

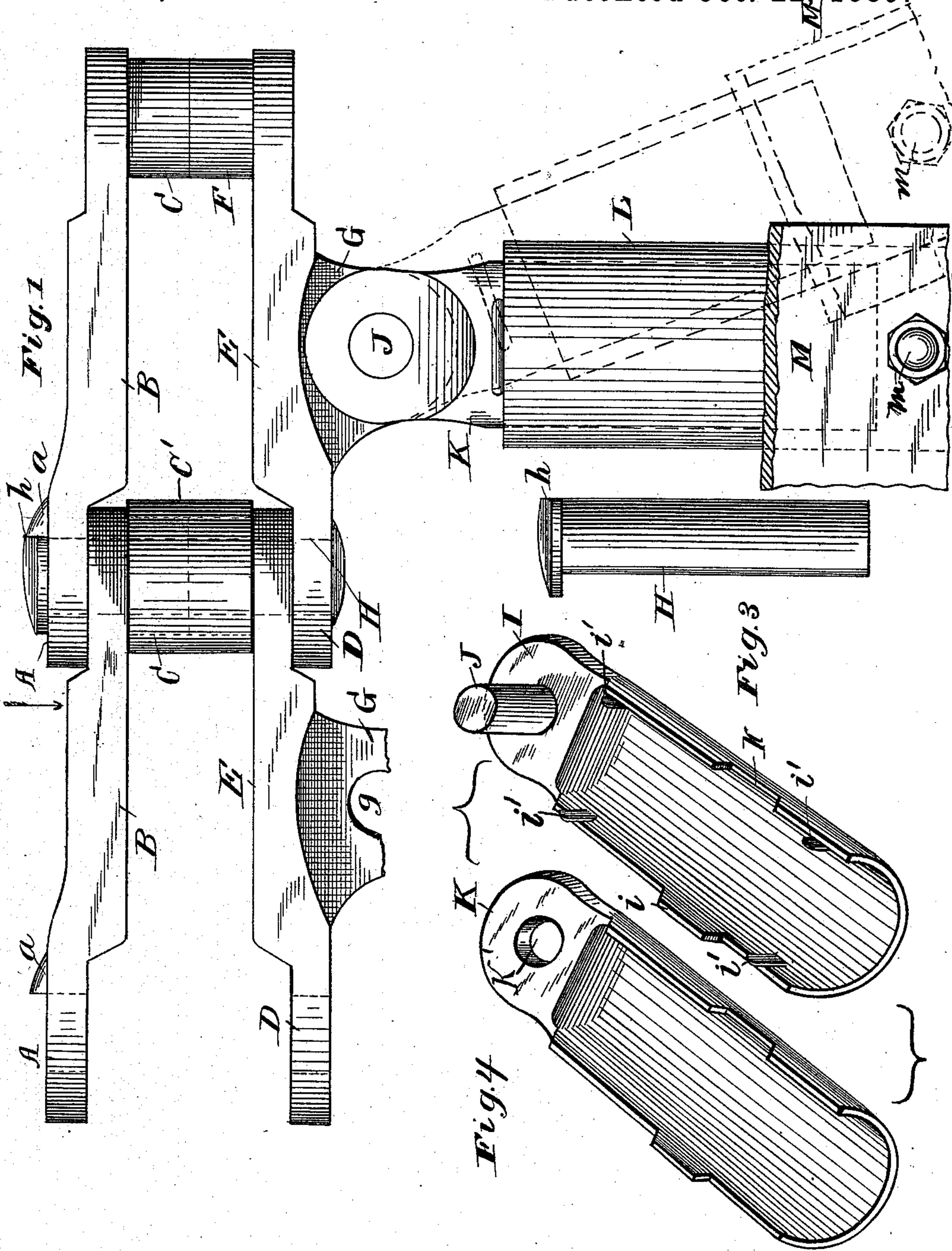
(No Model.)

3 Sheets—Sheet 1.

J. L. TAPLIN.
CARRIER.

No. 413,635.

Patented Oct. 22, 1889.



Witnesses:
J. C. Turner
P. H. Summers.

