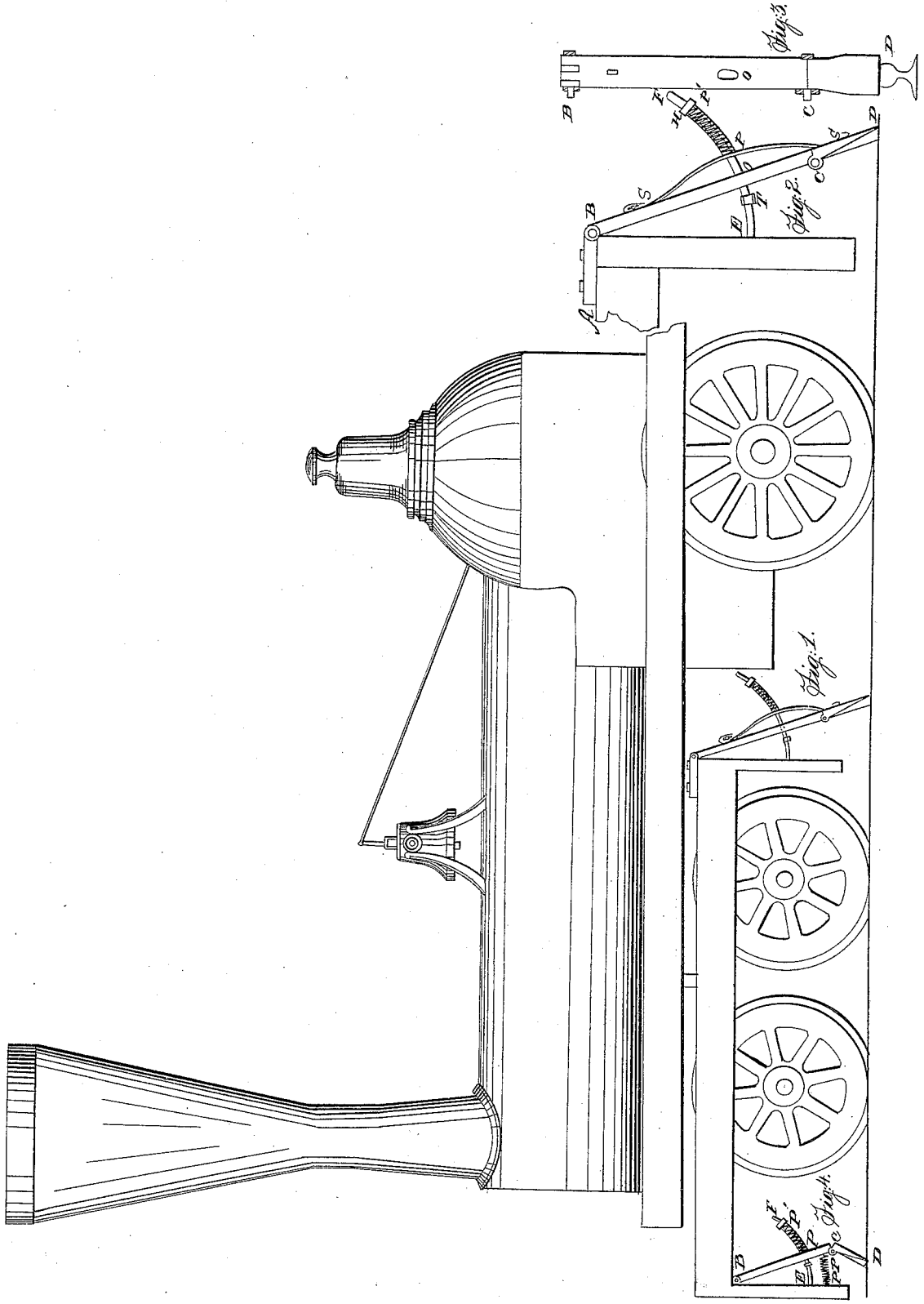
NAGLEE & RANEY.

Car-Track Clearer.

No. 2.406. Patented Dec. 30, 1841.



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UNITED STATES PATENT OFFICE.

HENRY M. NAGLEE AND THOS. RANEY, OF PHILADELPHIA, PENNSYLVANIA.

