

W. H. WRIGHT.
Car-Axles.

No. 146,373.

Patented Jan. 13, 1874.

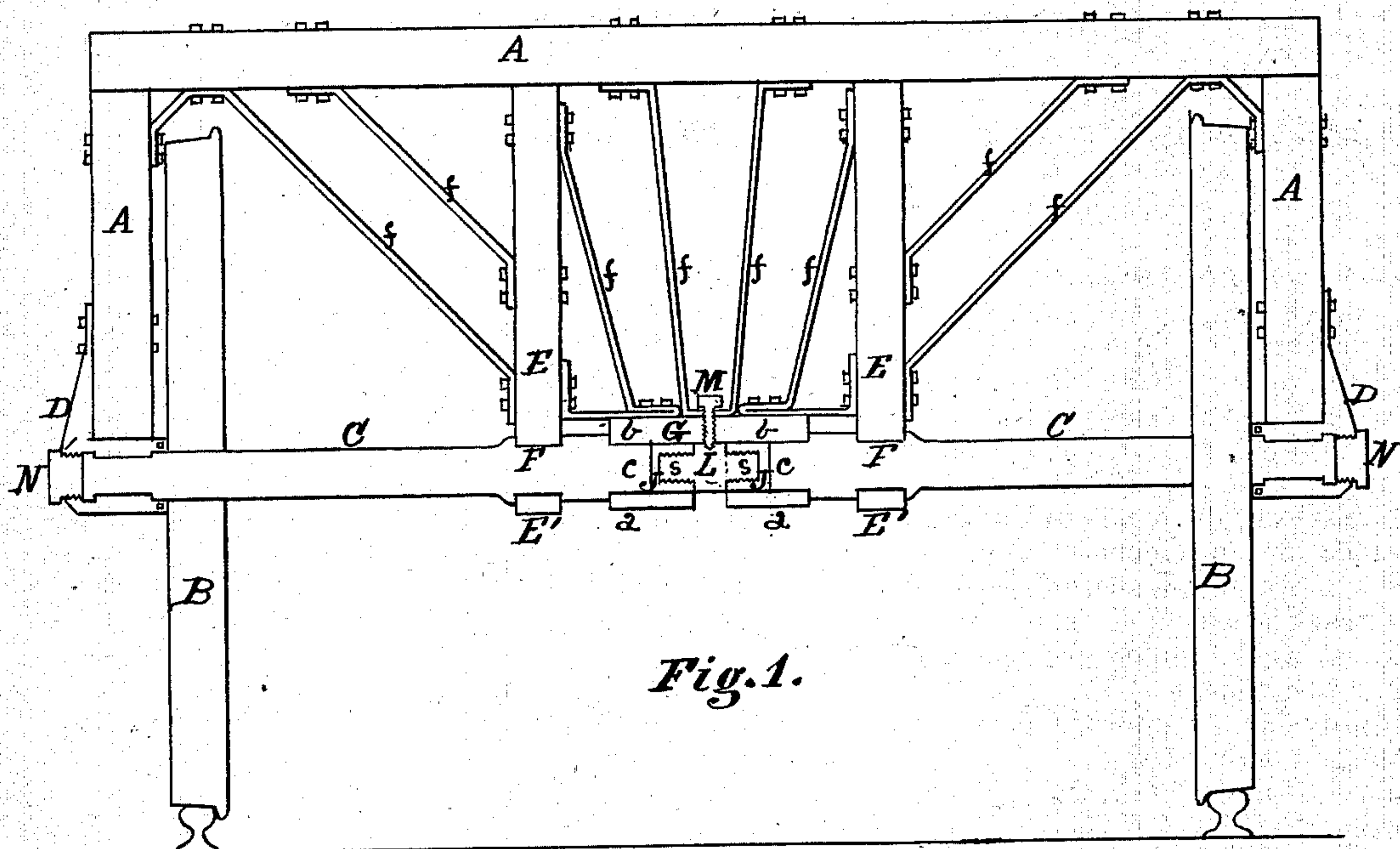


Fig. 1.

