THE ÉOLIENNE BOLLÉE
A DETAILED INVENTORY OF SITES
JOHN WALTER AND RÉGIS GIRARD
UPDATED TO 14TH NOVEMBER 2017

L’EAU ET L’ÉLECTRICITÉ
PAR
L’ÉOLIENNE BOLLÉE
Main cover picture: this 1930s advertisement from La Maine Découverte extols the virtues of then comparatively-new Éolienne Bollée No. 4, concentrating on its utility as a water pump and an electricity generator: something very few such sites ever did. Courtesy of Jean-Claude Pestel.

NOTE

Several versions of this directory have been published since the early 2000s, but the project is still far from complete. This is partly due to the fact that most of the compilation work has been done in Britain (and, ironically, is currently only available in English). Consequently, the best way of moving forward seems to be simply to make the ‘work-to-date’ accessible in the hope that enthusiasts (and owners of the Éoliennes!) will be able to fill blanks and expand individual entries. We are particularly grateful to Francis Bonneteaud, Francis Cahuzac, Jean Chevalier and Jean-Claude Pestel for their help in obtaining images and information.

Lists of protected sites published by Archive Merimée and searches of locations made with the assistance of the admirable ‘Géoportail’ of the Institut Géographique National (http://www.ign.fr) have allowed many individual sites to be traced. However, this is an area in which progress can still be made with personal visits.

The problem of recording all the details of these unique machines—much less conserving them—still presents a very real threat to progress…and the ultimate goal, a French-language translation, still seems so very far away.

This version of the list has been updated to 14th November 2017. One major problem, still to be addressed, concerns the reorganisation of the French regions implemented last year. Appropriate changes will be made in the next release of this inventory!

John Walter and Régis Girard, 2017
The lists that follow give brief details of more than three hundred Éoliennes Bollée made in France from 1871 until 1932. Information remains sketchy in many respects, but it is hoped that additional research will gradually enable most of the blanks to be filled.

The basis of the cataloguing is numerical, largely because cataloguing by name—see index!—is not as easy to achieve as it seems. Individual machines may be known by the names of châteaux or the communes, villages or municipalities in which they were erected. This is understandable in view of the uncertainty that surrounds the identity of many clients, but less so in the cases of well-documented private purchases. Consequently, privately owned ‘estate Éoliennes’ are listed here by the name of the site (usually a château); communal/municipal acquisitions are listed by the name of the village, town or district; and the few uncertain attributions are listed by the name of the nearest village.

This can often change established terminology: for example, the site once customarily identified as ‘Crucey Village’ is now listed as ‘La Houdière’—the name of the farm in which it stands.

Identification can also be complicated by errors in source documents, including Auguste-Sylain Bollée’s own client-lists; by the omission of accents on hand-set printers’ type; and, in at least one case, simply because the Éolienne Bollée appears in picture-postcards promoting adjoining villages! These views are often, but not invariably taken from different viewpoints.

Some Éoliennes Bollée visible in old photographs and picture-postcards, particularly those published prior to 1914, are described as simply as Moulins; others as Moulins à Vent; and at least one as La Machine Élevatoire. Some of them may not be the focus of the illustrations, yet may still be seen in the background of Le Lavoir (the wash-house) or Le Jardin de Potager (the vegetable garden). Others may be visible in Vue générale du Village.

Identification can also be hampered by the similarity of communal names which reflect the essentially Catholic heritage of France. Saints’ names, in particular, are so widely favoured that suffixes are necessary to distinguish the multitude of ‘Saint-Christophes’, ‘Saint-Germains’ or ‘Saint-Pierres’. These suffixes often refer to a geographical feature—the river on which the village stands, a district name or something within the communal boundaries (e.g., Colombey-les-Deux-Églises, ‘Colombey with two churches’). However, similar names make sites difficult to trace. Typical of these is a machine identified on a postcard only as ‘La Ferme du Mesnil-d’Açon’ in Eure. The Michelin Tourist and Motoring Atlas lists seven communes in Eure alone, from Le Mesnil-Fuguet to Mesnil-Verclives, but the actual site does not appear in the atlas index! Le Mesnil[‘-d’Açon’] stands due east of Tillières-sur-Avre.
NORTH-EAST
Alsace (code ‘AL’):
   67 Rhin (Bas-), 68 Rhin (Haut-)
Bourgogne (code ‘BO’):
   21 Côte d’Or, 58 Nièvre, 71 Saône-et-Loire,
   89 Yonne
Champagne (code ‘CH’):
   08 Ardennes, 10 Aube, 51 Marne,
   52 Marne (Haute-)
Franche-Comté (code ‘FC’):
   25 Doubs, 39 Jura, 70 Saône (Haute-),
   90 Territoire de Belfort
Île de France (Région Parisienne, code ‘IF’):
   75 Paris, 77 Seine-et-Marne, 78 Yvelines,
   91 Essonne, 92 Hauts-de-Seine,
   93 Seine-Saint-Denis, 94 Val-de-Marne,
   95 Val-de-Oise
Lorraine (code ‘LO’):
   54 Meurthe-et-Moselle, 55 Meuse,
   57 Moselle, 88 Vosges
Nord–Pas-de-Calais (code ‘NP’):
   59 Nord, 62 Pas-de-Calais
Picardie (code ‘PI’):
   02 Aisne, 60 Oise, 80 Somme

NORTH-WEST
Basse-Normandie (code ‘BN’):
   14 Calvados, 50 Manche, 61 Orne

Pre-2016 Régions and Départements of France

The map shows the previous grouping of individual French Départements (numbered) and administrative regions lettered).
Above: an aerial view of Arthonnay, in the department of Yonne. A No. 2 Éolienne Bollée was erected next to the Mairie (not visible in the photograph) in 1897. This machine apparently worked into the 1960s, and survives in good condition. From a picture-postcard published by Editions Sofer, sent to Paris in December 1969 but probably dating from the 1950s.

<table>
<thead>
<tr>
<th>Region</th>
<th>Code</th>
<th>Department(s)</th>
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<tbody>
<tr>
<td>Bretagne (code ‘BR’)</td>
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<td>22 Côtes-du-Nord, 29 Finistère, 35 Ille-et-Vilaine, 56 Morbihan</td>
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<tr>
<td>Centre (code ‘CE’)</td>
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<td>18 Cher, 28 Eure-et-Loir, 36 Indre, 37 Indre-et-Loire, 41 Loir-et-Cher, 45 Loiret</td>
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<tr>
<td>Haute-Normandie (code ‘HN’)</td>
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<td>27 Eure, 76 Seine-Maritime</td>
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<tr>
<td>Pays de la Loire (code ‘PL’)</td>
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<td>44 Loire-Atlantique, 49 Maine-et-Loire, 53 Mayenne, 72 Sarthe, 85 Vendée</td>
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<td>SOUTH-EAST</td>
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<td>Auvergne (code ‘AU’)</td>
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<td>03 Allier, 15 Cantal, 43 Loire (Haute-), 63 Puy-de-Dôme</td>
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<tr>
<td>Languedoc-Roussillon (code ‘LR’)</td>
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<td>11 Aude, 30 Gard, 34 Hérault, 48 Lozère, 66 Pyrénées-Orientales</td>
</tr>
<tr>
<td>Provence-Côte-d’Azur (code ‘PC’)</td>
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<td>04 Alpes-de-Haut-Provence, 05 Alpes (Hautes), 06 Alpes-Maritimes, 13</td>
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<td>Bouches-du-Rhône, 83 Var, 84 Vaucluse</td>
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<td>Rhône-Alpes (code ‘RA’)</td>
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<td>01 Ain, 07 Ardèche, 26 Drôme, 38 Isère, 42 Loire, 69 Rhône, 73 Savoie,</td>
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<td>74 Savoie (Haute-)</td>
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<td>SOUTH-WEST</td>
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<tr>
<td>Aquitaine (code ‘AQ’)</td>
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<td>24 Dordogne, 33 Gironde, 40 Landes, 47 Lot-et-Garonne, 64 Pyrénées-Atlantiques</td>
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<tr>
<td>Limousin (code ‘LI’)</td>
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<td>19 Corrèze, 23 Creuse, 87 Vienne (Haute-)</td>
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<td>Midi-Pyrénées (code ‘MP’)</td>
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<td>09 Ariège, 12 Aveyron, 31 Garonne (Haute-), 32 Gers, 46 Lot, 65 Pyrénées</td>
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<td>(Hautes-), 81 Tarn, 82 Tarn-et-Garonne</td>
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<tr>
<td>Poitou-Charente (code ‘PO’)</td>
<td></td>
<td>16 Charente, 17 Charente-Maritime, 79 Sèvres (Deux-), 86 Vienne</td>
</tr>
</tbody>
</table>
No. 346. The No. 3 Éolienne Bollée serving the gardens of the Manoir de la Touche dates from early in the twentieth century. It is among the most interesting of the surviving sites because some elements—the braced crossbeams overhanging the water tank, for example—are typical of neither Bollée nor Lebert practice. However, it now seems that construction was undertaken by Lebert in 1901. Photograph taken by Régis Girard in 2007.
The material that follows lists all the Éolienne Bollée sites that had been identified by the summer of 2017, exceeding 350 (including several that stood on two different sites and are sometimes entered twice).

No. 1 Éoliennes Bollée had a rotor diameter of 2·5m (8·2ft); No. 2 rotors measured 3·5m (11·5ft); No. 3 rotors were 5m (16·4ft) in diameter; and No. 4 had a 7m (23ft) rotor. The dimensions of the Nos. 1, 2 and 3 were deliberately chosen to give a surface area—and thus power—in the ratio 1:2:4.

Site lists

The details have been compiled from Bollée’s client lists, and from the personal observations of several people. The summary of éoliennes made by Ernest-Sylvain and Auguste-Sylvain Bollée prior to February 1894 is sufficiently accurate to allow the sites to be numbered sequentially. However, in the absence of order books, it is impossible to judge priority within each order-year, and so the locations have been listed alphabetically.

Slight changes have been made to the pre-1894 list over the years. For example, the aberrant Saint-Jean-de-Braye machine proved to be a prototype, removed from Le Mans, and, as a result, has been deliberately entered twice (as it is suspected that improvements were made during reconstruction). More recently, for example, we realised that a list published on the website contained a duplication: the No. 2 Éolienne Bollée of the Grand Séminaire in Vannes was entered twice—one (wrongly) in 1881 and again (correctly) ten years later.

The opportunity to correct this error was soon taken, though all numbers above 78 had to be reduced by one. The new total of 218 machines erected prior to February 1894, however, still agreed with the assessment based on Bollée’s lists.

Though many individual sites have now been linked with their true names, identification of others is still tentative; it is not always clear if a geographical name—of a commune, for example—masks a château, a religious establishment or a factory site. Renaming does not affect the sites numbered below 218, which are chronological, but often changes the essentially alphabetical post-1894 lists.

Names and locations given in the original Bollée sales lists are sometimes compromised by spelling errors, and also by changes in civil organisation since the 1890s. This can reflect changes in population, reducing the status of some communes, or alterations to their boundaries. The most obvious inconsistencies have been corrected, but the locations of individual sales are still sometimes unknown (e.g., where the names of the purchasers were linked only with the name of a town). For example, four Négociants in Reims bought wind engines in the 1870s and 1880s, but the identity of their domaines has yet to be confirmed.

How many sites?

The discovery of new sites and re-interpretation of data (particularly as dates can now often be attributed to Lebert éoliennes) suggest that the original estimates of production were too low, and that, therefore,
there are more ‘undiscovered’ sites than had been allowed. It is believed that Auguste-Sylvain Bollée erected approximately 258 wind engines, 218 of them prior to the end of February 1894. To these must be added 103 for Lebert—including thirty on columns—and another twenty for Duplay and SAEB in the post-1920 era, when work concentrated on maintenance and new commissions were comparatively scarce. This gives a speculative total of 381 Éoliennes Bollée…and means that there are thirty sites still to find!

Each individual directory entry takes a standard form:

123. Site name [and title]
Including synonyms and other names, if any. Site names which are underlined should be regarded as unconfirmed; they represent an attempt to move classification away from the names of communes, which can be (and often still is!) very confusing—especially if there is more than one Éolienne in the district.

[LATITUDE AND LONGITUDE: ITEM]
1—Location of site.
2—Date of construction.
3—1) Erector.
   2) Client.
   3) Protected status, if applicable.
4—1) Head type and size.
   2) Details of mount.
   3) Design of cap-platform.
   4) Access to head.
   5) Design of base or plinth
   6) Description of pump house or associated building.
   7) Design of pumps and associated machinery.
   8) Description of water source (e.g., well, sump).
   9) Method of storage (e.g., water tank, reservoir)
5—Fate.
6—Remarks

The title is also sometimes accompanied by symbols denoting points of interest:

❄ This indicates that the Éolienne itself still stands, though condition varies from relic to fully restored.
❄ Indicates a site which has been authenticated, though detail may be lacking.
❖ Indicates a site which is known to have been dismantled or destroyed.
❖ Indicates a site in which, though the Éolienne may have gone, parts of the pump-house and associated infrastructure remain.
❖ Indicates a site in (or nearly in) working order.
❖ Indicates a site listed (Inscrit) or classed (Clasé) as an historic monument by the French government.
❖ Indicates a site identified (or details deduced) wholly or partly from picture-postcards.
1: known Bollée sites, 1872–94

All of these are column-type installations, numbered according to installation date

1. ‘Jardin Bollée’ (Le Mans) ☭
   [EXACT LOCATION UNKNOWN]
   1—Pays de la Loire: 72 Sarthe, Le Mans.
   2—1872.
   3—1) Ernest-Sylvain Bollée.
       2) Client: self.
   4—1) Prototype No. 2 power head (3·5m diameter).
       2) A column mount. See also no. 11.
   6—This, the first of all the Éoliennes Bollée, was erected to serve the family gardens in Le Mans. The date of installation is not yet known, though a letter retrieved from the archives of the Château de Mazères confirms that the machine was in operation by September 1872. Experience suggested several improvements, leading to the substitution of a No. 3 (see below) in 1874. The original éolienne was then sent to the Bollée bell-foundry in Saint-Jean-de-Braye, on the outskirts of Orléans, where it still stands.

2. Rues (Château des) ⚖ ☭
   [47°41´48˝N, 0°40´09˝ E: WATER TANK?]
   1—Pays de la Loire: 49 Maine-et-Loire, ‘près le Lion-d’Angers’ according to Bollée (1888); ‘Chenille-Changé près Chamberlay (M.-et-L.)’ according to a picture-postcard of the ‘Jardin de Château des Rues’ (Mildred Cookson collection).
   2—1872.
   3—1) Auguste-Sylvain Bollée.
       2) Vicomte Jacques de Rougé.
   4—1) No. 2 power head (3·5m diameter).
       2) Column mount, 5 units?
   5—Replaced by a conventional wind-engine after falling into disrepair in the 1950s
   6—The first wind engine to be sold commercially, this and, therefore, forms a vital link in the history of the Éolienne Bollée.

3. Chanteau (Domaine de) ☭
   Also known as ‘Montsûrs’
4. Rochères (Château des [or les]) ♦

[47°55’33” N, 0° 33´27” W: SITE OF ÉOLIENNE?]

2—1873.
3—1) Auguste-Sylvain Bollée.
2) La Comtesse de Viennay.
4—1) No. 1 power head (2·5m diameter).
2) A column mount.
5—Dismantled.
6—A very early machine, presumably a ‘Modèle primitif’ with diagonal drive from the Papillon to the curb. It is suspected that the wind-engine was originally sited in the courtyard of the outbuildings which stood south of the house on the other side of what is now the access road. Photographs show that a pond or small open reservoir once stood within the yard, though no trace of the engine-base could be seen.

5. Charnizay (Château de) ♦

[46°54’40” N, 0° 59’39” E: PUMP-HOUSE?]

1—Centre: 37 Indre-et-Loire, ‘par Preuilly [-sur-Chaise]’.
2—1874.
3—1) Auguste-Sylvain Bollée.
2) Le Comte Thierry de Montesquiou.
4—1) No. 2 head (3·5m diameter).
2) A column mount.
5—Dismantled.
6. Hutreau (Château du) ♦ ♦

Also identified on postcards as ‘Le Hutreau’ or ‘Sainte-Ursule-d’Hutreau’

[47°26’01” N, 0°33´17” W: HOUSE]

2—1874.
3—1) Auguste-Sylvain Bollée.
2) Baron Laity.
4—1) No. 2 power head (3·5m diameter).
2) A 4-unit column, on a short riser.
3) The cap-platform has serpentine balusters, but lacks cardinal points.
4) The spiral staircase has rod-type treads.
5) The column was once raised on a brick-and-stone plinth extending from the pump-house wall, and protected by a fence (not original?). Now replaced by an ornamental flower bed.
6) The pump house was rectangular, highly decorative, built of rendered brick with quoined corners alternately of ashlar and three exposed courses of bricks. Above a string course are arcades of bricks (now filled with ventilated sheet-steel plates), and, on the long sides, keystones that are stepped outward to form part of the base of the crenellated parapet. The corners are similarly carried outward. Each face of the building displays a decorative carved-stone medallion ‘BL’. Access to the pump was through an arched doorway, similar to the arcading, but this is now bricked-up. Pump: not known.
7) The shape of the pump-house and the positioning of the arcade in the wall adjacent to the column suggest that a two-throw pump like that in Saint-Jean-de-Braye (q.v.) was used, though this was soon substituted by either the intermediate two- or perfected three-throw plunger design. Vertical brackets formed of wrought-iron strip, and
accompanying retaining bolts, placed high on the 'long' walls of the pump-house, suggest that the replacement pump was mounted high enough to allow the existing drive to be used. However, no entry has yet been gained to the installation.

8) The well lay beneath the pump-house, depth and construction unknown.

9) A cylindrical riveted sheet-iron water tank, mounted on cast pillars, was hidden in trees in the north-west corner of the site.


6—Originally known as 'La Perrière', this site became "l'Hutreau" during the nineteenth century. The seventeenth-century mansion was bought from the
Chatelin family on 12th October 1872 by Armand-François-Rupert, Baron Laity (1812–89), one-time préfet of Basse-Pyrénées and an associate of Napoleon III. Laity had been married to Hortense-Louise-Françoise de Beauharnais, comtesse de Quenelles, but she had died in 1851; the purchase of the Hutreau mansion occurred soon after the baron had remarried in 1871. His new bride’s surname, Bonet, was to be incorporated in the medallions found on the ornamental gates and the pump-house. = Laity commissioned Angers architect Charles Rocques to re-model the château in neo-renaissance style, work being completed with the addition of outbuildings, a laundry and glasshouses in 1874. The grounds were replanted dans le goût anglais, and a 25-metre well was sunk to supply water with the aid of the Éolienne Bollée. Laity died without issue in Baguères-de-Bigorre in 1889; his estate passed through a variety of owners, even serving as a hospital during the First World War, until it was purchased by Angers town council in February 1972. = The site is now contained within a public park formed from the grounds of the château. In addition to the pump-house and the water tank, there are two ponds, drained to serve as children’s play areas, and a concrete cover for a sump or cess pool. The pump house survived in 2002, but the wind-engine had been replaced by an ornamental flower bed. However, the components survived in store in Angers to be moved to l’Arche de la Nature in Le Mans. Excepting the near-identical prototype at Saint-Jean-de-Braye (no. 11), this would be the oldest surviving Éolienne Bollée.

7. Piolant (Château de) ♦

[46°34´39˝N, 0°36´29˝ E: HOUSE]

1—Poitou-Charente: 86 Vienne, ‘par Dangé-Saint-Romain’.

2—1874.

3—1) Auguste-Sylvain Bollée.

2) Baron de Kainlis.

4—1) No. 3 head (5m diameter).

2) A 4-unit column, with eight two-piece wrought iron guys and four intermediate stabilisers.

3) A circular cap-platform, with serpentine balusters but no cardinal points.

4) A spiral staircase with plain balusters and rod-type treads.

5) The base was apparently a simple circular footing.

6) A rectangular pump house, made of coursed brick with dressed stone quoins and a stone string-course. The doorway has a shallow arch, with stone quoins, voussoirs and keystone. A pyramidal
roof, apparently tiled, rises to a finial.
7) The pump is resumed to have been a ‘first pattern’ two-throw pump, as the drive is taken from the top of the first column-unit (cf., ‘Fonderie Bollée’, no. 11), but was probably replaced by a three-throw plunger pump at a later date.
8) A well lies beneath the pump.
5—Said to have been dismantled c. 1997/8 and scrapped.
6—Auguste-Sylvain Bollée’s August 1888 list of clients gives the power head of this installation as ‘No. 2’ (3·5m-diameter). A picture taken in the early 1990s shows that the column was clearly very old, owing to the design of its stair-treads, but the Papillon drive is horizontal.

8. ‘Père Bollée’ 🧪
[EXACT LOCATION UNKNOWN]
1—Pays de la Loire: 72 Sarthe, Le Mans.
2—1874.
3—1) Auguste-Sylvain Bollée.
   2) Bollée père, retired ‘fondeur de cloches et mécanicien’.
4—1) No. 3 power head (5m diameter).
   2) A column mount. Details to add from Cenomane photograph.
5—Dismantled.
6—This machine was erected to serve the estate of Ernest-Sylvain Bollée, who was then still in control of the wind-engine business. The description ‘retired bell-founder and engineer’ was obviously a qualification added by Auguste-Sylvain.
Bollée in the 1888 client list. It replaced the earlier No. 2 (above).

9. **Chauffert** (‘Domaine de’) 

[EXACT LOCATION UNKNOWN]
1—Champagne: 51 Marne, 51100 Reims.
2—1874.
3—1) Auguste-Sylvain Bollée.
2) M Chauffert (listed as ‘Négociant’ in August 1888, and as ‘Propriétaire’ in February 1894).
4—1) No. 2 head (3·5m diameter).
2) Column mount.
5—Dismantled?

10. **Collin-Millet** (‘Domaine de’) 

[EXACT LOCATION UNKNOWN]
1—Champagne: 51 Marne, 51100 Reims.
2—1874.
3—1) Auguste-Sylvain Bollée.
2) M Collin-Millet, ‘Négociant’.
4—1) No. 3 head (5m diameter).
2) Column mount.
5—Dismantled?

11. **Bollée** (Fonderie des cloches) 

[47°54′11″N, 1°56′17″E: ÉOLIENNE]
1—Centre: 45 Loiret: Fonderie Bollée, faubourg de Bourgogne, 45800 Saint-Jean-de-Braye, Orléans.
2—1872 (See notes).
3—1) Ernest-Sylvain Bollée.
2) Amédée Bollée.
3) Listed as a ‘monument historique’.
4—1) Prototype No. 2 power head (3·5m diameter).
2) A 4½-unit column mount, supported by six three-part wrought-iron guys and three one-piece wrought-iron stabilisers.
3) The cap-platform is circular, with serpentine balusters. No cardinal points.
4) The spiral staircase has decorated balusters and plain rod-type treads.
5) A simple circular plinth, probably rendered over bricks laid radially.
6) The pump-house is tall and slender, much like a small bell-tower. It is essentially arcaded, with a single round-headed arch on each side, raised on a square base made of fifteen courses of brick. Each corner is formed as a square brick pillar, projecting from the run of the walls, with a string course above the arch-heads and a cornice (continuing the line of the pillar caps) below the eaves. Each wall is made of double-height bricks. The clay-tiled roof, laid on wooden rafters, rises to half-round ridge tiles with decorative finials. A bull’s eye, lantern or circular void on the wall facing the Éolienne receives the horizontal drive shaft.
7) The two-throw pump, lacking a flywheel, is mounted on a double ‘A’-frame. The frames have horizontal
stiffeners, and are connected with cross-braces. Each brace is formed of four half-length rods with threaded tips, bolted into a central ring. The shape of the crankshaft is surprisingly crude, suggesting that it may be a locally-made replacement.

8) The well, lined in brick, lies directly beneath the pump. The proximity of the Loire suggests that it is nothing other than a shallow sump.


6—This is a particularly interesting Éolienne. It has a variety of unusual features: rod-type stair treads, small column knuckles, an overhead take-off to the pump-drive system that is about 3m75 above ground level, and an 'orientateur drive' angled at 45 degrees instead of the later horizontal pattern. An '1872' date-plate is attached to one of the column knuckles (is it original?) and documents retrieved from the Château de Mazères (q.v.) support the suggestion that this was the prototype wind-engine erected in 1872 in the Le Mans garden of Ernest-Sylvain Bollée. Bollée is known to have installed a No. 3 machine in 1874, and sent the displaced No. 2 to his cousin in Orléans. Consequently, there is little doubt that the St.-Jean-de-Braye machine is the oldest of all the Éoliennes Bollée. Unfortunately, the original ‘water grotto’ installed in the gardens of the bell-foundry in the late nineteenth century is no longer complete.

12. Saint-Pavace (Château de) [EXACT LOCATION UNKNOWN]
1—Pays de la Loire: Sarthe, ‘près Le Mans’.
2—1874.
3—1) Auguste-Sylvain Bollée.
   2) M Portet-Lavigerie.
4—1) No. 2 head (3·5m diameter).
   2) Column mount.
5—Dismantled?

13. Beaumarchais (Château de) [47°31´38˝N, 0°59´28˝E: HOUSE]
1—Centre: 37 Indre-et-Loire, ‘près Autrèche’.
2—1875.
3—1) Auguste-Sylvain Bollée.
   2) M Archdéaconme.
4—1) No. 2 head (3·5m diameter)
   2) Column.
5—Dismantled, apparently in the 1960s.

14. Bordigné (Château de) [EXACT LOCATION UNKNOWN]
1—Pays de la Loire: 72 Sarthe, ‘à Bernay près Conlie’ (now known as Bernay-en-Champagne’).
2—1875.
3—1) Auguste-Sylvain Bollée.
   2) M de Ruillé.
4—1) No. 3 power head (5m diameter).
   2) Column mount.
5—Dismantled?

6—Now known as the ‘couvent de Bordigné’ or possibly “l’ancien carmel Ste.-Anne”.

15. Chapelle-du-Chêne (La) [47°48´42˝N, 0°16´32˝W]
1—Pays de la Loire: 72 Sarthe, Communauté de La Chapelle-du-Chêne ‘près Sablé’.
2—1875.
3—1) Auguste-Sylvain Bollée.
   2) Communal authorities.
4—1) No. 2 head (3·5m diameter).
   2) Column mount.
5—Dismantled.
16. Chazelet (Château) ✫

“Environ d’Argenton [sur Creuse]” on some postcards

[46°30’30”N, 1°26’25” E: WATER TANK?]

1—Centre: 36 Indre, 36170 Saint-Benoît-du-Sault.
2—1875.
3—1) Auguste-Sylvain Bollee.
2) Marquis de Tilières.
4—1) No. 3 head (5m diameter).
2) Column mount.
5—Dismantled.
6—The château, with early fifteenth-century origins, is surrounded by ditches and dominates the Vallée de l’Abloux. The éolienne stood among the extensive range of outbuildings.

17. Champigny-Lamarque ✫

(Maison or Domaine)

[EXACT LOCATION UNKNOWN]

1—Centre: 37 Indre-et-Loire, Chinon.
2—1875.
3—1) Auguste-Sylvain Bollee.
2) M Champigny-Lamarque.
4—1) No. 2 head (3·5m diameter).
2) Column mount.
5—Dismantled.

18. Futaie (Château de la) ✫

[EXACT LOCATION UNKNOWN]

1—Pays de la Loire: 72 Sarthe, ‘près Le Mans’.
2—1875.
3—1) Auguste-Sylvain Bollee.
2) Mme Famin.
4—1) No. 2 power head (3·5m diameter).
2) Column mount.
5—Dismantled.

19. Graviers (Château des) ✫

Now known as ‘Le Gravier’

[47°40’33”N, 0°16’19” E: HOUSE]

2—1875.
3—1) Auguste-Sylvain Bollee.
2) M Cosson.
4—1) No. 3 power head (5m diameter).
2) Column mount.
5—Dismantled? The site of the wind-engine base and/or the foundations of a pump house may lie at 47°40’34”N, 0°16’25” E.

20. Mines (Château des) ✫ ✫

Now known as ‘Château des Basse-Minières’ or ‘Château de Soulanger’; sometimes listed on postcards as ‘Saint-
INVENTORY OF SITES

Georges-Chatelaison’
[47°11’47”N, 0°18’03˝ W: HOUSE]
2—1875.
3—1) Auguste-Sylvain Bollée.
   2) M de Monti.
4—1) No. 3 power head (5m diameter).
   2) A three-unit column.
   3) A circular cap platform with serpentine balusters, but probably lacking cardinal points.
   4) A spiral staircase gives access to the platform. Photographs suggest that it had the original rod-type treads.
6) The pump house is believed to have been circular in plan, probably with a conical roof of slates laid over wooden rafters.
8) The well lay directly beneath the pump, and is presumed to have been shallow.
9) A large “Pièce d’eau” lay next to the wind-engine.
5—Dismantled in the 1950s.
6—One of the many Éoliennes mentioned in the client-list published by Auguste Bollée fils in August 1888. The château, the work of architect Jacques Antoine for Joseph-François Foulon, dates from 1774–8. A windmill was built in 1805 and a chapel followed in 1811, but extensive alterations were made to the estate in the 1870s. The Éolienne Bollée was erected in this period to irrigate the gardens and parkland, but—unlike the windmill—no longer survives. Writing in Éoliennes anciennes (no. 2, November 2003), Bernard Sauldubois suggested that the water-supply was contaminated with too much coal dust from the mine to be satisfactory.

21. Motte (Château de la) ✩
Also known as ‘Saint-Lyé-la-Forêt’
[48°02’42”N, 1°58’43˝ E: ÉOLIENNE]
1—Centre: 45 Loiret, Saint-Lyé-la-Forêt.
2—1875.
3—1) Auguste-Sylvain Bollée.
   2) Comte de Cobra.
4—1) No. 3 power head (5m diameter).
   2) A 4-unit column, supported by eight main and four intermediate guys.
3) Circular cap-platform with serpentine balusters and cardinal points
4) A spiral staircase, with rod-type treads.
5) The base was probably a concentric-tier design.
6) The pump house is a cylindrical tower of coursed brick, with string courses of ashlar marking the position of the internal floors, beneath a conical roof of graduated slates on radial wood rafters. The roof rises to a sheet-metal finial with a weather vane. The doorway and the windows (which include a vertical slit, a pointed arch and a bull’s eye) have ashlar quoins. Projecting iron brackets at second-floor level help to support the drive-shaft tunnel, and larger brackets midway between the first and second floors originally supported wood-plank staging.
7) Pump: see below.
8) The well lies directly beneath the pump.
9) A cylindrical sheet-metal water tank, with a conical roof and ventilator, stands on a cylindrical tower apparently made of concrete over a rubble core.
6—Listed by J. Kenneth Major and André Gaucheron, *Les Éoliennes Bollée* (1985), as ‘Saint-Lyé-la-Forêt,’ this is a very interesting survival and it is hoped that details of its history will eventually be retrieved. The column is constructed of three full- and two half-sections, in the form $\frac{1}{2}:1:1:1:\frac{1}{2}$, with the drive taken—at an unusually high level—from $\frac{1}{2}$-section height. This means that the horizontal shaft (in its tunnel) enters the pump house at second-floor level, and also that the pump originally took a non-standard form. Whether it employed a chain of buckets, or was similar to the two-throw plunger design found in Saint-Jean-de-Braye is not known. It has been suggested that the position of the drive has been altered, but evidence is currently lacking.

**22. Paviers (Château de)**
[47°07'24"N, 0°28'58"E: HOUSE COURTYARD]
2—1875.
3—1) Auguste-Sylvain Bollée.
   2) Marquis de Quinennont.
4—1) No. 3 head (5m diameter).
   2) A column.
6) The pump house, which survives, is circular in plan and built of coursed ashlar blocks on a shallow plinth. It is topped by moulding and a flared coping over-edged by the roof. The roof is conical, with a sheet-lead edging strip, laid with graded slates on wood
rafters and purlins: six rows squared, six rows fish-scale, and finally three rows squared rising to sheet-lead flashing and an octagonal lantern. The lantern, made of wood, has eight round-headed apertures each containing four slats. The eight-panel lantern roof of two rows of slates rises to a short faceted mushroom-head finial. The pump-house windows (and presumably also the doorway unseen in the photographs) are set in rebated recesses. The window-like aperture for the drive shaft, however, has a prominent 'flat arch' lintel and a sturdy stone transom separating the small upper light from the larger bottom portion. This could suggest that the drive from the éolienne was head-height, but details of the site are lacking.

5—Dismantled, date unknown.
6—The Bollée February 1894 client-list dates this installation to 1894. This could simply be a misprint, but it seems possible that the original wind-engine had either been removed or replaced. For example, an old high-drive pattern could have been replaced by an up-to-date version driving the perfected three-throw pump. The base of the Éolienne may be visible at 47°07’27’’N, 0°28’54’’E.

23. Maître (Château) ✺
Also known as ‘Saint-German-de-Grave’
[EXACT LOCATION TO FIND]
2—1875.
3—1) Auguste-Sylvain Bollée.
     2) M Maître.
4—1) No. 1 head (2·5m diameter).
     2) A 3½-unit column mount, supported by six two-piece wrought iron guys and three one-piece stabilisers.
     3) A circular cap-platform with serpentine balusters, but no cardinal points.
     4) A spiral staircase, with straight balusters and rod-type treads.
     5) Concentric, three-tier base.
     6) No pump house. The pump stands directly above the sump (see below). However, there is a large pent-roof outbuilding to the rear of the sump which apparently once contained a gas-or oil-engine to drive the pump in still conditions.
     7) An endless chain of buckets, driven from the gearbox at the base of the column through an intermediate reduction gear.
     8) A shallow sump lies directly beneath the pump.
     9) A small open reservoir stands nearby.
5—Visited by Francis Bonneteaud and Rémy Sallette in May 2004. Owner: in private hands? Condition: surprisingly good,
but missing the Papillon and showing signs of wasted platework. Access: on private land.

6—Excepting the Éoliennes Bollée in Saint-Jean-de-Braye, the Parc du Huteau in Sainte-Gemmes-sur-Loire, and the Château de la Motte, this is the oldest survivor: and also one of only three sites to retain a chain pump. Parts of the chain still survive in the grounds. The impressive mansion probably dates from the late nineteenth century.

24. Providence (Le Covent de la)
   *Also known as ‘Sées’ or ‘Séez’*
   [48°36´32˝N, 0°10´22˝ E: ÉOLIENNE OR PUMP-HOUSE BASE?]

1—Basse-Normandie: 61 Orne—‘à la Communauté des Sœurs de la Providence’, Sées.
2—1875.
3—1) Auguste-Sylvain Bollée.
   2) Les Sœurs de la Providence.
4—1) No. 3 power head (5m diameter).
   2) A column.
5—Dismantled, date unknown.

25. Vrillaye (Château de) ✹
   [47°02´26˝N, 0°21´25˝ E: HOUSE]

1—Centre: 37 Indre-et-Loire, ‘près Richelieu’ [now generally listed as ‘37120 Chaveignes’].
2—1875.
3—1) Auguste-Sylvain Bollée.
   2) M de Morineau.
4—1) No. 2 power head (3·5m diameter)
   2) Column mount.
5—Dismantled?
6—The Éolienne may have stood in the nearby *jardin potager*: 47°02´22˝N, 0°21´23˝ E.

26. Pinardière (Chalet de la) ☞
   *Also known as “l’Aigle”*
   [EXACT LOCATION UNKNOWN]

1—Basse-Normandie: 61 Orne, 61300 L’Aigle.
2—1876.
3—1) Auguste Bollée.
2) M Noché.

4—1) No. 1 power head (2.5m diameter).
2) Column mount.

5—Dismantled.

6—Listed in March 1891, owing to a printing error, as ‘Laigle’.

27. Chandai (Château de) ★

[48°45’0” N, 0°43’52” E: HOUSE]


2—1876.

3—1) Auguste-Sylvain Bollée.
2) ‘M Didot’.

4—1) No. 1 power head (2.5m diameter).
2) A column.

5—Dismantled, date unknown.

6—The mansion was completed in 1881 for a member of the Firmin-Didot family, replacing an eighteenth-century house that was itself built on twelfth-century foundations. The château was destroyed by fire in 1961, leaving only an Italian-rustic style rotunda and a neo-Renaissance chapel. The éolienne may have been acquired for the ‘Grande Ferme’ on the estate.

28. Coulonoge (Château de) ★

[47°57’03” N, 0°49’08” E: HOUSE]

1—Pays de la Loire: 72 Sarthe, Écommoy.

2—1876.

3—1) Auguste-Sylvain Bollée.
2) ‘M Akermann’.

4—1) No. 3 power head (5m diameter).
2) Column mount.

5—Dismantled?

30. Launay (Château de) ★

[47°28’36” N, 0°35’18” W: HOUSE]

1—Pays de la Loire: 49 Maine-et-Loire, ‘par Champigné’. Identified with ‘Sceaux-d’Anjou’ on some postcards.

2—1876.

3—1) Auguste-Sylvain Bollée.
2) Mme Brichet, Proprietaire.
3) Classed as a monument historique on 2nd April 1963; and listed on 8th April 1963 for additional parts of the site.

4—1) No. 1 head (2.5m diameter)
2) Column mount.

5—According to Bernard Sauldubois (Éolienne Anciennes No. 2, November 2003), the machine was destroyed in a storm in 1994 after a long period of inactivity.

6—The éolienne was installed to irrigate the ornamental grounds of a mansion with fifteenth-century origins. However, it was erected in a hollow and was never entirely satisfactory. Work is believed to have ceased in the 1950s, but the éolienne stood until one of the main guys broke during exceptionally strong winds. This allowed the column to topple, fracturing on impact with the ground. The broken column and the damaged turbine were then declared beyond repair and sold for scrap.

31. Thoré (‘Maison de’) ★

[EXACT LOCATION UNKNOWN]

1—Pays de la Loire: 72 Sarthe, Le Mans.

2—1876.

3—1) Constructor: Auguste-Sylvain Bollée.
2) M Thoré, formerly ‘ingenieur en chef
32. Marolles (Château de) ✱ ✱

[47°11′51″N, 1°07′29″ E: SITE IN CHÂTEAU GARDEN]

1—Centre: 37 Indre-et-Loire, La grande ferme de Marolles ‘par Genillé’ (near 37460 Le Liège).
2—1876.
3—1) Auguste-Sylvain Bollée.
     2) Fernand Raoul-Duval.
4—1) No. 2 head (3·5m diameter).
     2) A 3½-unit column, with six two-piece (?) main and three one-piece intermediate stays.
3 The circular cap-platform had serpentine balusters, but apparently lacked cardinal points.
4) A spiral staircase with solid segmental treads gave access to the platform.
5) The base is assumed to have been concentric, with at least two tiers.
6) The pump house took the form of a decorative tower, in similar style to the château. Built of coursed rubble on a low ashlar plinth, it rose to a cylindrical rendered-rubble (?) cap, slightly greater in diameter, which was carried on circumferential rows of bricks stepped outwards and intermediate corbels. The tower was topped by a crenellated parapet. The upper walls were pierced with tiny three-light lancet windows, and it is assumed that the doorway and any windows in the lower part of the tower were similarly shaped.
5—Dismantled.
6—The château has twelfth-century origins, but was enlarged in the seventeenth century and then entirely transformed by the Raoul-Duval family in the early 1870s. It was owned in 1890 by Maurice Raoul-Duval (‘Maurice Duval’ from 1910, killed in action in 1916), who would probably have been responsible for the installation of the third Éolienne Bollée. = The first wind engine no longer stands; its fate is unclear. The only record of its existence comes in the form of a photograph in the collection of M Jean-Claude Pestel. The machine was erected to serve the house, several kilometres to the south-east of the Grande Ferme de Marolles (see no. 99 and no. 137).

33. Mazères (Château de) ✱

[47°15′27″N, 0°30′12″ E: HOUSE]

2—1876.
3—1) Auguste-Sylvain Bollée.
     2) M Torteru[e de Sazilly].
4—1) No. 3 head (5m diameter).
     2) A 4-unit column, with eight two-piece wrought iron cap-guys and four column
3) The cap-platform is circular, with serpentine balusters but no cardinal points.

4) A spiral staircase, with plain balusters and rod-treads, gives access to the head.

5) The base is circular, with two tiers (?), apparently made of concreted rubble.

6) The pump house is very tall, square in plan, built of coursed brick on an ashlar base. There are ashlar quoins at the corners and around the doorway. A white stone string-course runs around the sides of the building above the wooden door. A single window (now blocked) was inserted in the back wall, between the pumps, and a shallow pyramidal roof of slates laid on wood rafters rises to a plain sheet-metal finial (now missing).

7) Uniquely, this site has two pumps: one large and one small, use depending on the strength of the wind.

8) The well lies directly beneath the pump-house.


6—This is mistakenly listed in the August 1888 Bollée list as a No. 1 (2.5m diameter). The purchaser was a cousin of the family responsible for the Thorigny (q.v.) site in Indre-et-Loire. The first visit to the site was made by Ernest-Sylvain Bollée in the autumn of 1872 and an estimate was submitted in March 1873, at a time when the machine (which has high-level pump drive) was to be accompanied by two single-barrel pumps. By the time work began, however, the triple-throw pump had been perfected; Bollée’s invoice for work completed by 7th September 1876 refers to the two separate sets. These were driven by belts from a shaft that entered the pump-house above the string course.

= The Éolienne apparently worked reliably for many years, but the original drive shafts and the associated gearing, by then well worn, were replaced by Lebert in 1903; an appropriate manufacturer’s plate was duly affixed to the column. A plan was mooted to add an auxiliary gas-engine in 1914, but the advent of the First World War prevented this being done and the pump-house remains in its original form.

= Active until c. 1960, this particular Éolienne Bollée was erected to supply water to the landscaped park, fountains and gardens of the large house that was then newly built. It is among the oldest survivors; only those in Saint-Jean-de-Braye (which the Mazères papers suggest to have previously stood in Le Mans), the Parc du Hutreau and the grounds of the Château de la No. 33
Motte are older. The retrieval of pre-1914 documents from this particular site has played a crucial part in reconstructing the history of the Éolienne Bollée.

34. **Duneau** (‘Maison de’) [![Exact Location Unknown](https://via.placeholder.com/15)]

1—Centre: 45 Loiret, Orléans.
2—1876.
3—1) Auguste-Sylvain Bollée.
   2) M Duneau.
4—1) No. 1 head (2·5m diameter).
   2) Column mount.
5—Dismantled.

35. **Orléans** (le Grand Séminaire d’)

1—Centre: 45 Loiret, Orléans.
2—1876.
3—1) Auguste-Sylvain Bollée.
   2) The church authorities?
4—1) No. 1 head (2·5m diameter).
   2) A column mount.
5—Dismantled.

36. **Biozat** (Château de)

*Now ‘la Maison de Repos à Biozat’*

![46°04’14”N, 3°16’09”E](https://via.placeholder.com/15)

2—1877.
3—1) Auguste-Sylvain Bollée.
   2) Vicomte Jacques de Rougé.
4—1) No. 1 head (2·5m diameter).
   2) Column mount.
5—Dismantled.

37. **Saint-Louans** [Prieuré de]

*Also listed as ‘Pichard-Roy’, ‘Chinon’, ‘Saint-Louand’ or ‘Saint-Louans’*

![47°10’10”N, 0°13’08”E: ÉOLIENNE](https://via.placeholder.com/15)

1—Centre: 37 Indre-et-Loire, ‘par Chinon’.
2—1877.
3—1) Auguste-Sylvain Bollée.
4—1) No. 2 power head (3·5m diameter).
   2) A 4½-unit column mount, supported by six head- and three intermediate guys.
3) The cap-platform has serpentine balusters, but lacks cardinal points.
4) A spiral staircase, tread design uncertain, gives access to the head.
5) The base is apparently a concentric two-tier design.
6) The stone pump house, hexagonal in plan, has a pyramidal roof of coursed slate beneath flashing and a sheet-metal finial. It may, however, have been re-faced or rebuilt during its lifetime.
7) The pump is assumed to have been the standard three-throw pattern.
8) The well lies beneath the pump, dropping to river level.
9) A storage tank may have been placed at ground level beneath and in front of the pump house.
6—The origins of this site have been difficult to determine, and should still be treated as unconfirmed. Pre-1914 postcards indicate that the éolienne stood in the *jardin potager* next to the ‘Maison de Retraite’ of the priory of Saint-Louans. The religious house, with links stretching back to the eighth century, was re-established in 1857, when the building of the priory commenced on a hillside overlooking the north bank of the Vienne.

= The Bollée client lists identify the purchaser as ‘M. Pichard-Roy’, but there is an explanation: Elie Pichard, born in l’Île Bouchard in 1817, had married Louise Roy, daughter of a Chinon merchant, in 1844. Trained as a jeweller and steel-engraver, Pichard worked for Pierre & René Robineau of Saumur. In 1844, the year of his marriage, Pichard and
No. 37. The No. 2 Éolienne Bollée erected in 1877 to serve the priory of Saint-Louans, on the western margins of Chinon.

Photograph taken by John Walter in June 2002.
his brother purchased the Robineau business. Work began on items with religious significance, including rosaries and crosses, which were made alongside necklaces, lockets and medals. Établissements Pichard attained great success, expanding several times before the premises were reduced to cinders by a terrible fire in 1921.

= Elie Pichard-Roy was a rich man in the 1870s, and, given his involvement with religious items, it seems reasonable to conclude that he bought the Éolienne so that it could be gifted to the priory.

38. Devansaye (Château de la) ✡
[47°39’19”N, 0°51’04”W: ÉOLIENNE BASE?]
2—1877.
3—1) Auguste-Sylvain Bollée.
2) M de la Perraudière.
4—1) No. 2 head (3·5m diameter).
2) A column mount.
5—Dismantled?

39. Fougerais (Château de) ✡
Also known as ‘Les Fougerais’ and now as ‘Le Fougeray’.
[47°44’03”N, 0°24’52”W: ÉOLIENNE SITE?]
1—Pays de la Loire: 49 Maine-et-Loire, Morannes.
2—1877.
3—1) Auguste-Sylvain Bollée.
2) M Fillon.
4—1) No. 2 head (3·5m diameter).
2) A column mount.
6—The client-name was given as ‘Fillion’ in the March 1891 list.