Inventor:
John L. Taplin
by M. Bledsoe & Bliss attys

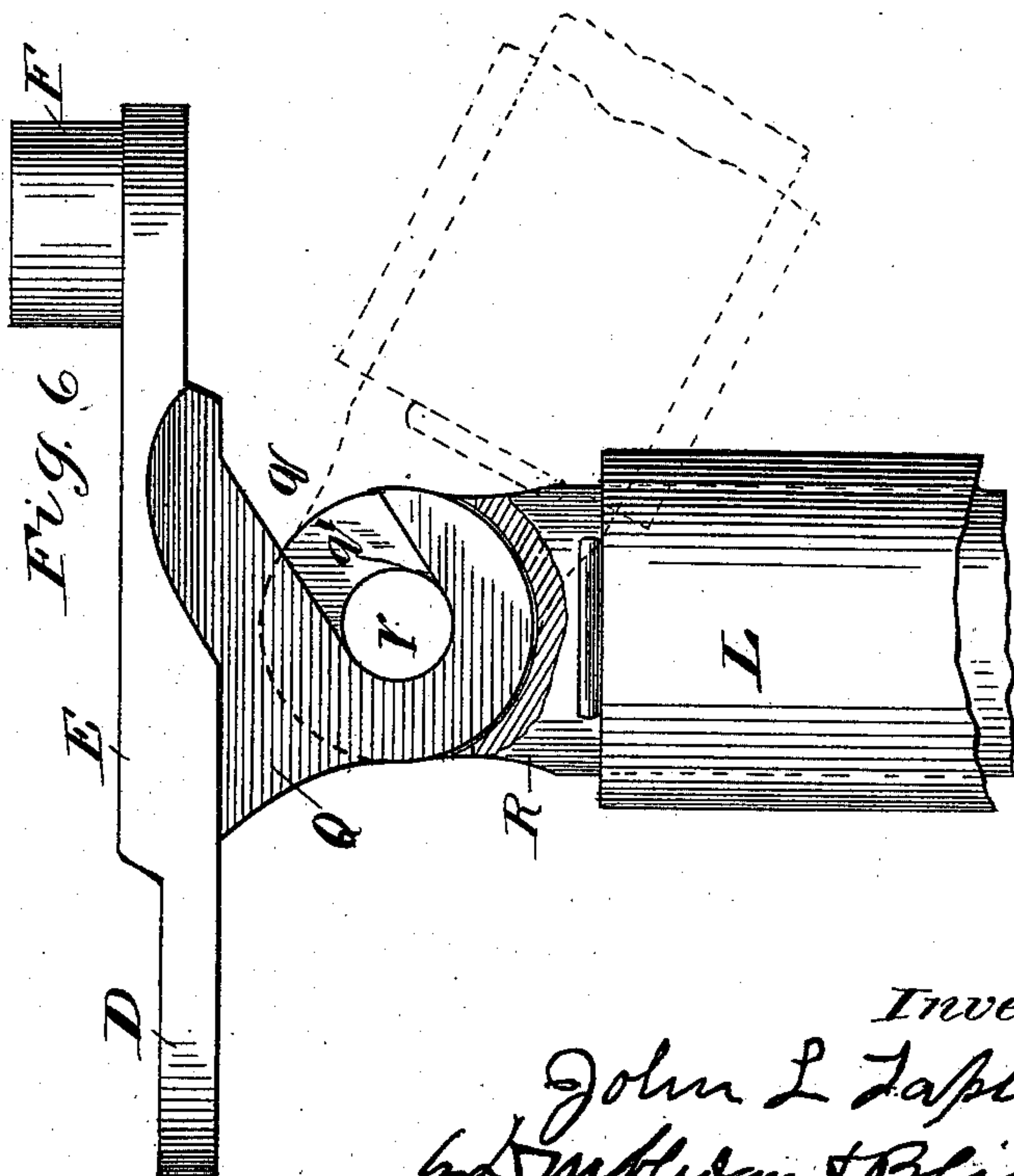
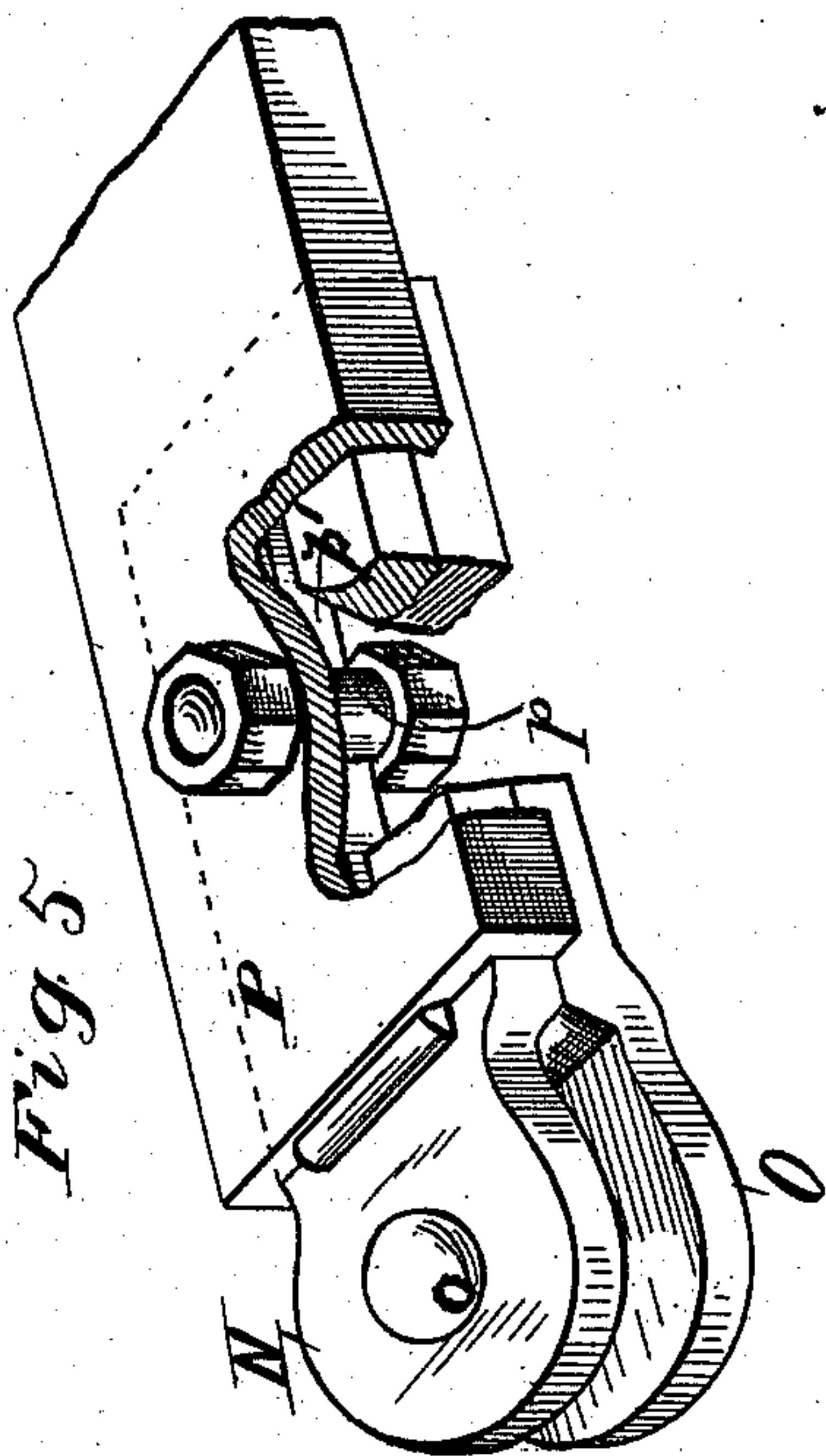
