

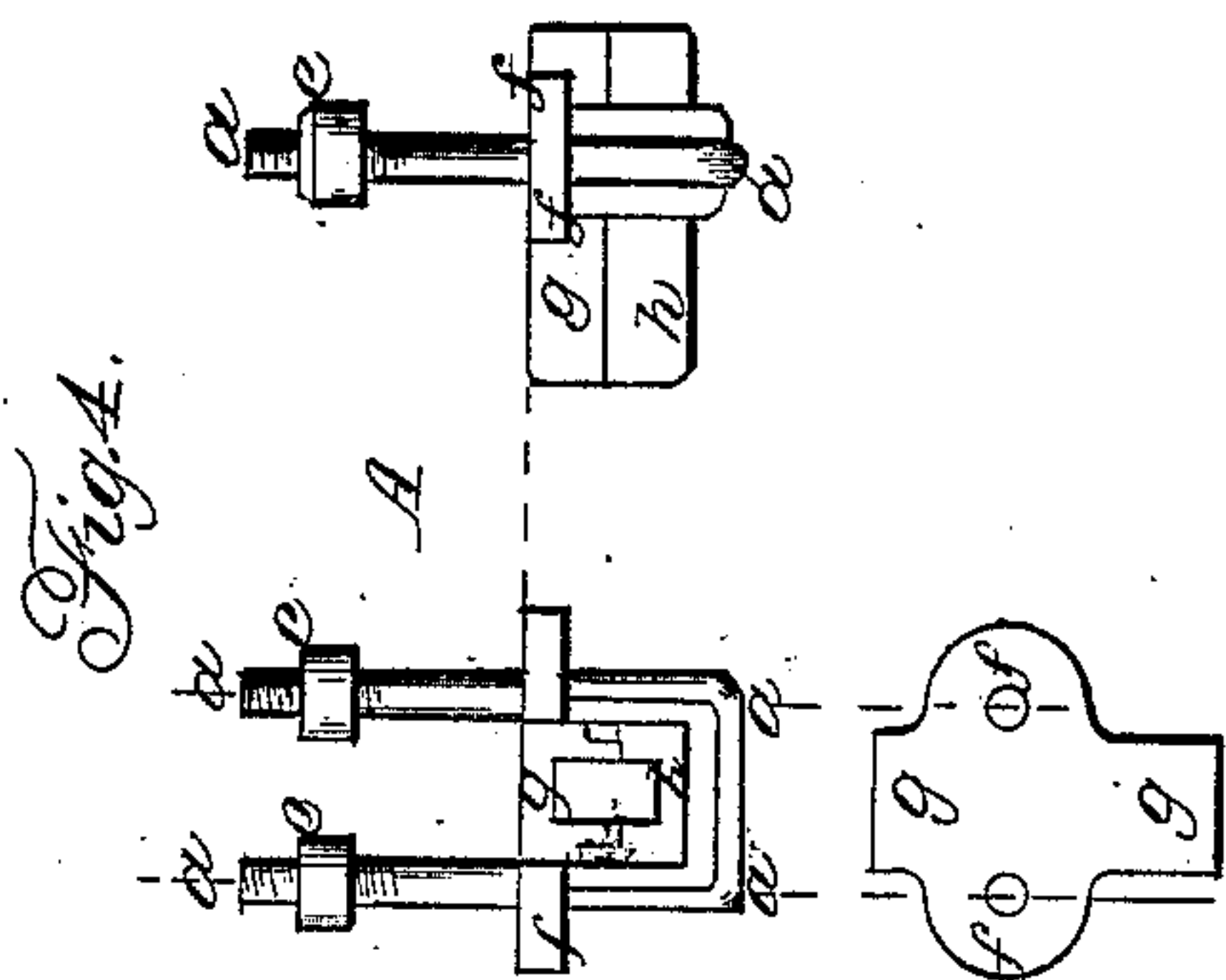
