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A SINGULAR COLLISION.

The engraving on this page, selected from the pages of the *Railroad Gazette*, was made from a photograph taken on the spot, and is therefore a correct representation of the scene. It has been stated that the managers of the road on which the accident occurred paid a large sum of money for the negative, with a view to prevent the circulation of copies and publication of the picture; but one copy at least escaped their vigilance, and the result is before our readers. Our contemporary, like ourselves, is unaware of the locality of the accident, all particulars having been carefully kept from the public; but the C 3443 on the stock car may be a clue as to the rolling stock composing one of the trains, although the interchange of railway cars is so frequent as to make it difficult to determine on which line such an accident actually occurred. The trains were certainly not passenger trains, as both engines are freight locomotives; and if happily no one was killed or injured, the railroad authorities might be able to conceal from the public the singular catastrophe.

Of the violence of the collision, there can be no doubt; and it doubtless occurred on a straight piece of line, or one or both of the engines would have been thrown from the track laterally. The interlocking of the driving wheels, the rupture of the side bars, the complete and clean division of one cylinder longitudinally (leaving one half attached to the cylinder head in which the piston rod is at rest), together with the upheaval of probably 60 tons dead weight, show the tremendous force with which the leviathans must have met, and the speed at which they must have been running, to

cause such utter destruction when they were suddenly brought to rest. Perhaps some of our readers will give further details of the occurrence, and tell us on what road it happened.

THE GALLAHUE ROTARY ENGINE.

We have recently had occasion to examine the operation of a new rotary engine devised by Mr. A. C. Gallahue, applied to the propulsion of a launch some thirty feet in length. The construction of the machine, briefly described, includes two hollow cylinders whose surfaces run in contact with each other, and the shafts of which are connected by exterior gear wheels. In the peripheries of these cylinders are pistons (two in each cylinder) which are set out against the side of the shell by interior bolts and nuts. To these last the steam has no access. In each cylinder, at the extremities of the diameter, perpendicular to that joining the pistons, are made transverse grooves, so that in passing the point of tangency the piston of cylinder No. 1 enters the groove in cylinder No. 2, and *vice versa*. It will be observed that there are no sliding abutments, and that the points where wear may be expected are at the edges of the pistons and at the ends of the cylinder. In the first instance, said edges are hardened, and the wear is taken up by leaf springs, inside the cylinders, provided with set screws. At one end the cylinders abut directly against the head. Between their other ends and the opposite head are placed two disks, between which is fibrous packing. Set screws, passing through the head, act on the outer disk, so

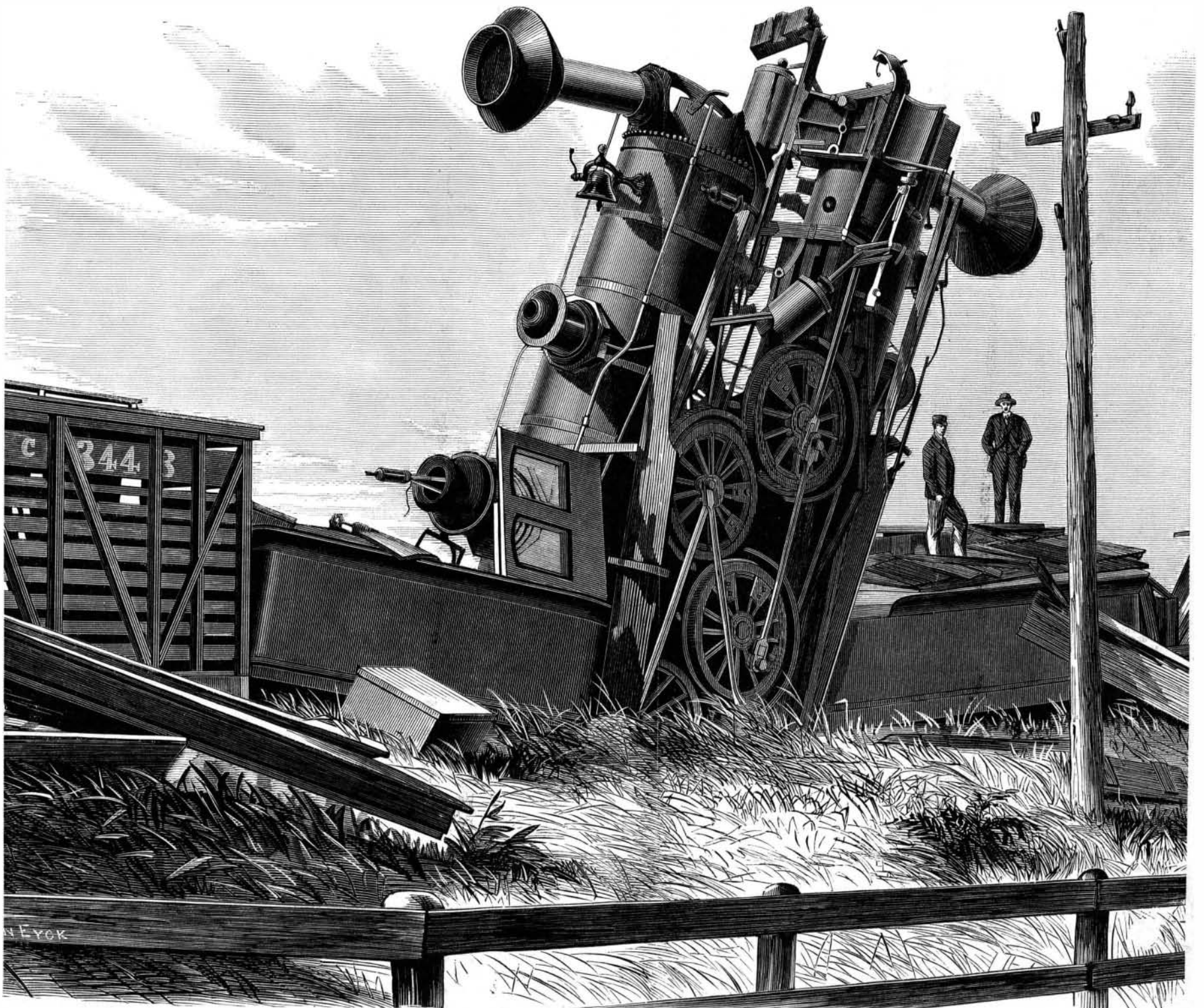
that, by setting these up as becomes necessary, a tight fit ensues.

Making 180 revolutions at 80 lbs. of steam, the inventor rates the engine we saw—which occupies a floor space of but 18 inches square, and has a piston area of 15 square inches—at 12 horse power. We can state that the machinery worked smoothly and without jar or pound, and that, whether standing still or working, there was no evidence of steam being wasted by blowing through. The exhaust was clearly and sharply apparent, and the manipulation of the engine, whether reversing, going ahead, or holding, was effected with facility.

The inventor informs us that in smooth water a speed of over twelve miles an hour has been maintained. Under proper conditions, we think that the engine would be found well suited for boat propulsion, as well as wherever light power is required. For further particulars the reader may address Messrs. A. C. Gallahue & Co., Morrisania Station, New York city. For prices, see advertisement on another column of this issue.

Selenium Experiments.

R. J. Moss has discovered that, when a bar of selenium is placed in the exhaust tube of a Sprengel pump and the air exhausted, the selenium becomes electrically conductive in the course of ninety hours. The selenium is then found to be covered with a delicate film of mercury, from the globule contained in the pump; and the conductivity is ascribed to this film.



A REMARKABLE RAILWAY ACCIDENT.