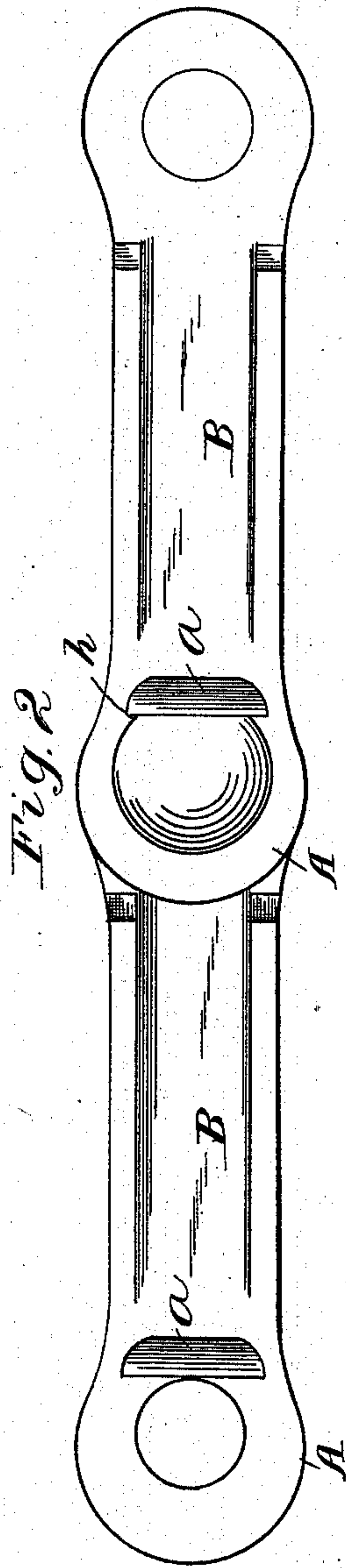
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by S. M. H. & Bliss attys.

