

AUGUSTUS DAY.

Improvement in Railway Track Cleaners.

No. 125,547.

Patented April 9, 1872.

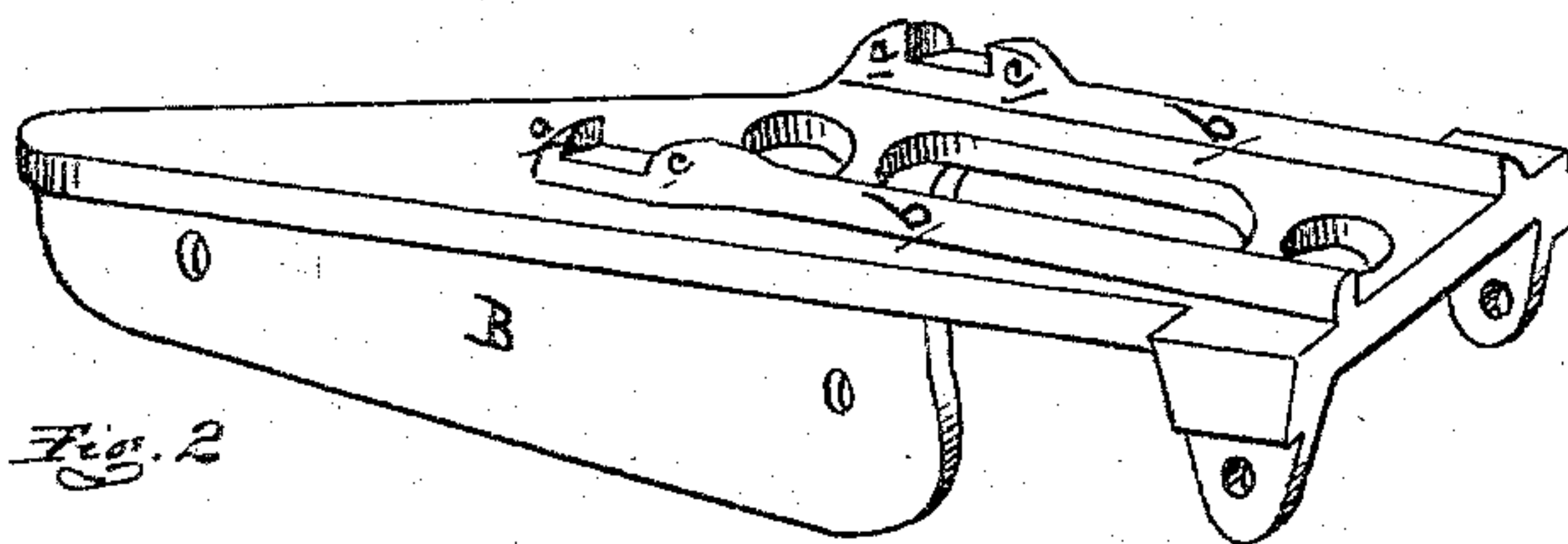
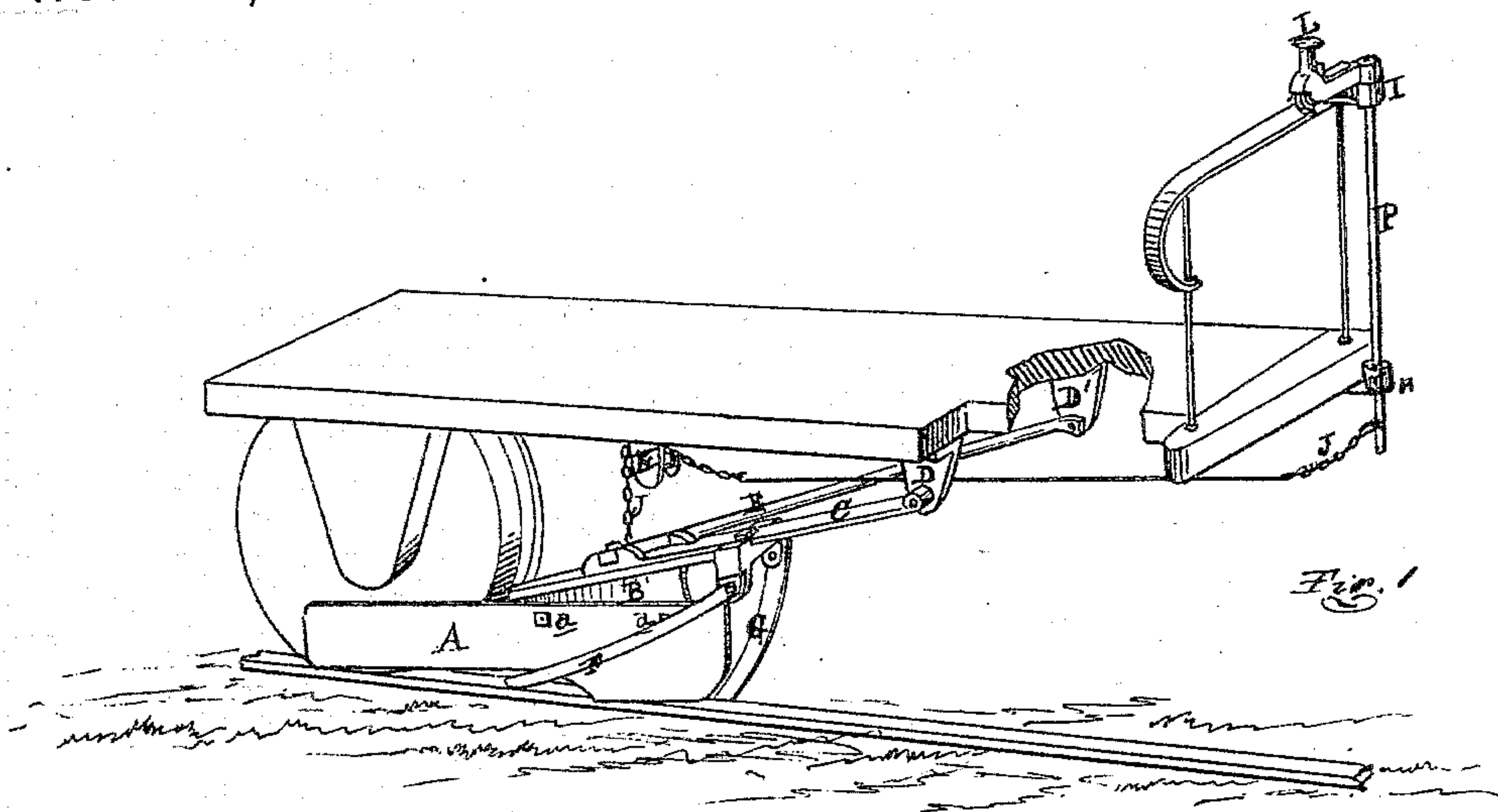