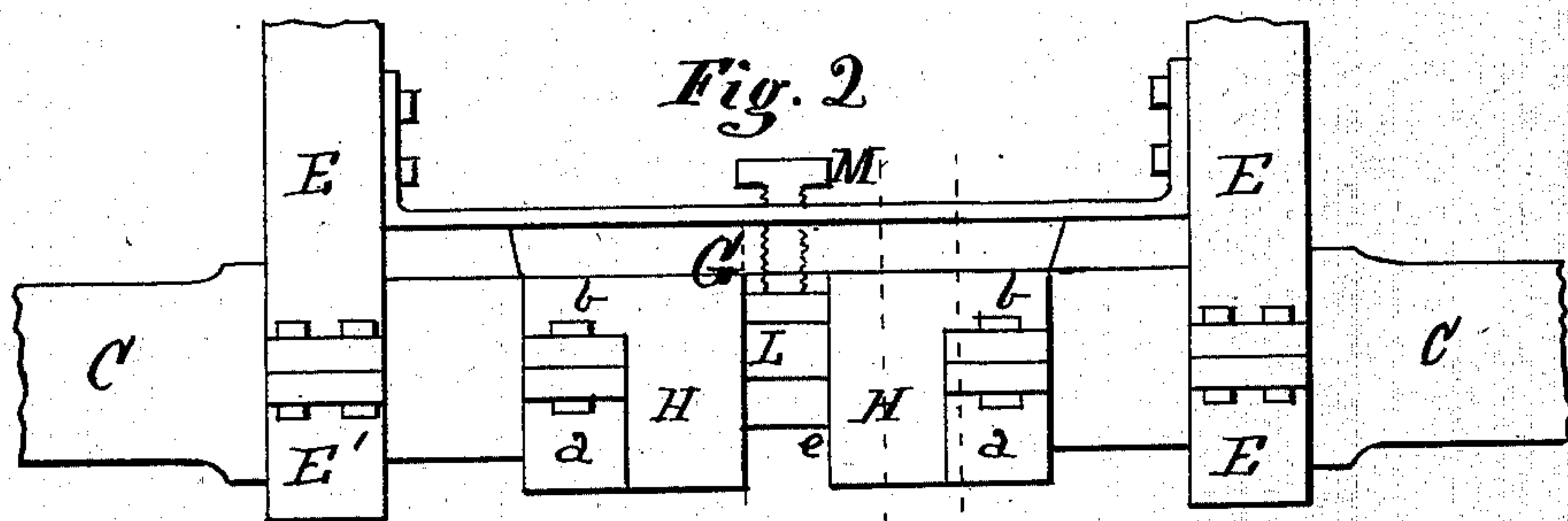


Fig. 2

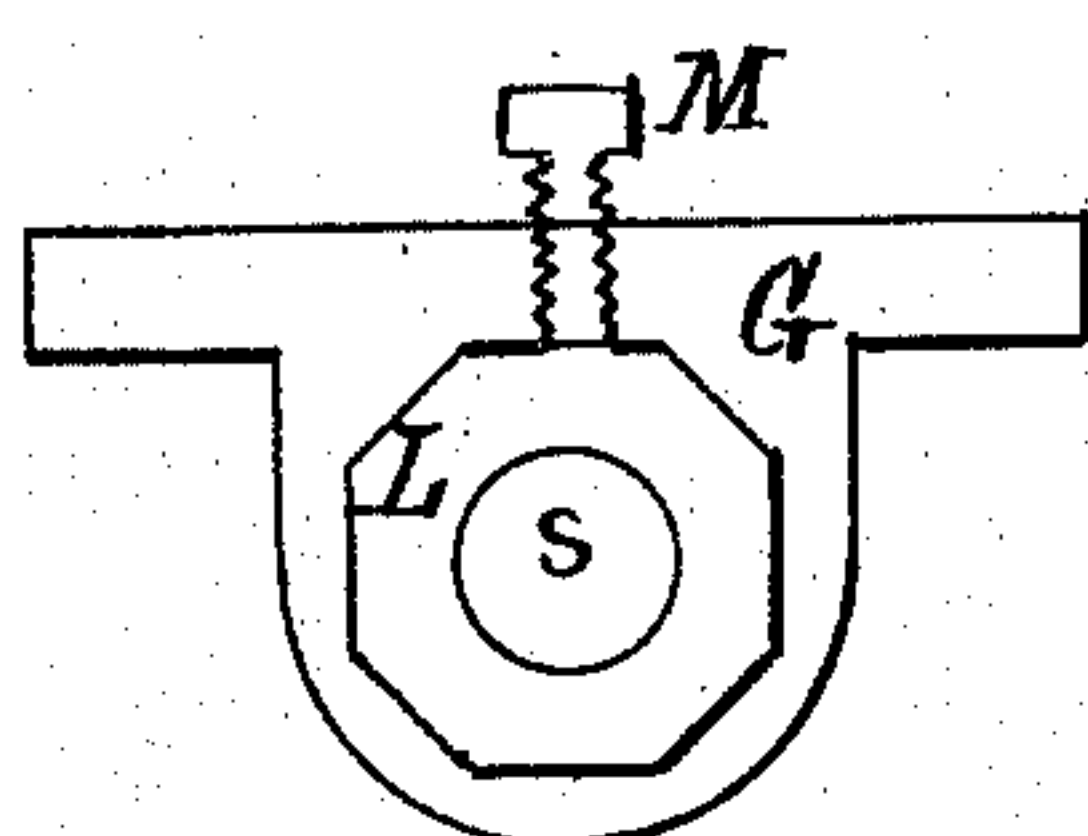


Fig. 3

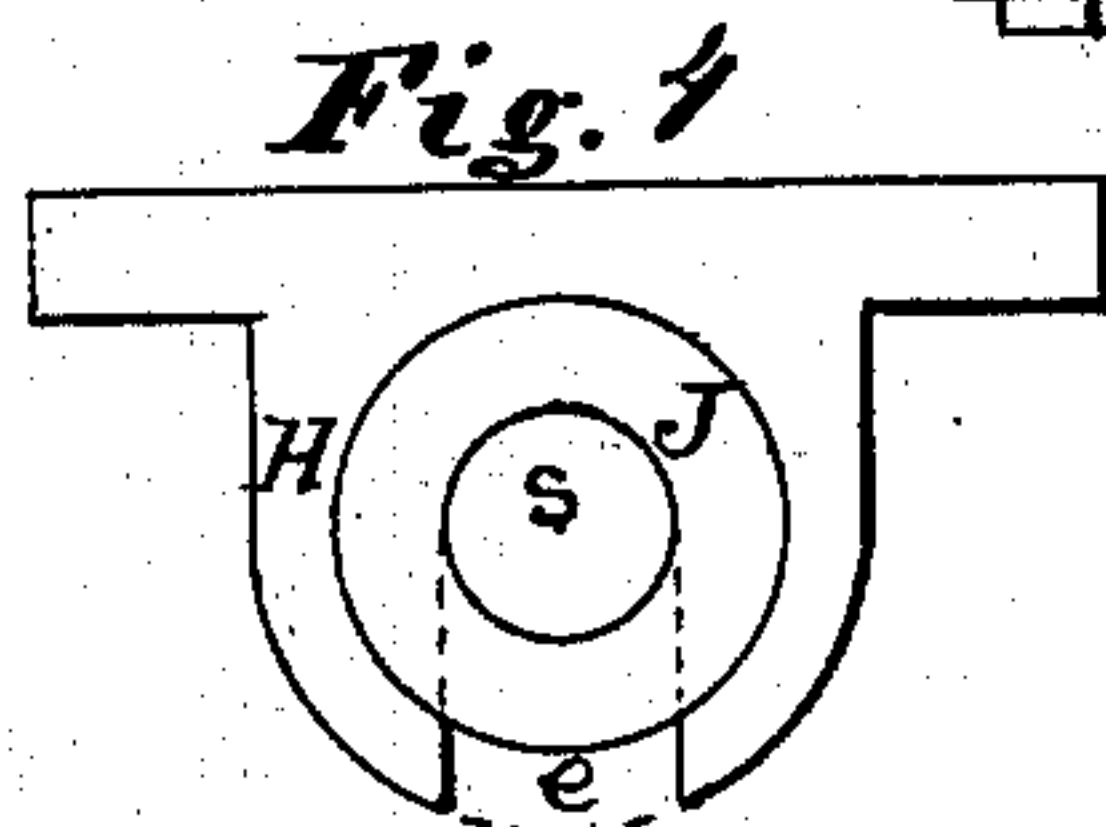


Fig. 4

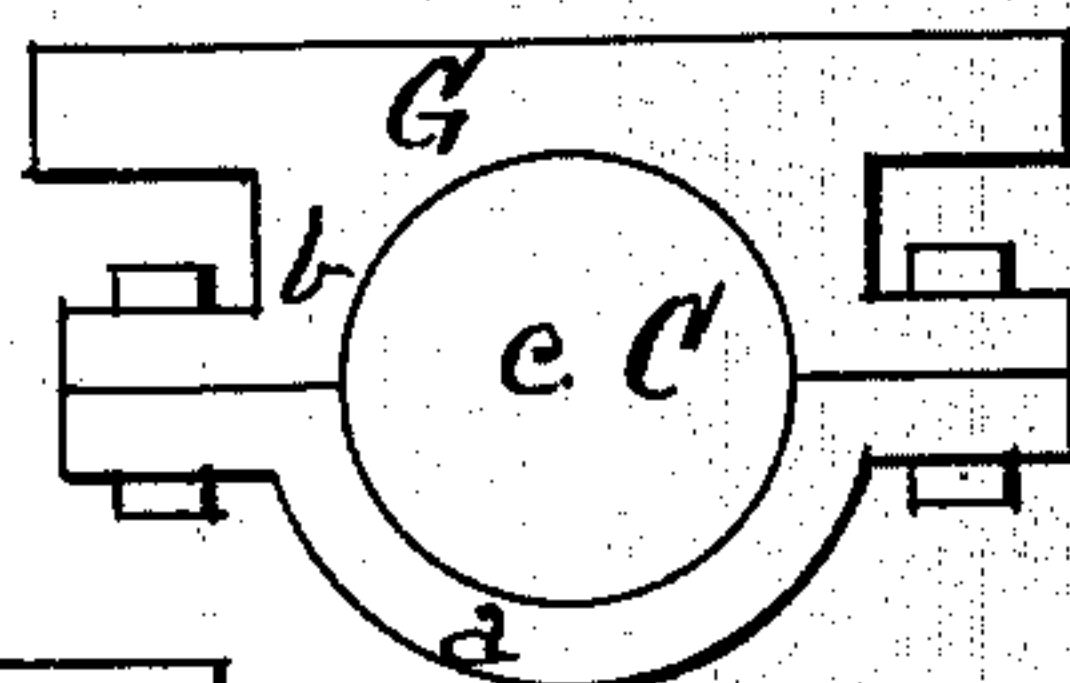


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN CAR-AXLES.

Specification forming part of Letters Patent No. **146,373**, dated January 13, 1874; application filed November 12, 1873.

To all whom it may concern:

Be it known that I, WILLIAM HAMILTON WRIGHT, of Durham, Greene county, State of New York, have invented certain new and useful Improvements in Axles for Railroad-Cars; and I do hereby declare that the following is a description thereof, reference being had to the accompanying drawings forming a part of this specification, in which—

Figure 1 represents a sectional elevation of a pair of truck-wheels and their axles, and a section of a truck, embodying the improvements in this invention. Fig. 2 is a side view of the improvements connected with the axle, on an enlarged scale. Fig. 3 is a cross-sectional view taken at line No. 1 in Fig. 2. Fig. 4 is a cross-sectional view taken at line No. 2 in Fig. 2. Fig. 5 is a cross-sectional view taken at line No. 3 in Fig. 2.