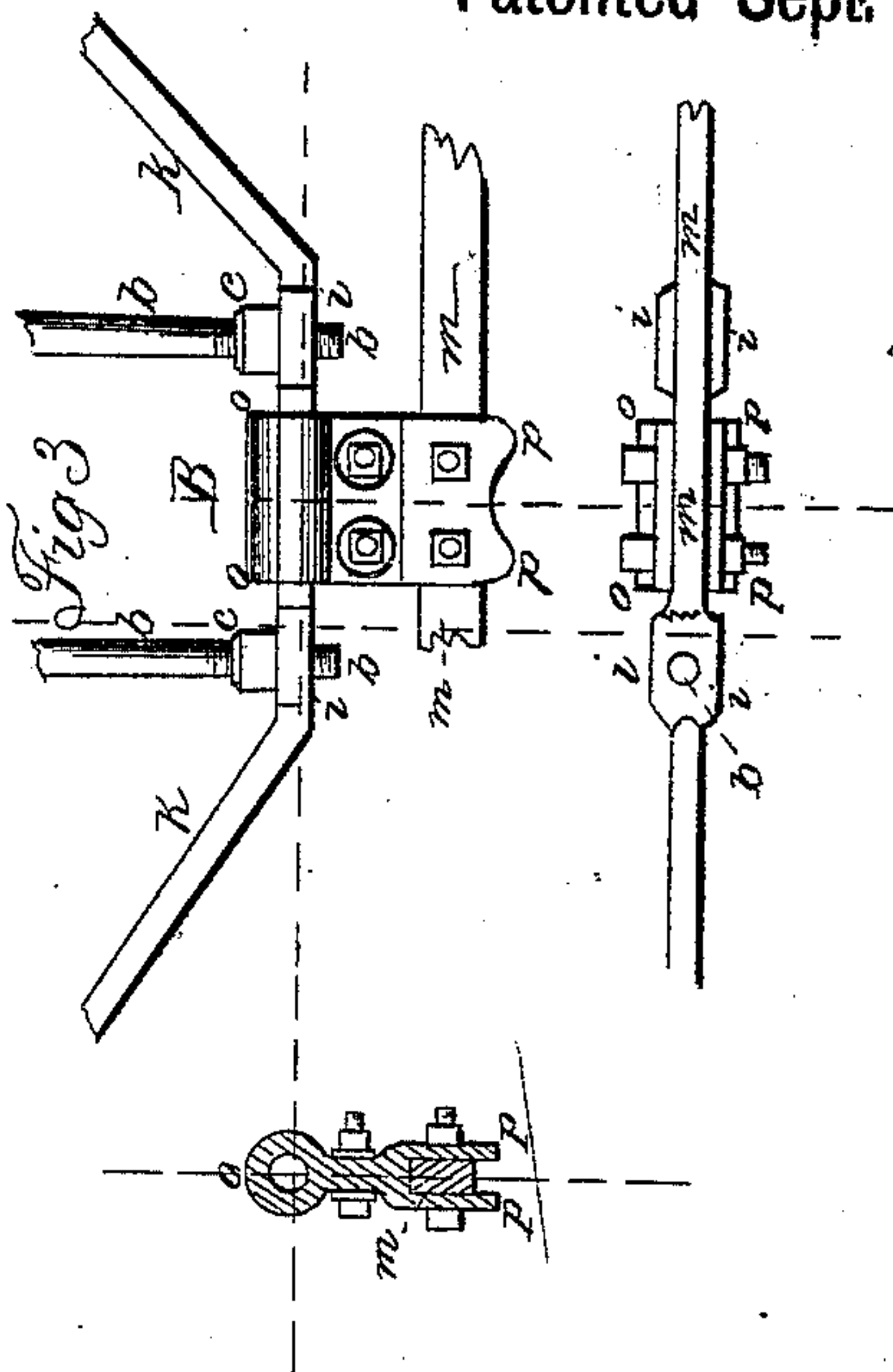