40. Montmorillon ✡ ✳
(le Petit Séminaire de)
[46°25’21”N, 0°51’51”E: CLOISTER]
2—1877.
3—1) Auguste-Sylvain Bollée.
2) The seminary authorities.
4—1) No. 3 head (5m diameter).
2) A column mount.
5—Dismantled.

41. Jarry (‘Maison [de]’) ✡
Also listed as ‘Bagneux’ and ‘Saumur (1)’
[47°15’11”N, 0°05’55”W: ÉOLIENNE]
1—Pays de la Loire: 49 Maine-et-Loire, ‘Saumur’ [rue du Clos Point, Les Buttes, Bagneux, near Saumur].
2—1877.
3—1) Auguste-Sylvain Bollée.
2) M Jarry, ‘Propriétaire’.
4—1) No. 2 power head (3·5m diameter).
2) A 3¾-unit column mount, with six head- and three intermediate guys.
3) The cap-platform has serpentine balusters, but lacks cardinal points.
4) A spiral starcase with plain balusters and rod treads gives access to the head.
5) The base consists of a short (approximately ¼-section) column beneath the gearbox attached to a concrete disc on top of a large rubble-built circular retaining wall, with a brick-laid lip. The enclosure is now largely grassed-over.
6) The pump house is a squared pavilion, with flanking indented apses and a shallow pyramidal slate (?) roof carried on wooden rafters. The ashlar walls—eight courses in the pavilion, six in each apse—rise to a dentilled architrave, and then to a cavetto-moulded cornice with a narrow coping.
7) The pump is the standard three-throw type with an overhung crank. The six spokes of the flywheel are straight.
8) The well lies directly beneath the pump, depth unknown.
9) Water is believed to have been stored
in a tank in the nearby outbuilding.

5—Visited by Régis Girard in 2005. Owner: not known. Condition: the machine was then in surprisingly good condition for its age. However, the platform floorplates showed signs of wasting and the Papillon rotor was missing. The drop-weight had also disappeared.

6—Among the oldest of the surviving Éoliennes, this stood on a gently-sloping site near a château in a suburb of Saumur. The drive shaft was raised higher than normal, owing to the insertion of a short section at the base of the column, though there is nothing in the design of the pump house to suggest that anything other than the conventional three-throw pump was ever installed. Interestingly, a later curved-spoke handwheel has been mounted on the outside of one of the pump house end-walls to allow small quantities of water to be raised when the wind engine was not working.

= The main house was roofless, and near derelict, in 2005; restoration was apparently to be considered after a sale in 2007, but nothing else is currently known about the fate of the wind-engine; it is feared that it has been dismantled, perhaps even scrapped.

42. **Soupisau (Château de)** ☨

*Also known as ‘Le Soupiseau’*

[49°19’24˝N, 2°46’30˝ E: HOUSE]

1—Picardie: 60 Oise, ‘près [60200] Compiègne’ (also listed as ‘[60320] Saint-Sauveur’).

2—1877.

3—1) Auguste-Sylvain Bollée in 1877.

2) Comtesse de Chanaleilles.

4—1) No. 2 head (3.5m diameter).

2) Column mount.

5—Dismantled, though the pump-house survives.

6—Details to add from a photograph.
43. **Thorigny** (Château de) 🔸

now 'Domaine de Thorigny'

[47°14′47″N, 0°41′39″ E: HOUSE]

1—Centre: 37 Indre-et-Loire, ‘par [37250] Montbazon’. Also listed in Veigné, the commune with jurisdiction.

2—1877.

3—1) Auguste-Sylvain Bollée.

2) ‘M de Sazilly’.

4—1) No. 3 head (5m diameter).

2) A column mount.

5—Dismantled.

6—This was built by the Torterue de Sazilly family (see also ‘Mazères, Château de, Indre-et-Loire’) on an estate, dating back to an eleventh-century fief, which was purchased from the Lebreton de Vonne family in 1845. The present mansion was erected in 1863–7 at a time when the estate community was also entirely reconstructed; the Éolienne was installed to serve the ornamental park and a jardin potager, and a chapel was added by Charles Torterue de Sazilly in 1883–4. The Éolienne is said to have been rebuilt in 1924 (which would have been the work of Gaston Duplay), and worked until replaced by a water-tower in the 1960s.

44. **Biarritz** (1) 🔹

[EXACT LOCATION UNKNOWN]

1—Aquitaine: 64 Pyrénées-Atlantiques (‘Basses-Pyrénées’), Biarritz.

2—1878.

3—1) Auguste-Sylvain Bollée in 1878.

2) Comte de La Rochefoucauld.

4—1) No. 1 head (2·5m diameter).

2) A column mount.

5—Dismantled.

6—Built for [Marie-Thomas-Auguste-] Hippolyte, comte de la Rochefoucauld (1803–91).

45. **Causeret** (Château de) 🔼

[47°16′46″N, 0°10′18″ E: CENTRE OF PARK?]

1—Centre: 37 Indre-et-Loire, Parc Causeret, 37140 Bourgueil.

2—1878.

3—1) Auguste-Sylvain Bollée.

2) M Chatry, ‘Propriétaire’.

4—1) No. 2 head (3·5m diameter).

2) A 5-unit column, supported with six two-piece wrought iron cap-guys and three one-piece column stays.

3) The cap-platform is circular, with serpentine balusters, but no cardinal points.

4) A spiral staircase, with straight balusters and solid ribbed treads gives access to the platform.

5) Base: concentric?

6) The pump house is believed to have been circular in plan, with a conical roof.

7) The pump was undoubtedly the standard three-throw gothic frame type, with an overhung crank and six straight flywheel spokes.

8) The well lay directly beneath the pump, depth unknown

9—Still standing in 2010. The last visit revealed that the éolienne was in reasonable condition, but was missing much or all of the Papillon. In addition, it was being threatened by ever-encroaching trees.

6—Perhaps erected to serve the Château de Pavée, Bourgueil: more information required.

46. **Chesnaye** (Château de la) 🔸

[47°19′30″ N, 0°54′44″ E: HOUSE]

1—Centre: 37 Indre-et-Loire, ‘près Bléré-[la-Croix]’ or 37270 Athée sur Cher.

2—1878.

3—1) Auguste-Sylvain Bollée.

2) M Colligny.

4—1) No. 2 head (3·5m diameter).

2) A column.

9) A tall octagonal tower, built of rendered-rubble panels with ashlar quoins, rises from a low stone plinth to a stone-block
cornice. The cornice is over-reached by the concrete (?) base of the sheet-iron water tank, which may be a replacement. The door was probably originally a wooden battened, ledged and braced design, but this has also been replaced by a modern double flush-panelled design.

5—Dismantled, date unknown.
6—The purchaser’s name is given as ‘Collinet’ in the March 1891 client-list.

47. Girardet (Château [de]) ★

[47°40’37” N, 0°37’56” E: HOUSE]
1—Centre: 37 Indre-et-Loire, ‘par Épeigné-sur-Dême’.
2—1878.
3—1) Auguste-Sylvain Bollée.
   2) M Desportes.
4—1) No. 3 head (5m diameter).
   2) A column.
5—Dismantled.
6—This machine was omitted from the March 1891 Bollée client-list (probably a printer’s oversight). It was owned by M de Sonnier in February 1894.

48. Goupillière (Château la) ★

Identified on some postcards as ‘La Gouprière’

[47°19’34” N, 0°36’34” E: HOUSE]
2—1878.
3—1) Auguste-Sylvain Bollée.
   2) Général Deligny.
4—1) No. 1 head (2.5m diameter).
   2) A 3½-unit column, with six two-piece anchoring guys and three one-piece stays.
3) The circular cap-platform had serpentine balusters, but apparently lacked cardinal points.
4) The three-tier concentric base was made of concrete over either rubble or bricks laid radially.
5) A spiral staircase with plain baulsters and solid treads gave access to the platform.
6) The decorative pump house, circular in plan, was made of coursed brick on a shallow plinth, with a string course at mid height and coping at the edge of the roof. Laid on wood rafters and purlins with graded tiles (including three rows with the tiles laid to give a diamond pattern), the roof took ogee form; the conical sheet-lead cap had a tall cast-iron ball-and-bud finial. The round-headed doorway and matching window aperture had brick arches, and there was also a quatrefoil window/ventilator in a stone seat.
7) The pump would have been the standard three-throw overhung crank design, with straight flywheel spokes.
8) The well lay directly beneath the pump house.
5—Dismantled, though the pump-house survives.
6—Details to add from photographs. The Château had an extensive range of outbuildings and a jardin potager to the west of the site.

49. Nançay (Château de) ★

[47°20’40” N, 2°12’45” E: HOUSE]
1—Centre: 18 Cher, ‘près Vierzon’, or 18330 Nançay.
2—1878.
3—1) Auguste-Sylvain Bollée.
   2) M Pepin-Lehaleur.
4—1) No. 2 head (3.5m diameter).
   2) A column mount.
5—Dismantled.

50. Puyraveau (Château de) ★

Also known as ‘Neuville-de-Poitou’

[46°59’55” N, 0°16’44” W]
1—Poitou-Charente: 86 Vienne, 86200 Pouant.
2—1878.
3—1) Auguste-Sylvain Bolée.
    2) M Masson, ‘Notaire’.

4—1) No. 1 power head (2·5m diameter).
    2) A four-unit column mount with six two-piece anchoring guys and four two-piece stays. At least one of these anchor-points is set in the pump-house wall.
    3) The circular cap-platform has serpentine balusters, but no cardinal points.
    4) The three-tier concentric base is made of limestone blocks set on an apron of similar material.
    5) A spiral staircase with plain balusters and solid treads gives access to the platform.

6) The pump house is tall, square in plan (but oval internally!), set into the curtain wall of the house. It is constructed of limestone quoins with a rubble infill, has a cornice with limestone brackets, and pyramidal roof of slate tiles rising to a ball finial. There is a glazed window in the roof, facing south, and a door to the east at ground level.

7) The original pump seems to have been a bucket type, which would account in part for the height of the drive. It seems to have been replaced by an electrically-driven pump some time after 1940, when the Éolienne was taken out of service.

8) The well, 23 metres 60 deep, lies directly beneath the pump.

9) A sheet-metal tank, supported on four stone piers, held six thousand litres. It has now disappeared.

5—Still standing in 2015.

6—This is a most unusual site, as the sections of the column are arranged as 1:½:1:1:½. This allows the horizontal drive-shaft to be taken from the top of the lowermost half-column.

= The Domaine de Puyraveau was created on the north-west side of the commune of Pouant (sometimes listed as ‘Pouans’) by the Avril family. The house, built from 1873 to replace an earlier residence, is customarily credited to Henri Avril (1841–1918), mayor of Pouant from 1892 until 1906. The estate subsequently passed in 1924 to Moïse Roux, who married Henriette Avril, and then in 1949 to Émile Catin. It was sold again in 2007.

= The sales lists do not mention the name of Avril, only that of a lawyer, ‘M Masson’, of Neuville-de-Poitou. It seems probable that Alfred-André-Gabriel Masson, listed as a notaire in Neuville in 1862–79, was attorney to the Avril family,
and that he acted as the ‘responsible intermediary’ in the purchase of the Éolienne Bollée.

51. Vau-Saint-Georges
(Château du)

Now ‘Vaulx-Saint-Georges’
[47°19’37’’ N, 1°18’25’’ E: PUMP HOUSE?]
1—Centre: 41 Loir-et-Cher, 41140 Thesée.
2—1878.
3—1) Auguste-Sylvain Bollée.
2) M de Place.
4—1) No. 3 head (5m diameter).
2) A 3- or 3½-unit column.
5—Dismantled.
6—This is believed to have been one of the few to have irrigated vineyards.

52. Beauvais
(Château de)

Now known as ‘Domaine de Beauvois’, and sometimes listed as ‘Château de Leugny’; place-names can include Azay-sur-Cher and Saint-Étienne-de-Chigny.
[47°23’49’’ N, 0°31’26’’ E: FORMAL GARDEN]
1—Centre: 37 Indre-et-Loire, 37230 Luynes.
2—1879.
3—1) Auguste-Sylvain Bollée.
2) M Gary.
4—1) No. 2 head (3-5m diameter).
2) A column.
5—Dismantled in the 1950s, at the request of the tenant farmer, and sold for scrap.
6—This is sometimes confused with the Azay-le-Rideau (Mazères, q.v.) or Château de Coteau machines. The mansion dates mainly from the seventeenth and eighteenth centuries, but was extensively remodelled in 1903–11. Work on the park and gardens ‘à l’anglais’ was begun by Édouard André in 1869. The château has an extensive range of outbuildings, where, presumably, the wind-engine stood.

53. Bourron[-Marlotte]
(Château de)
[48°20’26’’ N, 2°41’46’’ E: CHÂTEAU]
1—Ile-de-France: 77 Seine-et-Marne, 77780 Bourron-Marlotte, 14 bis rue du Maréchal Foch.
2—1879.
3—1) Auguste-Sylvain Bollée.
2) ‘Comte Wladimir de Montesquiou’.
3) Listed as a ‘monument historique’ on 18th March 1926 and again on 29th October 1971.
4—1) No. 2 head (3.5m diameter).
   2) A 4-unit column with six two-piece wrought-iron adjustable stays and three one-piece wrought-iron stabilisers.
   3) A circular cap platform, with trapdoor access, serpentine balusters and ribbed cardinal points.
   4) A staircase spiralling around the column, with plain balusters, solid treads, and a decorative newel post.
   5) Probably concentric, on a brick or concrete base.
   6) Pump-house design not known. Perhaps styled to blend with the château.
   7) The Bollée three-throw plunger pump, with a gothic-style cast-iron frame, an overhung crank, and a flywheel with six straight spokes.
   8) Directly beneath the pump house.
   9) A cylindrical sheet-iron water tank raised on a plinth.
5—Still standing in 2011, in poor condition.
6—The impressive château, standing on the margins of the Forest of Fontainebleau, was originally built c. 1610 by Claude Salart on the foundations of a mediaeval fortified house. The mansion and grounds were extensively remodelled late in the nineteenth century by Comte Wladimir-Anatole de Montesquiou-Fesenzac (1830-87), when an éolienne was installed to supply water to the fountains and the ornamental gardens.

54. Jallanges (Château de) 🌟
[47°26′41″ N, 0°49′45″ E: FORMAL GARDEN]
1—Centre: 37 Indre-et-Loire, 37210 Vouvray, Vernou-sur-Brenne.
2—1879.
3—1) Auguste-Sylvain Bollée.
   2) M Meignan.
4—1) No. 3 head (5m diameter).
   2) A column.
5—The wind-turbine was installed to supply water to the landscaped grounds, but was removed in the 1950s. There is no evidence to show that any trace of it remains.
6—The château, listed as a ‘monument historique’ on 22nd June 1946, which now operates as a hotel. It has fifteenth-century origins, though much of its fabric dates from an extensive eighteenth-century remodelling. The Éolienne presumably stood amongst the extensive outbuildings.

55. Mouy 🌟
[49°19′14″ N, 2°19′35″ E: STATION BUILDING]
1—Picardie: 60 Oise, 60250 Mouy [or Mouy-Bury], railway station.
2—1879.
3—1) Auguste-Sylvain Bollée.
   2) Compagnie de Chemin de Fer du Nord. Water was supplied to a tower, ‘alimentation de la Gare’.
4—1) No. 2 head (3.5m diameter).
   2) Column mount.
5—Dismantled?
6—One of several éoliennes purchased for railway service. Possibly destroyed during the First World War.

56. Ormeignies (Château d’) 🌟
1—Belgium: ‘par Ath’.
2—1879.
3—1) Auguste-Sylvain Bollée.
   2) Le Comte de Rouillé.
4—1) No. 2 head (3.5m diameter)
   2) A column mount, possibly of four units.
5—Assumed to have been dismantled in the late 1930s.
6—The Ormeignies estate was settled in the sixteenth century by the Pollart family. In 1777, the daughter of Ferdinand Pollart d’Hérimiez married Louis de Rouillé,
chevalier de Saint-Louis, and the house thereafter descended through this line. The original château, much modified, was destroyed by fire in the early 1840s, to be rebuilt by Edouard de Rouillé in 1846; another fire seriously damaged the building in 1866, and it was rebuilt in neo-classical style by architect Désiré Limbourg for comte [Geoffroy-] Adhémar de Rouillé (1842–1922). At the same time, a 22-hectare parc à l’anglais was created. The installation of the Éolienne coincided with the creation of an orangery south-east of the mansion.

57. St Hugh Charterhouse (1)

Also known as ‘Cowfold’ or ‘Parkminster’.
1—Britain: Saint Hugh Charterhouse, Parkminster, Shermanbury, [West] Sussex.
2—1879.
3—1) Auguste-Sylvain Bollée.
   2) ‘Pères Chartreux, Grande Chartreuse’.
4—1) No. 3 head (5m diameter).
   2) A column mount.
6—The pump house was circular, drawing water from an adjacent pond or reservoir.
5—The column toppled in a gale, c. 1963, and was dismantled in the 1980s.
6—Only the base of the pump house survives, though other components may be found in the house infill or the adjoining expanse of water. It is probable that the characteristics (excepting size) paralleled those of the 1881-vintage No. 1 (see no. 74, below).

58. Saint-Germain-sur-Avre

[48°45’52” N, 1°15’37” E: LAVOIR?]
2—1879.
3—1) Auguste-Sylvain Bollée.
   2) The municipal council.
4—1) No. 1 head (2.5m diameter).
   2) A column mount.
5—Dismantled.
6—This was the first communal machine to be installed, destined to raise ‘les fontaines publiques’, but very little is known about its history.

59. Guiller (Maison [de])

[EXACT LOCATION UNKNOWN]
1—Pays de la Loire: 53 Mayenne, 53270 Sainte-Suzanne.
2—1879.
3—1) Auguste-Sylvain Bollée.
   2) M Guiller, ‘Propriétaire’.
4—1) No. 3 power head (5m diameter).
   2) A column mount.
5—Dismantled?
6—Possibly stood on the edge of the village: see postcard views.

60. Sarlabot (Château de)

Also known as ‘La Ferme de Sarlabot’
[49°17’08” N, 0°06’07” W]
2—1879.
3—1) Auguste-Sylvain Bollée.
   2) M Balvay.
4—1) No. 1 head (2.5m diameter).
   2) A column mount.
5—Dismantled.

61. Tarnos (Château de)

[EXACT LOCATION UNKNOWN]
1—Aquitaine: 64 Pyrénées-Atlantiques (‘Basses-Pyrénées’), ‘près Bayonne’.
2—1879.
3—1) Auguste-Sylvain Bollée.
   2) Comtesse de Lalande.
4—1) No. 2 head (3.5m diameter).
   2) A column mount.
5—Dismantled.
62. Avon-les-Roches

[EXACT LOCATION UNKNOWN]

1—Centre: 37 Indre-et-Loire, Avon-les-Roches.

2—1880.

3—1) Auguste-Sylvain Bollée.

2) The communal council, ‘to supply public water-fountains’.

4—1) No. 2 head (3.5m diameter).

2) A 5-unit column, with six two-piece wrought iron head guys and three one-piece stabilisers.

3) The cap-platform had serpentine balusters, but apparently lacked cardinal points.

4) A spiral staircase with plain segmental treads gave access to the platform.

5) The base was circular, built of coursed brick rising from a low brick-laid plinth. It is believed to have been filled with cemented rubble and was edged with bricks laid radially.

6) The pump house was rectangular in plan, rendered over coursed brick.

The door was wood—battened, ledged and braced—and there was probably a window either on the end wall or directly opposite the entry of the drive shaft. The pitched roof was laid with slates on wooden rafters and purlins.

7) The standard three-throw pump was used, with an overhung crank and six serpentine spokes on the flywheel.

8) The brick-lined well, with a diameter of three metres, lay beneath the pump house. The sump was comparatively shallow, containing only about eight metres of water.

9) Water was supplied directly to a Lavoir and open reservoir close to the Éolienne.

5—Scrapped in December 1954.

6—On 29th June 1879, the conseil municipal voted eight thousand francs to construct a public wash-house and reservoir fed by a wind engine. The Bollée machine was installed in 1880, becoming operative a year later once the pipework had been completed.
It continued to work until the end of the Second World War, but subsequently fell into disrepair. On 12th December 1954, the machine was sold to M. Viceant for 40,000 francs and was pulled down on 18–20th December with the assistance of a scrap-dealer named Huet. Many of the local people were appalled, as they regarded the Éolienne among the landmarks of the village, but the cost of repairs was reckoned to be much too high to save it.

63. Blandan (Château de)
   [48°04´40˝ N, 0°14´42˝ E: HOUSE GARDEN]
   2—1880.
   3—1) Auguste-Sylvain Bollée.
      2) Mme Devré, ‘Propriétaire’.
   4—1) No. 3 head (5m diameter).
      2) A column mount.
   5—Dismantled.
   6—The building served at one time as the ‘Colonie de Vacance du Mans’.

64. Chavagné (Distillerie de)
   [46°20´19˝ N, 0°19´13˝ W: RESERVOIR]
   2—1880.
   3—1) Auguste-Sylvain Bollée.
      2) M Braconnier, ‘Distillateur’.
   4—1) No. 2 head (3·5m diameter).
      2) A column.
   5—Dismantled.
   6—The Distillerie d’alcool de betteraves Braconnier, also known as the ‘Distillerie de Chavagné’, created by Jean Braconnier, was licensed on 1st August 1862 to make cognac; a small steam engine had been installed in the factory by 1869, when 24 people were employed.
   7—The devastating effects of the phylloxera louse on local viticulture, where three-quarters of the vines were destroyed in 1875–80, assured the success of the distillery. Vines affected by phylloxera could produce grapes, but these were usually processed into alcohol while the disease-affected vines were being grubbed-up.
   8—Success allowed Braconnier to enlarge his premises several times between 1869 and 1899, which included the installation of an Éolienne to facilitate a constant supply of water. However, the business was sold to Jean Chapellier in 1907, profitability declined and it was sold again in 1918 to Chapuis, Ricard, Allenet & Cie. The distillerie became a centre for ramassage des betteraves, but was closed in the late 1920s. Many of the buildings were subsequently demolished, and it is assumed that the wind-engine (if it had survived) was dismantled at the same time.

65. Ker-Léon (Manoir de)
   Also known as ‘Château de Ker-Léon’
   [48°23´33˝ N, 4°24´0˝ E: CONVENT]
   1—Bretagne: 29 Finistère, 29480 Le Relecq-Kerhuon (also listed as in Guipavas).
   2—1880.
   3—1) Auguste-Sylvain Bollée.
      2) Prince de Wittgenstein.
   4—1) No. 1 head (2·5m diameter).
      2) A column.
   5—Destroyed in 1943/47
   6—Also known as the ‘Château Russe’, the house had an interesting background. Its construction was the result of a love-affair between the Parisian actress Rosalie Léon, born in Quimper in 1832, and Prince Pierre de (Sayn-)Wittgenstein, a nobleman of German descent who had served as aide-de-camp to the Tsar of Russia.
   7—Characterised by its extraordinary decoration, the house was built from
1863 onward. Rosalie Léon died in 1886; and the prince died in 1887, ‘of a broken heart’. The estate was liquidated in 1889, and Ker-Léon was sold in 1892 (but only after the sister of the prince had spent vast sums of money on additional decoration!).

The house had passed to the Comte de la Guérande by 1905, but was badly damaged by Allied bombing during the Second World War. What remained was sold to the Carmelites in 1948 and remains in their possession.

66. Maulny (Château de)  ★
    [48°09’59’’ N, 0°09’17’’ E: HOUSE COMPLEX]
2—1880.
3—1) Auguste-Sylvain Bollée.
    2) M Paillard-Ducléré.
4—1) No. 3 head (5m diameter).
    2) A column mount.
5—Dismantled?

67. Gabreau (‘Domaine de’) ★
    [EXACT LOCATION UNKNOWN]
1—Champagne: 51 Marne, 51100 Reims.
2—1880.
3—1) Auguste-Sylvain Bollée.
    2) M Gabreau, ‘Négociant’.
4—1) No. 2 head (3·5m diameter).
    2) Column mount.
5—Dismantled.

68. Bocquet (Maison) ★
    [EXACT LOCATION UNKNOWN]
1—Nord-Pas-de-Calais: 62 Pas-de-Calais, Bois de Vimy ‘près Arras’ [62580 Vimy].
2—1880.
3—1) Auguste-Sylvain Bollée.
    2) M Bocquet.
4—1) No. 3 head (5m diameter).
    2) A 4-unit column mount with eight adjustable two-piece head-guys and four one-piece stabilisers.
    3) A circular cap-platform with serpentine balusters, but no cardinal points.
    4) A spiral staircase with solid treads.
5) Possibly a concrete apron over a row of radially-laid bricks with a rubble infill.
6) Set in a compound alongside the éolienne, the pump house is enclosed by a wall of coursed brick surmounted by iron railings. Entry is through a wrought-iron gate pivoting on a brick pillar with decorative string courses and a pyramidal cap. Rectangular in plan, the pump house has clapboard sides (with a door inset in the wall facing the wind-engine base) and a roof of tarred felt—or perhaps hide—over wooden rafters rising to a central ridge. The rear end of the building abuts the gable end of the single-storey byre or stable, which in turn abuts two-storey accommodation.
7) Assumed to be the standard three-throw plunger pump, with an overhung crank and straight flywheel spokes.
8) Beneath the pump house.

5—Possibly destroyed during the First World War, but the area is now greatly altered and evidence is lacking.
6—Erected to supply the needs of a farm.

69. Bel-Air (Château de) [47°23′38″ N, 0°38′18″ E: HOUSE]

2—1881.
3—1) Auguste-Sylvain Bollée.
   2) Marquis de Gourjault.
4—1) No. 2 head (3·5m diameter).
   2) Column mount.
5—Dismantled.

70. Lachesnay[e]-Sainte-Gème (Château de)

Also known as ‘La Chesnaye’ or ‘La Chesnaye-Sainte-Gemme’ (see remarks below)

[EXACT LOCATION UNKNOWN]

2—1881.
3—1) Auguste-Sylvain Bollée.
   2) M Frédéric Exshaw (‘Exchaw’ in Bollée lists).
4—1) No. 2 head (3·5m diameter).
   2) Column mount.
5—Dismantled c. 1950.

6—This site appears in the client list published by Auguste-Sylvain Bollée in March 1891 as ‘Château de la Chesnaye à Cussac’, but its name has been the subject of considerable speculation. The adjoining estates of ‘La Chesnaye’ and ‘Sainte-Gemme’ were acquired by Exshaw in 1880. Completed in 1883, the mansion on the La Chesnaye domaine viticole was built in “à l’anglais” (‘in English Style’, mock-Tudor) to the designs of architect Louis Garros. The wind turbine was acquired to supply water to the surrounding park and arable land. Frédéric Exshaw (1826–1902), born in Bordeaux to John-Thomas Exshaw and Corinne Guestier, was the great-grandson of a Lord Mayor of Dublin. Exshaw’s family had made its fortune from the import/export trade, including vast quantities of wine, and apparently also from the hotel business. The estate suffered greatly in the depression of the early 1930s, and was all but ruined by the frosts of 1945 and 1956. It was acquired in 1961 by Jean Bouteiller, however, and has since recovered much of its former reputation.

71. Merlerault (Le) [EXACT LOCATION UNKNOWN]

2—1881.
3—1) Auguste-Sylvain Bollée.
   2) Le conseil communal Le Merlerault, for ‘public water supply’ (water fountains).
4—1) No. 3 head (5m diameter).
2) A 4½-unit column, supported by eight two-piece main and four one-piece intermediate guys.
3) The cap platform was circular, with serpentine balusters and cardinal points.
4) A spiral staircase with plain balusters and pierced-tread steps gave access to the platform.
5) The base comprised a circular plinth with two concentric tiers.
6) The pump house, rectangular in plan, was made of rendered rubble (?) with what appear to be wooden double doors. The near-flat roof was probably tarred boards laid on wooden rafters.
7) The pump was presumably the standard three-throw type, with an overhung crank and six straight flywheel spokes.
8) The well lay directly beneath the pump.
9) A large free-standing cylindrical water tank provided a base for the wind-engine and the pump house.
5—Dismantled.
6—The details were provided by a poor-quality image taken from a picture-postcard. The Éolienne stood directly alongside a sawmill (Scierie) and possibly also a Lavoir. The site is reminiscent of the Notre Dame de Charité installation in Le Mans.

72. Moussais[-la-Bataille] 🍃
(Château de)
Also known as ‘Chateau de Mousset’
[46°44’11” N, 0°29’11” E: HOUSE]
2—1881.
3—1) Auguste-Sylvain Bollée.
2) Comte de Laizer.
4—1) No. 2 head (3·5m diameter).
2) A column mount.
5—Dismantled.
6—The house was built a short distance westward of the reputed site of the original Battle of Poitiers in 732 (not the better-known conflict between the English and the French in 1356).

73. Deville (Maison [de]) 🍃
[EXACT LOCATION UNKNOWN]
1—Poitou-Charente: 79 Deux-Sèvres, Niort.
2—1881.
3—1) Auguste-Sylvain Bollée.
2) M Deville, ‘Banquier’.

4—1) No. 2 head (3·5m diameter).
2) A column mount

5—Dismantled.

74. St Hugh Charterhouse (2) ★ ★
Also known as ‘Cowfold’ or ‘Parkminster’

1—Britain: Saint Hugh Charterhouse,
Parkminster, Shermanbury, [West]
2—1881.
3—1) Auguste-Sylvain Bollée.
2) ‘Pères Chartreux, Grande Chartreuse’.

4—1) No. 1 head (2·5m diameter)
2) A 3½-unit column, with six two-piece wrought iron head guys and three intermediate stabilisers.
3) A circular cap-platform, with serpentine balusters but no cardinal points.
4) A spiral staircase with plain balusters and solid ribbed treads.
5) The base was two tiers of bricks, laid radially, perhaps around a rubble core.
6) A pump house built of coursed brick on a circular plan, lime-washed internally. The roof of graduated slates, laid on wood rafters, rises to a small finial. The battened, ledged and braced wooden door is set in a wooden frame.
7) The standard three-throw plunger pump, with a gothic frame, an overhung crank and a flywheel with six straight spokes.
8) A brick-lined sump, about 12ft deep.
9) Water was supplied from a subterranean reservoir with two brick-lined vaulted chambers. The tank probably lay within the monastery outbuildings.

5—see Remarks, below. Condition: near-relic.

6—Sited in an hexagonal compound of wrought-iron bar-fencing with a matching gate. The horizontal drive shaft has an intermediate bearing-bracket. The site was subjected to detailed analysis by students involved in a postgraduate conservation course: see Saving the Survivor: the British Éolienne Bollée (a conservation report published by the British Engineerium/University of Brighton, 2001).

— The machine was purchased from St Hugh Charterhouse for conservation early in 2003 and dismantled ‘into store’ in 2004. The éolienne was stripped to its components and much preservative work had been undertaken, but, with the sale of the British Engineerium in 2006, its ultimate future remained uncertain.
— The parts were duly sold, and were still in store in Windsor in 2009. It is to be hoped that planning consents will ultimately allow the Éolienne to be re-erected in appropriate surroundings.

75. Roche-d’Ambille ★
(Château de la)
[47°31’43” N, 0°42’16” E: ÉOLIENNE]

1—Centre: 37 Indre-et-Loire, Château de la Roche-d’Ambille ‘par [37380] Monnaie’.
Now customarily listed in the ‘commune de Nouzilly’.
2—1881.
3—1) Auguste-Sylvain Bollée.
2) M Leridon.

4—1) No. 2 head (3·5m diameter).
2) A 4-unit column mount with six main and three intermediate guys.
3) The circular cap-platform has serpentine balusters, but no cardinal points.
4) A spiral staircase with straight balusters and solid treads gives access to the platform.
5) The base is believed to be concentric.
6) The pump-house is probably circular in plan, with a conical roof.
7) The three-throw pump, with an overhung crank and six straight flywheel
spokes, would have been used.
8) The well lies directly beneath pump house.
6—This machine still stands in the estate near the château, where it was installed to supply water to an extensive range of fountains and ornamental ponds. It has recently been repainted, and was included in ‘3 balades découvertes autour des éoliennes’ (undertaken ‘à pied, à cheval, à vélo, en voiture…’, 19th/20th October 2002).

76. Meffre (‘Maison de’)
[EXACT LOCATION UNKNOWN]
1—Centre: 37 Indre-et-Loire, ‘près Tours’.
2—1881.
3—1) Auguste-Sylvain Bollée.
2) M Meffre (‘Architecte à Tours’ in August 1888, ‘propriété de Saint-Avertin’ in March 1891).
4—1) No. 2 head (3.5m diameter).
2) A column mount.
5—Dismantled.
6—The éolienne was erected in the grounds of a house owned by Edmond Meffre, son of the architect Jacques-Aimé Meffre (1795–1868), who was born in Tours c. 1825 and died in Saint-Avertin in September 1888. Meffre was also renowned as an architect. The site has yet to be identified; Meffre’s widow was living in the Château de Beaugalliard in Saint-Avertin by 1910, but it is by no means certain that this house was being occupied twenty years previously.

77. Salvert (Château de)
[47°20’35˝ N, 0°01´46˝ W: PUMP HOUSE?]
2—1881.
3—1) Auguste-Sylvain Bollée.
2) Baron Le Pelletier [de Glatigny]. Purpose: private water supply.
4—1) No. 2 head (3.5m diameter).
2) A 4½-unit column mount, supported by six two-piece head- and three one-piece intermediate guys.
3) The cap-platform is circular, with serpentine balusters but no cardinal points.
4) A spiral staircase with plain balusters and solid ribbed treads gives access to the platform.
5) The base is new (see notes, below).
6) A photograph in *Les Eoliennes Bollée* (1995) reveals that the pump house was hexagonal in plan, built of dressed stone, with an arched doorway and a prominent cap-course running around the building. The splayed roof was covered with the slates laid over wood rafters and purlins.
7) The standard three-throw pump was used, with an overhung crank and six straight flywheel spokes.
8) The well lay directly beneath the pump house.
9) A large sheet-iron cylindrical water tank on a coursed brick base still stands in the château grounds.


6—This machine was erected in the grounds of one of the finest houses in the Loire Valley, built in the sixteenth century and then substantially enlarged in the eighteenth and nineteenth centuries. The Éolienne supplied water for the château, the thirty estate employees and dependents, ornamental lakes and the vegetable gardens.

78. Saint (Maison [de]) ★
[39F3] [48°10’35”N, 2°45’10”W]
1—Haute-Normandie: 27 Eure, in the ‘commune Acon, près Nonancourt’.
2—1882.
3—1) Auguste-Sylvain Bollée.
2) M Saint, Propriétaire.
4—1) No. 2 head (3.5m diameter).
2) Column mount.
5—Dismantled.

79. Notre Dame de Charité ☒ ✱
[Monastère de]
Also known as ‘Bon Pasteur’
[48°00’37” N, 0°12’02” E: CENTRAL SPIRE]
1—Centre: 72 Sarthe, Le Communauté du Bon-Pasteur, Monastère de Notre Dame de Charité, Le Mans.
2—1882.
3—1) Auguste-Sylvain Bollée.
2) The communal authorities.
4—1) No. 3 head (5m diameter), apparently fitted at a later date with Entonnoir.
2) A 5-unit column, supported by eight main and four intermediate guys.
3) The circular cap platform had serpentine balusters and cardinal points.
4) A spiral staircase with plain balusters and pierced-tread steps gives access to the platform.
5) The base was a circular plinth—of concrete, in two concentric tiers?
6) The pump house was rectangular in plan, built of coursed brick, with a wooden door set in a round-head arch (?). The pent roof was laid with slates on wooden rafters and purlins, with half-cylindrical ridge tiles.
7) The standard three-throw pump was used, with an overhung crank and six straight flywheel spokes.
8) The well is assumed to have lain directly beneath the pump.
9) A large free-standing cylindrical water tank, with a grassed over top (at least in later days), provided a base for
the wind-engine and the pump house.
5—The Éolienne was dismantled prior to 1935, though the tank survived until recent years and the 'Bon Pasteur' still stands.
6—Details were provided by pre-1914 picture-postcards, as the site is now covered by housing.

80. Moc-Baril (Château) *

Now known as 'Château Bouvet-Ladubay'
[47°15’37’’ N, 0°06’03’’ W: ÉOLIENNE]
2—1882.
3—1) Auguste-Sylvain Bollée.
   2) M Étienne Bouvet, ‘Propriétaire’.
   3) Listed as a ‘monument historique’ on 26th December 1997.
4—1) No. 2 head (3.5m diameter).
   2) A 4-unit column mount, with six head- and three intermediate guys. An electrical supply bracket has been attached to the stairs of the second column unit.
No. 82. The Éolienne erected in 1882 to supply water to the estate of Château Gache. Photograph taken in 2005 by Francis Bonneteaud.
3) The circular cap-platform has serpentine balusters, but lacks cardinal points.
4) A spiral staircase, with ribbed solid treads, gives access to the platform.
5) The base is concentric, with four tiers.
6) The pump house, circular in plan, has a hexagonal lead-covered ogee roof rising to a finial. Three small windows are set into the roof-skirt. See notes.
7) The pump is presumed to have been the standard three-throw type.
8) The well lies beneath the pump, cut into rock.
5—Visited in May 2002 by a study group from the British Engineerium. Owner: bought from Mme Hugo by Saumur municipal council, c. 2009, and then sold into private ownership in 2015; it is now a first-class hotel, though with historic-monument status. Condition: good in 2002, but currently uncertain. Access: in 2002, screened by mature trees.
6—This wind-turbine stands in the grounds of an ostentatious mansion built for the industrialist Étienne Bouvet by an architect named Piette. Bouvet owned the nearby Moc-Baril factory, once the largest wine-bottling establishment in the world, and was the first in the district to instal electricity not only in his house and factory, but also in the village of Saint-Hilaire. Work on the site began in 1878, the Éolienne being purchased three years later to provide water for the garden, the grotto, ponds and a fountain. It is also said to have lit the house and factory, perhaps with the help of a small Gramme dynamo, but the removal of the pump and pump-house has also removed evidence of electricity generation. The original pump-house was demolished in the 1990s, during the time in which protection was being sought, and at a time when the site belonged to the Saumur council. It was subsequently rebuilt according to recollections of its appearance, but may be too low unless an ‘overhead’ pump was used.

81. Caudéran (Château de) ⚫
[EXACT LOCATION UNKNOWN]
1—Aquitaine: 33 Gironde, ‘près Bordeaux’.
2—1882.
3—1) Auguste-Sylvain Bollée.
   2) M Duvergier.
4—1) No. 3 head (5m diameter).
   2) Column mount.
5—Dismantled.

82. Gache (Château [de]) ⚫
[44°13´46˝ N, 0°17´26˝ E: ÉO LIENNE?]
1—Aquitaine: 47 Lot-et-Garonne, Buzet-sur-Baîse.
2—1882.
3—1) Auguste-Sylvain Bollée.
   2) M Gayraud, ‘Propriétaire’.
4—1) No. 1 head (2.5m diameter).
   2) A 3-unit column, supported by six two-piece wrought iron guys and three one-piece stabilisers.
   3) A circular cap-platform, with serpentine balusters but no cardinal points.
4) A spiral staircase, with straight balusters and plain solid treads.
5) A concrete base, circular, one tier.
6) No pump house.
7) An endless chain of buckets, driven from the gearbox at the base of the column through an intermediate reduction gear.
8) A circular brick-built, brick-lined well shaft, alongside the Éolienne, is protected by a short pent roof of tiles over wooden rafters. The depth is not known, but is likely to be comparatively shallow owing to the design of the pump.
9) Water was apparently run off by gravity to a small open reservoir.

6—The château was originally built in the seventeenth century, but was so extensively remodelled in the nineteenth century that little if any of the original structure remains. A new west front, a large conservatory and outbuildings were added, and the Éolienne was erected to supply gardens and agricultural land with water. It has been suggested that a large pulley on the pump shaft allowed a gas- or oil-engine to drive the pump if there was too little wind to turn the Éolienne rotor. The orientation of the pulley, at right-angles to the buildings, hints that the alternative source of power was portable.

83. Haut-Buisson (Château de) 📜
(48°09´06˝ N, 0°39´17˝ E: ORNAMENTAL LAKE)
1—Pays de la Loire: 72 Sarthe, ‘près [72400] La Ferté-Bernard’.
2—1882.
3—1) Auguste-Sylvain Bollée.
   2) Duchesse de Richelieu.
4—1) No. 3 head (5m diameter).
   2) A column mount.
5—Dismantled.
6—The owner was listed in March 1891 as the ‘Princesse de Monaco’.

84. Maule (Château de) 📜
(EXACT LOCATION UNKNOWN)
1—Pays de la Loire: 72 Sarthe, ‘près Le Mans’.
2—1882.
3—1) Auguste-Sylvain Bollée.
   2) M Chappée, Maître de Forge de Château de Maule. Purpose: private water supply.
85. Notz-Marafin (Château de) ★

[46°51′53″ N, 1°13′13″ E: ÉOLIENNE]
1—Centre: 36 Indre, ‘près Mézières-en-Brennes’ or ‘par Saulnay’.
2—1882.
3—1) Auguste-Sylvain Bollée.
2) M Cavé.
4—1) No. 1 head (2·5m diameter).
2) A column.
5—Still standing in December 2009 (Girard visit).
6—Noted as ‘Notz-Maratin’ (a printing error) in the August 1888 client-list. The surviving machine now has a No. 3 head, possibly substituted by Lebert during a major overhaul. The site also retains a Bollée hydraulic ram.

86. Remberge (Château de la) ★

Also known as ‘Ramberge’ prior to 1914
[47°31′06″N, 1°00′14″E: HOUSE]
1—Centre: 37 Indre-et-Loire, ‘par Autrèche’.
2—1882.
3—1) Auguste-Sylvain Bollée.
2) M Boulay (see notes).
4—1) No. 3 head (5m diameter).
2) A 4-unit column, with eight two-piece main and four one-piece intermediate stays.
3) The circular cap-platform had serpentine balusters, but lacked cardinal points.
4) A spiral staircase, with straight balusters and pierced treads, gave access to the platform.
5) The base is concentric, with four tiers of concrete on rubble infill or bricks laid radially.
6) The pump-house is circular in plan, made of coursed brick, with coping beneath the edge of the conical roof.
The round-headed wooden door opposite the entry of the drive shaft (and possibly also an accompanying window) is set in a wood frame within ashlar quoins. The roof originally had slates (now replaced) laid over wood rafters and purlins, and rises to a small lantern or ventilator with an ogee finial of sheet lead.

7) The pump is assumed to have been the three-throw type, with an overhung crank and six serpentine flywheel spokes.

8) The well lies beneath the pump.

5—Visited by Régis Girard in June 2007.


6—The March 1891 list names the client as ‘M de Bussierre’ and gives the power head as ‘No. 2’ (3·5m diameter). It is not known if this was a transcription mistake, or if the existing No. 3 is a replacement.

87. Ninet (‘Domaine de’) ⛩
[EXACT LOCATION UNKNOWN]

1—Champagne: 51 Marne, 51100 Reims.

2—1882.

3—1) Auguste-Sylvain Bollée.

2) M Ninet, ‘Négociant’.

4—No. 1 head (2·5m diameter).

2) Column mount.

5—Dismantled.

6—The domaine de Pez dates from the fifteenth century, one of the oldest in Saint-Estèphe. It was acquired in 1585 by Jean de Pontac, and the first vineyard was created shortly afterward. Confiscated at the time of the French Revolution, it was sold as ‘propriété de l’état’ to a M Tarteirony, passing successively into the hands of the Balguerie and Lawton families. The proprietor at the time of the éolienne purchase was William Lawton, a well-known Bordeaux wine merchant. His grandfather Guillaume Lawton (1753–1835) had become a partner in Tastet et Lawton in 1830. William had been born in 1824, but his father Henri died when he was only three years old. Consequently, on attaining his majority, Lawton assumed a guiding role in the partnership. He married Elisabeth-Charlotte Guestier (from another family involved in the wine trade) in 1849 and had one daughter, Madeleine, who in 1869 married Fernand, comte du Vivier de Fajy-Solignac; William, Fernand and Madeleine died in the château in 1902, 1903 and 1914 respectively. The estate then passed into the hands of the Bernard and Dousson families, until purchased in 1995 by Champagne Louis Roederer.

88. Lasalle-de-Pez (Château) ⛩
[45°15´29˝ N, 0°47´21˝ W: ÉOLIENNE]

1—Aquitaine: 33 Gironde, 33740 Saint-Estèphe.

2—1883.

3—1) Auguste-Sylvain Bollée.

2) M Peynieu.

4—1) No. 1 head (2·5m diameter).

2) Column mount.

5—Dismantled.

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4) A spiral staircase, with straight balusters and solid treads.
5) Believed to be a single-disc base, rendered over radially-laid bricks?
6) The pump house, approximately square, is made of coursed brick with a squared or ‘snecked’ rubble facing on the door wall and possibly stone(-faced?) pillars at each corner. The fabric shows considerable signs of repair, and the shallowly-pitched roof, on wooden rafters, is laid with modern clay tiles.
7) The three-throw overhung plunger-pump, with a gothic-style frame and a flywheel with six straight spokes.
8) A shallow sump beneath the pump?
9) Unknown (a sheet-steel tank nearby?).

5—Visited by Francis Bonneteaud in 2002 and again in 2004. Owner: M Rémy Sallette. Condition: erect, but missing many individual parts (e.g., some of the rotor blades and most of the stator blades). The platform floor-plates are also wasted through. Access: on private land.

6—This machine stands in the courtyard of the farm, and, as one of the older survivors, is in need of urgent attention as two of the main guys have parted.

90. Hatonnières (Château de) ✹

Currently listed on IGN maps as ‘Les Hattonnières’.

[EXACT LOCATION UNKNOWN]

2—1883.
3—1) Auguste-Sylvain Bollée.
   2) M Georges Surmont. ‘Propriétaire’.
4—1) No. 2 head (3·5m diameter).
   2) A column mount.
5—Dismantled.
91. **Biarritz** (2) [EXACT LOCATION UNKNOWN]

1—Aquitaine: 64 Pyrénées-Atlantiques (‘Basses-Pyrénées’), Biarritz.

