

The Holly Gravity Return System.

In a steam engine plant, this system is designed to return the water of condensation and entrainment without employing a pump or trap, by means of a simple open circuit, returning the water from below the boiler as if the boiler was below the surface. A single system receives and delivers the condensation from all the separators, drips, cylinder jackets, etc., effecting a saving of coal by returning the water to the boiler at very nearly boiler temperature. The system does not involve any mechanical movement and requires no attention after it is once put in operation. It has been placed in some of the best

and water supply complete. Roof is shingled, but slate would be better at a slight additional cost.

Size, 48 by 67 over all, except steps. Height of first story, ten feet; second story, ten feet; cellar, seven feet.

JEANTAUD'S ELECTRIC CARRIAGE.

In the interesting competition of automobile carriages organized in the month of July, 1894, by the *Petit Journal*, every one remarked with great surprise and much regret the absence of electric carriages. Only one was entered, and that was held in the custom house by various formalities. We have already de-

carriage there is suspended an electric motor that transmits motion to the hind wheels. A commutator is placed in front. Beneath the driver's foot there is a pedal that controls a circuit breaker and the brake. The weight of the vehicle and transmissions is 1,078 pounds, and that of the accumulators 925, inclusive of 615 for the plates and 310 for the liquid and the boxes. The motor weighs 240 pounds. Admitting an average weight of 330 pounds for two passengers, we reach a total weight of 2,573 pounds.

The source of electric energy consists of a battery of accumulators of the Fulmen type, of 21 elements distributed through 7 boxes of 3 elements each. Each of

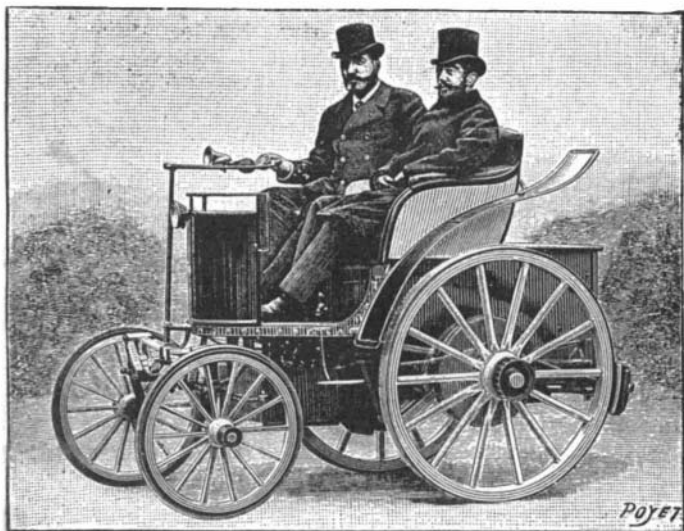


Fig. 1.—JEANTAUD'S ELECTRIC CARRIAGE.

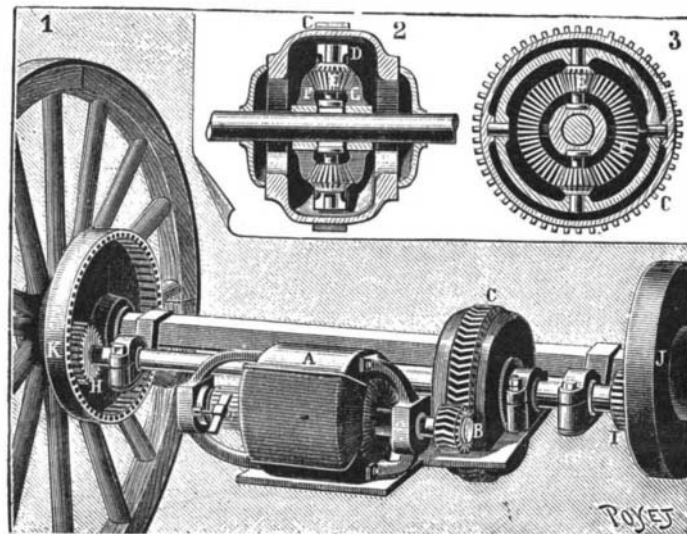


Fig. 2.—DETAILS OF THE MECHANISM.

equipped power stations in the country, and is now being put in at the power station of the Metropolitan Traction Company, of New York City.

AN ATTRACTIVE HOUSE.*

The very attractive house represented herewith in perspective is estimated to cost \$5,500. The cost of building materials and labor varies of course in different localities, but this is the estimate stated in *American Homes*, published at Knoxville, Tenn., for that section of the country.

The first story is of brick and the second story of shingles. Gables timbered and plastered. The staircase in the front hall is so arranged as to make the hall a nice, comfortable sitting room. On the stair landing is a handsome art glass window, producing a beautiful effect, both from inside and outside. Four pairs of sliding doors throw all the main rooms and hall practically into one room. The second floor has four large chambers, but the number may be increased by reducing their size.