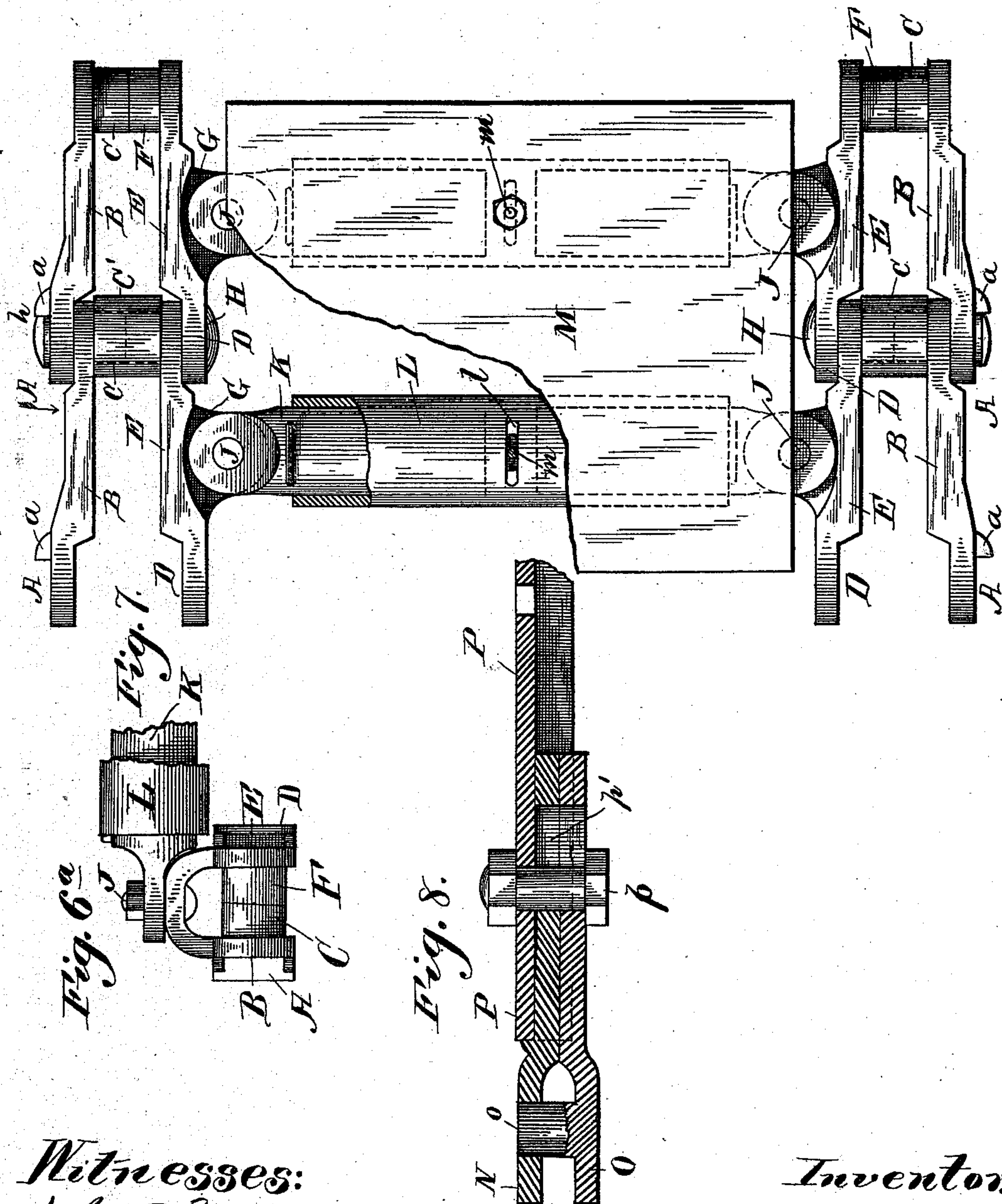
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CARRIER.