2—1883.

3—1) Auguste-Sylvain Bollée.
2) Duc de Tamames.

4—1) No. 2 head (3.5m diameter).
2) A column mount.

5—The Éolienne is assumed to have been dismantled after the end of the Second World War.

92. **Bois Giroult** (Château le) [EXACT LOCATION UNKNOWN]

Also known as ‘Bois-Girault’

[48°51´17˝ N, 1° 07´38˝ E: HOUSE]


2—1883.

3—1) Auguste-Sylvain Bollée.
2) Mme Meunié.

4—1) No. 2 head (3.5m diameter).
2) Column mount.

5—Dismantled.

6—The location of this site, believed to be in what is now known as Buis-sur-Damville, is given as ‘Damville’ in Bollée’s August 1888 client-list. The house has an extensive range of outbuildings.

93. **Marcouville** (Château de) [EXACT LOCATION UNKNOWN]

[49°18´11˝ N, 1°22´33˝ E: HOUSE]

1—Centre: 28 Eure-et-Loir, ‘par Brezolles’.

2—1883.

3—1) Auguste-Sylvain Bollée.
2) Mme Vingtaine.

4—1) No. 2 head (3.5m diameter).
2) A 4-unit column?

5—Dismantled.

6—The ‘Château de Marcouville’ of 27440 Les Houvillais in the canton of Fleury-sur-Andelle, may present a plausible alternative location.

94. **Saint-Jacques le Mineur** (Château de) [EXACT LOCATION UNKNOWN]

Also known as ‘Château de Nonant’

[49°18´11˝ N, 1°22´33˝ E: HOUSE]

1—Basse-Normandie: 61 Orne, 61240 Nonant-le-Pin.

2—1883.

3—1) Auguste-Sylvain Bollée.
2) M Lepetit, ‘Propriétaire’.

4—1) No. 3 power head (5m diameter).
2) A column mount.

6—This stood in the grounds of a large fortified house with eleventh-century origins. A chapel dedicated to Saint-Jacques le Mineur was built in 1503, giving the site its current name. Extensive changes were made to the site in the 1840s, and the château was acquired in 1863 by Jacques-Léonard Lepetit. The new owner created a stud-farm, ordering an Éolienne in 1883. The fate of the machine is in doubt, the survey undertaken in the early 1990s by Marc Valentin and Alain Froëchen, members of the Fédération Française des Amis des Moulins suggesting that it had been dismantled in the 1980s. However, the Ministère de la Culture et Communication ‘Archive Mérimée’ was listing it as ‘still standing’ in 2004.

95. **Fauvel** (Domaine de) [EXACT LOCATION UNKNOWN]

1—Basse-Normandie: 61 Orne, Saint-Pierre-d’Entremont, ‘par Montsecret’.

2—1883.

3—1) Auguste-Sylvain Bollée.
2) M Fauvel, ‘Propriétaire’.

4—1) No. 1 head (2.5m diameter).
2) A column mount.

5—Dismantled.

96. **Borde** (Château de la) [EXACT LOCATION UNKNOWN]

Now known as ‘Laborde’

[47°29´41˝ N, 1°40´23˝ E: HOUSE]

1—Centre: 41 Loir-et-Cher, [41230] Vernou-en-Sologne (‘par Cour-Cheverny’ in March 1891).
2—1884.
3—1) Auguste-Sylvain Bollée.
   2) M Bégé.
4—1) No. 2 head (3·5m diameter).
   2) A column mount.
5—Dismantled.

6—The house was built in 1643–5 by Guillaume de Flandres and remains largely in original condition, though the landscaped park was created in the nineteenth century. To supply the nineteenth-century ornamental lake, the vegetable garden and the nearby farm, an éolienne and possibly also an hydraulic ram were installed. The house and some parts of the site were listed as a ‘Monument Historique’ on 24th November 1994. According to the French government listing, only the ‘installation hydraulique’ survives, and it is not clear if this includes the wind-turbine.

97. Étrichets (Château les) ★
   Also known as ‘Etrichés’
   [48°03'25" N, 0°10'20" E: HOUSE]

98. Hameau (Maison/Château du) ★
   [48°04'06" N, 0°10'41" E: COURTYARD]

1—Pays de la Loire: 72 Sarthe, ‘à Saint-Saturnin près Le Mans’.
2—1884.
3—1) Auguste-Sylvain Bollée.
   2) M Lebert.
4—1) No. 2 head (3·5m diameter).
   2) A column mount.
5—Dismantled?

6—It is believed that this house was owned by Théophile-Arthur Lebert, father of Édouard-Émile Lebert, purchaser of Auguste Bollée’s business in 1898. Evidence is still lacking.
99. Marolles (Grande Ferme de) ⚫

[47°12’17” N, 1°07’28” E: ÉOLIENNE]

1—Centre: 37 Indre-et-Loire, La grande ferme de Marolles ‘par Genillé’ (near 37460 Le Liège).
2—1884.
3—1) Auguste-Sylvain Bollée.
   2) M Raoul-Duval.
4—1) No. 1 head (2.5m diameter), with an Entonnoir.
   2) A 3½-unit column, with six two-piece wrought iron cap-guys and three one-piece column stays.
   3) The cap-platform is circular, with serpentine balusters but no cardinal points.
   4) A spiral staircase with ribbed solid treads gives access to the platform.
5) The base, shrouded in undergrowth, is believed to be a concentric two-tier type with four (?) steps. The base of what could have been another Éolienne stands within 5 metres of the pump-house, but no other evidence is visible.
6) The pump house is rectangular in plan, built of coursed brick on a rendered brick base. The pitched roof is tiled to the ridge.
7) The standard three-throw gothic frame pump was used, with an overhanging crank, six straight flywheel spokes and oil grooves on the trunk guides.
8) The well is a shallow sump beneath the pump house.
6—Known locally as La Grande Ferme Neuve, the ‘model farm’ was originally created in the mid-nineteenth century by Philippe Dubreuil-Chambardel and then completely transformed in the early 1870s by Fernand Raoul-Duval (1833–92). Raoul-Duval had been born into a family of successful industrialists in Marolles-en-Brie, in the department of Seine-et-Marne, explaining the name of the mansion and the estate. Among the family enterprises was La Crépinière, a nearby brick- and tile-making factory created in 1867 by Raoul Duval-Dassier, which boasted quatre fours a feu continu (‘four furnaces continually in operation’). Fernand Raoul-Duval duly trained as a mining engineer, but was also committed also to improving agriculture throughout Indre-et-Loire. His farm was sufficiently important for the then-President of France, Marshal Mac-Mahon, to perform the grand opening on 19th September 1877.
   = The Entonnoir suggests that the machine had been ordered in 1884 but erected in 1885; the maker’s plate is now missing, and some of the parts show minor damage. It was allegedly positioned ‘adjoining the other Éolienne’ (see entry no. 32).

100. Mesnes (Château de) ⚫

[47°16’53” N, 1°16’41” E: HOUSE]

1—Centre: 41 Loire-et-Cher, ‘à la commune de Mareuil, par Saint-Aignan’ (41110 Mareuil-sur-Cher).
2—1884.
3—1) Auguste-Sylvain Bollée.
   2) M A. Johnston.
4—1) No. 3 head (5m diameter).
   2) A column mount.
5—Dismantled.
6—This estate was sold in 1850 to Louis Félix Faure, an industrialist from northern France, and then in 1875 to Arthur Johnston, descendant of an old Scottish family settled for many generations in Bordeaux. The house was entirely reconstructed in 1878–82, though additions were still being made as late as 1890. It was sold out of the family shortly after the end of the First World War and became a hospice in 1954.
101. **Lécureuil** (Maison)  
[EXACT LOCATION UNKNOWN]  
1—Pays de la Loire: 72 Sarthe, Pontlieue ‘près Le Mans’.  
2—1884.  
3—1) Auguste-Sylvain Bollée.  
2) M Lécureuil, ‘Propriétaire’.  
4—1) No. 1 head (2·5m diameter).  
2) A column mount.  
5—Dismantled.

102. **Bertrand** (Maison)  
[EXACT LOCATION UNKNOWN]  
1—Pays de la Loire: 72 Sarthe, ‘à Sablé[-sur-Sarthe]’.  
2—1884.  
3—1) Auguste-Sylvain Bollée.  
2) M Bertrand, ‘Propriétaire’.  
4—1) No. 1 head (2·5m diameter).  
2) A column mount.  
5—Dismantled.

103. **Collège des jeunes filles**  
[47°15’16” N, 0°04’27” E: ÉOLIENNE SITE]  
1—Pays de la Loire: 49 Maine-et-Loire,  
‘Collège municipal des jeunes filles à Saumur’.  
2—1884.  
3—1) Auguste-Sylvain Bollée.  
2) The college authorities.  
4—1) No. 2 head (3·5m diameter).  
2) A column mount, 4½ units-high if the engraving of the site is to be trusted.  
3) A circular cap-platform, with serpentine balusters and (possibly) cardinal points.  
4) A spiral staircase, with straight balusters and solid treads.  
5) Believed to be a three-tier base, material unknown.  
6) The pump house, rectangular in plan, was set into the corner of the curtain wall surrounding the jardin potager. It may have been constructed of dressed

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**No. 103**
stone, and had an ridge-roof of slates laid on wooden rafters.  
7) The three-throw overhung plunger-pump would have had a gothic-style frame and a flywheel with six straight spokes.  
8) A shallow well presumably lay beneath the pump.
5—Dismantled. The site is now covered by a college building.  
6—The 'college for young girls' was founded in 1881, one of the first to be created in response to a law permitting the extension of state-controlled secondary education to girls. A pensionnat was used as a temporary schoolhouse for the first three years, while an impressive building immediately to the south of the Château de Saumur was constructed in 1884–5. The wind-engine provided the school and its gardens with water.

104. **Vigie** (Villa La) 
[EXACT LOCATION UNKNOWN]  
1—Aquitaine: 64 Pyrénées-Atlantiques ('Basses-Pyrénées'), Biarritz.  
3—No. 1 head (2·5m diameter).  
2—A column mount.  
5—Dismantled.

105. **Dufresnoy** ('Domaine de') 
[EXACT LOCATION UNKNOWN]  
3—No. 1 head (2·5m diameter).  
2—A column mount.  
5—Dismantled.

106. **Thuillier** (Domaine de)
two-piece wrought iron cap-guys and three one-piece column stays.

3) The cap-platform is circular, with serpentine balusters but no cardinal points.

4) A spiral staircase, with plain balusters and pierced-and-ribbed treads, gives access to the platform.

5) The base is a concentric-circle design, possibly made of rendered brickwork.

6) The pump-house, circular in plan, is made of coursed brick with a conical roof of eighteen courses of graduated slates laid over wood rafters and purlins. The roof is topped by flashing and a simple rolled sheet-steel finial. The six-plank wood door is set into a wood frame, with a wooden lintel that extends the width of about two bricks outside the frame.

7) The standard three-throw gothic frame pump is used, with an overhung crank and six serpentine flywheel spokes.

8) The well lies beneath the pump.

9) It is assumed that water was raised to a tank, though none survives in the immediate vicinity of the Éolienne.

5—Visited by Régis Girard in March 2003. Owner: believed to be the conseil municipal de Tours. Condition: very good, though encroachment of a ring of mature trees (perhaps planted deliberately as a screen) presents a long-term threat. Access: public.

6—Auguste-Sylvain Bollée named the client in August 1888 as ‘M Blanchard, banquier, Tours,’ but his March 1891 list names ‘M Cottier, propriété des Hâtes et Château de Cangé…’ The machine stands in the ‘Bois des Hâtes,’ part of the Forêt de Larçay—named after a commune on the north bank of the Loire about 3km from the site. It retains a complete Entonnoir which, given the proximity of the date of construction to the grant of the patent, suggests that it was among the first Éoliennes Bollée to be so fitted.

109. Montoire-sur-[le]-Loir

[EXACT LOCATION UNKNOWN]

1—Centre: 41 Loir-et-Cher, [41800] Montoire-sur-[le]-Loir.

2—1885.

3—1) Auguste-Sylvain Bollée.

2) M Champelsuvier.

4—1) No. 1 head (2.5m diameter).

2) A column mount.

5—Dismantled?

6—The client was named as ‘Champelauvier’ in the March 1891 list. The site may have been Château de la Fosse (47°46´40˝N, 0°50´49˝E), which still has extensive gardens and an impressive pigeonnier. Capitaine François-Joseph-Charles Champelauvier (born in 1876) of the French infantry was killed in action on 23rd September 1914; his death notice places his family in Montlouis,
but, unfortunately, gives no additional details. He appears to have been the son of a Parisian banker, possibly the purchaser of the Éoliene, and married in Montlouis in 1899.

110. Nitray (Château de) ✤

[47°20´28˝N, 0°53´35˝E: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, ‘par Athée[-sur-Cher]’ or ‘Saint-Martin-le-Beau’.
2—1885.
3—1) Auguste-Sylvain Bollée.
       2) Baron Liébert.
4—1) No. 2 head (3·5m diameter).
       2) A 3½-unit column with six two-piece wrought iron cap-stays and three one-piece column stays.
       3) The cap-platform is circular, with serpentine balusters and cardinal points.
       4) A spiral staircase, with straight balusters and pierced segmental treads, gives access to the platform.
       5) The base has three concentric tiers of concrete over either rubble or bricks laid radially.
       6) The pump-house, rectangular in plan (perhaps lengthened), made of coursed brick stone or concrete pillars at the vorners. The roof consists of slates laid over wooden rafters and purlins, the edges of the latter over-reaching the walls. The wood door, battened, ledged and braced, is set in a wooden frame with a brick-infilled panel above the lintel.
       7) The pump is assumed to be the three-throw gothic frame type, with an overhung crank and six serpentine flywheel spokes.
       8) The well lies directly beneath the pump house.
5—Visited by Régis Girard in June 2007.
6—The house, dating from 1516, was an ancient fief of the Château de Montbazon. It was restored by Liébert in the nineteenth century. Only the column and balustraded platform of the éolienne survive, as the head was scrapped many years ago (perhaps in the 1960s). A pole attached to the crown of the column now anchors a wind-sock used by the local airfield.

111. Philberdière ✤

(Domaine or Château de la)
Also known as ‘Philberdière’ or ‘Restigné’
[47°16´54˝N, 0°16´54˝E: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, Domaine viticole de la Philberdière, 37140 Restigné.
2—1885.
3—1) Auguste-Sylvain Bollée.
       2) M Eugéne Princé, ‘Propriétaire’.
4—1) No. 2 head (3·5m diameter), possibly
with an Entonnoir.
2) A 4½-unit column mount with six main and three intermediate guys.
3) The circular cap-platform has serpentine balusters, cardinal points.
4) A spiral staircase, with straight balusters and pierced segmental treads, gives access to the platform.
5) The base is believed to be concentric.
6) The pump-house may be circular in plan, with a conical roof.
7) The pump was the standard three-throw type, with an overhung crank and six serpentine flywheel spokes.
8) A well lies beneath the pump house.
9) A cylindrical sheet-metal water tank rises alongside the site.
6—The Aubry family owns ‘Domaine Aubry et fils’ and ‘GFA de la Philberdière’, the businesses responsible for exploiting the estate vineyard (vignoble). Red Bourgueil AOP wine is made from Cabernet franc grapes.

112. Rigaudières (Château les) ⚫
Also known as ‘La Maison de Maître’
[47°19’11”N, 0° 0’18”W: HOUSE]
1—Pays de la Loire: 49 Maine-et-Loire, ‘à Allonnes, près Saumur’ (49650 Allonnes près Saumur, chemin des Rigaudières).
2—1885.
3—1) Auguste-Sylvain Bollée.
2) M Pottier.
4—1) No. 1 head (2·5m diameter).
2) A column mount.
5—Reported by Bernard Sauldubois to be extant in 2003. Owner: not known. Condition: said to be very good, including a near-complete Papillon. Access: situated on private land.
6—Built largely at the end of the eighteenth century.
century, this mansion originally commanded a large vignoble. However, the vines were devastated by phylloxera in the late 1870s and never replanted. The house is now an hotel.

113. Sorigny [EXACT LOCATION NOT KNOWN]
2—1885.
3—1) Auguste-Sylvain Bollée.
2) The communal council, to supply the wash-house and public water-fountains.
4—1) No. 1 head (3·5m diameter).
2) A 4-unit column mount, supported by six head- and three intermediate guys.
3) The circular cap-platform had serpentine balusters and with cardinal points.
4) A spiral staircase with plain balusters gives access to the platform.
5) The base is believed to have been a standard three-tier concentric design.
6) The pump-house lay alongside the column. Rectangular in plan, built of rendered brick or rubble, it had a pitched roof of tiles laid on rafters and purlins protruding from the gables. The roof also has decorative terracotta ridge tiles.
7) The standard three-throw overhung-crank pump was used.
8) The well lay under the pump house.
9) Water was pumped directly into adjoining Lavoir, which consisted of an open-top tank protected by a pitched roof of slates supported by pillars and laid on wood rafters and purlins (protruding at the gables), inset with five two-panel skylights on each side.
5—Dismantled, c. 1965.
6—Some of the Bollée client lists identify this machine as a ‘No. 3’ (5m diameter), but surviving picture-postcards of the pre-1914 period show quite clearly that it was the smaller No. 1. It is not clear whether this is a simple mistake; if the power-head had been changed; or if there was another Éolienne in Sorigny.

114. Temple (Château du) [47°06´36˝N, 0°25´14˝E: RESERVOIR PUMPHOUSE?]
2—1885.
3—1) Auguste-Sylvain Bollée.
2) M Lhuilier (or l’Huiller).
4—1) No. 3 head (5m diameter).
2) A column mount.
5—Dismantled?

115. Larose-Trintaudon (Château de). Also listed as ‘Trintaudron’ or ‘Trentandon’ [45°09´52˝N, 0°47´12˝W: HOUSE]
1—Aquitaine: 33 Gironde, ‘près Saint-Laurent’ [33112 Saint-Laurent-Médoc].
2—1885.
3—1) Auguste-Sylvain Bollée.
2) M Desmons.
4—1) No. 2 head (3·5m diameter).
2) Column mount.
5—Dismantled.
6—This estate was created in 1838 out of the ‘tènement de Trintaudon’ by Henri Delaroze (or ‘De la Rose’), mayor of Saint-Laurent and proprietor of the domaine de Perganson. Ownership passed in 1858 or 1859 to comte Ernest de Lahrens, for whom the château had been built by 1884. Bollée listed the estate as ‘Château Larose-Trintaudon’ in 1891 and ‘Larose-Trentandon’ in 1894, but the true spelling will be encountered on the wine-labels. Some of those printed during the 1920s even showed the éolienne.
= Larose-Trintaudon was sold in 1923 to a Russian émigré, ‘M le Comte Tchernoff’, who pulled up many of the vines in an ill-advised attempt to create a commercial dairy of immense
proportions. This project failed during the Depression, and the estate was sold to the Duc del Infantado (a Spanish army officer) before passing in 1963—virtually in ruins—into the hands of the Forner family.

= Now owned by les Assurances Générales de France, it has been restored to its former eminence.

116. Trinité (Château [de] la)

[48°40´22˝N, 0°43´18˝ E: ÉOLIENNE BASE?]

1—Basse-Normandie: 61 Orne, Beau lieu ‘par Saint-Maurice-les-Charencey’ or “Environ l’Aigle”.

2—1885.

3—1) Auguste-Sylvain Bollée.

2) M Boucher.

4—1) No. 1 head (2·5m diameter).

2) A column mount.

5—The Éolienne (or at least its base) and a neighbouring water tank may still survive: more details are being sought.

117. Benais (Château de)

[47°17´42˝N, 0°12´51˝ E: HOUSE]

1—Centre: 37 Indre-et-Loire, 37140 Benais.

2—1886.

3—1) Auguste-Sylvain Bollée.

2) M le Comte de Fitz-James.

4—1) No. 2 head (3·5m diameter).

2) A column.

5—Dismantled.

6—This site had two éoliennes (see also no. 130), but neither survives.

118. Saint-Vincent (Château de) *

Also known as ‘Borest’

[49°10´26˝N, 2°41´04˝ E: CHÂTEAU]


2—1886.

3—1) Auguste-Sylvain Bollée.

2) M Gibert, ‘Propriétaire’.

4—1) No. 1 head (2·5m diameter).

2) A 4-unit column mount, with six head- and three intermediate guys.

3) A circular cap-platform, with serpentine balusters and cardinal points.

4) A spiral staircase with pierced (and presumably ribbed) treads.

5) Concentric, two tiers, of brick and rubble?

6) Square in plan, the pump house is made of coursed brick with the arched door and window apertures of brick
The pyramidal roof is apparently battened sheet-lead over wood rafters rising to a slender octagonal wooden (?) lantern with a faceted roof rising to a ball finial.

7) Presumed to be the standard three-throw plunger pump, with a gothic frame, an overhung crank, and a flywheel with six serpentine spokes.

8) A well directly beneath the pump.

5—Still standing in 2010, hidden within a copse but still in good condition.

6—The geographical co-ordinates refer to a large house near Fontaine-Chaalis, whose ornamental park and lakes close to the banks of the Nonette river best fit the description of the Éolienne site.

119. Couplehaut (Château de)
[48°30´23˝N, 0°30´18˝E: HOUSE]


2—1886.

3—1) Auguste-Sylvain Bollée.

2) M de Mallevoue (Mallevoue?).

4—1) No. 2 head (3·5m diameter).

2) A column mount.

5—Dismantled.

6—In ‘Courgeoûn’ by the 1888 client-list.

120. Haut-Breton-Larigaudière (Château)
[45°03´20˝N, 0°42´06˝W: HOUSE]

1—Aquitaine: 33 Gironde, ‘Château de Haut-Breton, commune de Soussant’ (33460 Soussans, rue des Anciens Combattants).

2—1886.

3—1) Auguste-Sylvain Bollée.

2) M Landau, ‘Consul de Chili’.

3) The site was surveyed in 2001, but has yet to be protected.

4—1) No. 3 head (5m diameter).

2) Column mount.

6—The mansion and landscaped park, now enshrouded by urban development, apparently date from the second half of the nineteenth century. Landau, a member of a well-known mercantile/banking family, had acquired the property by 1878. The Éolienne was installed after the house had been completed. Prosperity declined until, by the 1930s, the vineyard was virtually derelict. Its fortunes revived in 1964, after it had been acquired by negociant G. de Mour, and again after the sale to Belgian vintner Jacques de Schepper in 1992. Thorough renovation of the house and vineyard have restored much of the once-lost reputation.

121. Monge (Château de la)
[48°10´45˝N, 0°37´47˝E: HOUSE]

1—Pays de la Loire: 72 Sarthe, ‘Saint-
122. École d’Artillerie [de Poitiers]

[EXACT LOCATION UNKNOWN]
1—Poitou-Charente: 86 Vienne: l’École d’Artillerie, Poitiers.
2—1886.
3—1) Auguste-Sylvain Bollée.
2) The French army (‘9e corps d’armée’).
4—1) No. 3 power head (5m diameter).
2) A column mount.
5—Dismantled.

123. Prégilbert

[47°38’34”N, 3°39’33”E: LAVOIR]
2—1886.
3—1) Auguste-Sylvain Bollée.
2) Le conseil communal, to supply water fountains.
4—1) No. 3 head (5m diameter).
2) Column mount.
5—Dismantled.

124. Tilloloy (Château de)

[49°38’44”N, 2°44’42” E: CHÂTEAU]
1—Picardie: 80 Somme, ‘par Roye’ [now 80700 Tilloloy].
2—1886.
3—1) Auguste-Sylvain Bollée.
2) Comte d’Hinnisdal.
4—1) No. 3 head (5m diameter).
2) A 3-unit column mount, with four main and eight supplementary guys.
3) A circular cap-platform with straight balusters, but no cardinal points.
4) A spiral staircase with ribbed-and-pierced treads.
5) Believed to be a concentric-circle base, made of rendered radially-laid bricks.
6) The pump-house is assumed to have been built into the support for the large cylindrical sheet-steel tank that stood within a few metres of the éolienne.
7) The standard three-throw plunger pump, with an overhung crank and a gothic-style frame.
8) It is assumed that the well lay directly beneath the pump, depth and construction unknown.
5—Destroyed by German shell-fire on 17th November 1914.
6—The mansion, in Louis XIV brick-and-ashlar style, was built for Charles-Maximilien-Antoine de Belleforière, Marquis de Soyecourt. The first stone was laid in 1645, but the house and its
‘vast park’ fell on hard times in the 1750s and were not restored until after the Revolution. = Some postcards showing the ‘Éolienne de Potager’ are taken in such a way that the machine can appear to be mounted on top of the water tank, but the layout was much more conventional. = The site was destroyed early in the First World War; but though the outbuildings were reconstructed in 1919–22 in the original style and the main house was completed in 1932, the wind-turbine was never reinstated.

125. Trilbardou (Château de) ✴

‘Trilbardou-sur-Marne’ on some postcards
[48°56’41”N, 2°48’12” E: CHÂTEAU]
1—Ile-de-France: ‘Seine-et-Marne, commune de Trilbardou’ (now Colonie de Vacances, rue de l’Église, 77450 Trilbardou).
2—1886.
3—1) Auguste-Sylvain Bollée.
   2) ‘M Koller’.
4—1) No. 3 head (5m diameter).
  2) A 4-unit column with eight two-piece wrought-iron adjustable stays and four one-piece wrought-iron stabilisers.
  3) A circular cap platform with trap-door access, serpentine balusters and ribbed cardinal points.
  4) A staircase spiralling around the column, with plain balusters, drainage holes cast integrally with the treads, and a decorative newel post.
  7) The standard three-throw plunger pump, with a gothic-style cast-iron frame, an overhung crank, and a flywheel with six serpentine spokes.
  8) Directly beneath pump house.
  9) Believed to have been a sheet-iron water tank.
5—Still standing in 2011. Details to add.
6—Said to have operated until 1973, this wind engine served a large mansion built on a riverside site. The original house was built for ‘Lieutenant de Police Lenoir’, who had acquired the land in 1788, but was reconstructed by M Keller in the late nineteenth century (when the ornamental park was created). It is
now a children’s holiday home, owned by the town council of Courneuve. Trilbardou was also once known for the *Usine élévatrice d’eau*, an 1860-vintage installation of four waterwheel-driven pumps—the work of engineer Alphonse Sagebien (1807–92)—which lifted water from le Canal de l’Ourcq to serve the commune.

126. *Violettes (Villa des)* [EXACT LOCATION UNKNOWN]

1—Pays de la Loire: 72 Sarthe, ‘à Chenu par Vaas’.
2—1886.
3—1) Auguste-Sylvain Bollée.
2) M Brûlé.
4—1) No. 1 head (2.5m diameter).
  2) A 4-unit column, with six main and three intermediate guys.
3) The circular cap-platform had serpentine balusters, but apparently lacked cardinal points.
4) A spiral staircase with pieced (?) treads and plain balusters gave access to the platform.
6) The pump house was apparently a combination pump house/water tank, circular in plan, with crenellations.
7) The pump is assumed to have been the standard three-throw pattern, with an overhung crank and six serpentine spokes.
5—Dismantled.
6—Owned in March 1891 and February 1894 by ‘Mlle Diet’. A picture-postcard, probably dating prior to 1910, shows that the Éolienne and the pump house stood in a walled garden extending downhill from the mansion. The mansion was demolished in the early 2000s to make way for residential apartments.

127. *Bollée (‘Maison Auguste’)†* [47°56′40″N, 0°11′02″E: ÉOLIENNE SITE]

*Also known as ‘Arnage’*

1—Pays de la Loire: 72 Sarthe, 72330 Arnage, 134-bis Avenue Nationale (now removed: see notes).
2—1887.
3—1) Auguste-Sylvain Bollée.
2) Auguste-Sylvain Bollée.
4—1) No. 2 power head (3.5m diameter), with an Entonnoir.
2) A 4-unit column mount supported by six primary and three secondary guys.
3) The cap-platform is circular, with recurved balusters and flat cardinal points.
4) A spiral staircase, with plain balusters and drain holes in the ribbed treads, gives access to the head.
5) The circular base is made of concrete (or possibly rendered brick) edged with a torus and decorated with two circumferential astragals.
6) The pump house, circular in plan on a brick base, comprised smooth rendering (scribed to masquerade as dressed stone) beneath two brick string-courses separated by glazed polychrome tiles. Rough-rendered brickwork rose from the upper string course to the eaves of the roof. The roof was once conical, originally with graduated slates laid over wood rafters but subsequently thatched. Set in brick pillars, the door had a shallow arch. The drive shaft from the base of the column entered through one of the large-diameter circular apertures edged with bricks laid radially. Glazed tiles were used as decoration on the external pump-house wall.
7) The pump was a variant of the three-throw overhung-crank design, operating the pump-chambers directly.
8) The well was a shallow sump, only about 2m deep, relying on the river Sarthe nearby.
9) A sheet-metal storage tank stood beside the gardener’s house. With a capacity of 8m³, it was cylindrical and supported on cast-iron columns.
5—Visited by J. Kenneth Major in April 2002, when owned by M. Martineau. It was in good condition, though in need of painting and repairs to the pump house, but was removed in 2007 (see below).
6—This wind engine was built in the grounds of Auguste-Sylvain Bollée’s house, erected in 1886 in Arnage, then a small village to the south of Le Mans. However, the property was sold in 2007 and the Éolienne was given to the Maison de l’Eau at l’Arche de la Nature in Le Mans. It was then dismantled for refurbishment. The unique pump had already been removed to stand alongside the column, and was also taken away. Unfortunately, it does not seem that the idiosyncratic thatched-roof pump house has been saved (though traces of it may remain in situ).

128. Aune (Forge l’) ❁
[EXACT LOCATION UNKNOWN]
1—Pays de la Loire: 72 Sarthe, Forge de l’Aune ‘par Fresnay-sur-Sarthe’.
2—1887.
3—1) Auguste-Sylvain Bollée.
2) M Hédin, ‘Maître de forge’.
4—1) No. 2 head (3.5m diameter).
2) A column mount.
5—Dismantled.

129. Bédat (Château du) ❁
[EXACT LOCATION UNKNOWN]
1—Midi-Pyrénées: 32 Gers, ‘par Aignan’.
2—1887.
3—1) Auguste-Sylvain Bollée.
2) M Gault.
4—1) No. 3 head (5m diameter).
2) Column mount.
5—Dismantled.

130. Benais (Château de) ❁
[47°17’42”N, 0°12’51”E: HOUSE]
1—Centre: 37 Indre-et-Loire, 37140 Benais.
2—1887.
3—1) Auguste-Sylvain Bollée.
2) M le Comte de Fitz-James.
4—1) No. 1 head (2.5m diameter).
2) A column.
5—Dismantled.
6—This site had two éoliennes (see also no. 117), but neither survives. According to Bollée catalogue entries, Fitz-James had sold the Benais estate to Vicomte de Soulier by February 1894.

131. Bruyère (Château de la) *

[47°22'12"N, 0°25'36"E: ÉOLIENNE]

1—Centre: 37 Indre-et-Loire, 'près Bruyère par Cinq-Mars-la-Pile'.
2—1887.
3—1) Auguste-Sylvain Bollée.
   2) M Girard-Bouvet.
4—1) No. 3 head (5m diameter) with an Entonnoir.
   2) A 5-unit column supported with eight two-piece wrought iron guys and four one-piece intermediate stays.
   3) The cap-platform is circular, with serpentine balusters and cardinal points.
   4) A spiral staircase, with straight balusters and pierced-and-ribbed treads, gives access to the platform.
   5) The base is three-tier concentric, made of concrete over rubble or bricks laid radially.
   6) The pump house takes the form of an elongated hexagon, made of coursed ashlar blocks, beneath a pitched roof of slates laid over wood rafters and purlins. The ridge has a line of tiles between two sheet-metal finials, and there are at least two massive (concrete?) buttresses supporting the walls.
   7) The pump is assumed to be the standard three-throw type, with an overhung crank and six serpentine flywheel spokes. A ring of gear-teeth on the flywheel could be used to drive an electric motor/dynamo unit.
   8) The well lies beneath the pump, depth unknown.
   9) An impressive water tower stands about thirty metres westward of the pump-house. It consists of a rectangular...
centre block of coursed ashlar, with the tank (out of sight internally) forming the second floor. A third floor, a later addition of inferior construction over the tank-top, has a pitched roof of slate on wooden rafters. Two ‘lean-to’ wings of coursed ashlar join the main block. They also seem to be additions; though built in the same style as the body of the tower, their roofs half-obscure the end-wall bull’s eye windows that dominate the first floor of the building, and they interrupt the prominent corner-quoins that descend to the ground only at the front and the rear. However, as the style of the quoined corners and arched doorways match throughout, it is concluded that the ‘wings’ were added comparatively quickly.


6—The house and land were purchased in 1919 by the grandfather of Mme Monique Allain-Castillo (the Marquesa de Casa-Pizarro) from the widow of the son of the original owner. The younger M Girard-Bouvet had been killed during the First World War. The wind engine continued to work into the 1980s, and, as a result, remains in surprisingly good order. The owners are hoping to restore the water supply to the lakes and reservoirs in the château grounds by recommissioning their Éolienne.

132. Chaalis (Château de) ★★★

Also known as ‘Pomponne’ or ‘Montjay-la-Tour’
[48°52´55˝ N, 2°40´55˝ E: CHÂTEAU]
1—Île-de-France: originally listed as ‘Seine-et-Marne, par Lagny’, now Rue de Bordeaux, 77400 Pomponne.
2—1887.
3—1) Auguste-Sylvain Bollée.
4—1) No. 3 head (5m diameter).
2) M Bacot.
3) A 5-unit column mount with eight head- and four intermediate guys.
4) A 5-unit column mount with eight head- and four intermediate guys.
5) A circular cap-platform with serpentine balusters and ribbed cardinal points.
4) A spiral staircase with holes cast integrally with the treads.
5) About two metres high, attached to the pump house, the base comprises a rustic stone retaining wall around what presumably is paved-over rubble infill. A wooden staircase gives access to the platform.
6) Set on top of the pump chamber, and contiguous with the wind-turbine base, the pump house is essentially rectangular. The walls appear to be rendered over brickwork. There is a decorative plinth, a string-course projecting at hip height, and a narrow
chequerboard frieze beneath the projecting eaves. The double-pitched slated roof has a finial at each end of the short ridge. The door is set in a flat arch with a prominent keystone, and is reached with a wooden staircase.

7) The standard three-throw plunger pump, with an overhung crank and serpentine fly-wheel spokes.

8) A brick-lined sump beneath the pump house, 2.5m deep.

9) Water was supplied to a reservoir 800m from the pump-site.


6—This machine, listed on the CFPPHR website as ‘Montjay-la-Tour 77410’, ceased working only in 1976. It was erected to serve a mansion built in brick and ashlar, Louis XIII style, in 1882–5. An announcement made in 2001 suggested that the Éolienne was to be demolished to make way for the route of the new TGV EST (high-speed railway line). Work was to have commenced in the summer of 2003, but a change of heart led to the removal of the Éolienne and pump-house to a new site alongside the château gate-house. The local industrial-history society began a campaign to safeguard the long-term future of the wind engine in 2004.

134. Froger (Domaine de) ✹
Also known as ‘Richelieu’
[EXACT LOCATION UNKNOWN]
1—Centre: 37 Indre-et-Loire, Richelieu.
2—1887.

3—1) Auguste-Sylvain Bollée.
2) Mme Froger, ‘Propriétaires’.

4—1) No. 2 head (3.5m diameter).
2) A column.

5—Dismantled.

135. Rolletière (Château de la) ✹
Now known as ‘La Roltiè re’
[47°37´49˝N, 0°01´57˝E: HOUSE]
1—Pays de la Loire: 72 Sarthe, ‘par le Lude’ (Savigné-sous-Le-Lude?).
2—1887.

3—1) Auguste-Sylvain Bollée.
2) M le Comte de Lesseville.

4—1) No. 3 head (5m diameter).
2) A column mount.

5—Assumed to have been dismantled.

136. Serigny (Château de)
[47°29´54˝N, 1°29´47˝E: HOUSE]
1—Centre: 41 Loir-et-Cher, ‘par Cour-Cheverny’.
2—1887.

3—1) Auguste-Sylvain Bollée.
2) M Adeline.

4—1) No. 3 head (5m diameter).
2) A column mount.

5—Dismantled?
6—The Éolienne probably stood in or near the jardin potager.

137. Courtois (Maison) ✹
[47°52´44˝N, 0°32´42˝E: HOUSE]
1—Pays de la Loire: 72 Sarthe, Verger ‘près Le Grand-Lucé’ (72440 Tresson).
2—1887.

3—1) Auguste-Sylvain Bollée.
2) M A. Courtois, ‘Propriétaires’.

4—1) No. 1 power head (2.5m diameter).
2) A 4-unit (?) column.

5—Still standing in 2002, when visited by
No. 139. The Éolienne of the Château de Beauval, erected in 1888, has been restored to working order. Photograph taken by Francis Bonneteaud, 2006.

6—Said to have been for sale in 2002, though nothing more is known at the time of writing.

138. Sainte-Claire (Monastère de) ❋
Also known as 'Alençon'

[EXACT LOCATION NOT KNOWN]
1—Basse-Normandie: 61 Orne, Alençon.
2—1888.
3—1) Auguste-Sylvain Bollée.
2) Les Petites-Sœurs des Pauvres ('Little Sisters of the Poor').
4—1) No. 2 power head (3.5m diameter).
2) A column mount.
5—Dismantled.
6—The site is assumed to have been in the grounds of the Monastère de Sainte-Clare et ses Religieuses, but could just possibly have served the nearby Couvent des Carmélites. Confirmation is still needed.

139. Beauval (Château de) ✸ ✹ ✸
Also known as 'Bassens'
[44°54´44˝N, 0°30´21˝W: ÉOLIENNE]
1—Aquitaine: 33 Gironde, 'à Bassens près [33530] Carbon-Blanc'.
2—1888.
3—1) Auguste-Sylvain Bollée.
2) 'M Hubert-Plom'.
4—1) No. 2 head (3.5m diameter).
2) A 4-unit column mount, with six two-piece wrought-iron guys and three one-piece stabilisers.
3) A circular platform with serpentine balusters and ribbed cardinal points.
4) A spiral staircase with straight balusters and pierced treads.
6) The pump house is concentric with (but larger than) the water-tank. The base has a diameter of about 11.5m, built of rendered rubble with ashlar quoins around the doorway and window aperture, and ashlar coping. The design was intended to harmonise with the nearby lavoir and farm house, and is similar to that found at Les Clerbaudières (q.v.).
7) The standard three-throw overhung gothic-frame plunger pump, modified by the addition of a sturdy wrought-iron bar to support the foot bearing. Each end of this bar is attached to an anchor embedded in the wall, and two additional brackets run upward from the head-gear frame. A large pinion on the main vertical shaft engages with a similar pinion on the crankshaft, apparently at a ratio of about 1:1. The flywheel has straight spokes, and the presence of a clutch-plate on the tip of the foot-bearing end of the crankshaft suggests the possibility of external drive. This is the only surviving pump with the 'optional extra' ball valves.
8) A brick-lined well lies directly beneath the pump-house, with a diameter of 2.5 metres and a depth of about 20 meters. The pumps are placed about 15m below ground level.
9) A large cylindrical rendered-rubble water tank, probably lined in sheet metal, sits on top of the matching pump-house. The total height of the buildings is about 8 metres.

6—This particular machine was restored by students of the École Nationale des Arts, Sciences et Métiers (ENSAM), Bordeaux. The construction is interesting, but some details are still unclear. It is believed that one column-unit runs down through the water tank, and thus that there are four units instead of the three visible between the tank-top and the platform. = The land was purchased in 1726 by the widow of Guillaume de Conilh, once
treasurer-general of France, and building of the Château de Beauval began immediately. The last ‘Widow Conilh’ bequeathed the estate to a cousin in 1857, but within three years it had been acquired by a prosperous ship owner, Louis-Hubert Plom. He immediately began restoration of the château, then landscaped the grounds and ordered an éolienne to provide water.

The estate passed through a variety of hands until 1976, when it was sold to estate agents. The failure of this business in 1991 allowed the local authorities to acquire the château, which was in very poor repair.

Refurbishment of the house inspired work on the Éolienne Bollée to begin in February 1995, and the official reopening took place on 13th September 1997.

140. Ravenau (Maison) ₩

(Maison) ₩

[48°41’23”N, 1°04’20” E: ÉOLIENNE]

1—Centre: 28 Eure-et-Loir, 28270 Brezolles.
2—1888.
3—1) Auguste-Sylvain Bollée.
2) M Ravenau, Propriétaire.
4—1) No. 2 head (3·5m diameter).
2) A 4-unit column mount with six two-piece guys and three one-piece stabilisers.
3) The cap-platform is circular, with serpentine balusters, and cardinal points.
4) A spiral staircase, with drainage holes cast integrally with the treads, gives access to the platform.
5). The base is a single disc, rendered over radially-laid brickwork (?).
6) The pump house is approximately square in plan, built of rendered brick (or perhaps rubble) panels with plain brick pillars at the corners. The walls are limewashed internally. Three courses of bricks running around the building immediately beneath the eaves are laid

alternately longitudinally (terracotta) and laterally (slate blue) to give a decorative diaper effect. A pitched roof of about fifteen courses of slates, with lead guttering, rises to sheet-metal flashing and a short tapering hollow finial (partly missing). A wooden door on one side gives access to the pump, which is set below ground level.

7) The standard three-throw pump is used, with an overhung crank and six serpentine spokes on the flywheel.

8) The well lies directly beneath pump house. The lift was undoubtedly small, as the pumps are probably only 5m above the level of the nearby ornamental lake.

5—Visited by the British Engineerium/University of Brighton study group in April 2001. Current owner: le conseil municipal, La Mairie, Brezolles. Condition: the machine was in good order at the time of the visit, though the pump-house roof was verging on collapse and the interior had been invaded by ivy. The pump was also beginning to deteriorate. Access: by permission only, as the machine stands in the Mairie grounds.

6—This wind engine was erected privately, in the grounds of a ‘Third Republic’ château that had been built for Jules-Antoine-Étienne Ravenau (1815–85), who had been mayor of Brezolles. The wind-engine was apparently purchased by his son, but the male line of the family is said to have died out during the First World War and the house duly became the Mairie.

The Éolienne now bears a Lebert plate, which probably shows that a major repair or refurbishment had been made some time after 1898 (cf, Berchères-les-Pierres).
141. Ard (Maison)  

(EXACT LOCATION UNKNOWN)

1—Poitou-Charente: 17 Charente-Maritime ('Charente-Inférieure'), Cozes.
2—1888.
3—1) Auguste-Sylvain Bollée.
   2) M Ard, 'Propriétaire'.
4—1) No. 3 head (5m diameter).
   2) A 5-unit column mount, with eight main and four intermediate guys.
   3) A circular cap-platform with serpentine balusters and ribbed cardinal points.
   4) A spiral staircase, with flat treads pierced with drain holes.
   5) The base was apparently a single disc of concrete over a rubble core.
   6) The pump-house was cylindrical, coursed brick with a hexagonal roof of graduated slates—laid over wood rafters—rising to sheet-metal flashing and a finial. The wooden door is a ledged, battened and braced design and it is assumed that a single window with quartered glazing was cut in the wall opposite the door.
   7) Presumably the standard three-throw gothic frame pattern, with an overhung crank and a flywheel with six serpentine spokes.
   8) The well lies directly beneath the pump head-gear.
   9) Storage is assumed to have been a cylindrical sheet-metal tank on a stone or possibly rendered brick tower about fifty metres from the pump.
5—Dismantled.
6—The owner of this site, M Ard, recommended the Éolienne Bollée to M Laroche of the distillery in nearby Pons. A picture-postcard with a postmark dated 1904 also shows that a small ridged-roof building, perhaps open sided, stood close to the pumphouse on the side nearest the storage tank. It is suspected that this contained some method of controlling the water supply. A low range of buildings next to the water tank presumably contained animals.
142. **Lussac-les-Châteaux**

[Exact Location Unknown]

1—Poitou-Charente: 86 Vienne, ‘Commune de Lussac-les-Châteaux’ (86320 Lussac-les-Châteaux).

2—1888.

3—1) Auguste-Sylvain Bollée.
   2) Le conseil communal.

4—1) No. 3 head (5m diameter).
   2) A 4½-unit column mount, with eight two-piece wrought iron guys and four one-piece stabilisers.
   3) A circular cap-platform, with serpentine balusters, but no cardinal points.
   4) A spiral staircase with plain balusters and pierced-and-ribbed treads.
   5) Base design not known, but possibly concentric tiers.
   6) A rectangular pump house made of coursed brick. The hipped roof was apparently made of slate over wooden rafters.
   7) The standard three-throw gothic frame plunger-pump with an overhung crank and serpentine flywheel spokes.
   8) A well lay directly beneath the pump house.
   9) The distribution of water remains unclear. There may have been a tank or small wash-house in a building alongside the pump house, which was set on the edge of a low escarpment. Water may have then gravitated downward—one postcard view suggests a large-diameter vertical pipe descended from the cliff-top—and run off into a nearby lake (or reservoir).

5—Dismantled c. 1963.

6—Most of the details are taken from pre-1914 picture postcards, as only the remnants of the base of the wind engine can still be seen.

= The decision to improve the communal water supply seems to have been taken in the autumn of 1887, as Auguste-Sylvain Bollée visited the site early in January 1888.

= Despite strong objections raised by a local ‘Ingénieur-Mécanicien’, Eugène Wells of Poitiers (who favoured a steam engine), Bollée’s quotation dated 6th July 1888 was subsequently accepted and final approval was granted by the
Prefecture of Lussac-les-Châteaux on 22nd August 1888.

= It is assumed that construction began soon afterwards, but was probably not completed until sometime during the summer of 1889.

