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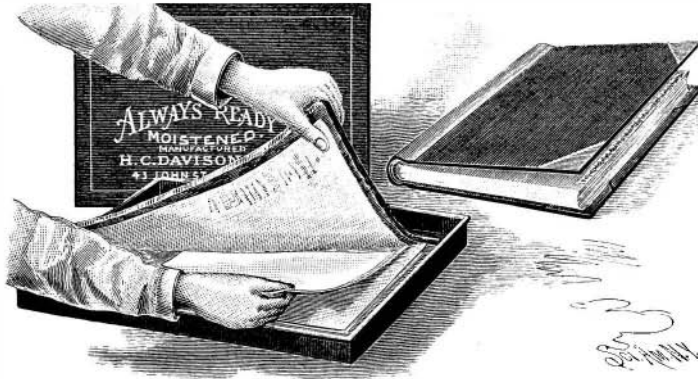
THE CASTLE OF BONNETABLE.

In Sarthe, at some distance from Mamers, and upon the railway that connects the latter with Saint Calais, stands, in the small city of Bonnetable, the castle built in 1742 by the architect Mathurin de Landelles upon the site of a former castle erected in the twelfth century by the lords of Montfort l'Amaury. An edifice often loses all unity and all charm in the successive alterations of which it is the object. It is with it, as it is with those coins which, having been passed from hand to hand for several generations, become smooth to the touch; the relief has disappeared.

Bonnetable has fortunately been preserved from so lamentable a fate. From the d'Harcourt family, which, in the thirteenth century, entered into possession of the fief, and one of the members of which, Jean d'Harcourt, had undertaken the construction of it, it passed into the hands of the Bourbon family and then into those of the de Luynes family. In 1788 it came into the possession of Duke Mathieu de Montmorency. At present it belongs to Duke de la Rochefoucauld-Doudeauville, who, in recent years, has had it restored by two Parisian architects, Messrs. Henri and Louis Parent.

The first castle, the one at least that Mathurin de Landelles constructed, includes two facades of analogous dimensions. The principal facade, flanked at its extremities by huge cylindrical towers, crowned by a projecting *chemin de ronde* which is prolonged

upon the entire facade, and covered with a conical slate roof, has the aspect of the entrance of a fortified castle. It is pierced in its center by a great ogival dome contrived in the base of a square donjon of quite feeble height, above which rises a pyramidal roof, surmounted by a light woodwork belfry. To the right and left of the entrance, protected by a drawbridge and closed by a porteallis, there are two towers smaller than the corner ones, and also cylindrical and covered by the same pepper-box-like roof. The rest of the facade is composed of a high ground floor, lighted by large, square bay windowed windows, the upper part of which is ornamented with the traditional curved lines. Above the ground floor is the first story, the windows



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of which, starting from the base of the *chemin de ronde*, and surmounted by high gable ends, rise to the ridge of the roof.

These windows, identical as to form with the windows of the ground floor, are the only ornamented part of the edifice. Their ornamentation, entirely Gothic, is, moreover, of the simplest nature. It is, nevertheless, in most exquisite taste. Their triangular tympan has a grand appearance under their framing of crocketed gables, surmounted by a flower at the point and bordered with symbolical animals at the base.