Fig. 2

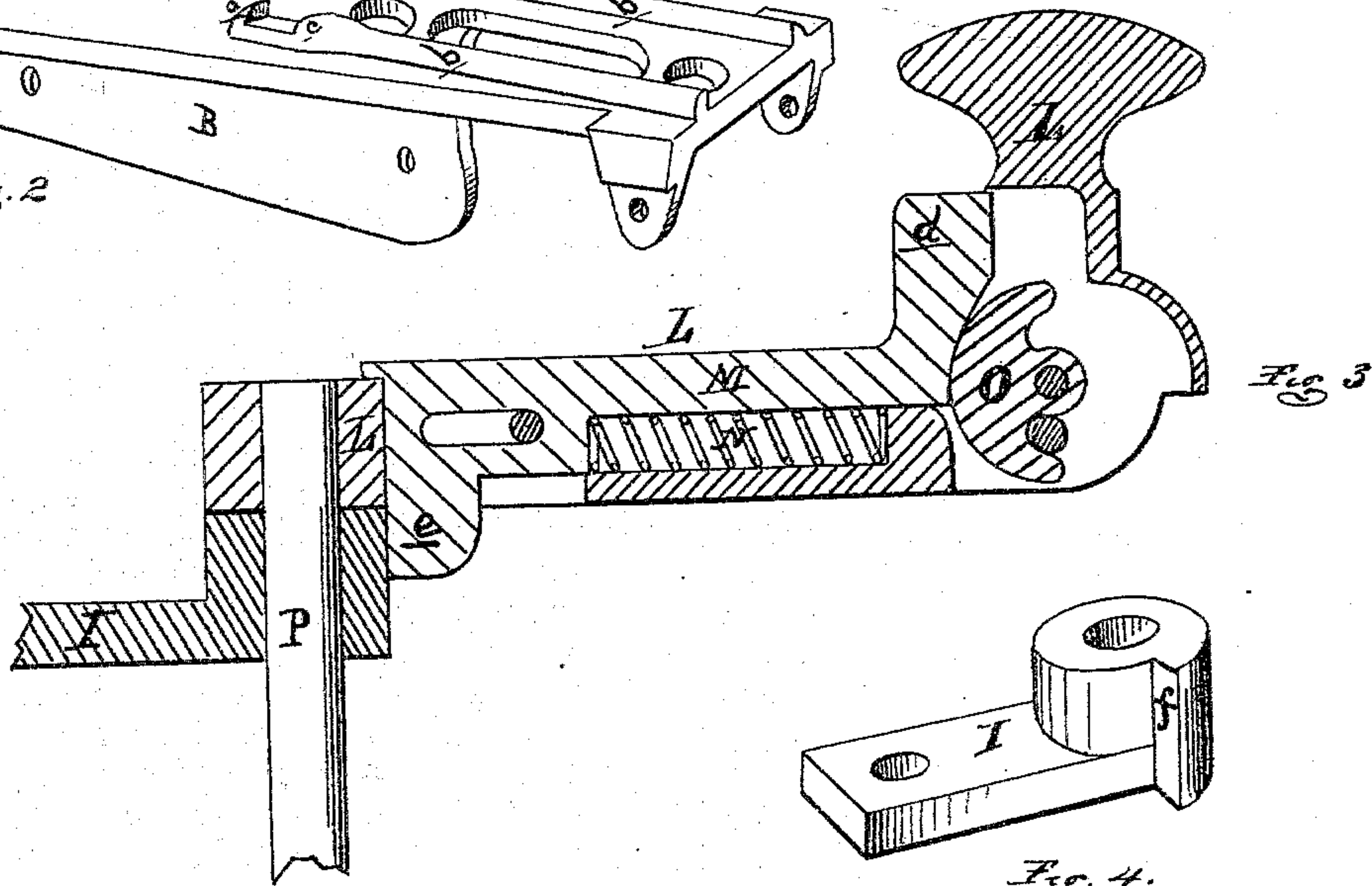


Fig. 3

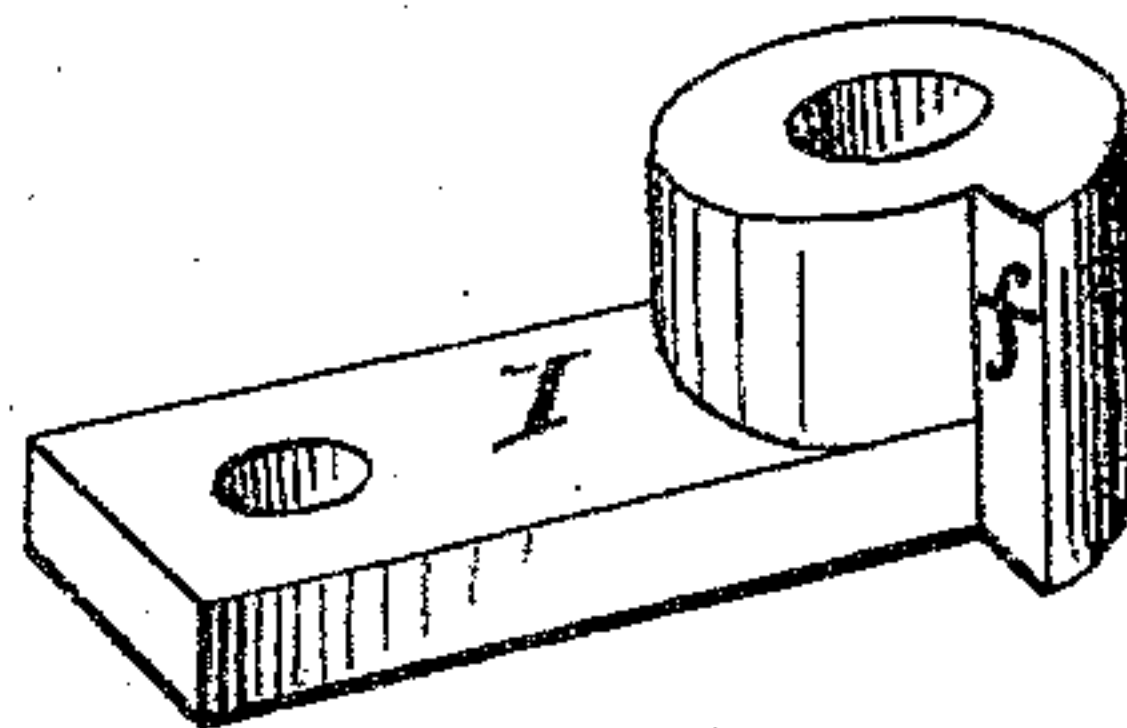


Fig. 4.

ATTEST :

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# UNITED STATES PATENT OFFICE.

AUGUSTUS DAY, OF DETROIT, MICHIGAN.

## IMPROVEMENT IN RAILWAY TRACK-CLEANERS.

Specification forming part of Letters Patent No. 125,547, dated April 9, 1872.

*To whom it may concern:*

Be it known that I, AUGUSTUS DAY, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Railway Track-Cleaners; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of the front part of a horse-car fitted with my improved track-cleaning device, showing the scraper lowered to the rail. Fig. 2 is an enlarged perspective view of the casting to which the scraper is secured. Fig. 3 is an enlarged vertical longitudinal section of the handle and the bracket of its shaft, and Fig. 4 is a perspective view of the said bracket.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of this invention relates to an improvement in the construction of railway track-cleaning devices and the means of operating them, being more especially designed to be attached to horse-cars for the purpose of removing snow, ice, mud, and other obstructions from the rails and immediately at the sides thereof; and it consists, first, in the peculiar construction and arrangement of a cast shank with relation to the scraper, which is secured thereto, and the draft-irons, which connect it to the under side of the car; second, in the pendent guards, which lift the scraper from the track on meeting with an obstruction on the outer side of the rail and deflect outwardly from the track; third, in a peculiar crank for operating the shaft, which raises and lowers the pair of scrapers at each end of the car, and in the arrangement of the various parts, as more fully hereinafter set forth.