143. Marolles (Grande Ferme de) *

1—Centre: 37 Indre-et-Loire, la Grande Ferme de Marolles ‘par Genillé’ (near 37460 Le Liège).
2—1888.
3—1) Auguste-Sylvain Bollée.
   2) M Raoul-Duval.
4—1) No. 3 head (5m diameter) with an Entonnoir.
   2) A 5-unit column, with eight two-piece wrought iron cap-guys and four one-piece column stays.
   3) The cap-platform is circular, with serpentine balusters and cardinal points.
   4) A spiral staircase with pierced-and-ribbed treads gives access to the platform.
5) The base is an unusually deep two-tier concentric design, with metal staple-type steps.
6) The pump room is to be found inside the adjoining building.
7) The standard three-throw gothic frame pump was used, with an overhung crank and six serpentine flywheel spokes.
8) The well lies directly beneath the pump.
9) A water tank is believed to have been placed in the eaves of the adjoining building.
5—Visited by a British Engineerium study group in May 2002 and by Régis Girard in the summer of 2005. Owner: not known. Condition: good, but deteriorating. Much of the Papillon is missing and the Entonnoir is fragmentary. Access: on private land, but visible above the
No. 143. The unique No. 3 éolienne installed by Bollée to serve the Grande Ferme de Marolles in 1888 is anchored partly to the adjoining building. It also has an unusually high drive achieved by raising the base and inserting an additional half-unit column. It is by no means certain that this is the original configuration, however, and alterations may have been made by Lebert.

Photograph by Régis Girard, 2005.
buildings from the main road.
6—This is a fascinating survival. Not only are four of the head stays anchored to wrought-iron wall plates, but the column is made of four whole and two half-sections (½:1:1:1:½). The presence of a Lebert plate may indicate that what was once a straightforward Bollée installation has been extensively altered. It may even have been moved from somewhere else on the fram, but evidence is lacking. The changes may have included raising the pump-head girders above head height, allowing the tandem attachment of two eccentric-driven deep-well pumps and an alternative drive from a gas or (perhaps later) oil engine by way of a transverse shaft at the rear of the pump room.

144. Beauregard (Villa) [EXACT LOCATION UNKNOWN]
1—Centre: 37 Indre-et-Loire, Montlouis-sur-Loire.
2—1888.
3—1) Auguste-Sylvain Bollée.
2) M J. Dubois, ‘Propriétaire’.
4—1) No. 1 head (2·5m diameter).
2) A column.
5—Dismantled.

145. Nonancourt (Gare de) [48°46´18˝N, 1°11´52˝ E]
1—Haute-Normandie: 27 Eure, 27320 Nonancourt, ‘la Gare de Nonancourt.
2—1888.
3—1) Auguste-Sylvain Bollée.
2) Compagnie de Chemins de Fer de l’Ouest.
4—1) No. 2 head (3·5m diameter).
2) A column mount.
5—Dismantled.
6—Used to supply the water-tower (‘alimentation du reservoir’).

146. Caserne Allard (La) [EXACT LOCATION UNKNOWN]
Also known as ‘Parthenay’
2—1888.
3—1) Auguste-Sylvain Bollée.
2) The military authorities.
4—1) No. 2 head (3·5m diameter).
2) A 4-unit column mount, with six two-piece wrought iron guys and three intermediate stabilisers.
3) A circular cap-platform, with serpentine balusters and cardinal points.
4) A spiral staircase with plain balusters and pierced-and-ribbed treads.
5) Design of base unknown, but possibly in concentric tiers.
6) A rectangular pump house, made of coursed brick, with a hipped roof of slate laid on wooden rafters. There may have been a sheet-metal finial at each end of the ridge, which was apparently capped with half-round tiles.
7) Assumed to have been the standard three-throw gothic frame plunger pump, with an overhung crank and six serpentine flywheel spokes.
8) A well lay directly beneath the pump house.
9) Water was apparently run off to a long, low wash-house alongside the base of the wind engine, made of coursed brick with a roof of slate laid on wood rafters.

5—Dismantled.
6—This wind engine was acquired to provide water for the garrison of the Allard barracks, built to house the 114th infantry regiment in 1875–8. The army retained possession until 1921, when the barracks was passed to the gendarmerie. The site was razed in 1978.

147. Taragona
1—Spain: ‘Grande Chartreuse Tarragone’.
2—1888.
3—1) Auguste-Sylvain Bollée.
2) ‘Pères Chartreux, Grande Chartreuse’.
4—1) No. 2 head (3.5m diameter).
2) A column mount.
5—Unknown; may still stand.
6—Another of the Carthusian sites created after the expulsion of the Order from France. Nothing is known about its fate.

148. Pont-Pietin (Château de) [47°28′01″N, 1°49′12″W: OLD HOUSE]
2—1888.
3—1) Auguste-Sylvain Bollée.
2) Baron de Lareinty.
4—1) No. 2 head (3.5m diameter).
2) A column mount.
5—Dismantled, date unknown.
6—The site is now part of a large psychiatric hospital, and it is assumed that the location of the Éolienne has been lost among the new buildings.

149. **Seillac** (Château/Domaine de)
   
   Also known as ‘Onzain’
   
   [47°32´50˝N, 1°09´33˝E: ÉOLIENNE?]
   
   1—Centre: 41 Loir-et-Cher, ‘par Onzain’ (now 41150 Seillac).
   
   2—1888.
   
   3—1) Auguste-Sylvain Bollée.
   
   2) M Valentin.
   
   4—1) No. 3 head (5m diameter).
   
   2) A column mount.
   

150. **Bouchet** (Ferme le)

   Also known as ‘Château du Bouchet’
   
   [47°40´48˝N, 3°40´38˝E: HOUSE]
   
   1—Bourgogne: 89 Yonne, ‘près Cravant’ [89460 Cravant].

   2—1889.
   
   3—1) Auguste-Sylvain Bollée.
   
   2) Comtesse de Boury.
   
   4—1) No. 2 head (3·5m diameter).
   
   2) Column mount.
   
   5—Dismantled.
   
   6—This was once tentatively (but mistakenly) identified with a site now enveloped by the Zone Industrielle des Bouchots, south of the commune.

151. **Houlletière** (Château de la)

   Also known as ‘La Houltière’
   
   [48°04´24˝N, 0°07´25˝E: HOUSE]
   
   1—Pays de la Loire: 72 Sarthe, ‘à [72650] La Milesse’.

   2—1889.
   
   3—1) Auguste-Sylvain Bollée.
   
   2) M Percheron.
   
   4—1) No. 2 head (3·5m diameter).
   
   2) A column mount.
   
   5—Dismantled?
   
   6—The house has a large jardin potager and an impressive water tower, but it is not yet known if anything of the Éolienne or the pump-house survives.
152. Chaux
(Compagnie des Phosphates de)
1—Brazil, location uncertain.
2—1889.
3—1) Auguste-Sylvain Bollée.
2) The owners of the company.
4—1) No. 3 head (5m diameter).
2) A column mount.
5—Assumed to have been dismantled, but information about this site is lacking.

153. Puy (Château de)
[47°16´51˝N, 0°41´25˝E: HOUSE]
2—1889.
3—1) Auguste-Sylvain Bollée.
2) M Raymond Bacot.
4—1) No. 3 head (5m diameter).
2) A column mount.
5—Dismantled.
6—The mansion erected by Bacot in the 1880s was demolished at the end of the First World War by its new owner, the parfumier François Coty (1874–1934), to be replaced by the enormous Château d’Artigny (or ‘du Puy d’Artigny’). The Éolienne may have disappeared at this time, though a bélier hydraulique in the riverside water mill was retained (at least initially) to supply the new house.
7) Artigny was occupied briefly by the French ministry of marine in 1940, then by the Germans, and became a hospital until the Coty family reclaimed the estate in 1947. It was sold in 1959 to René Traversac, who also owned the Prieuré de Chênehutte-les-Truffaux, to become a hotel and then a conference centre.

154. Guérineau (Maison)
[EXACT LOCATION NOT KNOWN]
1—Pays de la Loire: 72 Sarthe, ‘par Poncé-[sur-le-Loir]’. Now usually listed in 72340 Ruillé-sur-Loir.
2—1889.
3—1) Auguste-Sylvain Bollée.
2) Mme Vve Guérineau.
4—1) No. 1 head (2.5m diameter).
2) A column mount.
5—Dismantled.

155. Saint-Georges[-des-Sept-Voies]
(Prieuré de) *
[47°20´46˝N, 0°17´22˝W: ÉOLIENNE]
1—Pays de la Loire: 49 Maine-et-Loire, commune de Saint-Georges-de-Sept-Voies.
2—1889.
3—1) Auguste-Sylvain Bollée.
2) Ferme-école du Prieuré de Saint-Georges.
4—1) No. 2 power head (3.5m diameter).
2) A 4-unit (?) column mount, supported by six head- and three intermediate guys.
3) A circular cap-platform with serpentine balusters, but apparently lacking cardinal points.
4) A spiral staircase with plain balusters and pierced-and-ribbed treads gave access to the platform.
5) The base was an interesting frustal or truncated-cone design, built of roughly coursed rubble.
6) The pump house, circular in plan, is built of coursed brick. The conical roof consisting of seventeen visible rows of width-graduated slates (laid on rafters) rises beneath sheet-lead flashing and a finial. The door and window have round arches, in brick laid radially, but lack separate jambs. The door is ledged, battened and braced, and the window aperture (once glazed?) is currently filled with an inset shutter of similar type.
7) The pump is asumed to have been the standard three-throw pattern, with an overhung crank and six serpentine flywheel spokes.
8) Lying directly beneath the pump, the well is about 35 metres deep.

6—The Comtesse de Caen, a well-known philanthropist and supporter of the Arts, became patron of this age-old priory when she settled in Maine-et-Loire in 1867. One of her most important projects was the creation of La Ferme-École, the priory’s model farm, where the Éolienne was subsequently erected. The priory became a school, and is now owned by the departmental council.

156. **Couharde (Château de [la])**  
*Sometimes known as ‘de la Couarde’*[48°47'43" N, 1°44'24" E: CHATEAU]  
1—Île-de-France: then 78 Seine-et-Oise (now 78 Yvelines), ‘à la Queue-les-Yvelines’ [78940]. Also identified with Garancières and Grosrouvre.  
2—1890.  
3—1) Auguste-Sylvain Bollée.  
2) M May.  
4—1) No. 3 head (5m-diameter).  
2) Column mount.  
5—Dismantled.  
6—The house is now the centre of a large golf course with ornamental grounds.

157. **Mallez (Maison)**  
*EXACT LOCATION NOT KNOWN*  
1—Nord-Pas-de-Calais: 59 Nord, 59220 Denain.  
2—1890.  
3—1) Auguste-Sylvain Bollée.  
2) M H. Mallez, ‘Entrepreneur’.  
4—1) No. 1 head (2.5m diameter).  
2) Column mount.  
5—Dismantled.

158. **Monchy-Humières (Château de)**  
*Also known as Château d’Humières*[49°28'07" N, 2°44'52" E: HOUSE]  
1—Picardie: 60 Oise, ‘près Compiègne’ [now 60113 Monchy-Humières, Rue du Château 8].  
2—1890.  
3—1) Auguste-Sylvain Bollée.  
2) M Cahen.  
4—1) No. 2 head (3.5m diameter).  
2) Column mount, with six main- and three intermediate guys.  
5—Dismantled.  
6—The house is now a conference centre, and the focal point of an eighteen-hole golf course.

159. **Montebello (Domaine de)**  
*EXACT LOCATION NOT KNOWN*  
2—1890.  
3—1) Auguste-Sylvain Bollée.
2) M. P. Feuillan.
4—1) No. 1 head (2·5m diameter).
2) Column mount.
5—Destroyed in the great gales of 1999.
6—The purchaser is believed to have been a member of an Irish family (originally 'Phelan') who had married into the Bordeaux wine-trade.

160. Morsang-sur-Orge ¶
[48°39´31˝N, 2°20´33˝ E: CARREFOUR DE LA DEMI-LUNE, D117/D91 JUNCTION]
1—Île-de-France: 78 Seine-et-Oise, ‘près et par Savigny-sur-Orge’ [now 91390 Morsang-sur-Orge].
2—1890.
3—1) Auguste-Sylvain Bollée.
2) Dr Maurel.
4—1) No. 2 head (3·5m-diameter).
2) Column mount.
5—Dismantled.
6—Possibly in the Parc Beau-Sejour or in the grounds of La Seminaire Notre-Dame.

161. Pavillon (Château du) ¶
Now ‘Domaine des Hauts du Loire’
[EXACT LOCATION NOT KNOWN]
1—Centre: 41 Loir-et-Cher, ‘par Onzain’. 
2—1890.
3—1) Auguste-Sylvain Bollée.
2) M Oscar de Vallée.
4—1) No. 1 head (2·5m-diameter).
2) A column mount.
5—Dismantled.

162. Saint-Charles (Manoir) ¶
Also known as ‘Rémy’
[49°26´25˝N, 2°42´36˝ E: ÉOLIENNE]
1—Picardie: 60 Oise, ‘près Rémy’ [now 60190 Rémy, 201 Rue Poncelet].
2—1890.
3—1) Auguste-Sylvain Bollée.
2) M Dubert, ‘Propriétaire’.
4—1) No. 2 head (3·5m diameter).
2) A 4½-unit (?) column, with six head- and three intermediate guys.
3) A circular cap-platform with serpentine balusters and ribbed cardinal points.
4) A spiral stair, with pierced treads and plain balusters.
5) The base is believed to be a concentric two-tier design, probably made in brick.
6) Pump house is assumed to be circular, built of coursed brick, with a conical slated roof rising to a sheet-metal finial. Wooden door.
7) The standard three-throw plunger pump had an overhung crank and serpentine spokes.
8) The well lies directly beneath the pump house.
9) Water may have been fed to a tank in the eaves of the neighbouring château.

5—Still standing in 2009. Owners: M Vincent and Mme Catherine Gast. Condition: very good. There is some obvious wasting to the platform plating and deterioration in the fabric of the power-head (see remarks). In addition, the base of the column and the supporting guys are overrun by foliage which could be cleared. Access: private.

6—This is a particularly interesting site, owing to the presence of generating equipment in addition to the water pump. The ability to generate electricity may have been original, as the drive is higher than normal: unlike most machines of its type, the shaft has been raised by insetting a half-column beneath the gearbox. More details are awaited. The house was created early in the seventeenth century by Philippe de Beaumanoir, underwent many changes during its life, and is now an elegant and attractive hotel. Owing to damage sustained during a severe storm early in 2009, when several of the power-head blades broke loose, it seems likely that an attempt to restore the Éolienne will be made in 2010—perhaps, once again, as a generator of electricity.

163. Ri (Château de)  
*Also listed as ‘Ry’*

[48°47´27˝N, 0°08´11˝E: HOUSE]

1—Basse-Normandie: 61 Orne, ‘par [61210] Putanges[-Pont-Écrepin]’ or "environs d'Argentan".
2—1890.
3—1) Auguste-Sylvain Bollée.
2) Comte de Vigneral.
4—1) No. 1 head (2.5m diameter).
2) A column mount.
5—Dismantled.

164. Andoque (Domaine d’)  
*Also known as ‘La Rouëire’ or ‘Quarante’.*

Currently listed on IGN maps as ‘Le Château de Roueyre’.

[43°21´06˝N, 2°59´37˝W: ÉOLIENNE]

1—Languedoc-Rousillon: 34 Hérault; La Rouëire, 34310 Quarante.
2—1890.
3—1) Auguste-Sylvain Bollée.
2) M Gabriel Andoque.
4—1) No. 3 head (5m diameter).
2) A 4½-unit column mount, with eight head- and four intermediate guys.
3) A circular cap-platform, with serpentine balusters and ribbed cardinal points.
4) A spiral staircase, with straight balusters and pierced-and-ribbed treads.
5) A concentric three-tier base, apparently made of rendered rubble.
6) A rectangular pump house, made of rendered coursed brick on a similar base. The wooden door, set in an arch, is approached by a flight of six (?) steps. The tiled roof rises to a short ridge with two spike finials. The ridge and flank-edges are all protected by half-round cap tiles.
7) The standard three-throw plunger pump, with an overhung crank and six
No.164. The No. 3 of the Rouëire estate, Quarante, Hérault (inventory no. 164), was erected in 1890 and is still in near-working order.
serpentine flywheel spokes.
8) A well beneath the pump.
9) Water storage unknown, though it is believed that a Lavoir stands (or once stood) nearby.
6—This particular location was given as ‘Rouère par Quarante’ in the March 1891 Bollée client-list. Pictured on the front cover of Major & Gaucheron’s book L’Éolienne Bollée, among the first of its type to be returned to working order, the Éolienne soon gained the attention of molinologists worldwide. It is now back to its best, after an overhaul and a coat of paint.

165. Poterie (La) 
Also known as ‘Saint-Lubin-des-Joncherets’
[EXACT LOCATION NOT KNOWN]
2—1890.
3—1) Auguste-Sylvain Bollée.
2) The communal council.
4—1) No. 2 head (3·5m diameter).
2) A column.
5—Dismantled.
6—This stood in a small hamlet close to Saint-Lubin. It should not be confused with a Lebert pylon-type installation in Saint-Lubin-des-Cinq-Fonts (q.v.).

166. Valette (Château de la) 
Also identified as ‘Vallete’ or ‘Vallette’
[47°55’05”N, 0°43’42” W: ÉOLIENNE]
1—Pays de la Loire: 53 Mayenne, ‘près Villiers-Charlemagne’.
2—1890.
3—1) Auguste-Sylvain Bollée.
2) Prince de la Tour d’Auvergne.
4—1) No. 2 head (3·5m diameter) with an Entonnoir.
2) A 5-unit (?) column mount, with eight head- and four intermediate guys.
3) A circular platform, with serpentine balusters and ribbed cardinal points.
4) A spiral staircase, with straight balusters and pierced-and-ribbed treads.
5) A concentric-tier base?
6) The pump house is believed to be
rectangular in plan, probably made of coursed brick with a ridge-roof of slates laid over wooden rafters.
7) The standard three-throw plunger pump, with an overhung crank and six serpentine flywheel spokes.
8) A well presumably lies beneath the pump.
5—Still standing in December 2008.
6—Most of the details have been gleaned from photographs. The Bollée client-list notes the power-head to have been a No. 3 (5m diameter); this may simply be a mistake, but the head could have been changed by Lebert prior to 1914.

167. Barres (Château des)
Also identified as 'Ferme de la [Grande] Métairie”
[47°50’06” N, 2°45’41” E: GREENHOUSE]
1—Centre: 45 Loiret, ‘commune de Nogent-sur-Vernisson’.
2—1891.
3—1) Auguste-Sylvain Bollée.
     2) M de Vilmorin.
4—1) No. 3 head (5m diameter).
     2) A column mount.
5—Dismantled.
6—The name of this site is still in dispute, as the éolienne stood closer to the mansion than had been anticipated and may not have been erected specifically to serve the farm. More details are being sought.

168. Belvédère
(l’Hôpital Militaire de)
1—Tunis.
2—1891.
3—1) Auguste-Sylvain Bollée.
     2) Le Service Militaire.
4—1) No. 2 power head (3·5m diameter)
     2) A column mount.
5—Dismantled?

169. Berneau (Domaine de)
[47°04’58” N, 2°23’48” E: TOWN CENTRE]
1—Centre: 18 Cher, ‘près Bourges.’
2—1891.
3—1) Auguste-Sylvain Bollée.
     2) M Berneau, ‘Négociant’.
4—1) No. 1 head (2·5m diameter).
     2) A column mount.
5—Dismantled.

170. Brèche (Château de la)
[47°06’11” N, 0°28’0” E: HOUSE]
1—Centre: 37 Indre-et-Loire, ‘par l’Île-Bouchard’ or ‘par Parçay-sur-Vienne’.
2—1891.
3—1) Auguste-Sylvain Bollée.
     2) Le Comte Fadate de Saint-Georges.
4—1) No. 1 head (2·5m diameter).
     2) A column mount.
5—Dismantled.
6—The grounds include extensive vegetable gardens, but the position of the éolienne is no longer obvious.
171. Breuil (Château du) ★

Identified as ‘Le Breuil’ on some pre-1914 postcards

[47°12'18" N, 0°59'41" E: ÉOLIENNE]

1—Centre: 37 Indre-et-Loire, Le Breuil, ‘par Chambourg’ according to Bollée’s client list but now usually described as ‘près Chédigny’.

2—1891.

3—1) Auguste-Sylvain Bollée.

2) M Albert Dauprat.

4—1) No. 3 head (5m diameter). The February 1894 Bollée client-list notes a ‘No. 2’ (3·5m diameter), presumably a misprint.

2) A 4½-unit column mount, supported by eight two-piece wrought iron guys and three intermediate stays (one of which pierces the roof of the pump-house).

3) A circular cap-platform with serpentine balusters and ribbed cardinal points.

4) A spiral staircase, with plain balusters and pierced treads leads to the head.

5) The base is concentric, of three tiers with five steps.

6) The pump house, circular in plan, is built of coursed brick on a rendered (?) brick base. The two windows and the two-part folding wooden door are set in arches. A conical roof of eighteen visible slate courses rises to flashing and a sheet-metal finial.

7) The pump is assumed to have been the standard three-throw type (see notes).

8) A shallow sump beneath the pump-house suffices as a well, as the site is virtually at river level.

9) No water-tank survives on-site, though a rectangular brick-lined reservoir with a small sluice gate in the north-west corner lies alongside the pump house. It is assumed that the tank lay farther up the hill above the château.
5—Visited in May 2002 and again in 2004.  
Owner: Mme R. McDonald (since 1988).  
Condition: good, but now missing key parts such as shaft-access doors and several staircase balusters. The Entonnoir was still complete in 2004, except for a few small sections. Access: on private land, but visible from the neighbouring roadway.

6—The château has fourteenth-century origins, a fief of the Château de Loches, and now has an unfinished renaissance-style extension on the south side. It was purchased by Dauprat shortly before the wind engine was supplied. The site was also apparently served by a Bélier hydraulique (part of the integrated system that included the Éolienne), supplied with water from a tank-tower that is popularly said—but highly unlikely!—to have been designed by Gustave Eiffel.

= The water-supply system worked satisfactorily until 1941, when an unusually severe frost cracked the frame of the original three-throw pump and an electrically-driven pump was substituted. The Éolienne was still capable of turning as late as 1989, but it is not known if the electric pumps (replacements?) were still operating.

172. Biard (Château de) ☀
Also listed as ‘Briard’
(EXACT LOCATION UNKNOWN)
1—Centre: 37 Indre-et-Loire, ‘à la commune de Céré[-La-Ronde]’.
2—1891.
3—1) Auguste-Sylvain Bollée.
2) M Le Blond.
4—1) No. 2 head (3.5m diameter).
2) A column mount.
5—Dismantled.
6—The identity of this site is still in doubt, as it could be either Château Biard[-la-Chapelle] or Château [Grand-]Biard.

173. Chaumont (Château de) ☀
[47°28′45″N, 1°10′55″E: HOUSE COURTYARD]
2—1891.
3—1) Auguste-Sylvain Bollée.
2) Prince de Broglie.
4—1) No. 3 head (5m-diameter).
2) A column mount of unknown height.
5—Dismantled.
6—The château has extensive range of outbuildings, and a large jardin potager to the south of the house. The precise location of the Éolienne, however, is unclear.

174. Cloître-Lannéanou (Gare Le) ☀
(EXACT LOCATION UNKNOWN)
1—Bretagne: 29 Finistère, Le gare de Cloître-Lannéanou (railway station).
2—1891.
3—1) Auguste-Sylvain Bollée.
2) Les Chemins de Fer de l’Ouest?
4—1) Believed to have been a No. 2 head (3.5m diameter).
2) A four-unit column, with six adjustable two-piece wrought-iron main guys and three one-piece stabilisers.
5—Dismantled.
6—Used to supply water to the locomotive-replenishing tank.

175. Coteau (Château du) ☀
Now known as ‘Domaine de Coteau’
[47°20′50″N, 0°51′35″E: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, “commune d’Azay-sur-Cher” [37270 Azay-sur-Cher].
2—1891.
3—1) Auguste-Sylvain Bollée.
2) Mme de Lauverjat.
4—1) No. 2 head (3.5m diameter), with an Entonnoir.
2) A 4½-unit column supported by six two-piece wrought iron head-guys and three one-piece column stays.
3) A circular cap-platform with
serpentine balusters and ribbed cardinal points.
4) A spiral staircase with plain segmental treads gives access to the platform.
5) The base is believed to have been circular, tiered, and made of brick.
6) The pump house, made of coursed brick with dressed stone quoins, is approximately square with a small rectangular extension beneath a single tiled roof. The roof is pitched, has prominent capping-tiles on the ridge and the flanks, and has fretwork fascia. The lintels and cills of the windows and the door(s) are also dressed stone.
7) The pump is assumed to have been the standard three-throw gothic frame type, with an overhung crank and six serpentine flyheel spokes.
8) The well lies beneath the pump.
9) A large cylindrical water tank stands alongside the pump-house. A small cylindrical header-tank has been added at a later date, mounted on a wooden frame within what can be best described as an elevated hexagonal pergola with a pitched roof.

5—Visited by Régis Girard in June 2007. Current owner: la Comtesse de Larrea. Condition: the Éolienne itself was in good order, though the pump house and the pergola were deteriorating and their current status is not known. Access: on private land.

176. Forceries de l’Aisne

[49°39’22” N, 3°17’30” E: MAIRIE]
1—Picardie: 02 Aisne, ‘à Quessy’ [02700 Tergnier].
2—1891.
3—1) Auguste-Sylvain Bollée.
2) La Société anonyme des Forceries de l’Aisne.

4—1) No. 2 head (3.5m diameter).
2) A multi-unit column with six two-piece wrought-iron adjustable stays and three one-piece wrought-iron stabilisers.
3) A circular cap platform, with trapdoor access, serpentine balusters and (probably) ribbed cardinal points.
4) A staircase spiralling around the column, with plain balusters, drainage holes cast integrally with the treads, and a decorative newel post.
7) A standard three-throw plunger pump, with a gothic-style cast-iron frame, an overhung crank, and a flywheel with six serpentine spokes.
8) A well directly beneath pump house.
9) A nearby water-tank.

5—Dismantled.

6—The ‘Forceries’, created by Réné Jacquemart in 1891, comprised a large market-garden or établissement horticole relying on greenhouses and a special method of heating to provide fruit out of season. The Éolienne may have been destroyed during the First World War.

177. Guérinet (Château de) 🕗
[EXACT LOCATION UNKNOWN]
1—Centre: 41 Loir-et-Cher, ‘par Moulineuf’.
2—1891.
3—1) Auguste-Sylvain Bollée.
2) M Lambert-Champy.
4—1) No. 3 head (5m-diameter).
2) A column mount.
7) The standard three-throw pump.
5—Dismantled.

178. Haplincourt (Château de) 🕗
Also known as ‘Haplaincourt’ or ‘Haplincourt’
[50°05’25”N, 2°55’53” E: MAIRIE]
1—Nord-Pas-de-Calais: 62 Pas-de-Calais, ‘par Bapaume’ [62124 Haplincourt].
2—1891.
3—1) Auguste-Sylvain Bollée.
2) Baron du Quesnoy.
4—1) No. 2 power (3.5m diameter).
2) Column mount.
5—Dismantled.
6—Possibly destroyed during the First World War (cf., Tilloloy).
179. Haut-Villaumay (Château le) ✧
Known as ‘Haut-Villaumay’ on sales lists, or as ‘Villedômer-Villaumay’ on postcards.
[47°33’59’’ N, 0°54’07’’ E: SITE OF ÉOLIENNE?]
1—Centre: 37 Indre-et-Loire, ‘à la commune d’Auzouer-en-Touraine [37110].
2—1891.
3—1) Auguste-Sylvain Bollée.
    2) M Koszustki.
4—1) No. 2 head (3·5m diameter).
    2) A column.
5—Dismantled.
6—A popular subject of many picture-postcards published prior to 1914, this site may be identified as ‘Le Haut-Villomay près Villedômer’ or ‘Environs de [or ‘près’] Château-Renault’.

180. La Lune (Maison) ✧
Also known as ‘Maison Cornu’.
[48°01’18’’ N, 0°12’51’’ W: ÉOLIENNE SITE?]
2—1891.
3—1) Auguste-Sylvain Bollée.
    2) M Cornu.
4—1) No. 1 head (2·5m diameter).
    2) A column mount.
5—Dismantled.

181. Millemont (Château de) ✧
[48°48’27’’ N, 1°44’15’’ E: CHÂTEAU]
1—Ile-de-France: 78 Seine-et-Oise, ‘par Garancière-la-Queue’ [78940 Millemont].
2—1891.
3—1) Auguste-Sylvain Bollée.
    2) M Bejot.
4—1) No. 3 head (5m-diameter).
    2) Column mount.
5—Dismantled.
6—This large house, with extensive parks and gardens open to the public, dates largely from the 16th–18th centuries, though the seigneurie dates back at least to 1419. Ownership in the nineteenth century passed successively through the Delage, de Polignac, Richard and Bejot families, the last-named installing the wind engine to provide water for the gardens. The mansion
was listed as a historic monument on 28th April 1947 and upgraded to ‘classed’ status on 25th January 1965, but there is no evidence that the Éolienne survived.

182. Mozé (Château de) ☠
[48°13´14˝ N, 0°05´14˝ E: CHÂTEAU]
1—Pays de la Loire: 72 Sarthe, ‘près Beaumont[-sur-Sarthe].’
2—1891.
3—1) Auguste-Sylvain Bollée.
   2) M Moulinneuf.
4—1) No. 1 head (2-5m diameter).
   2) A column mount.
5—Dismantled.

183. Narcé (Château de) ☢
[47°26´32˝ N, 0°25´35˝ W: SITE OF WATER TANK]
2—1891.
3—1) Auguste-Sylvain Bollée.
   2) M Richou.
4—1) No. 2 head (3-5m diameter).
   2) A column mount.
5—Dismantled, date unknown.

184. Nau (Maison) ☠
[EXACT LOCATION UNKNOWN]
1—Centre: 37 Indre-et-Loire, [37370] Neuvy le Roi.
2—1891.
3—1) Auguste-Sylvain Bollée.
   2) M Nau, ‘Propriétaire’.
4—1) No. 2 head (3-5m diameter).
   2) A column mount.
5—Dismantled.

185. Vannes ☠
(Le Grand Séminaire de)
[47°39´28˝ N, 2°45´59˝ W: MAIN COURTYARD]
2—1891.
3—1) Auguste-Sylvain Bollée.
   2) The seminary authorities?
4—1) No. 2 head (3-5m diameter).
   2) A column mount.
5—Dismantled.
6—The seminary had extensive grounds, including vegetable gardens. The position of the Éolienne, however, is not currently known with certainty and additional information is being sought.

186. Beau-Sejour (Villa) ☔
Now known as ‘Château Beaujour’
[47°32´20˝ N, 1°13´16˝ E: SITE OF PUMP HOUSE]
1—Centre: 41 Loir-et-Cher, ‘à [41150] Chouzy [-sur-Cisse].’
2—1892.
3—1) Auguste-Sylvain Bollée.
   2) M Bourdin.
4—1) No. 2 head (3-5m diameter) with an Entonnoir.
   2) A 3-unit column mount supported by six adjustable two-piece head-guys and three one-piece stays.
   3) A circular cap-platform with serpentine balusters and ribbed cardinal points.
   4) A spiral staircase with ribbed and pierced treads gives access to the platform.
   5) The base is apparently a concentric two-tier design.
   6) The pump house, rectangular in plan, is built of coursed brick on a ‘half timber’ frame, with a pent roof of coursed slates beneath half-round ridge tiles with ribbed edges. A ledged, braced and battened wooden door is set in the long wall on the opposite side to the Éolienne base.
   7) The three-throw gothic-frame pump was used, with an overhung crank and a flywheel with six serpentine spokes.
   8) The well lies directly beneath the pump, and is at least 15m deep.
   9) The water tank is cylindrical, with a concrete cover placed on sloped dwarf
187. **Lesouple** (Domaine de)

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<tr>
<th>Coordinates</th>
<th>Address</th>
<th>Notes</th>
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<tbody>
<tr>
<td>48°10´52˝N, 1°23´10˝ E</td>
<td>1892.</td>
<td>2—1892.</td>
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<td>3—1) Auguste-Sylvain Bollée.</td>
<td>3—1) Auguste-Sylvain Bollée.</td>
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<td>4—1) No. 1 head (2.5m diameter), with a multi-part Entonnoir.</td>
<td>4—1) No. 1 head (2.5m diameter), with a multi-part Entonnoir.</td>
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2) A column supported with six two-piece wrought iron guys and three one-piece stabilisers.
3) The cap-platform is circular, with serpentine balusters and ribbed cardinal points.
4) A spiral staircase around column, drainage holes cast integrally with the treads, gives access to the platform.
5) The base is presumed to be a concentric design, possibly two-tier.
6) Pump house: rectangular?
7) Assumed to have been the standard three-throw pump with an overhung crank and serpentine flywheel spokes.


6—This machine has an 1885-type Entonnoir (augmenter) that, though not in particularly good condition, still retains much of its original sheet-metal shrouding.

188. **Cocherie** (Château de la)

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<td>2—1892.</td>
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<td>3—1) Auguste-Sylvain Bollée.</td>
<td>3—1) Auguste-Sylvain Bollée.</td>
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<td>2) M Petit.</td>
<td>2) M Petit.</td>
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<td>4—1) No. 2 head (3.5m-diameter).</td>
<td>4—1) No. 2 head (3.5m-diameter).</td>
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<td>2) A column mount.</td>
<td>2) A column mount.</td>
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<td></td>
<td>5—Dismantled.</td>
<td>5—Dismantled.</td>
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<td>6—Ordered in 1891.</td>
<td>6—Ordered in 1891.</td>
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189. **Courgis**

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<th>Coordinates</th>
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<td>2—1892.</td>
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3—1) Auguste-Sylvain Bollée.
    2) Le conseil communal de Courgis,
       to supply water fountains ('fontaines
       publiques')
4—1) No. 3 head (5m diameter).
    2) A 4-unit column (see 'Remarks'), with
       eight head- and four intermediate guys.
    3) A circular cap-platform with
       serpentine balusters and ribbed cardinal
       points.
    4) A spiral staircase with ribbed-and-
       pierced treads.
    5) Mounted on top of the pump-house.
    6) Cylindrical, in the form of a slender
       tower set into a hillside. The tower is
       believed to have been made of rendered
       coursed bricks, with an exposed cornice
       and a crenellated parapet. An arched
       window on the north-eastern side of the
       tower at ground level appears to have
       been bricked-in, leaving the brickwork
       of the cill, pillars and arch exposed, and
       a conventional wooden door, beneath
       a single-light window and a flat lintel,
       has been added (?) at first-floor level. A
       wooden stage, supported on wrought-
iron brackets, runs around the building from south-west to north-east to give access to the door. It is assumed that a ladder was used to reach the stage from the hillside.

7) A standard three-throw plunger pump, with an overhung crank and serpentine flywheel spokes.

8) A sump or well directly beneath the pump.

9) It is assumed that the first-floor door gives access to the pump-head gear, and that the pumps were mounted in a comparatively shallow sump. An annular tank may have occupied the lower storey of the tower, but it seems more likely that water was supplied directly to a neighbouring Lavoir.

5—Dismantled.

6—The details were gleaned from picture-postcards and an article by Pierre Haasé, published in the periodical Pays de Bourgogne in March 1995. It is possible that the Éolienne replaced an older wind-engine, accounting for the unusual tower.

190. Didot (Maison) *

[48°43’03” N, 1°12’24” E: PUMP HOUSE, NOW LOST]

1—Centre: 28 Eure et Loir, [28270] Escorpain (‘près Laons’).

2—1892.

3—1) Auguste-Sylvain Bollée.

2) ‘M Firmin-Didot’.

4—1) No. 3 head (5m diameter).

2) A 4½-unit column.

6) The pump house was sited alongside the column-base.

5—Dismantled.

6—This machine was purchased by a member of the famous family of printers and typecasters. Firmin Didot was the eldest son of Ambroise Didot (1790–1876) and the grandson of Firmin Didot, who died in Mesnil sur l’Estrée in 1836. The Éolienne apparently supplied water to his mansion and estate, but surplus water was also used to benefit the commune.

191. Gidonnière *

(Château de la)

Also listed as ‘Lhomme’ or “L’Homme”
1—Pays de la Loire: 72 Sarthe, ‘par [72340]
La-Chartre-sur-[le-]Loir’.
2—1892.
3—1) Auguste-Sylvain Bollée.
2) Le Duc de Lesparre.
4—1) No. 2 head (3.5m diameter).
2) A 3½-unit column mount, supported with
six main- and three intermediate guys.
3) The cap-platform is circular, with
serpentine balusters and cardinal points.
4) A spiral staircase, with plain balusters
and pierced-and-ribbed treads gives
access to the platform.
5—Re-discovered in 2005; still standing.

192. Mancelière (Château de)
[48°38´44˝ N, 0°58´46˝ E: JARDIN POTAGER]
1—Centre: 28 Eure-et-Loir, ‘par [28270]
Brezolles’.
2—1892.
3—1) Auguste-Sylvain Bollée.
2) M Couvreux.
4—1) No. 2 head (3.5m diameter).
2) A low column.
5—Dismantled.
6—A typical postcard-legend reads
‘Environs de Brezolles: Ferme du
Château de la Mancelière’.

193. Praslins
(Ferme de, Château de)
Now known as ‘Les Pralins’
[47°51´40˝ N, 2°44´56˝ E: ÉOLIENNE]
1—Centre: 45 Loiret, ‘à [45290] Nogent-sur-
Vernisson’.
2—1892.
3—1) Auguste-Sylvain Bollée.
2) Mme Vve Petitjean.
4—1) No. 2 head (3.5m diameter) with an
Entonnoir.
2) A 3½-unit column mount, apparently
with six head- and three intermediate
guys.
3) The circular cap-platform has
serpentine balusters and cardinal points.
4) A spiral staircase, with plain balusters
and pierced-and-ribbed treads, gives
access to the platform.
5) The base is believed to be the
standard concentric-tier design.
6) The pump house, probably square in
plan with a pitched roof, is made of brick
or coursed rubble.
7) The standard three-throw pump was
used, with an overhung crank and six
serpentine flywheel spokes.
8) The well lies beneath the pump.
9) A cylindrical sheet-metal water tank
stands next to the wind engine. The
supporting frame, on a hexagonal base,
has six cross-braced legs and a single
horizontal stringer dividing it into two
stages. A ladder on the outside of the
frame gives access to the tank-top.
5—Visited by Francis Bonneteaud, October
2003. Owner: not known. Condition:
reasonably good, with a near-complete
Entonnoir, but missing the entire
Papillon assembly. One of the anchoring
guys is missing, and one of the others
has been duplicated. Access: on private land, but easily visible within its coursed-rubble walled compound.

6—Comparatively little is known about this machine, though the installation remains surprisingly complete and is unquestionably worthy of a more detailed study.

194. Jacquemart (Château de) [49°14´01˝N, 3°18´17˝ E: SEE NOTE]

Also known as 'Château des Quartiers' or 'Quessy'

1—Picardy: 02 Aisne, 'par Tergnier'.
2—1892.
3—1) Auguste-Sylvain Bollée.
    2) M Jacquemart-Delamotte.
4—1) No. 2 head (3·5m diameter).
    2) A multi-unit column with six two-piece wrought-iron adjustable stays and three one-piece wrought-iron stabilisers.
3) A circular cap platform, with trapdoor access, serpentine balusters and (probably) ribbed cardinal points.
4) A staircase spiralling around the column, with plain balusters, drainage holes cast integrally with the treads, and a decorative newel post.
7) A standard three-throw plunger design, with a gothic-style cast-iron frame, an overhung crank, and a flywheel with six serpentine spokes.
8) A well directly beneath pump house.
9) A sheet iron water-tank stood alongside the wind-engine.

5—Said to have been destroyed by German shellfire during the opening stages of the First World War in 1914.

6—Nothing is known about this site, except that the purchaser may have been Réné Jacquemart (above). The co-ordinates are given for what is now known as 'Le Château des Quartiers; Quessy.

195. Sablons (Château les) [49°15´37˝ N, 1°15´0˝ E: HOUSE]

2—1892.
3—1) Auguste-Sylvain Bollée.
    2) M Hervey.
4—1) No. 1 head (2·5m diameter).
    2) A column mount.
5—Dismantled.

6—The small lakeside château, probably built at about the time the éolienne was erected, was owned by “Mme Raoul Duval, Veue du Deputé de l’Eure”. She had previously occupied a much the larger mansion known as ‘Château Notre-Dame’, built in 1759 by ‘Président Portail, gouverneur de Louviers’, with which the site of the Éolienne has sometimes been confused. Les Sablons served as a hospital during the First World War and subsequently became a Colonie de Vacances.

196. Saint-André-de-l’Eure [48°54´18˝N, 1°16´28˝ E: MAIRIE]

1—Haute-Normandie: 27 Eure, ‘commune de Saint-André-de-l’Eure’.
2—1892.
3—1) Auguste-Sylvain Bollée.
    2) The communal authorities.
4—1) No. 3 head (5m diameter).
    2) A 3-unit column supported with eight two-piece wrought iron guys and four one-piece stabilisers.
3) The circular cap-platform had serpentine balusters, but lacked cardinal points.
4) A spiral staircase with straight balusters and pierced-and-ribbed treads gave access to the platform.
6) The pump house, rectangular in plan, was built of rendered brick below a hipped tiled (?) roof, with brick quoins edging the door and window apertures.
7) The pump is assumed to have been the standard three-throw gothic-frame type, with an overhung crank.
8) The well lay directly beneath the pump-house.
5—Dismantled in the 1960s?
6—Ordered in 1891, this unusually low-set wind engine—and an adjoining Lavoir built in the same style as the pump-house—stood inside a walled enclosure.

197. Tillet (Château du) ♢
[49°15´27˝ N, 2°19´58˝ E: CHÂTEAU]
1—Picardie: 60 Oise, ‘près Cires-les-Mèllo’ [now 60660 Cires-les-Mèllo, Hameau le Tillet, Rue du Château].
2—1892.
3—1) Auguste-Sylvain Bollée.
   2) Comte de Hyanville.
4—1) No. 3 head (5m diameter).
   2) Column mount.
5—Dismantled; the pump-house survives.
6—Currently used as a convalescent home and health resort for the over 55s. The site also contains a water-tower dated ‘1932’, which may indicate when the wind-engine was replaced by electric or mechanically-driven pumps.

198. Bérard (Maison) ¶
[48°25´48˝ N, 2°46´01˝ E: CHÂTEAU]
1—Île-de-France: listed as ‘Seine-et-Marne, Vulaines’ [77870 Vulaines-sur-Seine].
2—1892.
3—1) Auguste-Sylvain Bollée.
   2) Mme Vve Bérard.
4—1) No. 1 head (2.5m-diameter).
   2) Column mount.
5—Dismantled.
6—The co-ordinates refer to the Château de Brûles, whose ornamental gardens seem to suggest an appropriate site.

199. Vierge Fidèle ¶
Also known as ‘La Délivrande’, and now as ‘Douvres-le-Délivrande’
[49°17´55˝ N, 0°22´20˝ W: BASILICA]
1—Basse-Normandie: 14 Calvados, ‘Pensionnat de la Vierge Fidèle, [14440] La Délivrande’. 
2—1893.
3—1) Auguste-Sylvain Bollée.
4—1) No. 3 head (5m diameter).
   2) A column.
5—Dismantled.
6—Standing in a small village north of Caen, on the site of the oldest Marian sanctuary in Normandy, Notre-Dame de la Délivrande (in neo-Gothic style) was built in the second half of the nineteenth century to replace the original Romanesque chapel. Work on the basilica commenced in 1853 and the site was consecrated on 22nd August 1895.
   = The Éolienne had by this time been erected in the grounds of the nearby boarding school, part of the convent of Notre-Dame de Fidélité.

200. Drouilly-les-Hayes ¶
(Château de)
[47°43´06˝ N, 0°46´33˝ E: CHÂTEAU]
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2—1893.
3—1) Auguste-Sylvain Bollée.
   2) Le Comte de Montais.
4—1) No. 2 head (3·5m-diameter).
   2) A column mount.
5—Dismantled.

201. Gabillière (Domaine de la) •

Now the lycée agricole d’Amboise
[47°23´45˝ N, 0°58´38˝ E: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, ‘par Amboise’ (Route de Bléré, 37400 Amboise).
2—1893.
3—1) August-Sylvain Bollée.
   2) M Chambert.
   3) Listed as monument historique, 8th October 1991.
4—1) No. 1 head (2·5m diameter), with an Entonnoir.
   2) A 4-unit column, with six two-piece wrought iron cap-guys and three one-piece column stays.
   3) The cap-platform is circular, with serpentine balusters and cardinal points.
   4) A spiral staircase with plain balusters and pierced-and-ribbed treads gives access to the platform.
   5) The base is a two-tier concentric pattern (possibly rebuilt).
   6) Square in plan, the pump house may also have been demolished.
   7) The three-throw gothic-frame pump was used, with an overhung crank and six serpentine flywheel spokes.
   8) The well, 25m deep, lay directly beneath the pump.
   9) A water tank stands on the woods close to the wind engine. It consists of a sheet-metal cylinder on top of a small tower, circular in plan, built of ashlar with quoins around the window and door apertures. A shallow coped moulding separates the tank form the tower. A large open reservoir lies in the park to the rear of the château.
5—Standing in 2010. Owner: the commune

No. 199

6—Remarks to add. Check current status, as condition may now have deteriorated appreciably

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<tr>
<th><strong>202. Landes</strong> (Château de)</th>
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<tr>
<td>3—1) Auguste-Sylvain Bollée.</td>
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<td>2) M Cloquemin.</td>
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<td>4—1) No. 1 head (2·5m diameter).</td>
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<td>2) A column mount.</td>
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<td>5—Dismantled.</td>
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<td>2—1893.</td>
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<td>3—1) Auguste-Sylvain Bollée.</td>
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<td>2) M Touraille.</td>
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<td>4—1) No. 1 head (2·5m diameter).</td>
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<tr>
<td>2) A column mount.</td>
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<td>5—Dismantled.</td>
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<tr>
<th><strong>204. Poigny</strong> (Chalet de)</th>
<th>[48°40´23˝N, 1°45´07˝ E: ‘LE VIEUX CHÂTEAU’]</th>
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<tbody>
<tr>
<td>1—Ile-de-France: 78 Seine-et-Oise, ‘par Rambouillet’ [now 78120 Rambouillet].</td>
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<td>2—1893.</td>
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<td>3—1) Auguste-Sylvain Bollée.</td>
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<td>2) M Hérelle.</td>
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<td>4—1) No. 2 head (3·5m-diameter).</td>
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<td>2) Column mount.</td>
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<td>5—Dismantled.</td>
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<tr>
<th><strong>205. Petites Sœurs des Pauvres</strong> (Asile des)</th>
<th>[EXACT LOCATION UNKNOWN]</th>
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<tbody>
<tr>
<td>2—1893.</td>
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<tr>
<td>3—1) Auguste-Sylvain Bollée.</td>
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</tbody>
</table>
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206. **Saint-Gabriel** (Pensionnat de) ✶

- 2—1893.
- 3—1) Auguste-Sylvain Bollée.
  2) Le Communauté des Sœurs de la Sagesse.
- 4—1) No. 2 head (3·5m diameter).
  2) A column mount.
- 5—Dismantled.