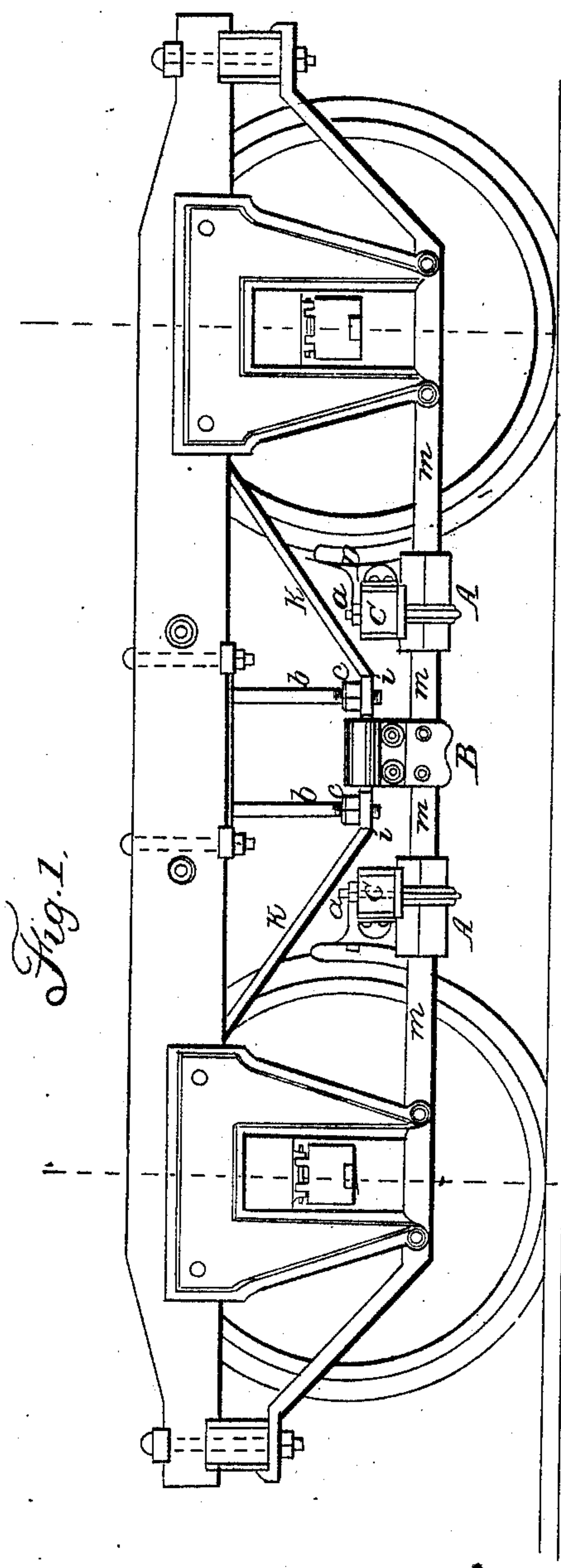
J. JONES.

