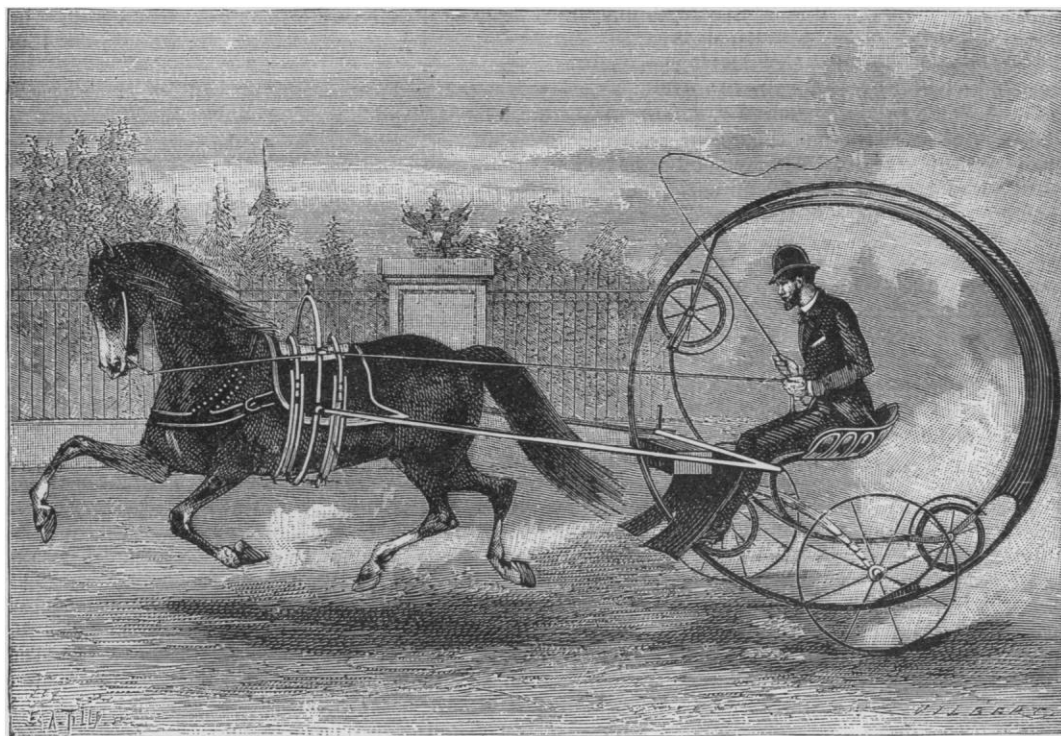


same date, at Fallstown, Ind. On the 30th a wide-spread shock was felt in California.

### L'HIRONDELLE.<sup>1</sup>

THIS name we find given to a carriage which is the result of one of the recent attempts to gain for the ordinary road-vehicle the ease of traction which a rail gives. It might be better to say that the actual result is the use of a

screen is furnished behind, to give protection from the mud and dust, which, carried up by the outer ring, would be dropped on the hapless occupant. To give the whole stability, there are two outriding wheels connected with the main part by springs, flexible enough to allow of the main weight being borne by the central wheel, and yet sufficiently stiff to prevent any overturning. The most of the parts are made of wrought iron or steel. It has been found that the carriage is not liable to



L'HIRONDELLE.

much larger wheel than any that can be used in the ordinary way, and so the advantage which a large wheel gives in passing over obstacles on a rough road. The form shown in the cut is said to have been used in Poland and Russia with considerable success, and carriages of this type to have made their appearance in Paris. The driver's seat is connected rigidly with the shafts and with the three small grooved wheels which are made to fit the inner surface of the large steel ring, or wheel proper, which rolls on the ground. A

accident, and, with ordinary care, may be kept in running-order.

### THE GREAT COMET OF 1882.<sup>1</sup>

THE accompanying sketches are intended to give an idea of the appearance of the nucleus of the great 1882 comet, in the 26-inch Washington equatorial, on the evenings of Feb. 1, Feb. 23, and Feb. 27, 1883. A magnifying

<sup>1</sup> This article, and the cut accompanying it, are taken from *La Nature* of April 14.

<sup>1</sup> Communicated by permission of Vice-Admiral Rowan, superintendent U. S. naval observatory.