207. **Michau** (Domaine de) ✶

- 2—1893.
- 3—1) Auguste-Sylvain Bollée.
  2) M Michau, ‘Propriétaire’.
- 4—1) No. 2 power head (3·5m diameter).
  2) A 3½-unit column mount, with six head- and three intermediate guys.
  3) The circular cap-platform has serpentine balusters and cardinal points.
  4) A spiral staircase, with plain balusters and (probably) pierced-and-ribbed treads, gives access to the platform.
  5) The base is a concentric-tier design.
  6) The pump house is hexagonal in plan, each face consisting of twelve glazed panels (six above six) set on a rendered brick base. The ogee roof is made of sheet lead, rising to an unusually tall spike-and-double ball finial.
  7) The standard three-throw plunger type pump is used, with an overhung crank and six serpentine flywheel spokes.
  8) The well lies directly beneath pump.
  9) A large cylindrical sheet-metal tank stands next to the wind engine on a hexagonal tower, with each of three stages separated by stringers. Each bay is not only cross-braced but also reinforced by large central retangular plates. A ladder on the outside of the frame gives access to a balustraded walkway around the base of the tank.

208. **Saint-Pierre-sur-Dives** ✶

- 2—1893.
- 3—1) Auguste-Sylvain Bollée.
  2) The communal authorities.

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2) Les Petites Sœurs des Pauvres (‘Little Sisters of the Poor’).
4—1) No. 3 head (5m diameter).
2) A column.
5—Dismantled.

6—As the illustration (left) shows, the Éolienne stood at the outer end of a wash-house within an outer courtyard. It is not yet clear what or who occupied the extensive range of buildings at the other end of the Lavoir.
4—1) No. 3 head (5m diameter).
  2) A column mount.
  5—Dismantled.
  6—Purchased to supply water for ‘les fontaines publiques’.

209. Guichard (Maison) ★
[EXACT LOCATION UNKNOWN]
1—Poitou-Charente: 17 Charente-Maritime,
[17490] Siecq.
2—1893.
3—1) Auguste-Sylvain Bollée.
  2) M Guichard, ‘Propriétaire’.
  4—1) No. 1 head (2.5m-diameter)
  2) A column mount.

210. Villevallier ★ ★
[63D3] [48°01’30"N, 3°18’34" E]
1—Bourgogne: 89 Yonne, ‘Commune de Villevallier, arrondissement de Joigny’
(now 89330 Villevallier, 10 rue des Petites Vignes).
2—1893.
3—1) Auguste-Sylvain Bollée.
  2) ‘Le conseil communal de Villevalliers’, to supply public water-fountains
('fontaines publiques').
  3) Proposed as a monument historique, not yet listed (but see notes).
  4—1) No. 3 power head (5m diameter) with an Entonnoir.
  2) A 4½-unit column mount with eight two-piece wrought iron guys and four one-piece stabilisers.
  3) A circular cap platform, with serpentine balusters and ribbed cardinal points.
  4) Spiral stairs, with plain balusters and pierced ribbed treads.
  5) Masonry base, concentric, two tiers, with a brick or rubble infill.
  6) Hexagonal-plan pump house, brick-quoined with rendered rubble infill (?).
The roof, covered with slates laid on wooden rafters, rises sharply to a sheet-metal finial.
  7) The standard three-throw plunger pump, with an overhung crank and serpentine flywheel spokes.
  8) An 8m-deep sump directly beneath
pump house.
9) A covered subterranean reservoir apparently lies between the pump house and the house. The Lavoir, now converted into a two-storey house, was originally a single-storey design on a sloping site. It was built of painted or possibly rendered brick, with projecting brick-pillar corners and brick ‘false pilasters’ (perhaps created simply by leaving them in their original state) between the three multi-pane windows and two wooden doors in the north-west wall. Each door was surmounted by a small window of its own, and the windows and doors were all set in brick-lined apertures. The cills appear to have been rendered, and the straight lintels were made of bricks laid vertically. The pitched roof consisted of slates laid on wooden rafters. Pre-1914 photographs show that the Lavoir also had large multi-pane windows in the gable-end walls, with decorative cills—each supported by three corbels—and surrounds distinguished not only by capped dwarf pillars but also by arches with three projecting keystones. Three multi-pane skylights were set in the rear of the roof.

5—See below.
6—The communal council appointed a commission to investigate provision of a ‘machine hydraulique élévatatoire’ in August 1892, and, after inspecting the Prégilbert Éolienne Bollée, accepted a quotation submitted by Auguste-Sylvain Bollée dated 14th January 1893. The order was duly placed on 30th April 1893 and erection began in November.

= Extensively repaired several times between the wars (by Duplay in 1920 and SAEB in 1930 and 1932), the Éolienne had ceased to operate by the early 1950s. A plan to reinstate it in 1957 was deemed to be too costly, and the site was eventually sold (in 1972) to “Mme Filliole, à Paris”. The Lavoir was transformed into a small auberge/hotel and the wind-turbine was abandoned to the elements. By 2002, the Entonnoir (augmenter) was still virtually complete, but the head began to deteriorate and some of the rotor blades began to detach. In 2006, the owner of what had become a small two-storey hotel offered the Éolienne for sale on eBay in the hope that a purchaser would remove it from the site.

= In 2009, however, the machine was dismantled into the care of the Parc du Moulin à Tan du Sens, with the expectation that it will eventually be returned to working order. The current status of the project is uncertain.

211. Saint-Maurice (Villa) ®

Often known as ‘Yzeures’, or ‘Izeures’ prior to 1914

[46°47´08˝ N, 0°52´0˝E: ÉOLIENNE SITE?]

1—Centre: 37 Indre-et-Loire, ‘à la commune de Yzeures[-sur-Creuse]’.

2—1893.

3—1) Auguste-Sylvain Bollée.

2) M Pénot, ‘Propriétaire’.

4—1) No. 1 head (2.5m diameter).

2) A 3½-unit column mount, supported by six adjustable two-piece head-guys and three one-piece stays.

3) The cap-platform was circular, with serpentine balusters and cardinal points.

4) A spiral staircase with plain balusters and pierced treads gave access to the platform.

5) The base is believed to have been a standard three-tier concentric design.

6) The pump house stood alongside the column. Apparently circular in plan, built of rendered brick or rubble, with a pitched roof of graduated slates laid on wooden rafters and battens.

7) The pump would have been the three-throw overhung-crank type.
8) Owing to the proximity of the river, the well is likely to have been a shallow sump (probably no deeper than seven metres) set directly beneath the pump house.
9) Water was pumped directly into adjoining Lavoir, which had an open-top tank.

5—Dismantled by the mid 1950s.
6—Surviving pre-1914 picture-postcards show that this machine was built alongside the river Creuse, on a specially-constructed embankment which may have been concrete or possibly faced in stone.

212. Belle-Fille (Château de) ✴
*Sometimes listed as ‘Chateau de Belleville’ or ‘Château Belle-Île’*

↑[47°56´15˝ N, 0°01´08˝ E: ÉOLIENNE]
2—1894.
3—1) Auguste-Sylvain Bollée.
   2) Marquis de Longueval.
4—1) No. 1 power head (2·5m-diameter).
   2) A column mount, 5 units?
5—Still standing in 2012.

213. Fretay (Château de) 🕊
↑[47°05´38˝ N, 0°57´58˝ E: CHÂTEAU]
1—Centre: 37 Indre-et-Loire, ‘par [37600] Loches’.
2—1894.
3—1) Auguste-Sylvain Bollée.
   2) Le Comte Boulay de la Meurthe.
4—1) No. 2 head (3·5m diameter).
   2) A column mount.
5—Dismantled.
6—The house has an extensive range of outbuildings, ornamental gardens, and *jardins potager*. It is not yet clear where the wind-engine stood, or how long it survived.

214. Marcilly-sur-Eure 🕊
*Also known as ‘La Motteuse’*
↑[48°49´53˝ N, 1°20´40˝ E]
2—1894.
3—1) Auguste-Sylvain Bollée.  
  2) The communal council.
4—1) No. 2 head (3.5m diameter).  
  2) A column mount.
5—Dismantled.
6—Acquired to raise ‘fontaines publiques’.

215. Mesnil-sur-l’Éstrée 
  [EXACT SITE UNKNOWN]
2—1894.
3—1) Auguste-Sylvain Bollée.  
  2) The communal council.
4—1) No. 3 head (5m diameter).  
  2) A column mount.
5—Dismantled.
6—Acquired to raise ‘fontaines publiques’, and possibly also to supply the communal Lavoir.

216. Mézières-en-Drouais ∆
  [48°43’41˝N, 0°1’37˝ E: COMMUNAL WATER TANK?]
2—1894.
3—1) Auguste-Sylvain Bollée.  
  2) The communal authorities.
4—1) No. 3 head (5m diameter).  
  2) A column mount.
5—Dismantled.
6—Said to have been acquired to raise ‘water fountains’. However, an association has sometimes been made with the nearby ‘Maison Couvreux’ and it is not yet known if there are actually two sites in Mézières.

217. Montivert (Château de) ☞
  [47°31’34˝N, 0°09’30˝ W: ÉOLIENNE SITE?]
2—1894.
3—1) Auguste-Sylvain Bollée.  
  2) M Du Breil.
4—1) No. 2 head (3.5m diameter).  
  2) A column mount.
5—Dismantled, date unknown.
6—This machine is said to appear in a postcard. The site was probably in the gardens bordering the château.

218. Petiteville (Château de) ☞
  [49°17’57˝N, 0°52’34˝ E: HOUSE]
2—1894.
3—1) Auguste-Sylvain Bollée.  
  2) Le Vicomte de Petiteville.
4—1) No. 2 head (3.5m diameter).  
  2) A column mount.
5—Dismantled.
6—The identification of this particular château should be treated with caution. Confirmation is still being sought.
2: other ‘column’ sites, c. 1894–1902

Speculative listing/numbering from here onward, owing to the absence of information

219. Arthonnay ♦ ✹

[47°55’59” N, 4°13’47” E: ÉOLIENNE]
1—Bourgogne: 89 Yonne, 89470 Arthonnay.
2—1899.
3—1) Édouard-Émile Lebert.
   2) Le conseil municipal d’Arthonnay.
4—1) No. 2 head (3.5m diameter).
   2) A 4½-unit column mount, with six head- and six intermediate guys (each in three groups of two).
3) A circular cap-platform with serpentine balusters and ribbed cardinal points.
4) A spiral staircase with ribbed-and-pierced treads.
5) Believed to be a concentric-circle base, made of rendered radially-laid bricks.
6) The pump house is assumed to have been directly beneath the éolienne, which stood on a platform alongside the Lavoir, and thus to be effectively an extension of the arcade (see below).
7) The standard three-throw plunger pump with an overhung crank and serpentine flywheel spokes.
8) Beneath the pump, depth and construction of the well unknown.
9) Water was raised directly into the Lavoir, alongside the wind-engine. This was originally a single-storey single bay building of coursed brick, with stone-quoinned corners and three six-light windows, beneath fixed three-pane quarterlights, set in surrounds of a brick arch above rusticated pilasters and a stone cill. The pitched roof was made of slates laid on wooden rafters, and had a plain ridge and a single slender chimney stack. The Lavoir stood above a three-bay arcade that was apparently used by animals.
6—Picture-postcards of this site were popular prior to 1939, when the Éolienne was superseded by an electric pump. The single-storey building was altered shortly after the end of the First World War by the addition of a second storey and a hipped roof, with a lucarne and a bell-tower. The arcade was closed by half-height coped walls and multi-light windows with metal frames, a door being inserted in the outer end of each of the flanking bays to allow entry and exit. The building then served as the Mairie.

220. Baritaud (Domaine de) ★ ★

Also known as ‘Bariteau’
(44°49’05” N, 0°27’29” W: ÉOLIENNE)
1—Aquitaine: 33 Gironde, ‘à [33360] Carignan-de-Bordeaux’.
2—Between 1894 and 1898 (1895?).
3—1) Auguste-Sylvain Bollée.
4—1, as built) No. 3 head (5m diameter).
2) A 4-unit column mount, with eight two-piece main guys and four intermediate one-piece stabilisers.
3) A circular cap-platform with serpentine balusters and ribbed cardinal points.
4) A spiral staircase, with flat treads pierced with drain holes.
5) A three-stage tier of concrete over a rubble core formed the base.
6) The pump-house is rectangular, with a cellar, made of coursed brick beneath a ridged roof of 22 rows of terracotta tiles laid over wood rafters. The ridges, main and flanking, are protected with half-round tiles; two short terracotta finials mark the ends of the main ridge. The wooden door is a ledged, battened and braced design, and the windows, which are not glazed, are round-headed.
7) The standard three-throw gothic-frame plunger pump, with an overhung crank and a flywheel with six serpentine spokes.
8) A well lies directly beneath the pump head-gear.
No. 220. The No. 2 Éolienne Bollée installed by the Domaine de Baritaud, in the Gironde, is one of the oddest of all. It probably dates from c. 1895, but a Lebert maker’s plate shows that it has been altered by adding another two column-sections to catch the wind more effectively.

Photograph taken by Francis Bonneteaud in 2006.
9) An impressive stone water tower is placed some distance from the pump.
6—This is an extraordinary survivor. Its greatest claim to fame is that an entirely new two-stage column has been bolted to the crown of the original installation, and the power head has been re-mounted on top of a second platform—effectively making a 6½-unit column with twelve main and eight intermediate guys. A short ladder was fitted to allow access to the spiral staircase bolted to the extra column units.
= It is assumed that the changes were made by Lebert, comparatively soon after the Éolienne had been erected, as the maker’s plate on the lower column now bears ‘Lebert successeur’ markings. It is also assumed that the changes were made simply because the original version was sited too low to catch the wind effectively.
= The pump-house stands on the edge of a steep slope, allowing the inclusion of a cellar or chamber beneath the pump head-gear. It is not currently known if this has any implications on the distribution of the water supplies; it may, for example, have contained an oil engine.
= The Château de Baritaud, which stands nearby, was originally built in the eighteenth century. However, the outbuildings of the farm and vineyard were erected in the last decades of the nineteenth century; the impressive water tower is dated 1889.
= Another interesting feature was the extraordinary (and possibly unique)
Belvedere, or viewing platform, which was effectively three Bollée multi-part columns on top of each other!

221. Beauvoir (Château de) 
[45°46’05’’N, 04°02’04’’W: PUMP HOUSE?]
1—Rhône-Alpes: 42 Loire, 42130 Arthun.
2—After 1894.
3—1) Auguste-Sylvain Bollée?
4—1) No. 2 power head (3·5m diameter).
2) Column mount?
5—Said to have been standing in 1994.
6—This château, of old but uncertain origin, was extensively re-modelled in the nineteenth century, when the grounds were landscaped and the water supply was improved. The Éolienne apparently dates from this period, but little is currently known about its history and construction—though the wallpaper in the dining room may be protected!

222. Bellevue (Ferme de)  
Also known as ‘Flavacourt’ or ‘Lincourt’ [LOCATION UNKNOWN]
1—Nord–Pas-de-Calais: 60 Oise, 60590 Flavacourt [Gisors].
2—After 1894.
3—1) Auguste-Sylvain Bollée?
2) Presumably, the owner of the farm.
4—1) No. 3 head (5m diameter) with an Entonnoir.
2) Apparently on a 4-unit column with eight two-piece wrought-iron adjustable stays and four one-piece wrought-iron stabilisers.
3) Circular cap platform with trap-door access and serpentine balusters, but no cardinal points.
4) A staircase spiralling around the column, with plain balusters, drainage holes cast integrally with the treads, and a decorative newel post.
5) Concentric base?
6) Pump house design unknown. Possibly rectangular, made of coursed brick with a ridged roof.
7) Bollée three-throw plunger pump,
with a gothic-style cast-iron frame, an overhung crank, and a flywheel with six serpentine spokes.

8) The well is assumed to have lain directly beneath the pump house.

9) A nearby water tank was probably used for storage.

5—Dismantled, date unknown.

6—The details come from a pre-1914 picture postcard. The site may have been destroyed during the First World War, but evidence is lacking.

223. Berchères-les-Pierres

[48°23’14” N, 1°33’18” E: ÉOLIENNE]


2—Completed on 25th October 1896.

3—1) Auguste-Sylvain Bollée.

2) The communal council.

3) Classed as ‘monument historique’ on 10th May 1993.

4—1) No. 2 head (3·5m diameter).

2) A 4½-unit column supported by six two-piece wrought iron guys and three stabilisers.

3) The circular cap-platform has straight balusters and ribbed cardinal points.

4) A spiral staircase, with drainage holes cast integrally in the treads, gives access to the platform.

5) The base is square, apparently composed of four dwarf walls of rusticated stone with a rubble infill. Three stone steps and a gate in the wrought-iron fence give access to the column.

6) The pump house, approximately square in plan, is built of coursed brickwork raised on a plinth of bricks laid vertically. A door set into one side gives access to the pump chamber. Laid with slates, the roof rises to a peak topped by a cylindrical galvanised sheet-steel finial.

7) The three-throw plunger pump has an overhung crank and serpentine flywheel spokes.

8) The well is a concrete-lined sump directly beneath pump, approximately square, and shallow (owing to the proximity of the pumps to the pump-
head gear and a water level that was less than 30cm beneath the head-gear support beams).

9) Water is run off into the adjoining reservoir.


6—Among the most attractive of the surviving Éoliennes Bollée, this is set in a spacious tree-shaded square at the north-east end of a small reservoir—adversely affected in recent years by the encroachment of buildings. The wash house (Lavoir) survives on the north-west side, together with some of its original wooden windlasses. A drain from the substantial reservoir, in the south-east corner, runs off towards the oldest part of the village—and a large flywheel-type hand pump by Levert of Chartres.

= This particular Éolienne operated until the 1960s, though the pumps now have an auxiliary electric drive. It also has a Lebert plate, though there is no doubt that it is a Bollée product. Consequently, it provides one of the most important pieces of evidence that Lebert habitually discarded his predecessor’s distinctive identifiers (cf., Brezolles) when repairs or improvements were being made.

224. Bois-le-Comte

(Château de)

[LOCATION UNCERTAIN]

1—Centre: 37 Indre-et-Loire, 37130 Cinq-Mars-La-Pile.

2—Said to have been erected in 1898.

3—1) Auguste-Sylvain Bollée.

4—1) No. 2 head (3.5m diameter), with an Entonnoir.

2) A 4-unit column, with six two-piece wrought iron cap-guys and three one-piece column stays.

3) The cap-platform is circular, with serpentine balusters and cardinal points.

4) A spiral staircase, with straight balusters and pierced-and-ribbed treads gives access to the platform.

5) The base is concentric, two-tiered, of concrete over a rubble infill (?)

6) The pump house, square in plan, is built of eight courses of ashlar blocks beneath a flared cornice. The pyramidal roof, slate laid over wood rafters and battens, rises to an ornamental pillar, ball and spike finial. The roundheaded
door and window apertures—the latter with wooden shutters—have ashlar quoins.

7) The standard three-throw gothic frame pump was used, with an overhung crank and six serpentine flywheel spokes.

8) The well lies directly beneath the pump house.

9) A cylindrical or possibly rectangular tank on a rubble-built tower is believed to have been built alongside the Éolienne.


6—See also ‘Château de la Bruyère par Cinq-Mars-la-Pile’. It has also been suggested—in *Les Éoliennes Bollée* (1995)—that another éolienne was erected in or near Cinq-Mars-La-Pile by
Édouard-Émile Lebert shortly after 1900. However, despite extensive enquiries, its existence has never been confirmed. The Bois le Comte machine has a Bollée maker’s plate, which shows that it cannot date later than 1898.

225. Bonnétable (Château de) *

[48°10’29”N, 0°25’16”E: ÉOLIENNE]

1—Pays de la Loire: 72 Sarthe, 72110 Bonnétable.
2—Between 1894 and 1898.
3—1) Édouard-Émile Lebert.
   2) Le Duc de Doudeauville.
4—1) No. 2 power head (3·5m diameter).
   2) A multi-stage column.
6—The original château, which straddles the boundaries of Bonnétable and the neighbouring commune of Brionnes-Sables, is said to have been built by Jehan de Harcourt in 1476–8. However, it was extensively remodelled in the late nineteenth century by architect Henri Parent for Sosthène de la Rochfoucauld, duc de Doudeauville (1825–1908). The north pavilion was added in 1880, and an Éolienne Bollée was subsequently erected to irrigate the arable portions (potager) of the surrounding park. This machine is believed to have worked into the 1960s.

226. Boudet (Château de) ♦

Now known as ‘Château de Villaines’

[47°59´46˝N, 0°05´57˝E: PUMP HOUSE]

1—Pays de la Loire: 72 Sarthe, Château de Villaines, 72700 Pruillé-le-Chétif.

2—1901 or 1902.

3—Édouard-Émile Lebert.

2) M. Boudet.

4—1) No. 2 head (3·5m diameter).

2) A 4-unit column mount, with six head- and three intermediate guys.

3) The cap platform had serpentine balusters and cardinal points.

4) A spiral stair, with plain balusters and pierced-and-ribbed treads, gave access to the platform.

5) The base was two-tier, concentric, possibly made of concrete over a ribble or brick core.

6) The pump house was rectangular in plan, placed alongside the column, built of brick-filled wood-frame panels on a brick plinth. Laid with scalloped tiles, the hipped roof had ridge tiles with pierced trefoil finials and a large ball-and-spike finial at each end; hip tiles were half-cylindrical. The wood door and two small glazed wood-frame windows were set in the ‘long wall’ opposite the Éolienne. One of the stays pierced the roof and wall, cf. Les Clerbaudières.

7) The pump was the standard three-throw type, with six serpentine flywheel spokes.

8) The well, 35m deep, lay directly beneath pump house.

5—Said to have been dismantled c. 1998, but it is suspected that parts of the site—the base, the pump house—remain in place.

6—An auxiliary gas-engine was installed in the pump house in the 1930s. When Les Éoliennes Bollée was published in 1995, the owners of the site, M and Mme Robichez-Boudet, were still considering restoring the machine. However, expense and lack of skills apparently forced the plans to be abandoned. A visit by J. Kenneth Major in April 2002 was unable to determine the fate of the Éolienne and nothing has been heard since then.
227. Bretignolles (Château les) ★★★
[47°07´55˝N, 0°19´11˝ E: HOUSE]
1—Commune d’Anché [37500 Anché].
2—Post-1894.
4—1) No. 1 head (2·5m diameter).
2) A column.
5—Details to add from JCP material.

228. Buttes (Ferme les) ★★★
Also known as ‘Rouillon’
[48°00´11˝N, 0°10 ´06˝ E: FARM BUILDINGS]
1—Pays de la Loire. Département: 72 Sarthe:
Ferme Les Buttes, Le Mans, 115 route de
Rouillon.
2—Between 1894 and 1898.
3—1) Auguste-Sylvain Bollée.
4—1) No. 2 head (3·5m diameter).
2) A 4-unit column mount, supported
with six main- and three intermediate
guys.
3) A circular cap-platform with
serpentine balusters and plain cardinal
points.
4) A spiral staircase with plain balusters
and pierced-tread steps gives access to
the cap.
5) The base is a circular brick plinth.
6) The pump house, circular in plan, is
built of coursed brick, with a wooden
door set in brick pillars and a round-
head arch. Conical roof, laid with
graduated slates on wooden rafters. The
ventilator, supported on a ribbed sheet-
steel cylinder, has a scalloped skirt and a
ribbed roof of galvanised iron.
7) Assumed to have been the standard
three-throw overhung-crank pump.
8) The well lies directly beneath pump.
5—Visited by J. Kenneth Major in April 2002.
Owner: not known. Condition: poor,
verging on near-relic. Access: on private
land, but visible from the public road.
6—This machine lacks the entire rotor
assembly and Papillon. Though a
few Entonnoir sections survive, the
remainder may not last too much longer.

229. Caplain (Établissements) ★★★
Also known as ‘Pont sous Gallardon’ or
‘Gallardon-Pont’
[48°31´04˝ N, 01°41´07˝ E: RAILWAY STATION]
1—Centre: 28 Eure-et-Loir, Pont-sous-[28320]
Gallardon, ‘près Chartres’.
2—Prior to 1904, perhaps pre-1898.
3—Auguste-Sylvain Bollée?
2) Établissments R. Caplain.
4—1) No. 2 head (3·5m diameter)
2) Installed directly on top of a four-storey
building, apparently held by short stays.
5—Dismantled.
6—The installation stood alongside the
railway tracks, between Gallardon-
Pont railway station (now closed)
and the bridge, alongside Caplain’s
grain and seed stores. Unfortunately,
there is as yet no evidence of internal
arrangements. It could be speculated
that the wind-engine drove a grain-
crushing mill instead of conventional
pumps, but details are lacking.
230. Chênehutte-les-Truffeaux

(Prieuré de)

[47°18´40˝N, 0°09´34˝ E: SITE OF ÉOLIENNE?]

1—Pays de la Loire, Maine-et-Loire (49); près Saumur, Prieuré de Chenehût-les-Truffaux.

2—After 1894.

3—1) Auguste-Sylvain Bollée?

4—1) No. 2 head (3·5m diameter).

2) A 3-unit column mount, supported with six main- and three intermediate guys.

3) A circular cap-platform with serpentine balusters and plain cardinal points.

4) A spiral staircase with plain balusters and pierced-tread steps gives access to the cap.

5) The base was probably a concrete disc sunk into the ground so that its upper surface was level with the grassed surround.

6) The pump house, possibly square in plan, was built of coursed ashlar blocks. The design and positioning of the door
and windows is not currently known. The pyramidal roof was tiled over wooden rafters and purlins.

7) The pump is assumed to have been the standard three-throw overhung-crank type. The drive from the gearbox of the Éolienne consisted of a long horizontal shaft, with two intermediate bearing-blocks on dwarf pillars of coursed brick placed transversely.

8) The well presumably lay directly beneath pump.

5—Dismantled, perhaps in the late 1940s. The Éolienne had certainly gone by 1961.

6—The Chênehutte site stood on an escarpment a few hundred metres from the river, which presumably supplied the well. The wind engine was placed immediately behind the main building, and is rarely seen in photographs of the priory, which is now an hotel, as they were usually taken from the riverside.

231. Clône (Le) ♦ ✨

Also known as ‘Le Clône de Pons’
[45°34’24” N, 0°34’57” W: ÉOLIENNE]

2—1902.

3—1) Édouard-Émile Lebert.

2) ‘Monsieur F. Laroche au Clône près Pons (Charente-Inférieure’).

3) Listed as an ancient monument, 10th October 2006.

4—1) No. 3 head (5m diameter).

2) Mounted directly on the roof of the pump house.

6) The pump house consists of a crenellated cylindrical tower made of coursed ashlar blocks, with two shallow string courses beneath the window levels and an upper corbelled plinth. The lintel above the door is dated ‘1901’. There are three floors: ground, containing the belt-driven Audemar pump and, below the flooring, the clutches for this and the well pump; first, now containing the British-made Bamford grain mill (added at a later date); second, supporting the two sheet-iron water tanks (now replaced by concrete versions); and a third, only
No. 231. Lebert erected the unique No. 3 Éolienne Bollée of Le Clône in 1902, to serve a distillery in the commune of Pons. The site still retains practically all the original infrastructure.

Photograph taken by Jeremy Evans in 2004.
70cm high, forming a top to the tanks. The Éolienne is securely mounted on the flat concrete roof of the tower, supported on wrought-iron ‘I’-beams.

7) The Audemar pump within the tower lifted water from the reservoir to the larger tank, which then supplied the distillery. Water from the distillery subsequently ran back into the reservoir. A single-throw submersible pump in the well supplies the small tank, which then ran to the house and gardens.

8) A well, sunk 12m away from the pump house, with a squared parapet supporting the head gear.

9) Two tanks were installed on the second floor of the tower, immediately below the power-head. Water was raised to a large tank for the distillery or the small tank that supplied the house with drinking water. A nearby reservoir
collected rainwater from the roofs of the house and could be replenished from the larger roof tank when required by way of a tap on the wall of the tower.


6—The mansion-house was built in 1849, when the original well was dug, and then enlarged and adapted for the next hundred years. The well was originally intended to supply the house with drinking water with the assistance of a water-tower built in the 1850s about 1km distant.

= The neighbouring distillery was erected in 1850–60 for Frédéric Laroche by Vehrenes et Maresté of Cognac, apparently on the basis of plans supplied from Britain.

= Lebert was approached to instal a Bollée-type wind engine on the basis of a recommendation made by M Ard, owner of the Cozes Éolienne (see no. 141), the relevant estimate being dated 27th March 1902—though the tower, until recently shrouded with ivy, had already been constructed from the remnants of two eighteenth-century windmills standing on the margins of the village. Lebert’s estimate suggest that a water-pumping system was already operating on the property: no standard Bollée- or Lebert-type pumps were included, a gearbox was to be installed to drive an (already emplaced?) Audemar-brand pump, and the horizontal well-head axle was to be extended to connect with a new subterranean drive-shaft.

= Pumping operations began in September 1902. There was originally a direct connection between the two pumps, but the shaft flexed too greatly and M Laroche subsequently had a new intermediate-belt drive installed to reduce the shock of operation.
232. Courtenay ★

[LOCATION UNKNOWN]
1—Centre: 45 Loiret, 45320 Courtenay.
2—After 1894.
3—Constructor: not known.
4—Not known.
5—Dismantled.
6—This could have been a pylon mount, so research is clearly needed.

233. Crémillières (Maison des) ★

Also known as ‘Cinq Mars la Pile’

[47°20’53” N, 0°27’38” E: HOUSE/MAIRIE]
1—Centre: 37 Indre-et-Loire, Cinq Mars La Pile.
2—1894?
3—1) Auguste-Sylvain Bollée.
4—1) No. 1 head (2.5m diameter), with an Entonnoir.
   2) A four-unit column, supported with six two-piece wrought iron cap-guys and three one-piece column stays.
3) A circular cap-platform, with serpentine balusters but lacking cardinal points.
4) A spiral staircase with pierced-and-ribbed treads gives access to the platform.
5) The four-tier concentric base is made of concrete, perhaps laid over bricks on the three lower tiers.
6) The pump-house is square in plan, made of coursed brick, with a high-sill door to one side and a window aperture opposite the entry of the drive shaft. These are currently closed by a new ledged, battened and braced door and a matching shutter. The roof is pyramidal, laid with slates over wood rafters.
7) The standard three-throw overhung-crank pump was used.
8) The well, directly beneath the pump, is sunk into a cave in the hillside.
9) A water-tank is assumed to have stood nearby.
6—Though sometimes listed as a ‘communal site’, the mansion did not become the town hall until 1988. It was built in the mid-nineteenth century on an estate that had once been a fief of the nearby château, though the identity of the purchaser of the eolienne has yet to be found. Water was supplied to the jardin potager and the house until the Second World War, but it seems that an electric pump was substituted for the wind engine in the 1950s. The fabric steadily deteriorated until the council decided to restore it, if not to working order then at least to good condition.

234. Dolus-le-Sec ★ ★

[47°09’45” N, 0°53’40” E: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, 37310 Dolus-le-Sec.
2—1898.
3—Ordered from Auguste-Sylvain Bollée, but probably completed by Lebert.
2) Le conseil municipal.
4—1) No. 1 head (2.5m diameter).
   2) A 4-unit column, supported with six two-piece wrought iron cap-guys and three one-piece column stays.
3) The cap platform is circular, with serpentine balusters but lacking cardinal points.
4) A spiral staircase, with pierced segmental treads gives access to the platform.
5) The base is made concrete, concentric of three tiers.
6) The original pump house was approximately square in plan, built of rendered brick, with a flat roof beneath the water tank. A battened, ledged and braced wooden door on one side gives access to the pump.
7) The standard three-throw overhung-crank pump was used.
8) A 12m-deep well lies beneath the pump house.
9) The original sheet-iron rectangular water tank was placed on top of the pump house. Water could also be supplied direct to a Lavoir or wash-house alongside the wind engine. This consisted of a rectangular concrete basin beneath a pitched slated roof supported on six wooden pillars. Each side of the Lavoir is now partly clad in wood boarding.
5—Owner: village de Dolus-le-Sec.
6—The installation of this machine was first proposed at a meeting of the council on 22nd May 1896, when, worried by a lack of sufficient drinking water, mayor Louis Martin donated a parcel of land (measuring 2 ares 10 centares) and a small sum of money to begin a subscription-fund to pay for a new Lavoir.
= The Éolienne worked until replaced by an electric motor in the 1950s, but was returned to working order as a ‘Millennium Project’ with the support of national, regional and local authorities in addition to the people of the commune. Officially re-opened on 26th May 2002, it has since been demonstrated regularly during the summer months.

235. Dyé

[47°54’3”N, 3°52’12”E: MAIRIE]
1—Bourgogne: 89 Yonne, 89360 Dyé.
2—1898 or 1899.
3—1) Auguste-Sylvain Bollée or, more probably, Édouard-Émile Lebert. 2) The communal authorities.
4—1) No. 1 head (2.5m-diameter). 2) A 4-unit column mount, with six head- and three intermediate guys. 3) A circular cap-platform with serpentine balusters and cardinal points. 4) A spiral staircase with ribbed-and-pierced treads. 5) Concentric, two or three tiers, presumed to be made of concrete over a rubble core. 6) Set in a walled enclosure with an adjacent Lavoir, the pump house was approximately square, of coursed brick, with round-headed window apertures and doorway. The pyramidal roof was tiled over wood rafters, with ridge tiles at each corner, and rose to a prominent spiked finial. 7) The standard three-throw pump, with an overhung crank and serpentine flywheel spokes. 8) A well directly beneath the pump, depth and construction unknown. 9) Water was run off to the Lavoir and possibly also to a reservoir or tank in the vicinity. The Lavoir was an arcaded five-bay design, with a frame of reinforced
concrete and coursed brick infill. The end bays—perhaps only on the access side—accommodated double doors, each with four vertical panels (two above two), beneath the full-width single-light window; the other bays all had windows with four lights running up to the eaves. The roof was laid with tiles over wooden rafters, and rose to a longitudinal ridge. There were no finials.

5—Dismantled?

6—This machine was one of several included by Pierre Haasé in 'Les éoliennes géantes de la «Belle Epoque» dans l’Yonne,' published in Pays de Bourgogne in 1995. The general design of the decorative single-storey Lavoir resembles Arthonnay and Villevallier (qq.v.).

236. Eu (Château d’)

[50°02’58” N, 1°25’02” E: HOUSE]
gas installation (then replaced by an internal-combustion engine) and a ‘roue motrice’, but it is not currently clear whether the Éolienne is still in place. Confirmation of status is still being sought.

237. Fournear (Le) [LOCATION UNKNOWN]

1—Centre: Cher (18), near [18400] Saint-Florent sur Cher.
2—Between 1894 and 1898 (but possibly as late as 1901)
3—1) Believed to have been Bollée.
2) Probably communal, with a Lavoir.
4—1) No. 2 head (3.5m diameter)
2) A 4-unit column mount.
5—Dismantled.
6—Details taken from a postcard in the JCP collection.

238. Grandvilliers (Ferme de) [48°32´23˝N, 2°52´57˝ E: ÉOLIENNE SITE?]

1—Ile-de-France: 77 Seine-et-Marne, 77720 La Chapelle-Gauthier, ‘Lieu dit Grand-villiers’.
2—After 1894.
3—1) Auguste-Sylvain Bollée?
4—1) No. 2 head (3.5m diameter).
2) A three-unit column mount attached to the farmhouse wall as well as by stays.
3) A circular cap-platform, with serpentine balusters and ribbed cardinal points.
4) A spiral staircase with pierced treads.
5) Probably a square plinth, perhaps of coursed brick with a rubble infill.
6) Possibly a separate pump-house built as a lean-to against the wall of the adjoining farm building; alternatively, perhaps inside the farm-building wall.
7) The standard three-throw plunger pump, with an overhung crank and a flywheel with six serpentine spokes.
8) A shallow sump directly beneath the pump.
9) Probably a tank within the eaves of the adjoining buildings, with run-off into a pond.

5—Dismantled?

6—Identified from several picture-postcards dating prior to 1914, taken because the site was regarded as photogenic.

239. Guimier (Parc)

[48°27´10˝N, 0°15´06˝E: SEE NOTES]

1—Pays de la Loire: 72 Sarthe, La Fresnaye-sur-Chédouet.

4—1) No. 2, after 1894.

5—Dismantled?

6—This site, shown in several pre-1914 postcards, consisted of ornamental gardens with a Lavoir, a lake and grottoes. It is said to have been created by Edmond-Marie Guimier, a one-time soldier and photographer born in Grand-Luce, who became curé of the parish of Rouillon until his death in 1940. The park is now enveloped by an industrial estate, and the status of the Éolienne is unknown.

240. Houdière (La)

Also known as ‘Crucey-Village’

[48°40´20˝N, 1°06´01˝E: BUILDINGS COMPLEX]

1—Centre: 28 Eure-et-Loir, 28270 La Houdière.

2—After 1894.

3—1) Auguste-Sylvain Bollée?

4—1) No. 1 head (2.5m diameter).

2) A column within the pump-house building, apparently with six two-piece wrought iron guys (and perhaps also the three stabilisers).

3) The circular cap-platform had serpentine balusters and cardinal points.

6) The unique roundhouse, possibly made of rough-rendered brick, had a conical tiled roof topped by the balustrated platform.

7) The pump is said to have been a three-throw plunger type.

8) The well lay beneath the pump.


6—This was an interesting site, and it is a pity that, though the wind-turbine itself has been saved, so many other details seem lost.

= It has been suggested that the roundhouse already existed, perhaps as the base of a windmill or granary (grenier), and that it was adapted to accept the Éolienne. Owing to the existence of the guys, however, it seems much more likely that the building was erected after the machine had been erected.
241. Lanessan (Château) 🌱
[LOCATION UNKNOWN]
2—Between 1894 and 1901.
3—1) No. 1 head (2.5m diameter).
4) Column mount.
5—Blown down in a gale in 1999 and sold for scrap.
6—The Lannessan estate was acquired in 1793, immediately after the French Revolution, by Jean Delbos, ‘négociant bordelais’. The mansion (like its near-neighbour, château La Chesnaye) was built in ‘English Style’—mock-Tudor—for André Delbos, grandson of Jean. Designed by Henri Duphot, it was completed in 1878. Marie-Louise Delbos, grand-daughter of André, married Étienne Bouteiller in 1907 and the property remained in the Bouteiller family until 2009.

242. Lestaules (Château de) 🌻
Also known as ‘Cestas’
[LOCATION UNKNOWN]
1—Aquitaine: 33 Gironde (l’École Superieure d’Arts Appliqués d’Aquitaine, 33610 Cestas, Avenue Saint Jacques de Compostelle 147).
2—Between 1895 and 1900.
3—1) Auguste-Sylvain Bollée?
4) No. 3 head (5m diameter) with an Entonnoir.
2) A 5-unit column mount, with eight two-piece wrought iron guys and four one-piece stabilisers.
3) A circular cap-platform, with serpentine balusters and ribbed cardinal points.
4) A spiral staircase, with flat treads pierced with drain holes.
5) The concentric base is apparently made of concrete over a rubble core.
6) The pump house is made of rendered coursed brick, with a string course separating the two storeys and a dwarf parapet edging a roof made of radial wood rafters laid with six (eight?) sheet-lead segmental panels. The wooden door is a ledged, battenb and braced design, set in an arch, and a door to the second storey (reached by a ladder) is similar.
7) A standard three-throw gothic-frame plunger pump, with an overhung crank

No. 242
and a flywheel with six serpentine spokes.
8) The well lies directly beneath the pump head-gear.
9) A cylindrical sheet-metal water tank is raised on a rendered brick tower a few metres away from the pump. The doors, windows and their apertures mirror the design, if not the shape, of those of the pump-house.
5—Visited by Francis Bonneteaud in the summer of 2006. Condition: very good. In need of some remedial work, with some wasting in the blades and the platform-floor panels, but otherwise close to full working order. Access: on the school land, alongside the main building.
6—This machine was erected to serve what was then a private house dating from 1830, now set in a five-hectare estate but once much more extensive. The house now serves as an arts college.

243. Louisière (Ferme de la) ⋆
[47°34’20”N, 0°39’58”E: CENTRE OF FARM]
4—1) No. 3, after 1894.
5—Dismantled?
6—Little is currently known about this site, though it seems that little or nothing of the Éolienne installation remains. Identification rests on a glimpse in the background of one of the many photographs of the Château de Beaumont-la-Ronce, even though details are difficult to discern.
= The ‘model farm’ was created in the early 1870s by André-Léopold-Jacques Bonnin de la Bonninière (1821–1904), fifth Marquis de Beaumont-Villemanzy, who employed architects Gustave and Charles Guerin of Tours to entirely re-model the feudal château in 1874–80.
= La Louisière—still a working farm today—was sold in the 1920s (?) to the Savé or ‘Savey’ family, owners of the estates of Platé and Thoriau that had been created by the renowned civil engineer Armand Moisant (see no. 359 and no. 365.

244. Maisières (Château de) ✰
[LOCATION UNKNOWN]
1—Near Mons, Hainault, Belgium.
2—1897?
3—1) Auguste-Sylvain Bollée.
   2) Le Vicomte Vilain XIII.
4—1) No. 1 head (2.5m diameter).
   2) A 4½-unit column, with six two-piece wrought iron head guys and three intermediate stabilisers.
   3) A circular cap-platform, with serpentine balusters and cardinal points.
   4) A spiral staircase with plain balusters.
and pierced-and-ribbed treads.
5) The base is believed to have been made of two brick tiers, laid radially on a rubble core.
6) The rectangular pump house was built of coursed brick, and had a ridged roof laid with tiles on wood rafters. The battened, ledged and braced wooden door was set in a brick architrave.
7) A three-throw plunger pump with a gothic frame, an overhung crank and a flywheel with six serpentine spokes.
8) The well lay beneath the pump.
9) Water was supplied to a tank within a massive brick-built reservoir. Set on a tapering base, the cylindrical upper part of the tower massive was doubly machicolated, once at the juncture with the tapering section and again beneath the crenellations. A wooden door was set in a brick architrave on the opposite side to the pump house, with a small round window high on the tapering wall. Photographs show that several window apertures had been filled; and this, together with differing brickwork texture at the juncture of the tapering and cylindrical sections of the tower, suggests that the water tank had been mounted on an existing building: the base of a windmill, perhaps.
5—Dismantled, or perhaps destroyed during the First World War.
6—The house was erected in the second half of the nineteenth century, perhaps around an earlier building, by the politician-diplomat and scholar Vicomte Hyppolite Vilain XIII (1796–1873) and substantially remodelled by his elder son, Vicomte Adrien Vilain XIII (1861–1914). The Éolienne was apparently installed to supply the Jardin potager and an orangery. The date of completion is uncertain, but was certainly prior to the sale of the Bollée business to Lebert in February 1898.

245. Maligny

[47°52’10”N, 3°45’55” E: MAIRIE]
1—Bourgogne: 89 Yonne, 89800 Maligny.
2—1894.
3—1) Auguste-Sylvain Bollée.
   2) The communal authorities?
4—1) No. 2 head (3·5m diameter). See notes below.
   2) A 4½-unit column with eight pairs of two-piece wrought-iron adjustable stays and four one-piece wrought-iron stabilisers.
3) A circular cap-platform with trapdoor access and serpentine balusters. No cardinal points.
4) A staircase spiralling around the column, with plain balusters, drainage holes cast integrally with the treads, and a decorative newel post.
5) Raised on a rusticated plinth with three steps.
6) Built of coursed brick, the pump house is square, with chamfered ashlar-
block corner pilasters. The pyramidal roof, apparently of slates laid on wooden rafters, rises to a sheet-lead finial; roof-edge panels are chamfered to match the plan. The round-headed battened, ledged and braced wooden door is set in an ashlar architrave; a small ventilator is set into one of the side walls, and a small window may be in rear.

7) Assumed to be the Bollée three-throw plunger pump, with a gothic-style cast-iron frame, an overhung crank, and a flywheel with six serpentine spokes.

8) A well directly beneath pump house.

9) As the pump was mounted on the edge of a shallow bank, a reservoir (with decorative hedges) was set into the hillside beneath the Éolienne. A matching door in bank-face gave access to the water chamber.

5—Dismantled, date unknown.

6—Many surviving postcards show a No. 3 head, often with the date ‘1902’ in the card-title. It is suspected that Lebert fitted a new turbine during a major overhaul, but confirmation is lacking.

246. Marsauceux

Sometimes placed in Mezières, the co-commune of Marsauceux

[48°43´42˝N, 1°26´37˝E: ÉOLIENNE SITE?]

1—Centre: 28 Eure-et-Loir, Marsauceux (28500 Mezières-en-Drouais), Rue de l’Éolienne.

2—1894.

3—1) Auguste-Sylvain Bollée.

2) The client was once assumed to have been the communal authorities, but was possibly an individual ‘Propriétaire’.