My invention relates to a sectional axle for railroad-cars; and consists, in one part, of the combination of a set-screw having a right and left hand screw-thread, end bearing-blocks, and sleeve with the sectional or half axles, in such a manner that the said set-screw will be capable of pressing the end bearing-blocks against the inner ends of the half-axles, as might be required, in consequence of any wear, to properly support the same. Another part consists in the combination of a sleeve and box bearings, capable of being tightened in a vertical direction, with the two half-axles and outer bearings. Another part relates to the combination of a set-screw with the sleeve and the right-and-left-hand set-screw, by which the said set-screw will be held from being turned by the action of the axle. Another part consists in the combination of set-screws with the usual outer jaws, holding the axle-boxes and the axle, and the central right-and-left-hand set-screw, in such a manner that the said set-screws will be capable of operating against the outer ends of the half-axles, to confine the limit of the throw of the central set-screw, so that the wheels may be securely preserved at the same distance apart.

To enable others skilled in the art to make and use my invention, I will proceed to describe it in reference to the drawings and the letters of reference marked thereon, the same letters indicating like parts.

In the drawings, A A A represent any suitable frame-work of the truck, constructed of iron or wood in whole or in part. B B are the wheels. C C are sectional axles firmly secured into the wheels, and having their outer bearings in the usual jaws and boxes D D, all of which are old and well known. In my invention I secure two inner bearings, E E, at a little distance from the inner or central ends of the axles, firmly to the frame-work of the truck, in any proper manner, and, by means of the lower half-bearings E' E', secure the axles at their journals F F, substantially as shown in Figs. 1 and 2. I also employ the connecting-sleeve G, the outer ends of which are provided with the half-boxes *a a*, Figs. 1, 2, and 5, capable of clamping with the body of the sleeve the ends *c c* of each axle, by operating with the upper half-boxes *b b* by means of the nutted bolts *d d*. The central portion of the said sleeve is provided with an opening, *e*, in the bearing-block sleeves H H, which are made solid with the sleeve, and forms a part of the same, as shown in Figs. 1, 2, and 4. J J are bearing-blocks working into the central portions H H, as shown, and are capable of being moved longitudinally in the direction of the axles. The bearing-block sleeves H H are each made with an opening in its lower side, as shown in Fig. 4, to receive the screw-stems *s s* of the set-screw L, which passes up through to engage with the bearing-blocks J J. The set-screw L is provided with a right and left hand screw-thread, each made with the same size and pitch in their threads, and work into the screw-threads cut into the end bearing-blocks J J, to crowd the same toward the ends *c c* of the axle C C, or drawing them from the same. M is a set-screw, working in the top portion of the sleeve G, directly over the head of the central set-screw L, to impinge on the same, as shown in Figs. 1 and 3, when the said central set-screw is properly set, to prevent its being moved by the action of the axles. The sleeve G, with its associate parts H H, and *b*, and *a*, is connected to the frame-work A A by any suitable braces or stays, *f f*, in any proper manner. The outer jaws D D of each half-axle have their outer ends closed over, as shown in Fig. 1. Into the said ends are cut screw-threads

to receive the set-screws N N, which bear against the ends of the axles, and are intended to prevent all longitudinal play of the same, and act with the central set-screw to keep the wheels set at a proper distance apart.

These improvements are simple, and render the sectional axles strong and capable of being preserved in a proper position with their wheels; and each wheel will have permission to revolve independently of the other when running on a curve, which will greatly relieve the truck and its parts from all strain now due to the rigidity of the axles with the wheels, and also relieve the rails of that side pressure now had in the usual axle and wheel.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the central set-screw L, provided with a right and left handed screw-

thread, end bearing-blocks J J, and sleeve G, with the sectional half-axles C C, substantially as and for the purpose set forth.

2. The combination of the sleeve G and half-bearings *a b a b* with the sectional axles C C and outer bearings D D, substantially as and for the purpose set forth.

3. The combination of the set-screw M with the sleeve G and central right-and-left-hand set-screw L, substantially as and for the purpose set forth.

4. The combination of the set-screws N N with the outer bearings D D, axles C C, and central right-and-left-hand set-screw L, substantially as and for the purpose set forth.

WILLIAM HAMILTON WRIGHT.

Witnesses:

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