2 Sheets—Sheet 1.

Car Brake.

No. 49,885.

Patented Sept. 12, 1865.



Witnesses:

Jay Hoyatt  
R. F. Osgood

Inventor:

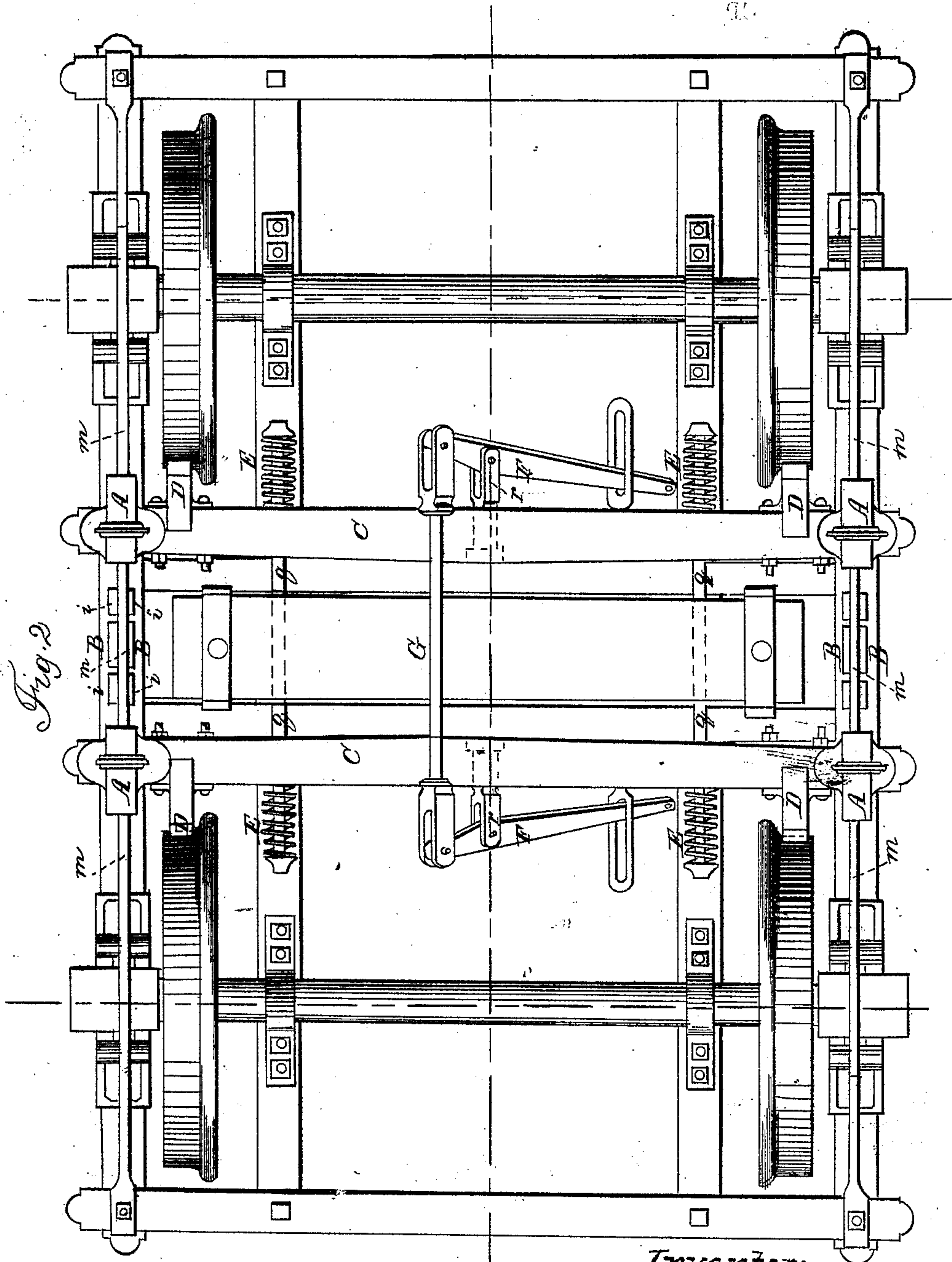
Joseph Jones  
By his Attorney J. M. Mason & Co

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# UNITED STATES PATENT OFFICE.

JOS. PH JONES, OF WEST ALBANY, NEW YORK.

## IMPROVED RAILROAD-CAR BRAKE.

Specification forming part of Letters Patent No. 49,885, dated September 12, 1865.

*To all whom it may concern:*

Be it known that I, JOSEPH JONES, of West Albany, county of Albany, and State of New York, have invented a new and useful Improvement in Railroad-Car Brakes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of a car-truck with my improved brake attached thereto. Fig. 2 is a plan of the same inverted; Fig. 3, a side elevation, a plan view from beneath, and a cross-section of the central support of the jaw-braces *m m*, shown detached; Fig. 4, a front elevation, side elevation, and plan of one of the sleeves which slide on the jaw-braces, shown detached from the brake-bars.

Like letters of reference designate corresponding parts in all the figures.

My invention is designed as an improvement on that patented to William D. Goodnow, October 18, 1864, and numbered 44,718.

In the schedule annexed to this patent, the object of the invention is stated to be to obviate the cause of accidents arising from the brake-bars breaking or falling upon the track by a compact arrangement of the brakes in the center between the wheels of the truck, whereby they are less exposed to the danger of breaking and of the parts becoming detached; and that the invention further consists in so constructing the brake-bars, in combination with the jaw-braces of the trucks, that in case said bars are broken they cannot fall to the track and obstruct the wheels; and in operating the two brakes conjointly by the direct endwise thrust of a short connecting-lever, by which both are made to act on the wheels simultaneously.