CONSTRUCTION OF RAILROAD-SCRAPERS FOR CLEANING THE TRACKS FROM SNOW, &c.

Specification of Letters Patent No. 2,406, dated December 30, 1841.

To all whom it may concern:

Be it known that we, HENRY M. NAGLEE and THOMAS RANEY, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Machine for Cleaning the Rails of Railways of Snow, Frost, Sleet, or Ice, which may be called "a Self-Acting Scraper;" and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view of a scraper and its fixtures, with spiral and semi-elliptic springs, attached to the rear of a truck frame of a locomotive engine and represents it when the engine is advancing, one scraper being applied to each rail. Fig. 2 is the same as the above but upon a larger scale. Fig. 3 is the front view of the iron bar (or scraper) detached from the other parts, and Fig. 4 is a side view with spiral springs only, it is attached to the front of the truck frame of a locomotive engine, and represents the scraper when the engine is backing.

The machine consists principally of an iron bar A, B, C, D; a curved rod E, F, and one, two or more springs S, S′, and P, P′, all of which are placed in the vertical plane through the middle of the rail. The bar A, B, C, D, may be of malleable or cast-iron or other suitable material. It is bolted to the truck frame, and is broken at B by a common hinge joint, at C by a folding joint 8 inches (more or less) from the lower end D, which is flattened where it rests upon the rail. The bolts that pass through the joints B and C are secured by keys (or burs) which may be taken out and the scraper removed when no longer required. At O there is an elongated hole through the bar which admits freely the rod E, F.

The iron rod E, F Fig. 2, is permanently fastened at E to the fender post, and is bent to a curve of a radius equal to the distance (B, E) from the hinge-joint B to its point of connection E with the fender post. It passes through the elongated hole O, in the iron bar, through a similar hole in the spring S, S′, and extends a foot (more or less) beyond them. The upper end F, cut into the form of a screw, admits a bur H to screw or unscrew upon it. T, Fig. 2, is a projection upon the rod, larger than the hole O, and limits the motion of the scraper in the direction O, E.

The springs may be of any form. We have represented two kinds: In Fig. 4, cylindrical spiral springs P, P′, made of iron or brass, and in Fig. 2 one of the same kind P, P′ pressing upon a semi-elliptic steel spring S, S′, which is the common elliptic spring, fastened at S in the usual manner. Fig. 2 is preferred.

The construction of the machine is simple, and consists of a common hinge joint, a folding joint which is the same as the joint in the carpenter's two foot rule, the elliptic spring of the usual form, and a spiral spring that may be procured ready made.

The operation of the machine may now be readily understood. The scraper or iron bar (A, B, C, D) is bolted to the truck frame, directely over the rail, and turns upon a hinge (B) which with the springs, allow it to yield to the unevenness of the rail, and the motion of the truck frame. The bar being longer than the vertical distance between the hinge (B) and the rail, it assumes an inclination of about 75° with the rail, and rests upon it. The iron rod (E, F) passes through the scraper, the springs (S, S′ and P, P′). The bur (H) is screwed down the rod (E, F) upon the upper end of the spiral spring (P P′) and the pressure thus produced is transmitted through the springs to the scraper, and through it to the rail, the amount of the pressure being regulated by screwing or unscrewing the bur (H). The object of the folding-joint (C) is that the scraper may remain stiff and press upon the rail when the engine is advancing (Fig. 2), and that the lower portion (C, D) may fold or double

under when the engine is backing (Fig. 4) otherwise the scraper would prevent the motion of the engine or be broken off.

Having thus fully described the nature of our invention, of "a self-acting scraper" for the purpose of cleaning the rails of railways of snow, frost, sleet, or ice, what we claim therein as constituting an invention and said HENRY M. NAGLEE and THOMAS RANEY wish to secure by Letters Patent, is—

The arrangement or combination of the iron bar, with joints and springs (the parts colored in the drawing) so that the machine will be self acting and operate in the manner set forth, the form of the springs and joints being of the ordinary known construction.

HENRY M. NAGLEE.
THOMAS RANEY.

Witnesses to Henry M. Naglee's signature:

JOHN NAGLEE, JR.,
JOHN EVANS.

Witnesses to Thos. Raney's signature:

JOSEPH M. NAGLEE,
B. H. RAUCE.