No. 413,635.

Patented Oct. 22, 1889.



Witnesses:

J. C. Turner
J. B. McGinnis

Inventor:

John L. Tappin
Agdumbleday 88312 atty.

UNITED STATES PATENT OFFICE.

JOHN L. TAPLIN, OF CIRCLEVILLE, ASSIGNOR TO JOSEPH A. JEFFREY, OF COLUMBUS, OHIO.

CARRIER.

SPECIFICATION forming part of Letters Patent No. 413,635, dated October 22, 1889.

Application filed October 20, 1888. Serial No. 288,689. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. TAPLIN, a citizen of the United States, residing at Circleville, in the county of Pickaway and State of Ohio, have invented certain new and useful Improvements in Carriers, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a plan view of so much of a chain and conveyer as is necessary to illustrate my invention. Fig. 2 is an edge view looking in the direction of the arrow, Fig. 1. Fig. 3 is a detached view of the pintle. Fig. 4 is a perspective view of the two-part attachment. Figs. 5 and 6 show modifications. Fig. 6^a illustrates a modification. Fig. 7 is a plan view illustrating my invention. Fig. 8 is a vertical longitudinal section of Fig. 5.

Referring to Figs. 1, 2, 3, and 4, A B C is one of the side bars, the part A having a round seat for the pintle, with a transverse rib or shoulder *a* upon its outer face, the opposite end having an inward-projecting sleeve C, adapted to receive an anti-friction roller C'. While I prefer to have the rib in the position shown in Figs. 1 and 3, such location is not indispensable, because it may be arranged upon the opposite or either of the other sides of the pintle-seats and in close proximity thereto. The opposite side bar D E F is provided with an outward-projecting ear or lug G, having a hole *g* in it. The pintle H has a head at one end, which is flattened or slabbed off at one edge, as at *h*, so that when in working position the rib or stop *a* fits somewhat closely this slabbed-off part and prevents the bolt from turning around in its seat in the end bar, to insure that the wear shall come upon that part of the pintle which is within the sleeve C F. Of course the opposite end of the pintle should be riveted over or otherwise secured against accidental displacement.

While I regard the above-described chain as being well adapted for use in my newly-invented carrier, yet the chain itself forms no part of this invention, and consequently I do not wish to be limited to its use; nor do I in this case claim any of the patentable features in the chain, preferring to do so in an-

other application which is concurrent herewith, having been filed November 27, 1888, Serial No. 291,994.