The interior is finished on first floor in hard woods for main rooms, and whitewood stained or painted for second floor. Cellar under entire house. Plumbing

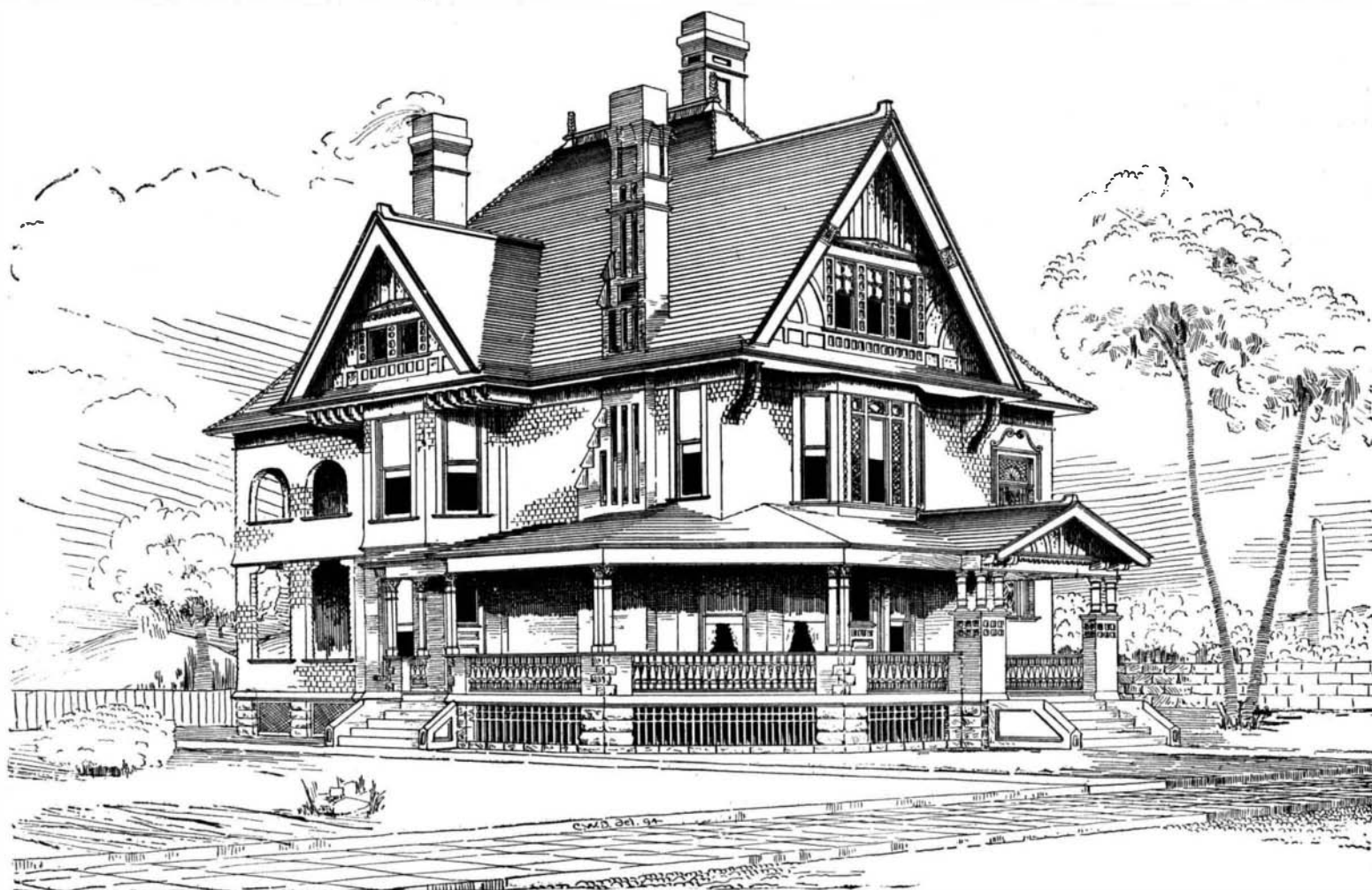
scribed some models of such carriages devised by various amateurs, but we must recognize the fact that up to the present the electric carriage has left much to be desired in its operation and has not given very satisfactory results. Must we blame the source of electric energy and the complex transmissions from the motor to the wheels for this? The blame might be equally ascribed to all these parts.

Mr. Jeantaud, a carriage maker of Paris, has just made a long stride toward the electric carriage. He has been studying this question, he tells us, for about fifteen years. He has had the wisdom to mature it without stopping at the results of an incomplete invention, and to ever seek a really practical solution and one capable of industrial application. He has finally succeeded in constructing a carriage which, after a trial by Mr. Michel Levy, engineer of mines, has been authorized to run freely around Paris.

Fig. 1 gives a general view of the carriage, which is a four-wheeled phaeton with a seat for two and with accumulators. There is a box placed in the rear for the reception of the latter. In front is the steering axle, which is the same as the one now employed in all automobile carriages, which Mr. Jeantaud was the first to apply, and which is provided with a long rod within reach of the driver. Under the

these accumulators contains 29 pounds of plates and is capable of furnishing, in normal operation, a capacity of 300 amperes-hour at a discharge of 30 amperes, of 240 amperes-hour at 40 amperes, and of 210 amperes-hour at 70 amperes. It will be remarked that it is a question here of discharges reaching as high as 3 amperes per pound of plates. In some particular cases, and certainly exaggerated ones, Mr. Jeantaud has been able to obtain discharges varying from 80 to 180 amperes, but for an hour and a half only. The capacity was 11 amperes-hour per pound of plate in the first case cited above and 7.5 in the last. The accumulators are mounted in tension, and keep this coupling constantly. From these figures, it may be remarked that the new accumulators are distinguished by a great capacity and by the high discharge that they are capable of furnishing, in resisting jarrings and shocks. These properties they owe to their very structure. The plates, which we have been able to examine at the works of the company, are formed of an internal mounting with honeycombs that are filled with active material, and the whole is inclosed between two celluloid plates containing apertures of small diameter. These celluloid coverings are in turn united and cemented at the top and bottom. A series of similar plates is grouped between them and mounted

* Engraving from *American Homes*, published at Knoxville, Tenn.



PERSPECTIVE VIEW OF AN ATTRACTIVE HOUSE.