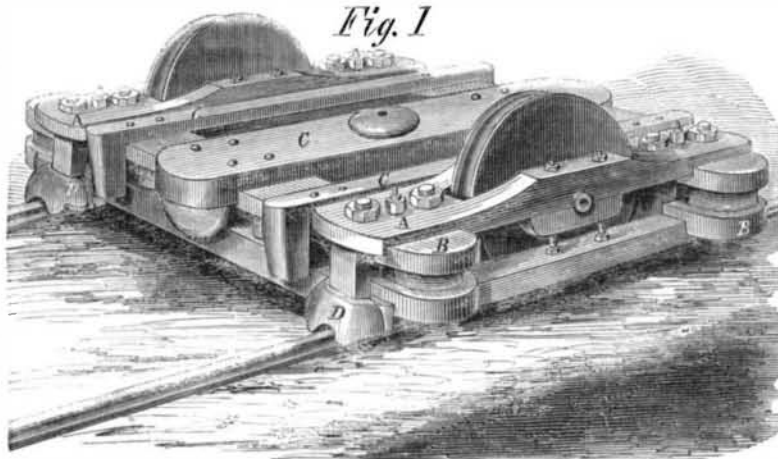


Improved Suspension Car Truck.

Cases have been known where a train of cars has been lifted bodily from the track by a tornado, and accidents have occurred which were attributed to the top-heaviness of cars, owing to their elevation from the track and the narrowness of their bases in the spread of the wheels. This improved truck is intended to bring the weight of the car nearer the track than is possible in the ordinary truck, to facilitate the ingress and egress of passengers, the loading and unloading of freight, to admit of the use of wheels larger than those commonly employed, and to allow independent action of the wheels on either side of the car.

Fig. 1 is a perspective view of a single truck. It will be seen that the body of the truck is suspended beneath the center of the axle, thus bringing the car bottom so much nearer the rails. The wheels run in brackets, A, which are connected by double cross-ties, B. Between the upper and lower portions of the cross-ties, springs of rubber, or other suitable material, are interposed, and the whole frame is braced and made solid by longitudinal ties, C. The rubbers, D, are intended to run near the rail for the purpose of clearing obstructions from the track, and securing the cars on the track if by

**STRAIT'S SUSPENSION CAR TRUCK.**

With these trucks the cars can fall but a short distance in case of collision, or running off the track. Larger car wheels may be used with greater speed and safety than with the ordinary truck, as the weight is suspended so near the rails. The truck may be attached to the car in the usual way or so that the wheels may work in wheel houses inside the car or in recesses outside, so that the car may be made wider, or consist of two stories. It is claimed that the wheels, being on independent axles, are subjected to much less wear and tear in rounding

curves than where both of a pair of wheels are secured to the same axle. Patented May 22, 1866, by H. Strait, 66 East Pearl street, Cincinnati, Ohio, whom address for further information.

KEENER'S PATENT HAT RACK.

Gentlemen are often much provoked by having their fine and costly silk and fur hats tumbled about the floor on account of the difficulty of balancing and supporting the entire length of crown upon the short hook or pin of ordinary hat racks. This occurs at parties or other gatherings, where many hats are



crowded together, or in hotels, private houses, offices, and elsewhere, and, as a result of such rough usage, many a valuable hat does not live out half its days.

The annexed engraving shows Keener's patent elliptic hat rack, which is designed to obviate this difficulty. In the place of the old form of hat hook, he supplies an elliptic ring or loop of metal or other material; this is suspended from an eye or hook. In using it, the ring is lifted to a horizontal position with one hand by means of a slight finger piece at its lower end, while the crown of the hat is inserted in the ring from below. The ring is then dropped to its pendent position, holding the rim of the hat against the wall or rack frame, as shown in the engraving.

Thus secured, it is impossible for the hat to fall of itself; it matters not how high the crown may be, it is safe. This form of rack may also be used for ladies' or misses' hats and bonnets, boys' caps, etc. If it is desirable to use it in connection with the old hooks for coats, the rings may be so placed as to

bring the hooks in their center; by this means the coat may be hung under the hat. This patent was obtained through the Scientific American Patent Agency. As the patentee is not prepared to manufacture these racks, he will sell the rights. [See advertisement in another column.]

HARLOW'S ASH SIFTER.

The old-fashioned wood fire, although having its inconveniences, is free from the plague of ash sifting and its attendant annoyances of dirt and labor. We have yet to see the person fond of poking the fire, who is equally enamored of sifting coal ashes. Economy, however, demands that ashes should be sifted, and he who can provide the means of doing the work effectively, divorced from its annoyances, is entitled to the thanks of the housewife. This is the intention of the improvement herewith illustrated.

It is a box containing a cylinder, A, of wire gauze which is rotated by a crank. The cover has a small trap, B, which is opened to admit the introduction of the mixed coal and ashes, the cylinder being held by the pawl, C, so that the opening, D, is retained opposite the trap. A partition, extends across the drum from the center to the periphery, and a door, E, pivoted on the central shaft closes the aperture. This door is secured by a button, seen at F, held by a spring. The lug, G, fastened to the inside of the case, turns this button and opens the door, E, at each revolution, and it is closed again by its own weight after passing the center. This arrangement tends to throw the ashes from side to side until they are thoroughly sifted, while the position of the door, when open, prevents the escape of either ashes or coal from the cylinder. When properly sifted the

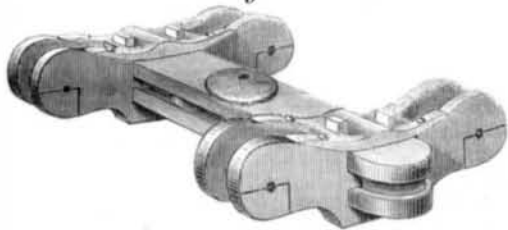


pawl, C, is lifted, the cylinder turned to the left, and the coal is dumped through the shute, H, into a hod. The contrivance is easily secured to the top of a barrel which receives the ashes and prevents them from escaping.

Patented through the Scientific American Patent Agency, April 24, 1866, by P. Harlow, Kingston, Ulster Co., N. Y., whom address for additional information.

REMARKABLE PASSAGE.—The English papers notice the fact that during the run from New York to Brest, the *Pereire* exceeded the *Ville de Paris's* run, the voyage being of extraordinary quickness, the distance from New York to Brest, which is 26 miles further from New York than Liverpool, and 225 miles further than Queenstown, being accomplished in eight days and 22 hours, giving an average speed of 14 knots an hour—a rate of steaming without parallel.

PAPER, as well as cotton fabrics, can be rendered partially fire-proof by immersion in a solution of alum.

Fig. 2

any means the wheels should be lifted from their places. To further secure this object, the wheels can be made with a light outer lip, as shown in the engraving. This is practicable in this truck, as the wheels move independently of one another on short axes.

Fig. 3

Fig. 2 shows a double truck intended for four wheels. Its plan of construction will be readily understood by the engraving without reference to its parts. Fig. 3 represents rubbers or guides to be attached to the double truck, projecting in front and in rear of the wheels. E is a fixed rubber at the rear of the wheel, and F an adjustable rubber, which can be raised or lowered at will by means of a bolt and spring.