In the drawing, A represents my scraper, being a plate of sheet metal of the form shown, slightly curved in cross-section. B is the shank, to which it is secured by the bolts *a a*. This shank is a casting in the form shown in Fig. 2. It is formed with a pair of longitudinal ribs, *b*, on top to receive the end of the draw-bar C, whose other end is pivoted to a hanger, D, pendent from the car; or it may be pivoted directly to the sill of the car. The shank is also fitted or cast with diagonal studs *c* on top

of said ribs *b* to receive the outer end of a diagonal brace, E, whose other end is pivoted to a hanger, D', parallel with the hanger D, but near the longitudinal center of the car. While the scraper and the parts to which it is attached are free to move in a vertical plane, this brace E effectually resists any lateral pressure to which the scraper may be subjected in moving obstructions from the rail, its own weight being sufficient to keep it down on the rail. The draw-bar and brace are securely bolted to the shank, and by the described arrangement of the ribs and studs perfect accuracy in the "set" of the scraper is secured, an essential feature of my invention. F is a guard-rod, secured to the front end of the shank on the outer edge, sweeping downward and backward nearly to the edge of the scraper, so that, on meeting with an inequality in the pavement outside the track, it will lift up the scraper and drop it after passing by. G is a scraper, pendent from the inner front end of the shank, terminating just inside of the rail in advance of the front end of the scraper, which lies athwart the rail. The lower end of this guard is curved slightly so as to clean the inner face of the rail and deflect the obstructing matter inwardly, as well as serving to lift the scraper over an obstruction which the scraper might not be able to remove. Although auxiliary to the scraper in the manner described, yet they are not essential to its operation as a scraper.

The means employed for lifting the scraper from the track, or rather the pair of them, as there is one at each side of the car, is a vertical shaft, P, journaled through brackets H I projecting, respectively, from the front sill of the platform and the guard-rail. A chain, J, secured to the lower end of the shaft, passes over a pulley, K, under the car, and, attached to the shank when wound about the shaft, raises the scrapers at each side of the car clear from the rails, being secured in the raised position by the means hereinafter described.

L is the crank, keyed to the top of the shaft to rotate it. The crank is cast with a longitudinal recess, with a slot in the inner end. In this recess a bar, M, is laid, having an upward-projecting thumb-piece, *d*, at the outer end and a downward-projecting latch, *e*, at the inner end, which protrudes through the slot in the crank, whose handle is recessed to receive the



thumb-piece *d*. A pin, passing through the crank and a slot in the bar, keeps the latter in place, while permitting it to move longitudinally. A coiled spring, *N*, placed in the bottom of the recess in the crank and abutting against a shoulder in the bar, presses the latter toward the eye of the crank. The upper bracket *I* has formed on one side a cam-notch, *f*, with which the latch of the bar *M* engages when swept around past it, to hold the scrapers up from the rails, a single turn of the shaft being sufficient to raise them as far as necessary. To drop them again the driver draws the thumb-piece toward the handle of the crank and releases the latter, when the weight of the scrapers causes them to drop.

To prevent the accidental dropping of the scrapers by passengers handling the crank, the lower outer corner of the latter is formed with a recess, in which is pivoted an anchor-shaped tumbler, *O*, which, when thrown over to engage with or rest upon a pin, *g*, across the recess, prevents the latch-bar from being drawn back, so that is necessary to first throw this tumbler around forward on its pivot before the latch can be released, being entirely inclosed within the crank. The existence and office of this tumbler would not likely be discovered by a casual observer.

Unless turned around at the completion of a trip, the car should be provided with a pair of scrapers and operating devices at each end.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The construction and arrangement of the shank *B*, as described, with relation to the scraper *A*, draw-bar *C*, and diagonal brace *E*, as and for the purpose set forth.

2. The combination, with the draw-bar *C* and scraper *A*, of the diagonal brace *E*, as and for the purpose set forth.

3. The guard *F*, as and for the purpose set forth.

4. The chain *J*, pulley *K*, and cranked shaft *P* for raising and lowering the scrapers, substantially as described.

5. The recessed and slotted crank *L*, bar *M*, thumb-piece *d*, latch *e*, and spring *N*, in combination with the cam-notch *f* of the bracket *I*, as and for the purpose set forth.

6. The construction and arrangement of the tumbler *O* with relation to the crank *L* and its latch-bar *M* for locking the latter, substantially as described.

AUGUSTUS DAY.

Witnesses:

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