4—1) No. 3 power head (5m diameter).

2) A 4-unit column, with eight two-piece wrought iron guys and four intermediate stabilisers.

3) The cap-platform is circular, with serpentine balusters and cardinal points.

4) A spiral staircase with plain balusters
and pierced-and-ribbed treads gives access to the platform.
5) The base took the form of a frustrum, or truncated cone (probably concrete over a rubble infill), with a short flight of steps up one side giving access to the staircase.
6) The pump house, square in plan, was made of coursed brick with plain wood-framed window apertures and doorway. The pyramidal roof, laid with slate over wooden rafters and battens, rises to a prominent sheet-lead finial.
7) The standard three-throw pump was used, with an overhung crank and serpentine spokes.
8) The well lay directly beneath the pump.
9) A large circular tower on a brick-capped rendered base stood a few metres from the base of the Éolienne. The water tank had a steeply pitched conical roof, apparently laid with lead sheets over wood rafters. A ledged and battened wooden door, within a brick architrave stepped out to carry the platform, is apparently dated ‘1894’. The tank-top was reached from a small stage projecting from the capping of the tank-base (with a removable ladder) and a ladder up the side of the tank to a wood-doored lucarne. The lucarne had a short projecting wood-slat roof with lead flashing along the ridge.

5—Dismantled.
6—A small rectangular open-frame Lavoir or cow-shed, with a thatched roof, stood alongside the pump house.

247. Mesnil-d’Acon ⚫
(La Ferme du)
[TILLIÈRES-SUR-AVRE] 48°45’29”N, 1°03’27”E: FARM BUILDINGS
1—Haute-Normandie: 27 Eure, La Ferme du Mesnil-d’Acon.
2—Believed to date c. 1897.
3—1) Auguste-Sylvain Bollée.
4—1) No. 2 head (3·5m diameter).
   2) A 4-unit column.
   6) The pump-house lay alongside the wind-engine base.
5—Still standing in 2010.
6—This was part of a substantial farmhouse, pictured on a card postmarked 24th July 1910. The column has an original Bollée maker’s plate.

248. Mirandol[le] (Château de) ✹
   Also known as ‘Beaumont-la-Ronce’
   (47°33´27˝N, 0°39´34˝ E: ÉOLIENNE)
1—Centre: 37 Indre-et-Loire, Beaumont-la-Ronce.
2—1898–1900?
3—1) Auguste-Sylvain Bollée or Édouard-Émile Lebert.
4—1) No. 2 head (3·5m diameter).
   2) A 4-unit (?) column, with six two-piece wrought iron cap-guys but apparently lacking the three additional column stays.
   3) The cap-platform is circular, with serpentine balusters and cardinal points.
   4) A spiral staircase with straight balusters and pierced-and-ribbed segmental treads gives access to the platform.
   5) The base is a single concrete disc.
   6) Placed close to the column, the pump-house is circular in plan, made of rendered coursed brick, and has a conical roof of slates laid on wood rafters and battens. A brick string-course may mark a division between the pump chamber and a water tank which may have been placed in the eaves.
   7) The pump is the standard three-throw gothic frame type, with an overhung crank and six serpentine flywheel spokes.
   8) The well lies beneath the pump.
6—Remarks. The date of this installation, a few hundred metres south-east of La Bézardiére, is subject to doubt. It does not appear in any of the pre-1894 client lists, and the absence of an Entonnoir suggests that it may date from the early Lebert period—perhaps 1899 or 1900. A restoration project is currently under active consideration.

249. Moulin (Ferme du) ✹
   (48°22´02˝N, 2°58´35˝E: ÉOLIENNE)
1—Île de France: 77 Seine-et-Marne, 77130 Cannes-Écluse.
2—Believed to date from 1895
3—1) Auguste-Sylvain Bollée.
4—1) No. 1 head (2·5m diameter), with a multi-piece Entonnoir
   2) A 4-unit column, with six two-piece wrought iron cap-guys and three
additional column stays.
3) The cap-platform is circular, with serpentine balusters and cardinal points.
4) A spiral staircase with straight balusters and pierced-and-ribbed segmental treads gives access to the platform.
5) The base comprises two concentric discs, possibly rendered over bricks laid radially.
6) The pump house, which lies alongside the column, is circular in plan. Made of coursed ashlar blocks topped by a moulded cornice, it has a sharply-pitched conical roof of lead sheeting rising to a tubular finial which may now lack an original ball terminal. The battened wood-plank door, braced by two full-width iron hinges, is set in a round-headed architrave of concrete (?); two small apertures, one for the drive shaft from the base of the wind-engine to the pump and another, diametrically opposite, originally for a small window, are similarly framed.
7) The pump is assumed to be the standard three-throw gothic frame type, with an overhung crank and six serpentine flywheel spokes.
8) The well lies directly beneath the pump.
6—Standing on the banks of the river Yonne, the ‘model farm’ and its neighbour, La ferme du Château, were created by Jacques-Charles-Édouard de Fitz James (1834–1913), Comte de Fitz James, shortly after his marriage in 1866 to Marie-Madeleine-Adèle, daughter of Comte Dulong du Rosnay. The Fitz James family, descended from the son born in 1710 to the exiled James II of England and his mistress Arabella Stewart. The Cannes-Écluse site already had a water-driven corn mill, and it is assumed that the Éolienne Bollée was purchased to supply water to the ornamental gardens and jardin potager of the farmhouse, perhaps soon after the Comtesse de Fitz James inherited the estate of her father (and proceeds of the sale of the Château de Benais, q.v.) in 1894.

250. Mul[l]onière (Château de la) ✫
[47°29´40˝N, 0°36´28˝E: MAIN HOUSE]
2—Said to date from 1893, but more probably 1894/5.
3—1) Auguste-Sylvain Bollée.
4—1) No. 2 head (2·5m diameter).
   2) A column.
   6) The pump house, now enveloped in foliage, is probably square in plan and made of rendered brick or possibly rubble. The pyramidal roof is laid with slates on rafters overhanging the eaves.
7) The pump is the standard three-throw type, with an overhung crank and gothic frames.
5—Dismantled, though the pump house and pump survive.
6—‘Millonière’, according to some of the postcards; current spelling ‘Mulonnière’. This was a vineyard prior to 1914, possibly connected by family ties with a similarly-named house in Maine-et-Loire.

251. Nogent-le-Phaye

   Sometimes ‘Nogent-Le-Faye’, particularly on postcards
[48°26´33˝N, 1°34´25˝ E: ÉOLIENNE]
1—Centre: 28 Eure-et-Loir, 28630 Nogent-le-Phaye.
2—1898.

3—1) Édouard-Émile Lebert (though the original order may have been placed with Auguste-Sylvain Bollée).
   2) Le conseil communal.
4—1) No. 2 head (3·5m diameter).
   2) A 5-unit column mount, with six two-piece wrought iron guys and three one-piece intermediate stabilisers.
3) The circular cap-platform has serpent-ine balusters and cardinal points.
4) A spiral staircase, with plain balusters and pierced-and-ribbed treads, gives access to the platform.
5) The base comprises a rectangular extension of the pump-house wall.
6) The pump house, rectangular in plan, is made of rendered brick with decorative brick quoins on the corners and also around the door frame. The pitched roof is tiled over wood rafters and battens, and has half-round ridge tiles.
7) The pump is assumed to have been the standard three-throw gothic frame pattern with an overhung crank and a
flywheel with six serpentine spokes.
8) A cylindrical sheet-metal water tank once stood on a plinth alongside the pump house.
9) The well lies directly beneath the pump, depth and details of construction not known.

6—This site is preserved in good condition, excepting the removal of the original water tank, whose base is occupied by an ornamental flowerbed. The Lavoir has also been rebuilt, though generally in keeping with its former state.

252. Nogent-le-Roi (Château de) ★
[48°38´28˝N, 1°31´55˝E: ÉOLIENNE]
1—Centre: 28 Eure-et-Loir, 28210 Nogent-le-Roi.
2—Erected between 1894 and 1898.
3—1) Auguste-Sylvain Bollée.
4—1) Head type unknown; possibly on top of a masonry pedestal. It is assumed that the mount is a multi-unit column.
5—Owner: commune de Nogent-le-Roi.
Condition: unknown. Access: public?
Said to have been included with the château in the listing as a ‘monument historique’ on 1st February 1993.
6—This Éolienne, assumed to be a Bollée, was erected in the grounds of a chateau built in 1863 in the style of Louis XIII by Alfred Chapelain. The original building had mediaeval origins and foundations survive from the fifteenth century.

253. Oger (Maison d’) ★
[46°44´44˝N, 0°50´45˝E: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, Confluent (‘Lieu-dit Laireau’), 37290 Yzeures-sur-Creuse.
2—Allegedly 1897 (see Remarks).
3—1) Auguste-Sylvain Bollée.
2) M Oger.
4—1) No. 1 (2.5m diameter).
2) A 3½-unit column mount with six two-piece adjustable cap-guys and three one-piece column stays.
3) A circular cap-platform with serpentine balusters and cardinal points.
4) A spiral stair with pierced-and-ribbed segmental treads gives access to the platform.
5) The base is made of concentric tiers, possibly of conceate over rubble or bricks laid radially.
6) Circular in plan, the pump house is made of coursed ashlar blocks with coping beneath the roof of terracotta tiles laid on wood rafters and battens. The doorway and the opposed window aperture are both arched. The roof has a slatted lantern or ventilator, possibly square in plan, rising to a pyramidal sheet-lead cap with low ridges or strakes formed between the panels.
7) The pump is assumed to be the standard three-throw type, with an
overhung crank and gothic frames.
8) The well lies directly beneath the pump, but is assumed to be little more than a sump owing the proximity of the river.

5—Still standing in 2011, in good condition.
6—Despite the differing dates and proprietors’ names, it has been suggested that this is the machine customarily identified as ‘Villa Saint-Maurice’ (see no. 211), moved from its original site when the river-bank was developed between the wars. The machines are undoubtedly similar combinations of No. 1 heads and 3½-unit columns, and the difference in the pump-houses could be explained simply by the construction of a new building of the same general design—if not detail—of the pump-house that had stood on the bank of the Creuse. More research is clearly needed.

254. Perreux (Château de) ★
[47°26'13"N, 0°58'02"E: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, 37530 Nazelles-Negron, 36 rue de Pocé.
2—Probably erected c. 1895–8.
3—1) Auguste-Sylvain Bollée.
4—1) No. 2 head (3·5m diameter).

2) A 4-unit column with eight two-piece wrought iron cap-guys and four column stays.
3) A circular cap-platform with serpentine balusters, but no cardinal points.
4) A spiral staircase, with straight balusters and pierced-and-ribbed treads, gives access to the platform.
5) The base is a concentric tiered pattern.
6) The pump-house, circular in plan, is made of rendered brick (or possibly rubble), with three arch-headed window apertures and a similar (but deeper) aperture for a ledged, battened and braced wooden door. Each aperture is edged with ashlar quions. The steeply pitched conical roof is laid with slates laid over wooden rafters and battens. The slates are placed...
conventionally for the lowest thirteen rows, then diagonally for four rows and then conventionally again for another thirteen. Lead flashing provides a rudimentary gutter, as well as roof-cap. This may once have been topped with a decorative finial, now lost.

7) The pump is assumed to be the three-throw type, with an overhung crank and six serpentine flywheel spokes.

8) The well lies directly beneath the pump house.

9) A cave in the nearby rocks provides a splendid natural reservoir.


6—Originally completed in 1701, but rebuilt in 1854, the impressive mansion is now run as a hotel. However, nothing is currently known about the history of the Éolienne.

255. Pied Sec (Le Mans) * *

Also known as “l’Éolienne GIAT”

[ORIGINAL LOCATION UNCONFIRMED]

1—Pays de la Loire. Département: 72 Sarthe: 11 rue de Pied Sec, 72000 Le Mans.

2—1895.

3—1) Auguste-Sylvain Bollée.

4—1) No. 1 head (2·5m diameter).

2) A 3½-unit column mount, supported with six main- and three intermediate guys.

3) The cap-platform was circular, with serpentine balusters no cardinal points.

4) A spiral staircase with ornamented straight balusters and drain holes cast integrally with the segmental treads gave access to the platform.

5) The base was a triple concentric-circle design, with a projecting torus (half-round edge) to tier of steps.

6) The pump house, circular in plan, made of coursed brick, had a steep conical roof rising to flashing and a small finial. Laid over wood rafters and battens, the slate courses are thirteen conventional; two laid as diamonds; six conventional; two with scalloped edges; and one conventional, immediately below the finial. The access door lies on the side opposite a small rectangular extension, with walls of painted asbestos panels and a sharply pitched roof. The vertically battened gable end lies above a double metal door with two threequarter-height windows per panel.

7) The pump is assumed to have been the standard three-throw type.

8) The well lay beneath the pump, depth and construction unknown.

5—Visited by J. Kenneth Major in April 2002.

6—This machine was built to supply the needs of a nearby estate. However, its site was then bisected by the railway, absorbed by Le Mans suburbs, and then acquired by the municipal authorities in 1936. Title passed to the army after
an extension of the military propellant factory (Ateliers pirotéchniques du Mans) enveloped the Éolienne.

The site was kept in good repair, though the pumps and associated drive-gear were removed. However, it was then sold by the state-owned arms-making business (Groupement Industriel des Armements Terrestres, ‘GIAT’) and subsequently enveloped by an industrial estate. At first, the Éolienne was intended to stand on a roundabout, much as the one-time Château de Salvert machine (q.v.) dominates the N147 north-east of Saumur. A plan was then mooted, in 2002, to move the machine to the Maison d’eau in l’Arche de la Nature, a museum being created in Le Mans; and the machine was dismantled into the care of the municipal authorities. However, it is suspected that the evidence that could have been provided by the well and the pump house has already been lost.

The machine, renovated in 2007, is accompanied by the unique pump from the site in Arnage (see no. 000).

256. Poissy-sur-Seine ✠

[LOCATION UNKNOWN]

1—Île-de-Fance, Yvelines (78, formerly Seine-et-Oise), Poissy-sur-Seine.
2—After 1894.
3—1) Bollée or Lebert?
4—1) No. 2 head (3·5m diameter).
   2) 3½-unit column, with six adjustable two-piece head guys and three one-piece column stabilisers.
   3) The circular cap-platform had serpentine balusters and cardinal points.
   4) A spiral stair with plain balusters and ribbed and pierced segmental treads gave access to the platform.
   5) The base was probably concentric, tiered.
   6) The pump house took the form of...
a coursed brick lean-to, rectangular in plan, with a roof of slates laid over wooden rafters and purlins. There are also distinctive eaves boards. A battened, ledged and braced door (and a glazed window) are set into the low-side wall.

7) It is assumed that the standard three-throw pump would have been used, with an overhung crank and gothic frames.

8) The well was presumably directly beneath the pump.

9) A cylindrical sheet-iron water tank stands on a base, circular or possibly octagonal in plan, which abuts the pump house. A narrow coping separates the tank from its tower. A door, presumably wooden, is set into a frame in the base of the tower on the same side as the door and window of the pump house.

5—Dismantled.

6—This machine, not yet conclusively identified, can be seen in the mid-ground of picture-postcards, “Usine Fibro-Ciment, vue prise de chemin de fer”, recording the effects of the devastating Seine floods of 1910. These are generally taken from the platform of Gaillard station.

257. Postolle

(48°16´54˝N, 3°26´39˝ E: ÉOLIENNE)

1—Bourgogne: 89 Yonne, 89260 La Postolle.

2—1898.

3—1) Auguste-Sylvain Bollée.

2) Le conseil communal.

4—1) No. 1 head (2·5m diameter).

2) A 4-unit column mount, with six head- and three intermediate guys.

3) A circular cap-platform with serpentine balusters and ribbed cardinal points.

4) A spiral staircase with ribbed-and-pierced treads.

5) Two-tier base, concentric, with four steps.

6) A square pump house of rendered coursed bricks with exposed brick quoins. The arched doorway has a decorative brick-edged architrave, the plain-cill window apertures being similar. The tiled pyramidal roof rises to a sheet-metal finial, with the edges protected by half-round ridge tiles.

7) The standard Bollée three-throw type, with an overhung crank and serpentine flywheel spokes.

8) A well beneath the pump.


6—Restored in its centenary year, this machine is now back in working order thanks to a campaign begun in 1976 by Mme Kaldonski. An attractive Lavoir, matching the pump house, stands next to the Éolienne.
258. Purnon (Château de) ★

Also known as ‘Les Chaumeries’, ‘Loudun’, ‘Monts-sur-Guesnes’, ‘Moulin-Bijard’ or ‘Verrue’

[46°52′08″N, 0°10′38″W: ÉOLIENNE]

1—Poitou-Charente. Département: 86
Vienne, 86420 Purnon.

2—Believed to have been erected in 1900.

3—1) Édouard-Émile Lebert.
   3) listed as ‘monument historique’ on
      11th December 1992, classed on 10th May
      1995. An earlier listing (1971) had been
      cancelled.

4—1) No. 2 head (3·5m diameter).
   2) A 4-unit column, with six wrought-
      iron guys and three intermediate
      stabilisers.
   3) A circular cap-platform, with
      serpentine balusters and cardinal points.
   4) A spiral staircase with plain balusters
      and pieced-and-ribbed treads.
   5) The base is a simple two-tier
      concentric footing of rough-cast
      concrete, with access steps.
   6) The pump house, circular in plan, is
      made of coursed rusticated stone, with
      matching quoins around the round-
      headed doorway and the similarly
      shaped window apertures. The roof
      rises to a terracotta finial. It is laid with
      terracotta tiles on wooden rafters,
      divided by six radial lines of ridge tiles,
      above an ‘apron’ consisting of four
      overlaid circumferential tile-rows. A
      small outhouse of concrete blocks, with
      a simple lean-to roof and a ledged and
      batten door, projects from the wall
      diametrically opposite the doorway.
      This is undoubtedly a later addition.
   7) The standard three-throw gothic
      frame plunger-pump, with an overhung
      crank and a flywheel with six serpentine
      spokes.
   8) A sump approximately 5m deep lies
      beneath the pump house.
   9) A tall cylindrical galvanised-steel
      water tank, with a low conical top,
      surmounts a cylindrical tower made
      of rubble infill between four ‘snecked’
      pillars of ashlar blocks. The wooden
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A door has an ashlar frame with prominent quoin and keystone, and there are narrow slots directly below the tank. As these align with slits in the cornice, it is concluded that there was once a projecting platform or gallery around an original tank. Access to a manhole in the present tank can be gained by the original external ladder and an additional ‘tank’ section with protective hoops and safety bars. A smaller tank, now in wasted condition, sits alongside the tower on a simple wooden four-post frame with quarter bars.

5—Visited by Francis Bonneteaud and Régis Girard in the summer of 2005. Owner: the de Rochequairie family. Condition: good. Some wasting can be seen on the platform floor plates, but the Papillon is complete excepting the drop weight and its cable. The pump-head gear is in good condition, but the submersible pumps have been removed.

6—The château was built in 1771–85, probably on earlier foundations; the ‘Long Avenue’ was added in 1812. The garden pre-dates the present house.

An éolienne was purchased to provide water for the house and jardin potager. It is suspected that the present tower-top water tank is a replacement for the smaller version, which was then pressed into service to give additional storage capacity. The abrupt (and obvious) change in the design and material of the ladders supports this claim.

258. Rochers (Chalet les) 

Also known as ‘Héloûp’

[48°24’09”N, 0°01’38”E: NEW HOUSE ON SITE]

1—Basse-Normandie: 61 Orne, 61250 Héloûp.
2—After 1894.
3—1) Auguste-Sylvain Bollée?
4—1) No. 2 head (3-5m diameter).
   2) A column mount
5—Dismantled in 1979
6—The power-head was acquired by the Musée de la Conservatoire National des Arts et Metiers (CNAM), remaining in store until a restoration project was mooted in 2009—status: unknown.

260. Rostrenen  

[48°14’33”N, 3°19’12”W: STATION BUILDING?]
1—Bretagne: 22 Côtes-du-Nord, 22100 Rostrenen.
2—Probably c. 1897–8.
3—1) Auguste-Sylvain Bollée.
    2) The communal council?
4—1) No. 3 head (5m diameter).
    2) A comparatively low column (3½ units?)
    9) Possibly the water-tower that stood in the station grounds.
5—Dismantled
6—This machine can be seen in the background of a pre-1914 picture-postcard showing the narrow-gauge railway station in Rostrenen. No other details are available.

261. Saint-Cécile (L'Abbaye) ✶ ✸
[47°50'49"N, 0°18'21"W: PUMP HOUSE?]
1—Pays de la Loire: Sarthe, 72300 Solesmes.
2—Between 1894 and 1898 (but possibly as late as 1901)
3—1) Believed to have been Auguste-Sylvain Bollée.
    2) The abbey authorities.
4—1) No. 2 head (3·5m diameter)
    2) A column mount.
5—Dismantled.
6—Details taken from postcards.
    Construction work on the abbey began in 1866.

262. Saint-Denis (Villa) ✺
[48°11'10"N, 0°05'29"W: ÉOLIENNE?]
1—Pays de la Loire: 72140 Sarthe, Saint-Rémy-de-Sillé.
2—After 1894.
3—1) Auguste-Sylvain Bollée.
4—1) No. 2 (3·5m diameter).
    2) A column '19.2m high'.
5—Apparently still standing in 2000, though evidence is unconvincing.
6—Mentioned in a list of historic monuments in the Sarthe area. Details are still being sought.

263. Sainte-Gemme ✺
[46°51'11"N, 1°20'22"E: ÉOLIENNE]
1—Centre: 36 Indre, Sainte-Gemme près [36500] Saint-Genou, at the intersection
2—1897
3—1) Auguste-Sylvain Bollée.
4—1) No. 1 head (2.5m diameter).
   2) An unusual 5-unit column mount, apparently with the usual six head- and three intermediate guys.
   3) The cap-platform is circular, with serpentine balusters and cardinal points.
   4) A spiral staircase, with plain balusters and pierced-and-ribbed segmental treads, give access to the platform.
   5) Base: set into the centre portion of the pump-house.
6) The pump-house is an extraordinary two-storey design, brick-built with rendered panels (now somewhat damaged), comprising two separate towers with an interconnecting walkway/wall fitted with balustrades to double as the wind-engine base. Both towers have ridged roofs of slate (?) laid on wooden rafters and purlins, with wood-plank doors and cilled windows set in round-headed dentilled architraves.
   7) Drive is taken from the Éolienne to the northward tower at first-floor level, entering the wall between two doors set in architraves of bricks laid lengthwise and transversely alternately (giving a 1:2:1:2 pattern).
7) The standard three-throw gothic frame plunger-pump, with an overhung crank and a flywheel with six serpentine spokes.
8) The well is assumed to lie beneath the pump.
6—This site has sometimes been confused with the Parc du Hutreau Éolienne (no. 6), as picture-postcards often bear legends such as ‘Sainte-Gemmes-sur-Loire (M.-et-L.)—Le Hutreau’ or ‘Ste. Gemmes-sur-Loire, Château du Hutreau’. However, this is ‘Ste-Gemme’ and not Ste-Gemmes.

264. Saint-Gervais-la-Forêt *
[LOCATION TO BE DETERMINED]
2—1899.
3—1) Édouard-Émile Lebert.
4—1) No. 1 head (2.5m diameter).
   2) A 4-unit column mount, apparently with six head- and three intermediate guys. There are also modern reinforcing cables.
   3) The cap-platform is circular, with serpentine balusters and cardinal points.
   4) A spiral staircase, with plain balusters and pierced-and-ribbed segmental treads, give access to the platform.
   5) Base: see below.
6) The pump house forms the base of the water tower.
7) The standard three-throw plunger-type pump is used.
8) The well, comparatively shallow, lies beneath the pump.
9) A reinforced-concrete water tower adjoins the wind-engine, with a balustraded grating-type walkway cantilevered out from the tank-body towards the wind engine. Removal of a short section of the balustrade of the Éolienne staircase allows direct access to the tower.

5—Visited by Régis Girard in May 2005.

6—This is a unique site. Though not yet one of those in active preservation, this machine is among the most complete. That it remains in working condition (apart from the pumps, which have deteriorated badly) was due to the site gardener, who kept the machine well greased and occasionally turned it over.

The Agence declared the Éolienne to be a threat to health and safety in 2004, intending to demolish it, but the site has since been sold privately.

= The Éolienne was removed in 2012, for restoration elsewhere, but it is known if the context of the site—the unique water-tank/tower unit, for example—has also been preserved. It is suspected that this vital industrial-archaeological knowledge has been lost forever.

265. Saint-Jean-de-Braye ❋
[LOCATION UNKNOWN]
1—Centre: 45 Loiret: 45800 Saint-Jean-de-Braye.
2—After 1894.
5—Dismantled?

266. Stéphen-Liégeard ❋
(Château)
[47°14´17˝N, 4°58´24˝ E: ÉOLIENNE]
1—Bourgogne: 21 Côte d’Or, ‘Meix de Fleurey’, 21220 Brochon.
2—c. 1900.
3—1) Édouard-Émile Lebert.
2) M Liégeard.
3) Classed as ’monument historique’ on 4th May 1984.
4—1) No. 1 head (2.5m diameter).
2) A 4-unit column, with six head- and three intermediate guys.
3) A circular cap-platform, with serpentine balusters and cardinal points.
4) A spiral stair, with pierced treads and plain balusters.
5) A concentric two-tier base with four access steps, made of concrete with a rubble core.
6) A circular pump house, built of coursed brick, with a conical slated roof rising to a sheet-metal finial. The
No. 266. Sunlight catches the Stéphen-Liégeard Éolienne on a stormy Spring day in 2012. This particular machine has been restored cosmetically, but is currently incapable of operation.

*Photograph by courtesy of François Decup, Brochon.*
267. Tailly ✗

[46°58′15″N, 4°48′51″ E: SITE?]
1—Bourgogne: 21 Côte d’Or, 21190 Tailly.
2—After 1894.
5—Said to have been in existence in 2004.
6—May stand a short distance from the Mairie.

268. Thorin (Maison) ✗

Also known as ‘Pruillé-le-Chétif (2)’

[LOCATION UNCERTAIN]
1—Pays de la Loire: 72 Sarthe, route du Mans, 72700 Pruillé-le-Chétif.
2—Early 1900s?
3—1) Édouard-Émile Lebert.
4—1) No. 2 head (3·5m-diameter).
  2) A 4-unit column mount, with six head- and three intermediate guys.
  3) The circular cap-platform has serpentine baluster and cardinal points.
  4) A spiral stair, with plain balusters and pierced ribbed treads, gives access to the platform.
  5) A masonry base with concentric tiers.
6) The pump house is built of coursed brick with contrasting-brick quoins, door frame and window/drive-shaft apertures. Decorative diamonds were worked into the brickwork, one above and two beneath each window. The door and window frames were wood. A Mansard roof was laid with slates over wood rafters and battens: thirteen plain courses, one course laid as diamonds, then nine conventional courses rising to a sheet-metal ‘spike’ finial.
7) The standard three-throw type was used, with an overhung crank and six serpentine flywheel spokes.
8) The well lay directly beneath the pumphouse, depth and construction unknown.
5—Still standing in 2002.
6—Then owned by M Thorin, grandson of the original purchaser, this particular site was still being listed as ‘Pruillé-le-Chétif (2)’ in André Gaucheron & J. Kenneth Major, Les Éoliennes Bollée (published in 1995). However, its current status is not known.

269. Toisley ✗

Named as ‘Thoisley’ on some postcards

[48°46′59″N, 1°15′46″ E: SITE?]
2—1897 or 1898.
3—1) Auguste-Sylvain Bollée.
  2) The communal council.
4—1) No. 3 head (5m diameter).
  2) A column of 3 or 3½ units.
5—Dismantled.
6—Evidence supplied by a postcard dated 22nd October 1916.

270. Vaumort ✗

[48°09′23″N, 3°26′23″ E: WATER TANK?]
1—Bourgogne: 89 Yonne, 89320 Vaumort.
2—c. 1899.
3—1) Édouard-Émile Lebert.
  2) The communal council.
4—1) No. 2 head (3.5m diameter) with an Entonnoir.
2) A 4½-unit column mount with eight two-piece wrought iron guys and four one-piece stabilisers.
3) A circular cap-platform, with serpentine balusters and ribbed cardinal points.
4) Spiral stairs, with plain balusters and pierced ribbed treads.
5) A masonry base, three tall concentric tiers, possibly with a brick or rubble infill; accessed by steps?
6) A rectangular pump-house, of coursed brick with a steeply-pitched roof laid with slates on wooden rafters.
7) Assumed to be the three-throw plunger pump, with an overhung crank and serpentine flywheel spokes.
8) A well directly beneath pump house.
9) A reservoir may have stood close to the Lavoir, which was constructed similarly to the pump-house.
5—Dismantled.
6—Details taken from a picture-postcard.

271. Vert-le-Grand

Also known as ‘Les Glaises’ and ‘Château de Guichet’
1—77 Seine-et-Oise (now 91 Essonne), 77810 Vert-le-Grand
2—Date unknown
3—1) Auguste-Sylvain Bollée, or possibly Lebert.
4—1) No. 2 head (3.5m diameter).
2) A 4½-unit column, supported by six two-piece adjustable head-guys and three one-piece stays.
3) The cap-platform is circular, with serpentine balusters and no cardinal points (?).
4) A spiral staircase, with plain balusters and pierced and ribbed segmental treads, gives access to the platform.
5) The base was probably a tiered pedestal, either mass-concrete or rendered over bricks laid radially.
6) The pump house, rectangular in plan, is assumed to have been built of coursed brick. The windows and the planked wooden door are likely to have been
set in a wood architrave and wooden frames. The roof, ridged, with vertical gable-ends, was of slate (or possibly tiles), laid over wood rafters and battens.
7) A standard three-throw pump was probably used, with an overhung crank and six serpentine flywheel spokes.
8) The well is assumed to have been beneath the pump-house.
9) Water was pumped to a cylindrical sheet-metal tank with the curtain wall, apparently raised on three pillars (coursed brick?) to provide sufficient head-of-water to supply the neighbouring château and/or commune.
5—Dismantled; the site is now covered with domestic housing.
6—Very little is known about this Éolienne, included in picture-postcard views of Vert-le-Grand published by ‘Mlle. Lepage’ prior to 1914. Identified by red-letter captions such as ‘Scène champêtre, lieu dit “Les Glaises”…’, they are difficult to date (the earliest recorded postmark is currently 12th October 1905). Nor is it clear if the Éolienne was owned by the commune or by the Château de Guichet, as it stood almost directly outside the gates of the domestic buildings of the house and the Vert-le-Grand lavoir was a mile away to the south in the village centre.

272. Villaine (Château de la) ★ ★ ★
Also known as ‘Vilaine’ or ‘Esvres-sur-Indre’
[47°16´40˝N, 0°47´32˝ E: ÉOLIENNE]
1—Centre: Indre-et-Loire, 37320 Esvres-sur-Indre.
2—1898.
3—1) Auguste-Sylvain Bollée (and Lebert?).
4—1) No. 3 head (5m diameter) with an Entonnoir.
2) A 5-unit column, supported by eight two-piece adjustable head-guys and four one-piece stays.
3) The cap-platform is circular, with serpentine balusters and ribbed cardinal points.
4) A spiral staircase, with plain balusters and pierced and ribbed segmental treads, gives access to the platform.
5) The base takes the form of a frustrum or ‘truncated cone’ pedestal of concrete.
6) The pump house, circular in plan, is built of coursed brick on a rendered base. The two windows and the planked
No. 272. The 1898 No. 3 Éolienne Bollée of the Château de la Villaine, better known as ‘Esvres’, prior to the completion of restoration (and a return to working order) in the summer of 2005.

Photograph taken by Mauricette Maingot in 1991.
wooden door are set in arches. A conical roof of slate, laid over wood rafters and battens, rises to lead flashing and a sheet-metal finial.
7) A standard three-throw pump is used, with an overhung crank and six serpentine flywheel spokes.
8) A shallow well lies directly beneath pump-house.
6—Similar to, but Isomewhat ater than the 1891-vintage Château de Breuil Éolienne Bollée (q.v.), this No. 3 in the valley of the river Echandon was installed to lift water about 30 metres to a château set into the hillside above the pumps.
= Weighing about nine tons, the éolienne worked successfully for many years, but was eventually replaced with electric pumps and fell into disrepair. In 2002, however, the owner of the château offered the wind-engine to the local community on condition that the electric pump in the well should still serve the house and its grounds.
= Restoration work began in 2003 with the financial assistance received from state and regional funds. MM. Noël Dupuy and Jean-Claude Archambault—respectively, the driving force behind the project and the superintendent of works—were able to commission SMVG of Beaumont-en-Veron to undertake restoration work, helped by members of the local industrial-heritage association under the chairmanship of M. Jean-Claude Pestel.
= On 2nd July 2005, resplendent in new dove-grey paintwork, the éolienne finally recommenced operations and can still be seen working on special occasions.
= The commune of Esvres has created a website from which fascinating details of the restoration project can be obtained.
The lists produced irregularly by Auguste-Sylvain Bollée have proved to be indispensable guides to the individual sites. This example, dating from August 1894, claims that there were then ‘more than 230 installations’. Regrettably, publication ceased when Bollée sold the business to Lebert, and so the identification of post-1894 sites now relies largely on guesswork.

Each of Bollée’s sales lists contains a multi-page inventory identifying not only each individual site but also the purchaser, the date of purchase and even an occasional change of ownership. The lists are not infallible, however, as the occasional spelling error and even misidentification of power-head size occurs from time to time.
3: the ‘pylon’ sites, c. 1900–32

Listed alphabetically, pending discovery of definitive information

273. Amécourt ✦ ecast
[49°22’45˝ N, 1°43’58˝ E: WATER TANK?]
1—Haute Normandie: 27 Eure, 27140
Amécourt près Gournay-en-Bray.
2—Probably c. 1903.
3—1) Édouard-Émile Lebert.
4—1) No. 3 head (5m diameter) with an Entonnoir.
   2) A seven-stage pylon with cross-
      bracing.
   3) A circular cap-platform, supported
      (probably) by radial arms.
   4) An access ladder.
   5) Assumed to have been bolted directly
      to a concrete apron.
   7) The three-throw pump, with
      overhung crank and a flywheel with six
      serpentine spokes, has one section of
      the frame adapted to receive the foot
      bearing of the vertical shaft.
5—Dismantled, date unknown.

6—Details supplied from picture-postcards
   published prior to 1914.

274. Augeaunerie (L’) ✭ ecast
Known as ‘Orbigny’ (or sometimes wrongly
as ‘l’Orangerie’)
[47°12’43˝N, 1°14’24˝ E: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, Orbigny.
2—Prior to 1914.
3—1) Édouard-Emile Lebert.
4—1) No. 1 head (2·5m diameter).
   2) A 3-stage pylon with diagonal
      bracing, on top of the water tank.
   3) A circular cap-platform, with
      serpentine balusters but no cardinal
      points.
   4) An access ladder.
   5) None; bolted directly to the tank-top.
   6) The pump house, possibly made of
      wood planks with a tarred-felt roof, is
      contained within the base of the pylon.
7) The pump is believed to be a standard three-throw type, but confirmation is lacking.
8) The water tank is cylindrical, made of concrete (possibly with a sheet-metal liner) on top of a two-stage pylon.
6—This is currently assumed to have been a private purchase, but it could have been communal. It is not clear if the tank is built around a single pylon, or if the construction is based on two short mounts. It could even be a Bollée head on an older mount (see JCP pictures).

275. Aumerval-les-Pernes [en Artois]
[50°30’16”N, 2°23’50” E: WATER TOWER/ÉOLIENNE BASE]
1—Nord-Pas-de-Calais: 62 Pas-de-Calais, 62550 Aumerval.
2—Prior to July 1906.
3—1) Édouard-Émile Lebert.
2) The communal authorities.
4—1) No. 3 head (5m diameter).
2) A seven-stage quadrangular wrought-iron pylon, with diagonal bracing.
3) Circular cap-platform with open-trap access, plain balusters and ribbed cardinal points.
4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the fourth stage, gives access to a short ladder running up the outside face of the pylon to the trap.
6) Set to the side of the éolienne, the pump-house is rectangular, perhaps made of wood planks placed horizontally, and had a ridged roof. The wooden door is battened, ledged and braced, and there may have been a window in the rear wall.
7) Assumed to be the standard plunger-type pump, with a three-throw crank and straight flywheel spokes.
8) The well lies directly beneath the pump.
9) Water was probably stored in a nearby tower, though details have yet to be traced.
5—Dismantled, date unknown.
6—Details of this little-known site have been taken from a poor quality picture-postcard entitled ‘Environs de PERNES-EN-ARTOIS – L’Éolienne d’Aumerval’ published prior to 1910 by ‘J. Fiévé, Lib., Pernes-en-Artois’. The earliest postmark is dated 3rd July 1906.

276. Barre-en-Ouche (La)
[48°56’39”N, 0°40’12” E: WATER TOWER/ÉOLIENNE BASE]
1—Haute-Normandie: 27 Eure, La 27330 Barre-en-Ouche (now part of 27410 Mesnil-en-Ouche).
2—1903.
3—1) Édouard-Émile Lebert.
2) The local communal authorities.
4—1) No. 3 head (5m diameter).
2) A five-stage quadrangular pylon atop a cylindrical water tower.
3) The cap-platform was circular, with serpentine balusters (and cardinal points?).
4) A ladder gave access to the platform.
5) The legs of the pylon were anchored directly to the tank-roof.
6) The pump house was contained within the arcaded brick base of the water-tank.
7) The pump is assumed to be the standard three-throw type.
8) The well lay directly beneath the tower, sunk to a depth of 115 metres.
9) A cylindrical water tank was placed directly on top of a chamber containing the pumps, giving a height of perhaps 11 metres. The lower storey was made of coursed brick, with an arcade of sixteen ‘blind’ arches, one containing a wooden
Above—the watertank-top Éolienne erected to serve the commune of La-Barre-en-Ouche was a great favourite with pre-1914 publishers of picture-postcards, as shown by these examples from the collections of John Walter and Jean Chevalier.

Door in a brick frame and one or two of the others containing small windows. The tank consisted of eight pillars of brick, separated by what was probably reinforced concrete (or, alternatively, rendered rubble). The tank may have been lined, but details are no longer clear. Access to the pylon was by way of an external ladder on the north-east side of the building.

5—Dismantled in the mid 1930s
6—Details have been taken from a group of picture-postcards published prior to the First World War. This was one of several machines featuring ‘three-tier’ construction, and it is a shame that it has not survived. The precise date of erection remains elusive. However, one type of card is overprinted ‘Service complet de distribution d’eau installé par la Société du Puits Artésien de Vincennes, 32, rue du Petit-Château, à Charenton (Seine) inauguré le 25 Octobre 1903…’ (‘complete water-distribution service installed by SPAV… inaugurated on 25th October 1903’) and it is assumed that the Éolienne had been erected by this date.

277. Bazarnes

[47°39’33”N, 3°39’45”E: MAIRIE]
1—Bourgogne: 89 Yonne, 89460 Bazarnes.
3—1) See notes.
4—1) Power-head type unknown.
2) Pylon mount.
5—Dismantled, date unknown.
6—A list compiled by Marc Rapin from details in the 1911 Araou catalogue indicates that a conventional single-rotor wind engine was installed in Bazarnes in 1910, under the supervision of architect Eugène Fijalkowski of Auxerre.

There is no reason to doubt this claim; either the attribution of a Bollée turbine to the site is mistaken, therefore, or the Araou head was replaced in the 1920s—when work would have been undertaken by Duplay or SAEB.

278. Beaulieu (Château de) [47°21´46˝N, 0° 39´36˝: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, ‘Joué[-les-Tours] Pont-Cher’:
2—Between 1905 and 1909.
3—1) Édouard-Émile Lebert.
4—1) No. 1 head (2·5m diameter).
   2) A 7-stage quadrangular pylon with cross-bracing.
   6) The pump house was probably sited between the pylon legs, or perhaps in a chalet to the side.
5—Dismantled, possibly in the 1950s.
6—The wind engine stood at the end of a raised terrace by the gardens.

279. Béru [47°48´04˝N, 3°53´20˝ E: MAIRIE]
1—Bourgogne: 89 Yonne, 89700 Béru.
2—Prior to 1910.
3—1) Édouard-Émile Lebert.
   2) The communal authorities.
4—1) No. 3 head (5m diameter).
   2) An eight-stage quadrangular wrought-iron pylon, with cross-bracing.
   3) A circular cap-platform with open-trap access, plain balusters and ribbed cardinal points.
   4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the sixth stage, gives access to a short ladder running up the outside face of the pylon to the trap.
   6) Within the pylon legs, the pump house is rectangular, made of coursed brick rising to a gabled roof of tiles laid on wooden rafters. The building is substantially longer than it is wide. The battened, ledged and braced wooden door is set in a brick architrave, with a wood-framed glazed window in the back wall.
   7) Assumed to have been a plunger pump, with a three-throw crank and serpentine flywheel spokes.
   8) Directly beneath the pump, depth and construction of well unknown.
   9) Water was raised to a neighbouring reservoir.
5—Dismantled, date unknown.

280. Billonnais (Ferme des) ✦

[45°49´11˝N, 2°45´40˝ E: ÉOLIENNE]
1—Centre: Loiret 45, 45290 Nogent-sur-Vernisson.
2—Prior to 1909.
3—1) Édouard-Émile Lebert.
2) Assumed to have been the owners of the farm.
4—1) No. 1 head (2.5m diameter).
2) An eight-stage quadrangular wrought-iron pylon, with cross-bracing.
3) A circular cap-platform with open-trap access, plain balusters and ribbed cardinal points.
4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the base of the sixth stage, leading to a ladder running up the outside face of the pylon to the trap.
6) Within the pylon legs, the pump house is made of coursed brick with a flat, probably cast-concrete roof.
7) Assumed to have been a plunger pump, with a three-throw crank and serpentine flywheel spokes.
8) The well is assumed to lie beneath the pump.
9) Water was apparently raised to a neighbouring water-tank.
5—Still standing in 2016.
6—Nothing is currently known about the history of this site

281. Blainville-sur-l’Eau ✦

[48°33´46˝N, 6°24´15˝ E: SITE OF PUMP?]
4—1) No. 3, 1908.

Below—this picture-postcard shows how the Éolienne purchased from Lebert by the owners of the Ferme de Billonais stood in the couryard behind the farmhouse.
Above—It is not known of the pylon-mounted Éolienne erected by Lebert in Les Bordes served the community or a factory. The site is sometimes listed as ‘Vert-le-Grand’, but see no. 271.

2) communal purchase.
5—Possibly destroyed or dismantled during the Second World War.

282. Blairville
[50°13’11” N, 2°42´56” E: MAIRIE]
1—Nord-Pas-de-Calais: 62 Pas-de-Calais, 62173 Blairville.
2—Between 1926 and 1930.
3—1) La Société des Éoliennes Bollée?
2) The communal council.
4—1) No. 3 head (5m diameter).
2) A quadrangular pylon mount.
7) The three-throw pump had an 80mm bore and a 320mm stroke.
5—Possibly destroyed or dismantled during the First World War.

283. Bordes (Les)
[48°36’28” N, 2°20’2” E: ÉOLIENNE SITE?]
1—Île-de-France: 78 Seine-et-Oise [now 91 Essonne], 91220 Le Plessis-Pâté.
2—Prior to 1908.
3—1) Édouard-Émile Lebert.
4—1) No. 2 head (3·5m diameter), with an Entonnoir.
2) A six-stage quadrangular wrought-iron pylon with diagonal bracing.
3) A circular cap-platform with open-trap access, plain balusters and ribbed cardinal points.
4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the fourth stage, gives access to a short ladder running up the outside face of the pylon to the trap.
7) Assumed to have been the standard plunger pump, with a three-throw crank and serpentine flywheel spokes.

Edition H. Ruelle, épicerie — Vert-le-Strain
8) Directly beneath the pump?
9) A large double-diameter sheet-iron water tank on top of an ivy-clad tower (rendered brick?). Balustraded walkways project from the roof of the upper small-diameter part of the tank, from the juncture of the tanks, and from the juncture of the tank and the tower. They are all reached by external ladders.

5—Dismantled, date unknown.
6—The details are taken from picture-postcards dating from 1908–10.

284. Boullay-Mivoye (Le) ✷ ☩

(48°38´50˝N, 1° 24´21˝ E: ÉOLIENNE BASE)

1—Centre: 28 Eure-et-Loir, 28210 Le Boullay-Mivoye.
2—1902.
3—1) Édouard-Émile Lebert.
2) The communal council.
4—1) No. 3 head (5m diameter) with an Entonnoir.
2) A six-stage pylon with cross-bracing.
3) A circular cap platform with plain balusters and cardinal points.
4) A ladder runs vertically alongside the drive-shaft to a projecting platform at the base of the fourth stage, from where another ladder runs up the outside of the pylon to give access to the cap.
5) The legs are encased in the pump-house, but were probably bolted to a concrete apron.
6) The pump house, rectangular in plan and rising on a low plinth, is built in an ornate quasi-Egyptian style. The walls slope outwards to encase the legs of the pylon, with a matching additional bay extending to one side. The walls appear to be made of cast-concrete, with textured-infill panels within an ‘X’ divider. Small diamond-within-diamond plaques are placed in three quadrants of each bay, as a small circular four-light window was set in the upper quadrant. An access door (out of view in most pictures) was also provided. The walls rise to a moulded string course beneath a frieze of small diamonds on squared plaques separated by projecting brackets. Decorative moulding above the frieze is stepped outwards to form a projecting cornice.
7) It is assumed that the standard three-throw pump was used, with an overhung crank, but details are lacking.
8) The well lay directly beneath the pump.
9) Water was pumped to a large cylindrical tank close to the church.

5—Dismantled. The pump house was still in place in 2010, but its current status is uncertain.
6—Identified from postcards (e.g., a card in the Mildred Cookson collection, postmarked 18th July 1904). The éolienne stood at a crossroads between the Mairie and the school.
285. Boullay-Thierry (Le) ❍ ❥

[48°38´03˝N, 1°25´34˝ E: ÉOLIENNE BASE AND LAVOIR?]