I will first briefly describe the construction of Goodnow's invention. It is applied to trucks of ordinary construction. The brake-bars *CC*, to which the shoes or rubbers *DD* are attached, are suspended from the frame above by links, or their equivalent, near each end, and the bars are of such length that their ends extend beyond or outside of the jaw-braces *m m*, above which they are suspended, and a yoke or staple extends from the under side of the ends of each bar around the brace *m*, connecting it loosely therewith. The brakes are held away from

the wheels by means of two spiral springs, *E E*, on the outside of each bar *C*, (shown in Fig. 2,) and the two bars lying parallel and near together. The same bolt or rod, *q*, extends through both bars, and these, moving freely on the rods *q q* and on their hangings or links, are forced together by the pressure of the springs designed to keep the shoes or rubbers *DD* from contact with the wheels when not in use. At the outer end of each brake-bar (shown also in Fig. 2) a coupling-head, *r*, is firmly attached and pivoted to the two levers *F F'*, by which the brakes are actuated, the former being connected by a chain to a windlass of ordinary construction, and the latter with a rod which extends to the brake of the other truck, so that the winding up of the chain on the windlass applies the brakes to all the wheels of the car. The short arms of the levers *F F'* are connected by a single bar, *G*, by which the motion of *F* is communicated by a direct endwise thrust to *F'*. This invention, though a great improvement over the ordinary car-brake, has been found defective in this particular: the brake-bars *C* being connected loosely by staples with the jaw-braces *m*, the rubbers *D*, when drawn back by the springs, are not sufficiently sustained and kept in their proper upright position, as when in contact with the wheels; but on account of their projecting from one side of the brake-bars their weight causes the center of gravity to fall outside of the point of support at the center of the bar, and consequently they tip or incline so that their upper ends rest against the wheels, and by the great friction thereby resulting soon become worn off, while their contact offers resistance to the motion of the wheels.

My improvement is designed to remedy this defect; and the invention consists in rigidly securing to the ends of the brake-bars sleeves *A A*, which fit around and slide on the jaw-braces *m m*, thereby dispensing with the use of the supporting-links, as before described, the same combined and arranged with the rubbers or shoes *DD* and brake-bars *CC* and jaw-braces *m m*, substantially as hereinafter described. These sleeves *A* may be constructed in two parts, *g* and *h*, as represented in Fig. 4, the part *g* being provided with flanges *f f*, through which passes the yoke *a a*, which secures the sleeve to the brake-bar and holds the



parts together by means of the nuts *e e* on the top of the bar. A recess in the interior may be formed in casting the upper portion, *g*, of the sleeve to allow the india-rubber, leather, or other suitable material to be inserted to receive the friction from the weight of the brake-bars where it rests on the jaw-braces and thereby prevent the wearing of the metal surfaces by contact.

The sleeves should be made of such length as to prevent any tipping or inclination of the brake-bar and shoe, and for this purpose I make that end of the sleeve next to the shoe longer than the other, so as to most perfectly accomplish the desired result.

The brake-bars, being secured in the manner above stated to the jaw-braces, cannot vibrate or become loose, and if the bar breaks the parts are prevented from falling under the wheels.

I also employ in my improvement a device, *B*, for supporting the jaw-braces at their center. This device consists of two inclined braces, *k k*, provided with flanges *i i*, into which screw vertical rods *b b*, having nuts *c c*, and the two similar pieces *p p*, which secure these braces *k k* to the jaw-braces *m* by being united at their upper ends at *o* and firmly bolted together, all as clearly shown in Fig. 3.

In other respects, except in the foregoing particulars, I adopt the same construction as Goodnow, above described.

Though I dispense with the use of links for suspending the brake-bars as employed by Goodnow, as aforesaid, yet safety-chains may be attached to the brake-bars at suitable positions, and to the frame above, if desired, to insure against the possibility of the parts falling on the track in the event of their breaking, and thus, perhaps, getting under the wheels.

By the use of my improvement not only is that loss of power caused by the shoes falling against the wheels and the wear of both prevented, which are matters of considerable importance, but, the parts being so secured as to prevent in a great measure that rocking or vibratory motion which Goodnow's invention allows, the liability of the parts to become loose or broken is in a corresponding degree lessened.

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

The combination and arrangement of the sleeves *A A* with the brake-bars *C C*, shoes *D D*, and jaw-braces *m m*, operating substantially in the manner and for the purposes set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOSEPH JONES.

Witnesses:

S. H. FOSTER,

JAMES VAN VALKENBURG.