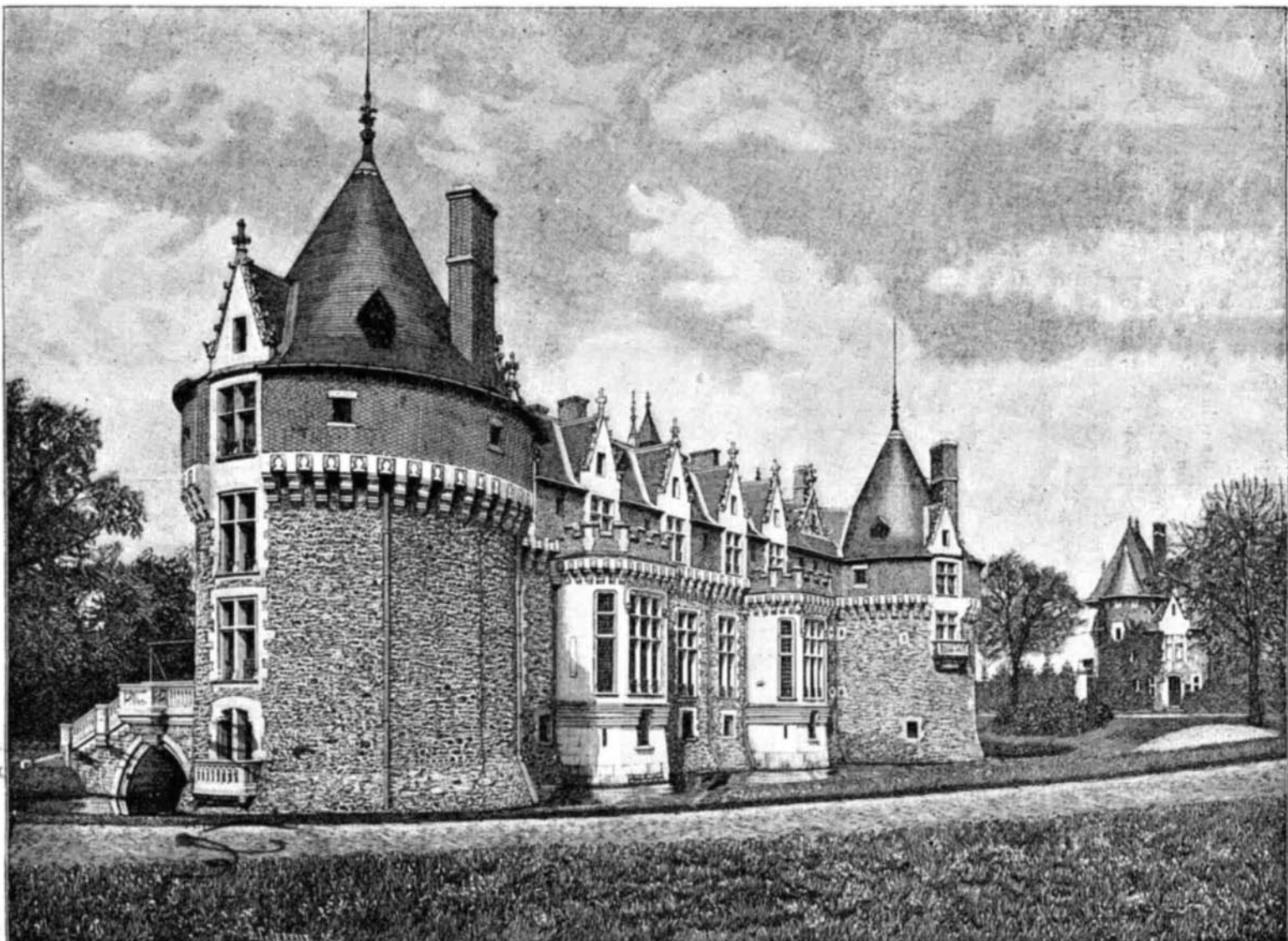
The decoration is the same for the lateral facade, which, like the principal one, is flanked by a huge corner tower, and, like it, bathed in a wide basin. But while the principal facade has, without any modification, preserved its severe aspect of former times, the lateral facade has, during the course of the last work of restoration, undergone a few modifications designed to render it more habitable. The windows of the corner towers have been provided at the base with elegant little balconies, supported by sculptured brackets and provided with openwork balustrades. In the space comprised between the towers the rigidity of the straight line is broken by two bay windows with six sides—a sort of projecting turrets containing large win-

dows, but which do not exceed the height of the ground floor, and the upper part of which forms an embattled terrace, upon which, in guise of balcony, open the windows of the first story. This is the facade that is represented in our engraving.

So much for the primitive part. As the castle in this form was not sufficient for a large family and for a *personnel* still more numerous, some enlargements became necessary. It became a question of constructing a new wing in complete harmony with the old edifice, without changing anything in the primordial plan. The architects have acquitted themselves of this task with rare skill. At the other extremity of the principal facade they have constructed a new main building, parallel with the ancient wing, but of more limited dimensions. This building, which has the form of a long quadrilateral, and which rises from the foundations of the destroyed wings of the castle constructed by the lords of Montfort l'Amaury, presents the aspect of a donjon, which is connected wonderfully well with the rest of the edifice. At the point of connection of the corner tower and the new donjon the architects have constructed a chapel, whose apsis projects over the basin.

Such is the castle in its present state. But the description would be forcedly incomplete did we not speak of the inclosing wall, which extends in front of the principal facade of the castle, upon the street (for the property is situated in mid-city), and the construction of which, very ingeniously combined, does the greatest honor to the Messrs. Parent. It is an embattled wall in which, opposite the postern of the castle, opens a lattice-work gate flanked by high masonry pillars. Let us add that although the castle has preserved none of its ancient furniture, the internal arrangement has not been sensibly modified. One feels that the present arrangements have been made by the Duke of La Rochefoucauld and his architects with a religious respect for the past. They cannot be too highly felicitated.—*Magasin Pittoresque*.

In a paper on the Laval steam turbine, read before the French Society for the Encouragement of National Industries, it was stated that, though invented only in 1891, some 200 of the motors are now at work, ranging in size from 5 to 100 horse power. The speed of rotation ranges from 15,000 to 30,000 per minute, the steam issuing from the guides at the full speed due to its pressure. Owing to this it is not necessary that the wheel should fit closely into the guide chamber, as there is no tendency to leakage, and, as a matter of fact, a clearance of about $\frac{1}{8}$ inch is allowed between the two. There being this clearance, the wheel cannot jam as it might otherwise do mounted as it is on a very flexible shaft.



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