1—Centre: 28 Eure-et-Loir, ‘Environs de Dreux’ on postcards.
2—Prior to 1912.
3—1) Édouard-Émile Lebert.
   2) The communal authorities
4—1) No. 3 (5m diameter).
   2) Quadrangular multi-stage pylon.
   3) The circular cap-platform has plain balusters and cardinal points.
   4) A vertical ladder paralleling the drive shaft gives access to a platform carried outward from the fourth stage, from where an external ladder reaches the platform.
5—Dismantled.
6—Postcards dating prior to the First World War, showing the wind engine, are usually titled “Château de Boullay-Thierry – Les Ecuries”, which has been taken to suggest that it stood on the château estate. However, the views show that it stood a considerable distance away, and plotting the position on a map suggests that it was actually a communal purchase.

286. Bourdaisière ❍ ❥

(Château de la)

[47°22´16˝ N, 0°50´16˝ E: ÉOLIENNE]

1—Centre: 37 Indre-et-Loire, 37270 Montlouis-sur-Loire, ‘près Tours’.
2—1907/8.
3—1) Édouard-Émile Lebert.
   2) M Gustave Angellier.
4—1) No. 2 head (3.5m diameter).
   2) A seven stage cross-braced quadrangular pylon.
   3) The circular cap-platform has plain balusters and cardinal points.
   4) A vertical ladder paralleling the drive shaft gives access to a platform carried outward from the fourth stage, from where an external ladder reaches the platform.
5) Each of the four legs is bolted to a concrete cube sunk into the ground.
6) The pump house, approximately square, lies between the pylon legs. Made of concrete, or possibly rendered brick, it has a flat roof.
7) The standard three-throw pump was used, with an overhung crank and six serpentine spokes on the flywheel.
8) Placed directly beneath the pump, the well is 30m deep.
9) A cylindrical, ferro-concrete (?) water tank, with an iron balustrade, tops a four-storey stone tower.
5—Visited by Régis Girard in May 2003.
6—This machine is pictured in Les Éoliennes Bollée (p. 62) as ‘Éolienne Lebert près de Tours’. The house, created in the fifteenth century by François I, was subsequently set in an ornamental park created by Angellier at the end of the nineteenth century and refined more recently by Prince Louis-Albert de Broglie. The five-hectare site is now famed for its flowers and an
extraordinary collection of vegetables (particularly tomatoes). Also worthy of attention is the wonderful ornamental greenhouse, badly damaged in a gale in 1999 but since repaired.

287. Brannay

[48°13’43”N, 3°07’21”E: ÉOLIENNE BASE]
1—Bourgogne: 89 Yonne, 89150 Brannay.
2—About 1905.
3—1) Édouard-Émile Lebert.
   2) Commune de Brannay.
4—1) No. 2 head (3.5m diameter).
   2) A six-stage quadrangular wrought-iron pylon, with cross-bracing.
   3) A circular cap-platform, with open-trap access and plain balusters. No cardinal points?
   4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the fourth stage, gives access to a short ladder running up the outside face of the pylon to the trap in the platform.
6) Within the pylon legs, square, made of rendered brick with exposed-brick quoins and a brick cornice. The flat roof was probably made of tarred felt over a wood or concrete base.
7) Assumed to have been the standard plunger pump, with a three-throw crank and serpentine flywheel spokes.
8) A well beneath the pump.
9) A cylindrical sheet-iron water tank was placed on a low plinth alongside the pylon base.
5—Dismantled, date unknown (1960s?).
6—The details are taken from picture-postcards published prior to 1914, and from aerial photographs taken in the 1930s and 1950s. The latest-known postmark dates from October 1962.
288. Champigny-en-Beauce

[47°42’57˝N, 1°15´21˝ E: WATER TANK]
1—Centre: 41 Loir-et-Cher, 41330 Champigny-en-Beauce.
2—Between 1903 and 1905.
3—1) Édouard-Émile Lebert.
4—1) No. 1 power head (2·5m diameter).
2) A seven-stage quadrangular pylon mount.
3) The cap-platform was circular, with radial supports, serpentine balusters (?) and cardinal points.
6) The pump house is assumed to have been in the base of pylon.
8) The well lay directly beneath the pump-head.
9) A water tank is believed to have stood close to the pump-site.
5—Dismantled.
6—Details have been taken from a picture postcard in the J. Kenneth Major collection. Another, in the Mildred Cookson collection, is postmarked 7th September 1909. The machine also appears in the background of a postcard picturing the ‘Pavillon Madeleine Dessaignes (contre le Tuberculose)’, which could suggest that it was erected to supply this particular sanitorium instead of the local commune. Information is still being sought.

289. Champlay

[47°57´05˝N, 3°26´21˝ E: MAIRIE]
1—Bourgogne: 89 Yonne.
2—1905.
3—1) Édouard-Émile Lebert.
2) Presumably, the communal authorities.
4—1) Head-type unknown.
2) A quadrangular pylon with cross-bracing.
5—Dismantled. See below.
6—Two essentially similar wind engines were erected prior to 1914 (cf., Cruzy-le-Châtel), one close to the Mairie to serve the needs of the village and the other in the nearby hamlet of Grand-Longueron. (For details, see no. 308) The town-hall machine was dismantled.
in the late 1990s, owing to fears that its deteriorating structure would become dangerous (and would be too costly to repair), but some of the parts went to a museum in Seurre in the Côte d’Or (La Grange aux Moines?) and may survive.

290. Channay-sur-Lathan  [47°28´42˝N, 0°16´40˝ E: SITE OF PUMP HOUSE?]
1—Centre: 37 Indre-et-Loire: 37330 Channay-sur-Lathan.
2—Prior to 1907.
3) Édouard-Émile Lebert.
   2) Le conseil municipal.
4—1) No. 1 power (2·5m diameter).
   2) A seven-stage cross-braced quadrangular pylon.
   3) A circular cap-platform, with straight balusters but no cardinal points.
   4) A vertical ladder from ground level to the fifth-stage platform, then another ladder, mounted externally that gives access to the trap.
5) The base was probably a concrete apron.
6) A pump house at the side of the pylon was apparently square in plan, built of coursed brickwork, with a flat or possibly shallow-pitch roof.
7) The pump is assumed to have been the standard three-throw overhung type.
8) The well lay directly beneath the pump house.
9) Water was pumped directly into adjoining Lavoir, which consisted of a large open-top concrete or possibly rendered-rubble tank beneath a curved corrugated iron roof supported on eight cast-iron pillars.
5—Dismantled and sold for scrap, 1964
6—Details provided by a variety of postcards, the earliest being dated 21st September 1907.

291. Chéroy  [48°11´39˝N, 2°59´37˝ E: SITE OF ÉOLIENNE]
1—Bourgogne: 89 Yonne, 89690 Chéroy.
2—1928–30?
3—1) La Société Anonyme des Éoliennes Bollée.
   2) Presumably, the communal authorities.
4—1) ‘No. 4’ head (7m diameter).
   2) A very tall, possibly twelve-stage quadrangular wrought-iron pylon, with cross-bracing.
   3) A square cap-platform, with open-trap access, plain balusters and an additional mid-height rail. No cardinal points.
   4) A ladder climbing around the outside of the pylon reaches a platform projecting externally around the tenth (?) stage, giving access to a short ladder running up the outside face of the pylon to the trap.
6) Assumed to be square in plan, the
pump house was contained within the pylon legs. Construction may have been of reinforced concrete, with panels on each wall, but details are lacking.

7) The standard plunger-type pump, with a three-throw crank and serpentine flywheel spokes.
8) A well directly beneath the pump.
9) A mushroom-like reinforced-concrete water tower alongside the pylon may have contained a cylindrical sheet-iron tank. Panels cast into the body and ‘stalk’ of the tower served as decoration.

5—Dismantled, date unknown.
6—Pictured in 1930s postcards, and mentioned in an interview by Bernard Sauldubois of M Jean Couet, a one-time employee of SAEB (see Éoliennes anciennes no. 2, November 2003).

292. Clerbaudières (Les) ⌠ ⌡

Sometimes listed as ‘Les (or ‘Des’) Clairbaudières’

[46°34’51”N, 0°46’29”W: ÉOLIENNE]
1—Poitou-Charente: 86 Vienne, near Paizay-le-Sec.
2—Prior to 1908.
3—1) Édouard-Émile Lebert.
4—1) No. 2 head (3·5m diameter).
2) An eight-stage quadrangular pylon mount.
3) A circular cap-platform, supported by radial arms. Straight balusters, ribbed cardinal points?
4) A ladder from ground level leads to a triangular-fillet staging in the base of the third stage of the pylon; a second ladder leads to a similar fillet in the base of the fifth stage, then a short third ladder rises to a balustrated platform projecting from the base of the sixth stage. A fourth ladder then runs up the outside of the pylon to give access to the cap-platform.
5) The pylon legs are each bolted to concrete anchor-blocks in the ground.
6) A hexagonal pump house has been built within the legs of the pylon (which pierce the walls and roof). The building was constructed off-centre so that the vertical drive shaft enters virtually against a wall. The ogee roof of fish-scale tiles rises to a pinnacle, and is edged with fretted fascia boards. The walls are brick with quoins, lintels and sills of dressed stone. Two wood-frame windows with quartered lights; two three-quarter height wooden doors with scalloped upper edges and filigree wrought-iron grilles. The pump house contains the pump, a windlass, and a manually operated blower to ventilate the well.
7) The pump is an unusual two-throw pattern with reinforced cranks and a robust frame, suggesting heavy-duty (deep well) use. Auxiliary drive can be engaged with a crude sliding-pinion clutch on a layshaft driven from a pulley.
No. 292. The Château les Clerbaudières No. 2 Éolienne Bollée, Paizay-le-Sec. The status of this machine is somewhat uncertain, owing to the sale of the house and surrounding land for development in 2005.

Photograph taken by John Walter, 2002.
on the outside wall of the pump house.

8) A single well-shaft dropped directly below the pylon. It is assumed to be deep, owing to the design of the pump.

9) A cylindrical water tank, made of sheet iron plates riveted together, is raised on a large-diameter two-storey base built of rendered coursed brick, with a string course and a moulded cornice supported by quarter-circle corbels. Two battened-and-braced wooden doors, set in quoined stone frames under a sturdy horizontal lintel, are placed directly above each other. A small circular bull’s eye window or ventilator appears above the doors. Access to the tank and the upper floor is gained with a removable ladder.


6—This machine stands in the grounds of a large château. The central core of the building dates from the seventeenth century, but is said to incorporate an original structure dating back to the twelfth century. Wings were added in the eighteenth and nineteenth century (‘1765’ appears on one of the beams or poutre). The long-term status of the site remains uncertain, as it was sold for re-development in 2003. Considerable re-building had already taken place by 2005, including the reconstruction of the irreplaceable orangery.

293. Conlie

[48°7’38˝N, 0° 0´41˝ W: STATION BUILDINGS]

1—Pays de la Loire: 72 Sarthe, Conlie railway station.

2—Possibly 1908.

3—1) Édouard-Émile Lebert.

2) Compagnie de Chemin de Fer du Nord?

4—1) No. 3 power head (5m diameter).

2) A six-stage quadrangular pylon.
6) A circular pump-house beneath the water-tank.
5—Dismantled, date unknown
6—Details to add from picture-postcards.

294. Cotonou

1—Dahomey (French West Africa), Cotonou dock-side.
2—1910?
3—1) Édouard-Émile Lebert?
4—1) No. 3 head (5m diameter).
   2) A quadrangular six-stage pylon mount.
5—Presumed to have been dismantled.
6—One of the few Éoliennes Bollée sent to the French overseas colonies, this stood in a palm-grove close to Cotonou wharfage. Its existence is confirmed by pictorial postcards published prior to the First World War, but details of its operations are lacking. The port was extensively redeveloped in the 1960s, but it is believed that the Éolienne had been removed some years earlier—perhaps during development that had taken place in the 1920s.

295. Coulangé (Abbaye de)

[47° 8’28”N, 1°13’18” E: CENTRE OF SURVIVING ABBEY BUILDINGS]
1—Centre: 37 Indre-et-Loire, 37460 Villeloin-Coulangé.
2—Prior to 1914.
3—Édouard-Émile Lebert?
   2) La Laiterie Co-opérative de Coulangé.
4—1) No. 3 head (5m diameter).
   2) Probably a multi-stage quadrangular pylon.
5—Dismantled.
6—Identification requires confirmation, as the only known photograph of the site conceals much of the éolienne behind an ancient tower. This tower is assumed to be part of the curtain wall of the original abbey, particularly as the ground appears to slope steeply.
   = The abbey was deconsecrated (and partly destroyed) during the French Revolution. By the early 1900s, at least part of the site had become the base of operations of the local dairy co-operative. It is assumed that the éolienne dates from this era.
296. Courville-sur-Eure ✦
[48°26′59″N, 1°15′15″ E: ÉOLIENNE]
1—Centre: 28 Eure-et-Loir: Foyer de Vie, Rue Masselin, 28190 Courville-sur-Eure.
2—Completed (and run for the first time?) on 29th October 1902.
3—1) Édouard-Émile Lebert.
2) The Courville asylum management.
4—1) No. 3 head (5m diameter).
2) A six-stage quadrangular pylon braced diagonally.
3) The cap-platform has straight balusters and ribbed cardinal points.
4) Access?
5) Base?
6) A pump house was created by filling the sides of the lowest stage of the pylon with vertical wooden boarding, topped by a shallowly pitched ridged roof made (latterly, at least) of galvanised zinc sheets laid over wooden rafters. One side of the building was pierced for a door, and the others for small windows.
7) The plunger-type pump was driven by a standard three-throw crank. Bore diameter 65mm, stroke unknown.
8) The well lay beneath the pump, 1.5m diameter and 25m deep.
9) Water was pumped to a large cylindrical reinforced-concrete water tower, supported on six pillars, which stood on an artificial mound alongside the Éolienne.
6—Commissioned by the directors of the local asylum, l’Établissement d’Assistance de Courville, the first approach was made to Lebert in 1899. Work began in the summer of 1902 and had been completed by the autumn. The machine ran until 1967. Interest aroused in the 1980s by André Gaucheron and J. Kenneth Major, during research for *The Eolienne Bollée* led to official protection for the Courville wind-turbine. However, this entailed dismantling the water tower—an essential component of the installation—and replacing the boxed-in pump house with a glazed chamber, allowing the pump to be viewed without entering the Éolienne enclosure. The work was completed in 1992.

297, 298. Cruzy-le-Châtel ✦
[47°51′21″N, 4°12′33″ E: LAVOIR]
1—Bourgogne: 89 Yonne, 89740 Cruzy-le-Châtel, Rue de la Fontaine.
FIRST INSTALLATION
2—1902?
3—1) Édouard-Émile Lebert.
   2) The communal council.
4—1) No. 2 head (3·5m diameter).
   2) A five-stage (?) quadrangular pylon mount with 'X' bracing.
5—Dismantled, date unknown (1930s?).

SECOND INSTALLATION
2—1903?
3—1) Édouard-Émile Lebert
   2) The communal council.
4—1) No. 3 head (5m diameter).
   2) A seven-stage (?) quadrangular pylon mount with 'X' bracing.
5—Dismantled, date unknown (1930s?).
6—Some of the details have been taken from picture-postcards published prior to the First World War. The earliest examples to show both installations are postmarked 4th January and 16th March 1904.

= The Éoliennes co-existed for many years, providing water to the neighbouring Lavoir. Postcards probably dating c. 1931–2 suggest that the shorter unit was the first to be abandoned, but it is not known with any certainty (1940?) when the taller machine was abandoned.

299. Denée **
   [47°22’38”N, 0°36’42”W: MAIRIE]
1—Pays de la Loire: 49 Maine-et-Loire, 49190 Denée.
2—Post-1900.
3—1) Édouard-Émile Lebert.
   2) Client not known.
4—1) No. 2 power head (3·5m diameter).
   2) A seven-stage (?) quadrangular pylon.
   3) The cap-platform has clasp-arm supports and straight balusters, but no cardinal points.
   4) A vertical ladder alongside the drive shaft leads to a small platform projecting at fifth-stage level. An external ladder gives access to the trap.
   5) Base?
   6) The design of the pump house: not known (set into the base of the pylon?).
7) The pump is assumed to have been the standard three-throw plunger design.
8) The well lay beneath the pump-head.
9) Water was apparently pumped to a Lavoir some distance away.
Condition: poor, lacking the entire rotor assembly and Papillon mechanism, though the pumps are said to survive. Access: situated on private land.
6—The presence of an Entonnoir and the clasp-arm support suggests that this machine probably pre-dates 1902 and that, therefore, it would be among the first of its type.

300. Divion ⋆

[50°28’19”N, 2°30’16”E: CHURCH]
1—Nord-Pas-de-Calais: 62 Pas-de-Calais, 62460 Divion.
2—Prior to 1910.
3—1) Édouard-Émile Lebert.
2) The communal authorities.
4—1) No. 3 head (5m diameter).
2) An eight-stage quadrangular wrought-iron pylon, with diagonal bracing.
3) A circular cap-platform, with open-trap access and plain balusters. No cardinal points.
4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the sixth stage, gives access to a short ladder running up the outside face of the pylon to the trap.
6) The pump-house was square, within the pylon legs, probably made of concrete or rendered brick. The flat roof, covered with tarred felt, projects beyond the walls to provide rainproofing. The door is assumed to be wooden, ledged and braced, and there was probably a window in the rear wall.
7) The pump is assumed to have been the standard plunger type, with a three-throw crank and serpentine flywheel spokes.
8) The well lay beneath the pump.
9) A large circular sheet-iron tank on top of a three-storey tower of coursed brick held the water. Staging projecting from edge of the tower at the foot of the tank carries a balustraded handrail. A vertical ladder on the side of the tower facing the road, with a protective cage (a latter addition?), gave access to the staging.
5—Dismantled, date unknown.
6—Identified only from a poor-quality image of a 1930s-vintage postcard. Consequently, most constructional details remain unclear.
301. Égriselles-le-Bocage ✴️

(48°06’14” N, 3°11’18” E: ÉOLIENNE BASE)

1—Bourgogne: 89 Yonne, 89500 Égriselles-le-Bocage, La Source Saint-Hubert.
2—1932.
3—1) Leroux et Gatinois for SAEB.
2) The communal council.
4—1) No. 3 head (5m diameter).
2) A 27.5m twelve-stage quadrangular pylon, with compass-arm supports and cross-bracing.
3) A circular cap-platform, with plain balusters and a mid-height circumferential bar. No cardinal points.
4) A ladder running up the inside of the pylon to the tenth stage, where a small projecting platform gives access to a ladder to the trap.
6) Set between the pylon legs, the pump house is rectangular in plan: the bracing of one side of the lowermost stage was omitted to allow the pump-house to protrude. The style of construction is not yet known.
7) The standard three-throw plunger pump?
8) A well beneath the pump house.
5—Dismantled early in 1951 and taken to l’Hameau de Paradis (q.v.), near Trancault (Aube). The pump house survives on the original site.
6—This, undoubtedly among the last Éoliennes Bollée to be erected, had its origins a decision taken in 1929 by the communal council to provide running water. A decision taken in 1931 favoured the Bollée design in competition with the products of Araou of Narbonne and Les Matériels Agricoles de Lyon (successors of Plissonier). The No. 3 duly arrived at the local railway station in December 1931, in pieces, and was erected over ‘la Source captée Saint-Hubert’ early in 1932. However, the site was badly chosen: even on its 27.5m pylon, the wind turbine was largely shielded from all but the prevailing westerly winds by the sides of the valley of the Ru de Montgerin. Provisional acceptance was delayed until 9th November 1933.

= The Éolienne worked throughout the Second World War, but had deteriorated so greatly that, by the summer of 1949, the council had decided to purchase a petrol engine to supplement the existing auxiliary electric pumps. In December 1950, the redundant wind-engine was sold to M Noël, to be moved to his property in Aube (see ‘Paradis, Ferme de’) early the following year. There it remains, though a plan to return it to its original site in time to celebrate its eightieth birthday in 2012 does not seem to have been exploited. See “L’Éolienne Bollée d’Égriselles-le-Bocage” in La gazette d’Égriselles-le-Bocage, no. 7, November 2010.

302. Épuisay ✴️

(47°54’04” N, 0°55’48” E: ÉOLIENNE)

1—Centre: 41 Loir-et-Cher, 41360 Épuisay, route de Mondoubleau.
2—1911.
3—1) Édouard-Emile Lebert.
2) Le conseil municipal d’Épuisay.
4—1) No. 3 power head (5m diameter).
2) An eight-stage quadrangular pylon mount, c. 21m high.
3) A circular cap-platform with radial supports, straight balusters, and flat-sheet cardinal points.
4) Access?
5) Base?
6) The pump house is in the base of the water tower.
7) The pump is the Lebert three-throw pattern with an overhung crank and six serpentine flywheel spokes (or later two-throw design?), originally with provision for auxiliary petrol-engine drive (a 2cv vertical single-cylinder Guéret).
No. 302. This No. 3 Éolienne Bollée, still in near-working order, was erected by Lebert in 1911 to serve the commune of Épuisay in Loir-et-Cher.

Photograph taken by Colin Haines, 2003.
8) The well lies directly beneath the pump-head, 114m deep; it is believed to be lined with brick (one-metre internal diameter) for the first 35m, then a 35cm diameter borehole for the remaining 81m.

9) Water was stored in the adjoining water tower (built of reinforced concrete with brick infill), which is about 7m square and 9m high, supported on twelve pillars. There is also a reservoir or basin alongside the neighbouring Lavoir.


6—The supply of water began on 15th September 1911, though the site was not opened officially until 17th March 1912. The machine ran until 1967, but remains in very good order and can easily be seen from the roadside. However, public access to the base of the water tower, containing the main stop valve, has led to superficial damage and extensive graffiti. The pumps remain in situ, but could not be examined in detail. The auxiliary engine was clearly removed many years ago. The site was classed as a ‘monument historique’ on 12th June 1992.

303. Fontaine-Mâcon

[48°29´45˝N, 3°30´35˝E: RESERVOIR]

1—Champagne: 10 Aube, 10400 Fontaine-Mâcon.
2—1905.
3—1) Édouard-Émile Lebert.
   2) The communal authorities.
4—1) No. 3 head (5m diameter).
   2) A six-stage quadrangular wrought-iron pylon, with cross-bracing.
   3) A circular cap-platform with open-trap access, plain balusters and ribbed cardinal points.
   4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the base of the fourth stage, gives access to a short ladder running up the outside face of the pylon to the trap.
6) The pump-house is square, coursed brick, with walls rising outside the base of the pylon. The roof, rising shallowly to a central ridge, is believed to have
been made of tarred felt laid over wood rafters. A shuttered window, with a projecting lintel was placed centrally in the wall opposite the ledged, battened and braced wooden door.

7) The pump is assumed to have been the standard three-throw plunger type, with a gothic-style cast-iron frame, an overhanging crank, and six straight flywheel spokes.

8) The well lies beneath the pump.

9) Water was pumped to the adjoining reservoir.

5—Dismantled.

6—Details have been supplied by a variety of picture postcards, including one in the Mildred Cookson collection postmarked 6th December 1905.

304. **Fredonnière (Château la)** ✧

*Also known as ‘Le Temple’*

[47°55’53”N, 0°55’34” E: WATER TANK]

1—Centre: 41 Loir-et-Cher, 41170 Le Temple.

2—1926/7.

3—1) La Société des Éoliennes Bollée.

2) Comte de Talancé de la Barre.

4—1) No. 2 power head (3·5m diameter).

2) An old seven-stage quadrangular pylon mount, suitably modified to accept a new Bollée-type power-head.

3) A circular cap-platform, with straight balusters and plain cardinal points.

4) Ladders from the ground reach up to the first stage; to a small internal platform on the second stage; to an external platform on the fourth stage; and then to the cap.

5) Base?

6) The pump house is set within the pylon, between the arched framing to the lowest stage. Rectangular, made of coursed brick, it has a wooden door and a pitched corrugated-iron roof.

7) The pump is a two-throw type, possibly set in the well (?)

8) The well lies to the side of the
INVENTORY OF SITES

9) Water was raised to a large cylindrical tank raised on a cylindrical coursed-brick base alongside the pylon.


6—This particular machine was built on the basis of a wind-engine (perhaps with North American origins) erected in 1911 by the agricultural-goods supplier Th. Pilter of Paris.

= The machine was previously ascribed to Duplay, but it is clear that although consultation began in the summer of 1924, erection did not take commence until the summer of 1926. The final SAEB invoice is dated 8th February 1927.

= Unfortunately, the remnants of the turbine were taken down in 2004, and it thought that the pylon was demolished c. 2011. This is a great shame, understandable in view of terrible condition, because the éolienne was well worth preserving.

305. Frémicourt

[50°06´38˝N, 2°54´12˝ E: LAVOIR?]
1—Nord-Pas-de-Calais. Département: 62 Pas-de-Calais, 62450 Frémicourt.
2—1927 or 1928.
3—1) La Société des Éoliennes Bollée.
2) Presumably, the communal council.
4—1) ‘No. 4’ power head (7m diameter).
2) A quadrangular pylon mount.
7) A three-throw pattern, 100mm bore x 350mm stroke.
5—Dismantled, date unknown.
6—Details of the performance of this particular machine were given in 1930 by René Champly, in Les Moteurs à Vent.

306. Giel

[48°45´31˝N, 0°11´58˝ E: WATER TANK]
1—Basse-Normandie: 61 Orne, Orphelinat Agricole de Giel (61210 Giel-Courteilles).
2—Believed to have been c. 1905.
3—1) Édouard-Émile Lebert.
2) Client: not known, but assumed to have been the Orphelinat management.
4—1) No. 2 power head (3.5m diameter).
2) A three-stage quadrangular pylon on top of the water tower.
3) The circular cap-platform may have been supported by clasp-arms, though this is not clear from photographs. Straight balusters, no cardinal points.
6) The pump house is believed to have been a small wooden shed within the legs of the tower, though its exact design is not obvious from evidence provided by surviving photographs.
7) The pump is assumed to have been
9) A distinctive cylindrical reinforced-concrete water tower, doubling as a pylon base, stood on an open frame consisting of six concrete pillars. The pillars sloped inward, connected with horizontal cross-beams on two levels.
5—Apparently dismantled by 1939.
6—It is assumed that this installation was unsuccessful, possibly because too much water was required by the ever-growing Orphelinat. However though the éolienne was removed prior to the Second World War, the water tank still survives on its original site and may even be still in use.

307. Grande-Brosse (La) ☯
[47°22´07˝N, 3°08´07˝E: RESERVOIR]
1—Bourgogne: 58 Nièvre, 58220 Donzy.
2—Shortly after 1900.
3—1) Édouard-Émile Lebert.
2) The local council.
4—1) No. 2 head (3·5m diameter).
2) A short, half-unit pylon atop a masonry tower.
6) A slender three-storey round-

the standard three-throw plunger type, with an overhung crank and serpentine flywheel spokes.
8) The well lay beneath the tower, depth and construction not known.
tower pump house, tapering slightly as it rises to the flat roof. The base of coursed brick is surmounted by a string-course at cill level, and then by rendered-brick walls; additional string courses mark the cills of the first- and second-floor windows. The tower rises to an overhung cornice to which the balustrades of the eolienne guardrail are attached. The round-headed doorway and each of the eleven window apertures are made of ashlar blocks, with a keystone only in the centre of the door arch. The door was made of wood planks, arranged vertically, ledged and braced, but the windows do not seem to have been framed and glazed.

7) The pump is assumed to have been the standard plunger type, with a three-throw overhung crank and straight spokes on the flywheel.

8) The well lay beneath the tower.

9) A Lavoir, a pond and, perhaps, a cylindrical tank were used for storage.

5—Dismantled. The tower may survive.

6—Details of this site have been taken from picture-postcards dated as early as 1906—e.g., ‘LA GRANDE-BROSSE, près Donzy/La Pompe élévatoire’, published by H. Pontaut of Cosne. It is not clear from these views if the wind-engine could be reached internally, with ladders rising inside the tower, or if external ladders ran up the rear of the tower.

308. **Grand-Longueron** [Le] ※ ❥

*Or ‘Champlay-Grand-Longueron’*

[47°57’20”N, 3°23’57” E: D182/D482 CROSSROADS]


2—1905.

3—1) Édouard-Emile Lebert.

2) The communal council, possibly to irrigate market gardens.

4—1) No. 2 head (3·5m diameter).

2) A quadrangular pylon, 18m high.

5—Dismantled in 1997.

6—Listed in Gaucheron & Major, *Les Éoliennes Bollée*, this wind engine was once believed to have been moved.
However, records held by the commune indicate that two Éoliennes Bollée were commissioned simultaneously, one in Champlay (q.v.) and the other in Grand-Longueron. Shortly after the machine had been dismantled, the remnants were obtained by the owner of the Moulin de Migé, M. Yves Clert, and several of his colleagues. In 2009, the parts were still at the Moulin, but may now have been moved elsewhere. Though dismantled and steadily deteriorating, the turbine head and the pylon could have been re-erected relatively easily.

309. Herbault

[47°36´13˝N, 1°8´18˝ E: APPROXIMATE SITE OF ÉOLIENNE]

1—Centre: 41 Loir-et-Cher, Herbault.
2—1909/10
3—1) Édouard-Émile Lebert.
   2) Le commune de Herbault.
4—1) No. 2 power head (3·5m diameter).
   2) A five-stage pylon atop a water tank.
   3) The cap-platform has straight balusters, but lacks cardinal points.
   4) An external ladder attached to the pylon reaches to the trap.
   5) Mounted on the water tank.
   6) The pump house was cylindrical, 6m high, made of coursed rubble and contained in the base of the water tower.
   7) The pump is assumed to have been the standard three-throw overhung type. However, one crank drove a bucket pump at the depth of 50 metres and the others drove plunger pumps, 23m beneath ground level, which lifted water from the intermediate sump to the tank.
   8) The well lay directly beneath the pump. Apparently 27m65 deep, though the bore-hole (30cm diameter?) containing the bucket pump descended to 300 metres.

9) Water was pumped directly into a cylindrical reinforced-concrete tank (with a capacity of 150 cubic metres) placed on top of the pump house. The top of the tank was 12m above ground level.

5—Dismantled in 1964.
6—First discussions were undertaken within the council in 1902, when a decision to sink wells and purchase a suitable wind-engine was taken.

= The wells were duly completed in November 1905, and a quotation from Lebert was approved in August 1906. Erection of the eolienne began in 1909 and had been completed by the time water was pumped for the first time in February 1910.
= The principal well was sunk next to the Mairie and the École Communale des Filles. The machine had already ceased working when the Second World War ended, but was damaged beyond economic repair in a storm at the end of December 1955.

310, 311. Limours-en-Hurepoix [48°38´49˝N, 2°06´07˝ E]
1—Île-de-France: 78 Seine-et-Oise (now 91 Essonne): Route de Roussigny, 91470 Limours.

FIRST INSTALLATION
2—After 1900.
3—1) Édouard-Émile Lebert.
2) The communal authorities.
4—1) No. 3 head (5m diameter).
2) A quadrangular six-stage pylon mount with ‘X’ bracing.
3) A circular cap-platform; clasp-arm type? Straight balusters and plain cardinal points.
6) A square timber-built pump house was inserted between the pylon-legs, with a shallowly pitched roof rising to a low point. It is assumed that there was a wooden door on one side of the pump-house, but neither this nor any windows are usually visible.
8) Directly beneath the pylon.
5—Dismantled in the 1930s.
6—Some of the details were provided by pre-1914 postcards.

SECOND INSTALLATION
2—After 1900.
3—1) Édouard-Émile Lebert.
2) The communal council.
4—1) No. 3 head (5m diameter).
2) An eight-stage quadrangular pylon with ‘X’ bracing.
3) A circular cap-platform: clasp-arm type? Straight balusters and plain cardinal points.
6) A square timber pump house lay between the pylon-legs, with a shallowly pitched roof rising to a low point. It is assumed that there was a wooden door on one side of the pump-house.
8) Directly beneath the pylon.
5—Dismantled, date unknown.
6—Compare the details with the preceding entry. It is assumed that the machines were erected at differing times and
that, owing to its greater size and height, this is probably the newer of the two installations. Perhaps the earlier machine had been set too low to catch the wind effectively; or possibly demand increased.

The two machines worked alongside each other for many years, until the rapid growth of population asked too much of them.

312. Loches

[47°54’N, 0°59’15”E: CROSSROADS, RUES DE LA CHAUVELERIE AND MARECHAL DE LATTRE DE TASSIGNY]

1—Centre: 37 Indre-et-Loire, Loches, ‘Rue de la Chauvellerie’.
2—Probably c. 1902.
3—1) Edouard-Emile Lebert.
4—1) No. 3 head (5m diameter).
    2) A seven-stage (?) quadrangular pylon with cross-bracing. The crown is supported on a square of angle-iron, which suggests an early date.
    3) The circular cap-platform has plain balusters, but lacks cardinal points. It is supported by a clasp-arm structure,
    4) A ladder runs up the centre of the pylon to a platform built outward from the base of the fifth stage, and another ladder then climbs the outside of the pylon to give access to the cap.
5—Still standing in 2011, but lacking the entire head assembly.
6—See JCP photographs.

313. Loudéac

[48°10’46”N, 2°45’25”W: SITE OF WATER TANK/ÉOLIENNE BASE]

1—Bretagne: 22 Côtes-du-Nord, 22600 Loudéac, junction of Rue Louis Lavergne and Place du Gal de Gaulle.
2—Prior to 1917.
3—1) Édouard-Émile Lebert.
    2) Le commune de Loudéac.
4—1) No. 3 head (5m diameter).
    2) A 5-stage pylon atop the water tower.
    3) The cap-platform was circular, with straight balusters and cardinal points.
    4) A ladder rose from the top of the
pump house to the cap-platform.
5) Mounted on the water tank.
6) The pump house is believed to have been built inside the base of an impressive coursed-rubble tower, about 10m high, with coping beneath the iron balustrade. Access was gained by a wooden door set in a flat arch, and at least one small window (within a similar but smaller flat arch) gave natural light. The tower stood on a grassed mound within a walled enclosure; a niche containing a water-fountain and drinking trough, beneath an ornamental urn, projected from the south wall. Iron reinforcing straps around the top of the tower (two placed circumferentially, four vertically) helped spread the weight of the power head.
7) The pump is assumed to have been the standard three-throw type, with a flywheel with six serpentine spokes.
8) The well apparently lay directly beneath the base of the tower.
5—Dismantled.
6—Details were taken from a picture postcard in the ‘Pays Breton Illustrée’ series, dated 18th June 1917. However, an earlier postcard (unfortunately undated) shows that the Bollée-type power head was substituted for an original single-rotor Eclipse type, perhaps made in France, which had presumably failed the test of time. The 1917 postcard suggests that the Éolienne power-head had an Entonnoir, which would probably date it prior to c. 1908.

314. Luplanté ⊳

No. 313

[Image of Luplanté Éolienne]

1—Centre: 28 Eure-et-Loir, 28360 Luplanté.
2—1926?
3—1) Georges Duplay or possibly SAEB.
4—1) No. 2 head (3·5m diameter).
   2) A three-stage diagonally braced pylon on top of the reinforced-concrete water tower.
   3) The circular cap-platform had plain balusters and an additional mid-height circumferential stringer, but lacked cardinal points.
5) The pylon was probably bolted directly to the top of the water tower.

6) The impressive reinforced-concrete water tower had ten rough-cast panels, tapering inwards, with decorative nibs at each end. The two-storey tower rose to ten ribs carried outward to support an integral large-diameter water tank matching the base in style. The tank-top had a string course beneath the cornice, and appears to have supported a small cylindrical projection which could perhaps have protected the ladder-head. The shape of the tank/tower unit obviously precluded use of an external ladder. A doorway in the base had a lintel and pillars of concrete, and at least one small circular window was set at first-floor level.

7) It is assumed that a standard Bollée or Lebert-type pump was used, but details are lacking.

8) The well lay beneath the pump.

9) Water could also be supplied to the neighbouring Lavoir, which stood in the same enclosure as the éolienne. The boundary walls were made of coursed brick and had prominent coping.

5—Dismantled, date unknown. However, the tank appears to survive.

6—Most of the details have been provided by picture-postcards dating (in most cases) from the early 1930s.

315. Luynes (Château de) 📚

[^]{47°23’15”N, 0°33’13” E: SITE OF ÉOLIENNE}

1—Centre: 37 Indre-et-Loire, 37230 Luynes.

2—Prior to 1910.

3—1) Édouard-Émile Lebert.

2) Duc de Luynes.

4—1) No. 3 head (5m diameter).

2) A seven-stage (?) pylon mount.

3) The cap-platform was circular, with straight balusters but probably lacking cardinal points.

5—Nothing remains to show the existence of the wind engine excepting the adjacent buildings.

6—The château was originally a castle owned by the Maillé family, built on a rocky outcrop in the twelfth century on the foundations of an older fortification and then greatly enlarged in the thirteenth, sixteenth and seventeenth centuries, when a high curtain wall was added and the original keep eventually disappeared. The last major alterations were made by Charles d’Albert (who became Duc de Luynes) in 1617–21. Many picture-postcards have featured ‘Le Château et l’Éolienne’ (including at least one print in which the wind engine was cropped off the edge of the view!), but little is known about the actual site—which lay well behind and to one side of the the buildings. Frustratingly, few of the cards are dated and the history of the éolienne is difficult to determine. It appears to have been in operation by
1910, and, judged by dated postmarks on picture-postcards, lasted at least into the 1930s.

316. Lyre [La Neuve-] 🏰 ⛰

[48°55’05”N, 0°44’56”E]

1—Haute-Normandie: 27 Eure, 27330 La Neuve-Lyre.

2—Shortly after 1910.

3—1) Édouard-Émile Lebert.
  2) The communal authorities.

4—1) No. 3 head (5m diameter).
  2) A six-stage quadrangular pylon, c. 16m high.
  3) The cap-platform had radial supports, straight balusters, and flat-sheet cardinal points.
  4) A vertical ladder ran alongside the drive shaft from ground level to the base of the fourth stage, where a small platform was carried outward to allow a second ladder to rise outside the pylon to give access to the manhole in the cap-platform.
5) Base?
6) The pump house, next to the tower, was built of coursed brick beneath a ridged roof of sight courses of slates (or perhaps tiles) laid over wood rafters. The ridge is capped with half-cylinder tiles and has barge boards at each gable end. The windows appear to have had round-head arches, with the bricks placed radially and some kind of keystone, and the door was probably a ledged, battened and braced design set in a rectangular frame.
7) The pump was probably a two-throw Lebert pattern. There may also have been provision for auxiliary petrol-engine drive.
8) The well lay directly beneath the pump-head gear.
9) An impressive coursed-brick water tower, with a string course of bricks laid vertically, stood alongside the pump house. It supported a concrete tank, possibly with a sheet-metal liner, on a corbelled plinth. The tank portion had four string courses, matching that of the tower, and a brick coping of the same style. A ladder on the outside of the tower gave access to a wooden door set in a decoratively arched frame of brick, and there were four blind bulls’ eyes with radial-brick surrounds above the uppermost string course.
5—Apparently dismantled prior to 1940, though the base remained in place at least until 1972.
6—The details were taken from a picture-postcard with a postmark dated March 1915. It is suspected that a Lavoir or public wash house adjoined the pump site, but it is not visible in the photograph. The style of the single diagonal bracing in each pylon bay duplicates the design of Épuisay, and it is clear that the Lyre wind engine was erected in the 1910-14 era. The new-look of the buildings and the nearby wooden framework (a viewing platform?) seen in the postcard may suggest that it was published shortly after the Éolienne was completed, suggesting 1914 as the most likely date of commissioning.

317. Marquion ☄
[50°12′37″ N, 3°05′07″ E: MAIRIE]
1—Nord-Pas-de-Calais: 62 Pas-de-Calais, 62860 Marquion.
2—Prior to 1929.
3—1) La Société Anonyme des Éoliennes Bollée? 2) Presumably the local council authorities.
4—1) ‘No. 4’ head (7m diameter). 2) A quadrangular pylon with a total height of 28m.
7) Champly listed the pump as a three-throw plunger type with an 85mm bore and a 400mm stroke
5—Dismantled? The wind engine may have been destroyed during the Second World War.
6—Another of the machines tested by Réné Champly for inclusion in his book Les Moteurs à Vent (1933).

318. Matha ☄
[45°52′02″ N, 0°18′37″ W: LA MALADRIE CROSSROADS]
1—Poitou-Charente: 17 Charente-Maritime, 17160 Matha.
2—After 1900.
3—1) Assumed to have been Édouard-Émile Lebert.
4—1) Head-type unknown. 2) A multi-stage quadrangular pylon.
5—Dismantled?

319. Maugué (Château de) ⚘
Also known as ‘Maugay’
[76C1] [47°49′15″ N, 1°12′53″ E: ÉOLIENNE]
1—Centre: 41 Loir-et-Cher, ‘près [41290] La Chapelle-Enchérie’. 
2—1900 or 1901.
3—1) Édouard-Émile Lebert.
   4—1) No. 3 power head (5m diameter), with an Entonnoir.
   2) A seven-stage pylon mount.
   3) The cap-platform, supported by four girders in ‘clasp-arm’ form, has straight balusters and ribbed cardinal points.
   4) A vertical ladder alongside drive shaft leads to a platform at sixth-stage level. It is not clear whether this projects in the manner of later installations. Another ladder then gives access to the trap.
   5) The base is an interesting design on a sloping site, possibly originally built to support a windmill. The plan is basically square, but the sides are battered (sloping inward) and each corner has a massive tapered-face abutment or pier set at 45 degrees to the walls. Construction is rubble with brick quoins consisting of three courses of a brick-and-a-half above three courses of comprising one brick, two half-bricks, and one brick apiece. The batteden and braced wooden door is set in an arched brick-quoined doorway, which was probably altered when the pump house was added; the keystone appears to be ashlar. The main vertical drive shaft runs down into the base, which presumably contains a gearbox and a horizontal drive shaft.
6) Sited alongside the base, the pump-house is small, almost square in plan, and is built of brick-quoined rubble. The system of quoining is similar to that found on the base, but the style of the rubble suggests that the pump house was erected at a later date. The doorway, though quoined, has a very low (virtually flat) arch of bricks without the contrasting keystone. The double-pitched roof is laid with nineteen courses of slates over wood rafters, and has a lead-flashed ridge.
7) The pump is assumed to have been the standard three-throw plunger type.
8) The well lies beneath the pump house.
5—Visited by Dr Mathew Philip and Mme Annie Arcangeli in June 2001, though no access could be gained to the base or pump house. Owner: M Caubert de Clary (2001). Condition: deteriorating rapidly. Though wasted in places, the pylon was near-complete; however, many of the stator blades, the upper portions of the stator shroud, the blades of the Papillon and virtually all of the Entonnoir were missing. Access: on private land.
6—The design of the cap platform suggests an earlier date that the radial-arm Éolienne Bollée in Courville-sur-Eure (q.v., 1902). Consequently, assuming that the wind engine is still standing in 2017, this may be among the oldest remaining pylons.
320. Mauny [-Saint-Maurice-aux-Riches-Homens]
[48°21′03″N, 3°30′52″ E: CHURCH]
1—Bourgogne: 89 Yonne, 89190 Saint-Maurice-aux-Riches-Homens, Hameau de Mauny.
2—Prior to 1908.
3—1) Édouard-Émile Lebert.
        2) The communal authorities.
4—1) No. 3 head (5m diameter).
        2) A six-stage quadrangular wrought-iron pylon, with cross-bracing.
        3) A circular cap-platform with open-trap access, plain balusters and ribbed cardinal points.
        4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the fourth stage, gives access to a short ladder running up the outside face of the pylon to the trap.
6) The square pump house is made of coursed brick, with a flat roof (tarred felt over wooden boards?) within brick coping. The wooden door, battened, ledged and braced, has a contrasting brick architrave; and there was probably a similar window aperture—probably shuttered in wood—on the back wall.
7) The standard plunger pump, with a three-throw crank and serpentine flywheel spokes.
8) A well beneath the pump.
9) Not known: there may have been a reservoir nearby.
5—Dismantled, date unknown.
6—Once placed mistakenly in Sarthe, owing to a confusion with the Château de Maulny. Most of the details were provided by picture-postcards dating prior to 1914.

321. Mercy-le-Bas [49°01′43″N, 5°17′19″ E: RESERVOIR]
1—Lorraine: 54 Meurthe-et-Moselle, near 55220 Souilly.
4—1) No. 3 head (5m diameter).
    2) Pylon mount.
6—At the end of ‘Grand Rue’: see postcards for details.

**322. Milly 🌺 📖**

[47°48’55”N, 3°46’17” E: CHURCH]

1—Bourgogne: 89 Yonne, 89800 Milly-Chablis.

2—1912?

3—1) Édouard-Émile Lebert.

2) The communal authorities.

4—1) No. 3 head (5m diameter).

2) An eight-stage quadrangular steel (?) pylon, with diagonal bracing.

3) A circular cap-platform with plain balusters and ribbed cardinal points.

4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the sixth stage, gives access to a short ladder running up the outside face of the pylon to the trap.

6) Within the pylon legs, square in plan, the pump house is made of coursed brick rising to a lean-to roof with wooden eaves boards. The door is assumed to be wooden, probably batten, ledged and braced; and there may be a window in the back wall.

7) The standard plunger pump, with a three-throw crank and serpentine flywheel spokes.

8) A well beneath the pump.

9) A neighbouring Lavoir with, perhaps, an additional tank or reservoir.

5—Dismantled, date unknown.


**323. Mognaises (Ferme les) 🌸**

Also known as ‘Ciron’ or ‘Le Château de la Rosinière’

[46°37’51”N, 1°15’16” E: CIRON MAIRIE]

1—Centre: 36 Indre, 36300 Ciron.

2—Shortly after 1902.

3—1) Édouard-Émile Lebert.

2) Mme R. Laborde.

4—1) Head unknown.

2) A multi-stage quadrangular pylon.


6—Listed in *Les Éoliennes Bollée* (1995). The mansion was built in 1902 by Roséline Laborde, and it is assumed that the éolienne was erected shortly afterward.

**324. Montagny-en-Vexin ✌ ✨**

[49°08’00”N, 2°44’24” E: LAVOIR?]

1—Picardie: 60 Oise, 60240 Montagny-en-Vexin.

2—Probably c. 1910.

3—1) Édouard-Émile Lebert.

4—1) No. 3 head (5m diameter).

2) An eight-stage diagonal-brace quadrangular pylon.
6) A lean-to roof over the pump in the pylon base.
8) A well directly beneath the pump.
9) The Lavoir stood by the pylon, next to the road, and it is assumed that a water-tank or reservoir was nearby.
5—Dismantled?
6—Details confirmed by a picture-postcard postmarked 1928, but clearly published many years earlier.

325. Paradis (Ferme de)

Previously listed as “Val d’Orvins”

1—Champagne: 10 Aube, ‘Le Hameau de Paradis, par [10290] Trancault’.
2—1951 (see notes).
4—1) No. 3 head (5m diameter).
   2) A 27.5m twelve-unit quadrangular pylon with diagonal bracing.
   For other details (excepting the pump house), see ‘Égriselles-le-Bocage’
5—Still standing in 2010, deteriorating but still in surprisingly good condition.
6—This site is listed on the CFPPHR website as “Val d’Orvins”, leading to confusion. However, it is now known that the Éolienne had been erected in 1932 to serve the commune of Égriselles-le-Bocage (q.v.) in Yonne. It had been purchased on 14th November 1950 by M. Pierre Noël, “équarisseur dans l’Aube” and moved early in 1951 to his property near what the Égriselle council minutes record as “l’Hameau de Paradis” near Trancault. The machine worked from 1951 until 1971, apparently without problems, but M. Noël subsequently sold his land and the Éolienne lay idle for many years.
   = When new owners took possession in 1991, the wind-engine was no longer usable. The blades could not rotate, and only the head could turn in the wind. In 2010, unable to fund restoration but aware of the historical significance of the Éolienne, the proprietors of the estate offered it to the council of Égriselles! Plans have been mooted to return the machine to working order in 2012, on its original site (where the pump house still stands), to celebrate its eightieth birthday.

326. Paroy-en-Othe

[48°02’06”N, 3°34’18”E: ÉOLIENNE BASE]

1—Bourgogne: 89 Yonne, 89210 Paroy-en-Othe/Brienon.
2—1910/11.
3—1) Édouard-Emile Lebert.
2) The communal authorities.
4—1) No. 3 head (5m diameter).
   2) A nine-stage quadrangular pylon mount with cross-bracing.
   3) A circular cap-platform with straight balusters and cardinal points.
   4) A ladder apparently ran up inside the pylon to the seventh stage, where a small projecting gantry gave access to an external ladder reaching the platform.
6) Rectangular pump house, probably made of rendered brick, with a roof of lead or iron sheeting laid on wooden rafters rising to a ridge. A ledged-and-battened wooden door was set in one side, with a four-light wood-framed window on one or possibly both ends.
7) A three-throw plunger pump, directly beneath the vertical shaft, possibly with the foot bearing combined with the frame (see ‘Passy’, below).
8) A well directly beneath the pump.
9) Water was run off into a large circular reinforced concrete tank alongside the engine base.
5—Dismantled.
6—Information taken from pre-1914 postcards.

327. Passy

[63D3] [48°06’37”N, 3°18’36”E: LAVOIR]
1—Bourgogne: 89 Yonne, 89510 Passy.
2—1902.
3—1) Édouard-Émile Lebert.
   2) Le conseil municipal.
4—1) No. 3 (5m diameter) ‘Type Lebert 903’ power-head.
   2) A quadrangular seven-stage pylon ‘sur mt. d’orientation’ with ‘X’ bracing.
   3) Circular cap-platform with plain balusters, but probably no cardinal points.
   4) A vertical ladder from ground level to a balustraded balcony carried outward from the fifth (?) stage, and an inclined ladder from this platform to the cap.
5) Four concrete anchor blocks, one for each leg.
6) A square building between the pylon legs, built of coursed brick, with a flat roof of zinc sheet (?). The wall farthest from the Lavoir has a battened and braced wooden door set in a wooden frame, and there is believed to have been by a small window on the opposite wall.
7) A variation of the standard three-throw pump, with an overhung crank and gothic framing, suitably adapted to provide the foot-bearing for the vertical drive-shaft.
8) A well directly beneath the pump, depth and construction unknown.
9) An impressive enclosed multi-bay Lavoir, made of coursed brick with a pitched roof of slate and iron-framed windows.
5—Sold to M Antonin Castor and moved to La Rose-des-Vents (q.v.) in August 1933. Still in existence in 2009 on a new site in the Nigoland leisure park.
6—Evidence has been provided by pre-1914 postcards, the oldest dating from December 1905.

328. Péault [46°30´10˝N, 1°13´20˝W: WELL/SITE OF ÉOLIENNE]
1—Pays de la Loire: 85 Vendée, 85320 Péault.
2—1928.
3—1) La Société Anonyme des Éoliennes Bollée.
4—1) No. 3 head (5m diameter).
2) A three-stage quadrangular pylon with diagonal bracing.
3) A circular open-trap cap platform with plain balusters and half-height bars
4) A ladder in the pylon led to the cap.
5) A six-arm concrete spider.
6) The pump-house was made of concrete, approximately hexagonal, with vertical ribs at each corner and circumferential strakes marking the stages. A battened and braced wood-plank door and at least one small multi-light window were set in the walls in concrete frames.
7) The pump is assumed to have been the standard three-throw pump, with an overhung crank, adapted to provide the foot-bearing for the vertical drive-shaft.
8) The well, 52m deep, lay beneath the pump.
5—The power-head was removed c. 1953, and the pylon followed in 1986. The water tower was demolished shortly afterwards.
6—Built over a mediaeval open well, a short distance from the church, this wind-engine served reliably for only fifteen years. By 1946—the Germans had used the tower during the war as an anti-aircraft machine-gun post—the Éolienne had deteriorated so greatly that the control mechanism no longer worked effectively. The turbine turned too fast, followed the wind erratically, and was exceptionally noisy. It was replaced by an electric motor and then, in 1952–3, by mains water supply.
= An attempt to use the water tank as a reservoir then failed, when pressures began to fluctuate alarmingly, and the tank was removed.
= The fabric of the tower lasted until, in the 1980s, the concrete began to crumble and demolition followed.
329. Pouilly-sur-Meuse 

[49°32’29” N, 5°06’48” E: PUMP HOUSE?]

1—Lorraine: 55 Meuse, Pouilly-sur-Meuse.
2—Prior to 1910.
3—1) Édouard-Emile Lebert.
4—1) No. 3 head (5m diameter).
2) A multi-stage (8 or 9) quadrangular pylon, with cross-bracing.
6—Shown behind “L’Usine hydro-électrique (ancien filature de laines et de fabrique de feutres incendiées, puis de fabrique de cellulose)” . It is far from easy to determine how close the éolienne stands to the factory grounds or, more plausibly, if it lies some distance away. The latter would suggest communal origins.

330. Préhy

[47°45’33” N, 3°44’50” E: RESERVOIR/ÉOLIENNE SITE?]

1—Bourgogne: 89 Yonne, 89800 Préhy-Chablis.
2—1925.
3—1) Georges Duplay.
2) The communal authorities.
4—1) No. 3 head (5m diameter).
2) A thirteen-stage quadrangular steel or wrought-iron pylon, with cross-bracing.
3) A squared cap-platform with an open trap and plain balusters. No cardinal points.
4) A vertical ladder within the pylon, paralleling the drive shaft, reaching a platform projecting externally from the tenth stage, gives access to a short ladder running up the outside face of the pylon to the trap.
6) Supporting the pylon, the pump house is built of ashlar blocks (possibly concrete) with a flat roof protected by coping and a bay projecting rearward.
7) Probably the standard plunger pump, with a three-throw crank and serpentine flywheel spokes.
8) A well beneath the pump, 35 metres deep.
9) Water was raised 110 metres to a reservoir on a nearby hillside.
5—Replaced by an electric motor in 1953.
6—The pump-house shrouds the lowest stage of the pylon, which appears to have only twelve stages. The Préhy machine, ‘de 37 mètres du hauteur’, was included in the article by Pierre Haasé, ‘Les éoliennes géantes de la «Belle Époque» dans l’Yonne’, published in Pays de Bourgogne in 1995.

331. Romain-sur-Meuse [#] [48°10’23”N, 5°32’06” E: CHURCH]
1—Champagne: 52 Haute-Marne, 52150 Romain-sur-Meuse.
2—prior to 1910.
3—1) Édouard-Émile Lebert.
2) The communal authorities.
4—1) No. 2 head (3·5m diameter).
2) An eight(?)-stage quadrangular wrought-iron pylon, with cross-bracing.
3) A circular cap-platform with open-trap access, plain balusters and ribbed cardinal points.
4) A vertical ladder inside the pylon, parallel with the drive shaft, reaching a platform projecting externally from the sixth stage, gives access to a short ladder running up the outer face of the pylon to the trap.
6) Square pump house, flat-roofed, placed between the pylon legs.
7) Assumed to be the standard plunger pump, with a three-throw overhung crank and straight flywheel spokes.
8) A well lies beneath the pump.
9) A water tower may have stood nearby, though water was also supplied to a neighbouring Lavoir.

5—Dismantled, possibly in the early 1960s.
6—Information has been taken from a coloured picture-postcard probably dating from the early 1930s.

332. Rose-des-Vents (La) ★
[83D1] [47°46’33” N, 5°39’12” E: ÉOLIENNE]
Also known as ‘Broncourt’ or ‘La Folie’
1—Champagne: 52 Haute-Marne, La Folie crossroads (5km east of 52500 Fayl-Billot).
2—1902.
3—Édouard-Émile Lebert.
2) Passy communal council
3) Moved in 1933 (see ‘Remarks’).

4—1) No. 3 ‘Type 903’ head (5m diameter), fitted with a rocking control weight instead of a drop-weight.
2) Seven-stage pylon with cross-bracing.
3) A circular cap-platform, 20m above the ground, with plain balusters and ribbed cardinal points (ribs one side only). Compass-arm platform supports.
6) After the 1933 move, a dynamo house was created in the base of the pylon by boarding-in the lowest two stages, and then tarring the wood for protection. A low ridged roof helps to protect the electrical control gear from rain.

5—The éolienne was still standing when the site was visited in August 2004 by Ruth and Keith Andrews of the Hampshire Mills Group. Even then, however, the owner, M. Antonin Castor, was offering it for sale: the garage—a fascinating pre-1914 building with a mass-concrete façade—was deteriorating, but the Éolienne remained in surprisingly good condition. The Papillon was complete,
and the turbine blades were all in place. The power-head had been painted as a Tricolour, with concentric rings of red, white and blue, and an anemometer was lashed to the machine. = In 2006, the owners of the Nigoland pleasure park (27 Rue de la Vallée du Lanion, 10200 Dolancourt) bought the éolienne. After extensive restoration, it was re-erected in 2008 and may be seen 'at work' in the Ferme d’Antonin section of the 'Village Suisse' (pumps are still being sought).

6—This interesting survivor is one of the few with the quadrant-type control gear for the Papillon, believed to be a later repair as a drop-weight bracket remains in place. It is also the only known Bollée wind-engine to have been used exclusively for something other than water supply. It was purchased in the summer of 1933 from the commune of Passy, where it had been erected in 1902, and re-erected in its present location in September 1933 to drive a 130-volt generator. This charged two large storage batteries supplying the garage and the neighbouring farm. = The electrical installation worked until 1944, when the mechanic responsible for its upkeep was transported to Germany and M. Castor was forced into hiding. When the Second World War ended, the generator and the batteries were in such bad condition that M. Castor decided that the most cost-effective solution was simply to connect with the national power-lines and install a new transformer. The wind-engine was then disconnected.

= This machine was once mistakenly placed in the Territoire de Belfort, and was listed in André Gaucheron & J. Kenneth Major, Les Éoliennes Bollée (1995), as 'Broncourt'. This confusion arose from the proximity of the communes of Broncourt and Voncourt (south-east of the site), and also of the 'Haut Fourneau de Farincourt, Route de Voncourt, Fayl-la-Forêt'—a foundry which may also have had an Éolienne, at least according to the Ministère de la Culture et Communication website.

333. Rouillardière *  ☸
(Château de la)
[47°22´18˝N, 1° 01´55˝ E: ÉOLIENNE]
1—Centre: 37 Indre-et-Loire, Souvigny, Forêt d’Amboise.
2—1910 or 1911 (see notes below)
3—1) Édouard-Émile Lebert.
4—1) No. 1 head (2·5m diameter).
   2) A three-stage quadrangular pylon with diagonal bracing, on top of a tower.
   3) A circular cap-platform with straight balusters and cardinal points.
   4) Access to the éolienne is gained by a ladder up the side of the tower and tank,
then another up the outer face of the pylon to reach the cap.
5) The legs of the pylon are attached directly to the tower.
6) The pump house is in the base of the tower.
7) The standard three-throw pump was used, with an overhung crank, gothic frames and six serpentine flywheel spokes.
8) The well lies directly beneath the pump.
9) Circular in plan, the tower (now partially shrouded in ivy) is made of coursed rubble raised on a low plinth. It rises to six brick courses, five laid horizontally, stepping outward with small vertical abutments of brick and stone. The sixth or uppermost course is laid vertically to abut the small concrete water tank with a string course and coping.
5—Still standing.
6—The éolienne is not shown on picture-postcards dating prior to 1906, but had been erected some time between 1906 and August 1912.

334. Roussainville (Chateau de) ✶ ★
[48°17’27”N, 1°15’19”E: ÉOLIENNE]
2—Early 1900s.
3—1) Édouard-Émile Lebert.
4—1) No. 1 head (3·5m diameter).
    2) A multi-stage quadrangular pylon.
6—Offered for sale at auction in December 2007, when apparently still on its original site (‘buyer to pay costs of dismantling and transportation’). Current status unknown.

335. Saint-Aubin-sur-Yonne ✶ ■
[47°59’51”N, 3°20’52”E: ÉOLIENNE BASE]
1—Bourgogne: 89 Yonne, 89300 Saint-Aubin-sur-Yonne, between what is now the D959 and the Dérivation Joigny (canal).
2—1901?
3—1) Édouard-Émile Lebert.
    2) Le conseil municipal,
4—1) No. 3 head (5m diameter).
    2) A seven-stage quadrangular pylon mount with cross-bracing.
3) The circular cap platform is supported
by clasp arms, possibly with one arm bent to clear the other (cf., Maugué).
6) Placed between the pylon legs, the pump house effectively comprises the lowest stage. Square in plan, it is made of dressed stone and has a concrete-slab roof. The central wooden door is set in a round-top arch of brick.
7) The standard three-throw plunger pump, with an overhung crank and serpentine flywheel spokes.
8) A well beneath the pump house.
9) A large covered concrete reservoir on the crest of a nearby hill. The Lavoir was farther down, on the riverbank.

5—Dismantled, beginning on 16th May 1994.
6—This may have been among the earliest of all Lebert’s pylons, as the way in which the crown is attached to the pylon-head and the style of construction (particularly the riveting and the reinforcing fillets) is totally unlike most other examples. The Courville installation, for example, which can be reliably dated to 1902, shows many improvements.
= An electric motor had been substituted for the wind-engine in the 1930s, and fabric of the machine had seriously deteriorated by the time of the survey undertaken in the early 1990s for Les Éoliennes Bollée by André Gaucheron & J. Kenneth Major. The entire rotor, drive and Papillon assembly had disappeared, though a fragmentary Entonnoir remained. Though local interest in the preservation of the machine was strong, the authorities decided that the cost of 300,000 Francs was too great a burden for such a small community.

336. Saint-Branchs

[47°13’38”N, 0°46’18”E: MAIRIE]
1—Centre: 37 Indre-et-Loire, 37320 Saint-Branchs.
2—1901?
3—1) Édouard-Émile Lebert.
   2) The communal council.
4—1) No. 1 power head (2.5m diameter).
   2) A five-stage quadrangular pylon with cross-bracing.
   3) A circular cap-platform with straight balusters and cardinal points.
4) A vertical ladder from ground level to the third-stage platform, then another ladder, mounted externally, gave access to the cap.
5) The base was a concrete apron.
6) The pump house lay within the pylon legs. Square in plan, built of coursed brickwork, it had a pitched pyramidal roof of graduated slates laid on wood rafters and battens.
7) The pump is assumed to be the standard three-throw overhung type.
8) The well lay beneath the pylon.
9) Water was pumped directly into an adjoining Lavoir, which consisted of a storage tank and a large concrete or possibly rendered-rubble tank open to the elements. Run-off replenished a small pond.
5—Dismantled.
6—Evidence has been supplied by many pre-1914 picture-postcards, including one in the J. Kenneth Major collection that is postmarked 1st June 1908. The design of the pylon shows that this is a very early installation.

337. Saint-Cyr-les-Colons ✪ ✫
Sometimes mistakenly listed as 'Saint-Cyr-les-Colombs'
\[47°44´31˝N, 3° 44´44˝ E: POSSIBLE ÉOLIENNE SITE\]
1—Bourgogne: 89 Yonne, 89800 Saint-Cyr-Chablis.
2—1910?
3—1) Édouard-Emile Lebert.
2) The communal council.
4—1) Head type unknown.
2) Pylon mount.
5—Dismantled in the late 1950s?
6—Superseded by an electric pump in 1953.

338. Saint-Gatien-des-Bois ✽ ✫
\[49°16´55˝N, 0°13´43˝ W\]
2—After 1900.
4—1) Head type not known.
2) Believed to have been on a quadrangular pylon.
5—Dismantled.
6—Possibly known as ‘Villa Bel-Air’, though confirmation is currently lacking.

339. Saint-Lubin des Cinq Fonts ✪
Also known as ‘Saint Lubin des Cinq Fonds’
\[48°12´48˝N, 0°52´54˝E: ÉOLIENNE SITE\]
1—Centre: 28 Eure-et-Loire, 28330 Authon-du-Perche.
4—1) No. 3 head (5m diameter).
2) A multi-stage pylon.
5—Dismantled.
6—It has been suggested that this is basically a Bollée turbine mounted on an older pylon. The stage-spacing at the top and base and the way in which the cap-platform is supported have all been questioned, but more information is clearly needed...
340. Saint-Vaast-d’Équiqueville ➕
[49°48'59"N, 1°15'46"E: ÉOLIENNE SITE]
1—Haute-Normandie: 76 Seine-Maritime, 76510 Saint-Vaast-d’Équiqueville.
2—1908?
3—1) Édouard-Émile Lebert.
4—1) No. 1 head (2.5m diameter).
2) A short three-stage quadrangular pylon mount, set in the top of a cylindrical sheet-metal tank on top of a concrete (or possible masonry) tower
5—Dismantled, date unknown.
6—Take details from photograph.

341. Sap (Le) ✖
[48°53’39˝N, 0°20’22˝E: ÉOLIENNE SITE?]
1—Basse-Normandie: 61 Orne, 61470 Le Sap-en-Auge ‘près Lisieux’.
2—After 1900, but prior to 1914.
3—1) Édouard-Émile Lebert.
2) The communal authorities.
4—1) No. 1 head (2.5m diameter).
2) A multi-stage quadrangular pylon.
5—Dismantled.
6—The machine stood behind the buildings on the southern side of Rue Raoul Hergault, which is identified on most of the postcards as ‘Rue Hergon’. However, the identification of the actual site should be considered as provisional.

342. Senelier (Ferme de) ❨√
[LOCATION UNCERTAIN]
Also known as ‘Asnois’.
1—Poitou-Charente: 86 Vienne, 8650 Asnois.
2—1916/17.
3—1) Édouard-Émile Lebert.
2) M Senelier.
4—1) No. 1 head (2·5m diameter).
2) A 3-stage pylon with diagonal bracing, on top of the water tank.
3) A circular cap-platform.
4) An access ladder.
5) None; the pylon legs are bolted directly to the tank-top.
6) The pump house is contained in the base of the water-tank tower.
7) The pump is believed to be a two-throw Lebert type, but confirmation is lacking.
8) The well, directly beneath the pump, is 39m deep.
9) The water tank is cylindrical, made of reinforced concrete, and stands on a cornice on top of the coursed-rubble tower.
6—The éolienne is said to have worked until 1940, and was then put back into working order by German authorities in 1942. A Mangin pump, driven by a small petrol engine, was installed (in the 1920s?) to supply water when there was too little wind. However, it proved to be too weak and was eventually replaced by an electric motor.

343. Sens-de-Bretagne ❨√
[48°19´50˝N, 1°31´30˝W; ‘LA CROIX COUVERTE’]
1—Bretagne: 35 Ille-et-Vilaine, 35490 Sens-de-Bretagne (a few kilometres west of Fougères).
2—Prior to 1911.
3—1) Édouard-Émile Lebert.
2) The communal authorities.
4—1) No. 2 head (3·5m diameter).
2) A six-stage quadrangular pylon with diagonal bracing.
3) The cap-platform was circular, with straight balusters and cardinal points.
4) A ladder rising to a platform at the base of the fourth stage, and then another ladder ascending to the cap.
5) The base was a concrete rectangle.
6) There was no pump house.
7) The standard three-throw pump was used, with an overhung crank, placed between the road from St-Aubin-de-Cormier and the engine base.
8) The well lay directly beneath the pump.
9) A reservoir may have stood next to, or possibly behind the site.
5—Said to have been dismantled c. 1958.
6—Identified from pre-1914 picture postcards.

344. Souilly

[49°01’43”N, 5°17’19”E: RESERVOIR]
1—Lorraine: 55 Meuse, near 55220 Souilly.
2—1901 or 1902.
3—1) Édouard-Émile Lebert.
2) The communal authorities.
4—1) No. 3 head (5m diameter).
2) An eight-stage pylon mount with cross-bracing.
3) A circular cap-platform with plain balusters and ribbed cardinal points. Compass-arm supports?
4) An internal ladder originally rose to the fifth stage, where a projecting balustrated balcony gives access to an external ladder leading to the manhole or ‘trap’ in the platform base. However, the lower ladder has been replaced with a modern ‘caged’ design leading up from the second stage, reached by a removable ladder that bridges the first two stages.
6) A pump house was probably originally created in the base of the pylon by roofing-over (and possibly also boarding-in) the lowest stage, though the pump head-gear is now in the open.
7) The standard Bollée three-throw pump, with overhung crank and the foot bearing for the vertical drive shaft supported on an integral extension of the head-gear frame. Large flywheel with six serpentine spokes.
8) The well apparently lies directly beneath the pump.
9) The site occupies the edge of a closed grassed-over reservoir, apparently on top of a purpose-built pump chamber.
6—Some evidence of constructional details has been provided by a picture-postcard postmarked 18th September 1904, but most currently comes from photographs posted on the CILAC website in October 2004. However, this information is now more than a decade old, and an update is badly overdue.

- This particular machine is an unusual survival, dating from the earliest period of Lebert tenure, and the design of the pump, though not unique, is particularly worthy of remark.

- The decision to erect the Éolienne and a Lavoir (public wash house) was taken by the communal council on 13th November 1899, and the machine, erected at the end of 1901, commenced work early in 1902.

- The pump head-gear frame still bears a Lebert-type maker’s plate—a very unusual find—but also has the name of Auguste Bollée cast into the iron support webs.

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345. Torcé-Viviers-en-Charnié  
Also known as ‘Le Verger’ (see notes below)

[48°05´54˝N, 0°15´55˝W: ÉOLIENNE SITE?]

1—Pays de la Loire: Mayenne (53), 53270 Torcé-Viviers-en-Charnié

2—Probably between 1909 and 1911.

3—1) Édouard-Emile Lebert.

2) The communal authorities.

4—1) No. 1 head (2.5m diameter)

2) Quadrangular multi-stage pylon with diagonal bracing.

5—Dismantled.

6—Details taken from postcards (including one dated 1912) showing ‘Le Verger’, a mansion set in an orchard. The current water-tower stands in ‘rue du Verger.’

346. Touche (Manoir de la)  

[47°24´12˝N, 0°26´14˝ E: ÉOLIENNE]  

1—Centre: 37 Indre-et-Loire, Mazières de Touraine.

2—c. 1902 (see notes below).

3—1) Édouard-Emile Lebert.

4—1) No. 3 power head (5m diameter), with an Entonnoir.

2) A two-stage quadrangular pylon atop a water tank, with cross-braces and an additional vertical brace on two faces of the lower stage. There are also four head-stays secured to the joists on which the pylon is bolted.

3) The cap platform is circular, with straight balusters, but lacks cardinal points.

4) A short ladder leads from the tank-top to the platform.

6) The pump house, circular in plan, two or possibly three-storey, is made of ashlar (dressed stone) with ornamental quoins around the door and window apertures. What appear to be crossed ‘I’-beams protrude from the fabric of the building to support wrought-iron vertical joints taking at least part of the weight of the pylon, platform and
turbine head.
7) Pump: a single-barrel design of unknown provenance. Auxiliary power was provided by a Japy ‘Modèle 11E’ petrol engine, no. 6518, which remains on the site.
8) The well lies directly beneath the pump-house.
9) A sheet-metal water tank is interposed between the pump-house and the pylon, topped with a balustrated platform giving access to the Éolienne. The tank-platform is reached by an external ladder.

6—This is one of the most interesting of the pylon-and-tower sites. The power head retains an Entonnoir, suggesting that the installation dates from the very early years of the twentieth century, but the strange design of the pylon indicates that the turbine had been substituted for an older single-rotor machine. Confirmation is still being sought.
The Manoir, built in the 1860s amidst parkland, also possesses an exceptional nineteenth-century glass-and-iron greenhouse.

347 Val de Mercy

[47°40’30”N, 3°35’12”E: ÉOLIENNE BASE?]

1—Bourgogne: 89 Yonne, 89580 Val de Mercy (on the river Genotte, west of Bazarnes, south of Auxerre.)

2—1920s?

3—1) Probably Georges Duplay.

2) The communal council.

4—1) No. 3 head (5m diameter).

2) A twelve-stage quadrangular pylon mount with compass-arm supports and diagonal bracing.

3) A circular cap-platform, with plain balusters and an additional mid-height circumferential bar. No cardinal points.

4) A ladder running up the inside of the pylon to the tenth stage, where a small
projecting platform gives access to a ladder to the trap.
6) Probably set between the pylon legs, the pump house would have been square in plan. The style of construction is not yet known, but was possibly concrete and rubble.
7) The standard three-throw plunger pump?
8) A well beneath the pump house.
9) A large cylindrical water tank may have stood on a low tower alongside the Éolienne.

5—Dismantled in the late 1950s?
6—The design of the platform suggests that this dates from the Duplay era, or possibly even from the early 1930s. Consequently, it could have been one of the last of its type.

348. Vaudeurs * *

[48°07’59”N, 3°33’00” E: SITE]
1—Bourgogne: 89 Yonne, 89320 Vaudeurs.
2—1923.
3—1) Georges Duplay.
   2) The communal council.
4—1) No. 2 head (3.5m diameter).
   2) A seven-stage quadrangular pylon mount with compass-arm supports and diagonal bracing.
   3) A circular cap-platform, with plain balusters and cardinal points (?).
   6) Alongside the pylon, rectangular in plan, the pump house is made of dressed stone and has a concrete-slab roof.
8) A well beneath the pump house.
6—A decision of the communal council, approved in April 1922, provided the commune with a Lavoir and public Aubreuvors. Land was purchased to enable a well to be sunk, a reinforced-concrete reservoir to be built, and an
Éolienne to be erected.

= Inspection of American-style wind-engines elsewhere in Yonne convinced the Vaudeurs council to order a Bollée wind turbine from Georges Duplay, ‘Ingenieur du Mans’. The installation was completed in the summer of 1923 and worked until the late 1950s, when it was replaced by a water tower on a nearby hillside. The decision to restore the wind-turbine to working order was taken in 1989, when, despite years out of service, it was in surprisingly good condition. The well was still in existence, though the pumps and the auxiliary petrol engine had gone, and the reservoir had been demolished. The project duly proceeded even though the Lavoir had been private property since 1980; work was completed in 1991, and government protection was granted in 2004.

349. Vignol ★★★ ★★★

[47°21’43˝N, 3°40’20˝ E: LAVOIR?]

1—Bourgogne: 58 Nièvre, 58190 Vignol.
2—1909/10.
3—1) Édouard-Émile Lebert.
   2) Le conseil municipal de Vignol.
4—1) No. 3 head (5m diameter).
   2) A quadrangular pylon mount, about 24m high.
   3) A circular cap-platform, with straight balusters and (apparently) flat cardinal points.
   6) A pump house of coursed brick, at the base of the pylon. Fitted with a tiled roof?
   7) Assumed to be the standard three-throw pump.
   8) A cylindrical stone-lined well beneath the pylon.
6—Though the decision to order a water-pump was taken by the communal authorities as early as 1900, the approaches to Lebert were not made for some time. The accompanying Lavoir was constructed first, in 1908, and Lebert’s tender, made on 31st July 1909, was approved on 21st August. Erection began on 20th September 1909 and the wind-engine was probably completed by the end of the year…though the opening ceremony was delayed until early 1910 (cf., Épuisay).

350. Villennes ★★★

[48°55’30˝N, 2°00’10˝ E: ÉOLIENNE]

Sometimes known as ‘Domaine de Fauveau’

1—Île-de-France: 78 Seine-et-Oise, now 78 Yvelines, ‘Chemin de Fauveau, 78670 Villennes-sur-Seine’.
2—1904?
3—1) Édouard-Émile Lebert.
4—1) No. 3 head (5m diameter).
2) An eight-stage quadrangular pylon mount with cross-bracing.
3) A circular cap-platform with straight balusters and plain cardinal points.
4) A vertical two-part ladder paralleling the drive-shaft gives access to a balcony projecting from the fifth stage, from where an external ladder reaches the cap-platform.
5) none: the pump, above the well-head, sits directly beneath the pylon and is protected by a double-pitched roof of zinc sheets laid on rafters supported by the first-stage horizontal girders. The structure is open on all sides, but an adjoining engine house is built of coursed brick apparently with a shallowly pitched flat roof of tarred felt. It is probable that a horizontal engine, gas or perhaps later oil-powered, once occupied this lean-to. The wall facing the pump, which would once have been open, has been filled with breeze blocks.
7) One of only a few surviving gothic-frame three-unit plunger-pumps with an integral foot bearing for the vertical shaft. It is extended at the 'inboard' end, by way of a clutch, and geared to a drive pulley on a layshaft. The outboard end of the pump abuts a massive ‘A’-frame.
8) Beneath the pump, the well is 28m deep.
9) A cylindrical sheet-metal water tank, supported on a 4m-diameter stone base with a battened and braced wood door.
6—Postcards dated as early as 1906 show that this Éolienne, often listed as a communal purchase,* stood close to the Château de Fauveau and also to Villa Beau Site, owned in 1918 by a member of the Cartier Bresson family (who had made a fortune from the manufacture of threads and wire). It is not yet known if it had been erected to serve the needs of a jardin potager, though an orangery stood nearby. Work is said to have ceased at the end of the Second
World War, when an electric motor was substituted. The ‘foot-bearing’ plunger pump, rarely encountered on Bollée sites, has an Auguste-Sylvain Bollée (not Lebert) maker’s plate which may date it to the period immediately after Lebert purchased the business. The incorporation of the vertical-shaft foot bearing in the frame seems to have been unsuccessful, and was soon abandoned.

351. Viviens (Les) *

[47°49’36”N, 2°53’50”E: ÉOLIENNE/TANK SITE?]

1—Région: Centre. Département: 45 Loiret, ‘près Châtillon-Coligny’.
2—c. 1903.
3—1) Édouard-Émile Lebert.
4—1) No. 1 head (2.5m diameter), possibly with an Entonnoir.
2) A five-stage pylon on top of a water tank. The horizontal cross-bracing takes the form of single alternate diagonals.
3) A circular cap-platform, supported by four girders arranged in ‘compass-arm’ form, has serpentine balusters and cardinal points.
4) A vertical ladder runs up the outside of the pylon from the tank-top to the platform.
5) The legs of the pylon rest on brackets projecting from footings on top of the tank.
6) The pump house, circular in plan, is made of coursed brick that has apparently been rendered externally and plastered internally. A prominent cornice divides the pump-house from the tank. There is a single window, with a wood frame, and a battened and braced wooden door is set in a wood frame.
7) The pump mechanism, now partly dismantled, is assumed to have been a three-throw type. The foot bearing is supported on two ‘I’-beams running between dwarf coursed-brick walls, and
a curved rail with straight balusters, immediately inside the pump-house door, guards the well-front. Most of the head gear has gone, the flywheel (six curved spokes) has fractured, but the pumps themselves may survive.

8) The well lies directly beneath the pump, and is lined in brick.

9) A cylindrical storage tank has been erected on top of the pump-house.

5— Visited by Francis Bonneteaud, October 2003. Owner: not known. Condition: the pylon and power-head are good, though the blades of the Papillon appear to be missing. The pump mechanism is little more than a relic. Access: on private land, but easily visible.

6— The presence of an Entonnoir suggests that this dates from the first few years of Lebert supervision, but very little is known about the origins of the site.
In addition to the wind-turbines, Auguste Bollée also drew attention to the installation of pumps (and even béliers hydrauliques) for clients for whom the wind-engine was inappropriate.

Some of these sites may already have had a source of power (e.g., a waterwheel) and simply needed new pumps; others, perhaps, made demands that were too limited for an expensive Éolienne Bollée to service effectively. Unfortunately, few of them have been surveyed, and it is not clear if any of the equipment survives.

**Non-Éolienne installations**

Client-lists published in August 1888, March 1891 and February 1894 name seventeen sites under the heading ‘élévations d'eau par roues hydrauliques ou autres moteurs avec pompes (Système Bollée)’:

352. **Barbée** (Château de la)

   [47°40’51”N, 0°10’53”W: LE MOULIN DE LA BARBÉE]

353. **Broglie** (Château de)

   [47°00’29”N, 0°31’28”E: ORNAMENTAL GARDEN]

354. **Château-du-Loir**

   [47°41’37”N, 0°25’05”E: MAIRIE]

355. **Château-la-Vallière**

   [47°32’37”N, 0°19’35”E: MODERN WATER TANK]

356. **Combourg** (Château de)

   [48°24’27”N, 1°45’13”W: CHÂTEAU]

357. **Couture** (Château de)

   [48°00’08”N, 0°33’20”E: PUMP SITE?]
   Pays de la Loire: 72 Sarthe, ‘à 72440 Saint-Michel-de-Chavaignes’. Client: Mme Vve Devré. Date: 1889. Pumps only?

358. **Dampont** (Château de)

   [49°06’36”N, 1°58’21”E: CHÂTEAU]
   Ile-de-France: Seine-et-Oise, ‘a Ws-Marines’ (now 95450 Us). Client: Comte de Kersaint. Date: 1883. Pumps only?

359. **Donneterie** (Château de la)

   [47°34’11”N, 0°34’06”E: CHÂTEAU]
   Centre: 37 Indre-et-Loire, ‘près Neuillé’ [37360 Neuillé-Pont-Pierre]. Client: M Moisant. Date: 1885. The Domaine de la Donneterie was created by the renowned civil engineer Armand Moisant (1838–1906), son of an agriculteur, who purchased 2100 hectares
of arable land in Touraine in 1878. The feudal Château de la Donneterie, which by then comprised little more than four towers and a fragmentary courtain wall, was flanked by a new mansion and its parc à l’anglais erected in 1879–82, and five hundred acres of land were used to create to fermes modèles to exploit the latest technology.

The buildings of the ferme de Platé (north-east of the château, see entry 365) and the ferme de Thoriau (south west of the house) lay within a kilometre of the mansion. The question is simply if Moisant purchased an Éolienne Bollée to supply his ornamental park, but though he purchased pumps in the mid 1880s, there is currently no evidence to suggest other than that these were installed in the farms.

363. Orbec-en-Auge
[49°01’15˝N, 0°24’18˝E: MAIRIE]
Basse-Normandie: 14 Calvados, 14290 Orbec. Client: ville d’Orbec. Date: 1883. Installation of six pumps for public water supply. It is assumed that they were installed somewhere on the banks of the river Orbiquet, perhaps driven by a watermill.

364. Perrais (Château de[s])
[47°50’53˝N, 0°06’36˝E: CHÂTEAU]
Pays de la Loire: 72 Sarthe, ‘à [72320] Parigné-le-Pôlin’. Client: Marquis de Broc. Date: 1885. It is still unclear how the pumps were driven, but the most likely source of power would have been a wind-engine.

365. Platé (Ferme de)
[47°34’29˝N, 0°34’17˝E: WIND PUMP]
Centre: 37 Indre-et-Loire, ‘près Neuillé’ [37360 Neuillé-Pont-Pierre]. Armand Moisant, creator of the Domaine de la Donneterie and the ‘model farms’ of Platé and Thoriau, purchased Bollée pumps in the mid 1880s. At Platé, one of these replaced the pump supplied with an American-type wind engine—possibly a Eureka—which featured in several pre-1914 postcards and whose ‘headless pylon’ survives on-site above the Bollée pump.

366. Reignac (Château de)
[47°13’58˝N, 0°55’00˝E: CHÂTEAU]
Centre: 37 Indre-et-Loire, 37310 Cigogné, Reignac[-sur-Indre]. Client: M E. Muller. Date: 1887. The pump is said to have driven by a wind engine ‘du type américain’, but there is as yet very little evidence to back the claim.
367. Saint-Calais

[47°55’29”N, 0°44’42”E: SWIMMING POOL]

Pays de la Loire: 72 Sarthe, 72120 Saint-Calais. Client: municipal authorities. Date: 1885. This order referred only to the manufacture of pumps for the abattoir and the local commune. The site is assumed to have been on the bank of the river Anille, perhaps close to where the pool now stands, but the exact location remains uncertain.

368. Saint-Quentin-des-Isles

[49°02’53”N, 0°36’23”E: CHÂTEAU DU HOULLEY]

Haute-Normandie: 27 Eure, 27270 Saint-Quentin-des-Isles. Client: Mme de Sainte-Opportune. Date: 1882. The co-ordinates refer to the château ‘à Saint-Aubin-le-Vertueux’, due east of Saint-Quentin, which not only had an ornamental park but was usually identified as ‘Château de Saint-Quentin-des-Isles’ on most pre-1914 picture-postcards. = The so-called ‘Vieux Château’in Saint-Quentin itself—49°02’50”N, 0°34’47”E—is a possible, if unlikely alternative site.
No. 370
369. Theil (Château du)

[LOCATION UNCERTAIN]
Date: 1889. The identification of this site still presents problems. A single picture-postcard of the ruins of the (mediaeval?) Château du Theil gave the location as [86300] ‘Bonnes’, to the north of Chauvigny. There the Clos de Teil and the Vallée de Teil are still to be found, but there is no evidence of a large house unless ‘La Maison Neuve’ to the west, on the bank of the Vienne, is considered.

Éoliennes Type Lebert

Very little is known about this type of wind-engine, said to have been introduced c. 1906. It is assumed that the combination of a quadrangular pylon, a single rotor (with two concentric rows of blades) and a winding-fan capable of pivoting through 90 degrees signifies an attempt by Lebert to simplify the Bollée turbine.

The goal was presumably a cheaper alternative to the standard turbine which would be more competitive with the American-style designs promoted by Plissonier, Araou and many others. But, as confirmation is still lacking, the identification of the sites listed here with Lebert should still be treated with caution.

370. Guignonville ❖

[48°11’55”N, 2°06’45”E: WATER TANK]
1—Centre: 45 Loiret, Guignonville [45480 Grenève-en-Beauce]
2—Between 1908 and 1914.
3—1) Édouard-Émile Lebert.
2) The communal council.
4—1) 8.6m diameter rotor.
2) An eight-stage quadrangular pylon mount with diagonal bracing.
3) The square cap-platform had rounded corners and plain balusters.
4) A ladder rose vertically alongside the vertical shaft to give access to the cap.
5) Alongside the pylon, rectangular in plan with a ridge roof.
6) The pump was placed inside the pump-house, but its design is unknown.
7) The well lay beneath the pump.
8) A cylindrical sheet-metal water tank stood on a tower of coursed rubble alongside the wind-engine.
5—Dismantled, date unknown.
6—It is assumed that the current water tank rises from the same site as the original. The site has occasionally been identified with Guignonville, [45270] Quiers-sur-Bézonde, but this particular hamlet is far too small to have had a wind engine.

371. Maison-Dieu, La ❖

Also known as ‘Lamaisondieu’
[47°24’58”N, 3°38’33”E: LAVOIR]
1—Bourgogne: 58 Nièvre, 58190 La Maison-Dieu.
2—Unknown, but prior to 1923.
3—1) Édouard-Émile Lebert?
2) The communal council.
4—1) 7.1m diameter rotor.
2) A ten-stage quadrangular pylon mount with diagonal bracing.
3) The square cap-platform had rounded corners and plain balusters.
4) A five-part ladder climbed the outside of the pylon to give access to the cap.
5) Between the pylon legs, rectangular in plan, made of coursed brickwork with a ridge roof.
6) The pump was placed inside the pump-house.
7) The well lay directly beneath the pump.
5—Dismantled, date unknown.
6—Perhaps the newest of the five machines of this type identified to date. The most likely date of erection is 1912–14.
372. Montfaucon [d’Argonne]

[49°16´22˝N, 5°07´58˝E: LAVOIR]

1—Lorraine: 55 Meuse, 55270 Montfaucon d’Argonne.
2—Prior to 1909.
3—1) Édouard-Émile Lebert.
2) The communal council.
4—1) 7.1m diameter rotor.
2) A nine-stage quadrangular pylon mount with cross-bracing.
3) The squared cap-platform had rounded corners, making it almost octagonal, and plain balusters.
4) A ladder rose vertically alongside the vertical shaft to give access to the cap.
6) The cubic pump-house stood between the pylon legs, perhaps comprising concrete walls and a corrugated-zinc roof bent in an arc.
8) The well lay beneath the pump.
5—Dismantled.
6—This machine, which may be the oldest of the five (erected in 1907?) was destroyed during the First World War. The entire village was obliterated during the fighting, but was rebuilt in the 1920s slightly south-west of the site. The ruins now stand in a grove of trees. However, it is possible that the Lavoir either survived or was rebuilt on its original site a few hundred metres away from the village. Details are still sought.

373. Parigné l’Évêque

[47°56´14˝N, 0°21´55˝E: MAIRIE]

Pays de la Loire: 72 Sarthe, 72250 Parigné l’Évêque.
2—1909?
3—1) Édouard-Émile Lebert.
2) The communal council.
4—1) 8.6m diameter rotor.
2) An eight-stage quadrangular pylon mount with diagonal bracing.
3) The square cap-platform had rounded corners and plain balusters.
4) A ladder rose vertically alongside the vertical shaft to give access to the cap.
6) The rectangular pump-house, rectangular in plan, stood alongside the pylon. It was built of coursed brick, and had a gabled roof of slates laid on wooden rafters and battens. The roof had a fretted wooden fascia board. A wooden door and at least one three-light window were set in brick pillars, lintels and cills. See photograph for details.
7) The pump was placed inside the pump-house, but its design is unknown.
8) The well lay beneath the pump.
9) A cylindrical panelled reinforced-concrete water tank stood on a smaller-diameter tower of coursed rubble close to the wind-engine.
5—Dismantled, date unknown.

374. Rugles

[48°49´20˝N, 0°42´26˝E: MAIRIE]

Haute-Normandie: 27 Eure, 27250 Rugles.
2—1909?
3—1) Édouard-Émile Lebert.
2) The communal council.
4—1) 8.6m diameter rotor.
2) An eight-stage quadrangular pylon mount with diagonal bracing.
3) The square cap-platform had rounded corners and plain balusters.
4) A ladder rose vertically alongside the vertical shaft to give access to the cap.
6) The pump-house was erected alongside the pylon. Rectangular (perhaps almost square) in plan, it consisted of coursed brick panels set into a plinthed frame of concrete. Each wall was divided into five brick bays separated by a vertical string course, the widths of the bays corresponding to the double-width door and single-width windows (each consisting of four lights two-and-two above blind panels).
The cornice was a plain moulding, the roof was flat, and a short ornamental pediment rose above the cornice on the front elevation.

7) The pump was placed inside the pump-house, but its design is unknown.
8) The well lay beneath the pump.
9) A reservoir stood directly behind the wind-engine.

Possible Bollée installations

Most of these are currently listed in the inventories of the Ministère de la Culture et Communication.

However, it is often difficult to distinguish the Bollée-type turbines—as so many surviving machines are listed in the assessments simply as ‘Éoliennes’. It is possible that sites in Départements such as Indre-et-Loire, Sarthe or Yonne could be Bollées, whereas those in less well-documented districts will probably represent alternative designs.

One of the sites previously identified with Bollée, la Filature de soie ‘Maison Rouge’, Saint-Jean-de-Gard, (30) Languedoc-Roussillon, is now known to have accommodated a locally-made single-rotor wind engine surmounting what may once have been the base of a tower mill.

Domaine de Tournelay, Nueil-sur-Argent, 79 Deux-Sèvres (Poitou-Charente), still has a tall single-rotor American-type wind engine. Consequently, this leaves only:

La Sauvetat, 32 Gers (Midi-Pyrénées). This is still believed to have been a Bollée or Lebert site.

Château de Creuse, 80 Somme (Picardie)

Fonderie de Farincourt, 52 Haute-Marne (Champagne)

Château de la Ferrière, Vaux-sur-Aure, 14 Calvados (Basse-Normandie)

Les Giraults, Montbouy, 45 Loiret. All that remains of this installation is the masonry tower that once supported a water tank and a wind engine. It is possible that this was an Éolienne Bollée erected by Lebert in the early 1900s, but details are lacking. Rival wind engines were also sometimes erected in tower/tank/pylon form—in Loudéac, for example—and a tower is not sufficient evidence in itself to prove Bollée connections.

Maison le Haura, Illats, 33 Gironde (Aquitaine)

Ferme Haut-Roussillac, Visan, 84 Vaucluse (Provence-Côte-d’Azur)

Maison la Madeleine, Fréjus, 83 Var (Provence-Côte-d’Azur)
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