In using chains arranged in two parallel lines, with carriers or conveyers of various sorts attached at or by their opposite sides to the chains, it sometimes happens that one end of the carrier will fall behind its opposite end by reason of one of the chains slipping over one or more sprockets on its driving-wheel, which operates disadvantageously, because, among other things, it is apt to break from the chain-link the attachment by which it is connected to the carrier, and, furthermore, when the carrier assumes such diagonal position it draws the two lines of chain closer together, so that they will not properly track their sprocket-wheels. So, also, the movements of the carriers or conveyers around the sprocket-wheels are seriously interfered with by such getting out of position of the carrier attachments. In order to remedy these difficulties, I propose to employ articulating connection between the chain-links and the carriers; and I further propose to make such connections extensible.

One construction which I have invented for the carrying out of this part of my invention is as follows:

I K is a two-part coupler, preferably cylindrical in cross-section, and hollow to secure lightness. By preference its engaging walls are formed with lugs and recesses *i k*, which interlock and prevent endwise movement of one part relatively to the other, and the part I is further provided with a series of projecting ears, as at *i' i''*, which engage with the inner surface of the other part K. The outer end of the part I is provided with a pin J, which enters a hole *g* in the ear G of the side bar of the chain. The part K is provided with a hole K' to receive the pin J, the inner ends of the lugs and the outer ends of the couplers being preferably rounded.

L represents a section or piece of gas-pipe fitting somewhat closely over the inner end of the coupler and serving to keep the two parts thereof from accidental separation.

1 (see Fig. 7) is a bolt-hole through the piece

of gas-pipe, and M is a section of the platform or carrier-bar bolted to the gas-pipe and also to an adjacent gas-pipe, the bolt-holes 1 being preferably between the ends of the couplers, so as to permit the relative movements of parts without cramping during the various movements which the parts are liable to assume when in operation.

In Figs. 5 and 8 I have shown a modification in which the articulating coupler is composed of two parts having a pin *o* projecting from the lower member, with a hole in the upper member to fit over the pin, these parts N O being attached to a carrier-bar P by means of a bolt *p*, the under side of the carrier-bar being recessed to receive the upper member of the coupler and assist in maintaining the parts in proper working relation.

In Fig. 6 I have shown another modification, in which the lug Q of the side bar is provided with a throat *q*, leading inward from near the base of the lug to a seat *q'*. The coupler R is forked at its outer end and provided with a pin *r*, which can be inserted or passed through the throat into the seat when the coupler is placed at a somewhat acute angle, (indicated in dotted lines,) the construction of parts being such that after the coupler is attached to the carrier, as indicated in full lines, it cannot be disconnected from the ear or lug when in any of the positions which it will ordinarily assume in practical operation.

When one end of the conveyer has fallen behind the other, as indicated in dotted lines, Fig. 1, the coupler will be drawn out endwise from the gas-pipe, but not so far as to endanger the telescopic connection between them. Thus a proper distance between the lines of chain may always be maintained, and a similar result may be secured in the construction shown in Figs. 5 and 8 by slotting the shank portions of the parts N O, as at *p'*, Fig. 8, so that the carrier-bar P and the bolt *p* may slide endwise relatively to the coupler, and by an examination of these figures it will be understood that the downward-projecting edges of the carrier, which overlap the edges of the shanks, assist in keeping these parts in line with each other.

I propose when using a platform M of such width as to overlap or engage with two of the carrier-bars to so connect these parts by means of bolts or pivots at *m* that these bars can change their positions as required without undue strain upon any of the parts.

It will be understood that in addition to the telescopic movement of the coupler within the gas-pipe, it (the coupler) can also rotate within the gas-pipe, which latter capability also facilitates traversing the sprocket-wheels, particularly when one end of the bar has fallen behind the other.

While I have described the best mode now

known to me of carrying my invention into effect, yet I do not wish to be limited to the details of construction herein shown, because many modifications thereof will readily suggest themselves to a person skilled in the art in which this construction belongs without departing from its spirit. For instance, while I have shown the ears or lugs projecting laterally from the chain, any of the well-known forms of link which having ears or plates projecting upward from the side bars and having bolt-holes might be used as pivotal supports for the couplers, as is indicated in Fig. 6; and it will be readily understood that when the chains are traversing sprocket-wheels the couplers will rotate within the gas-pipe as the links assume angular position relatively to each other in conforming to the outlines of the wheels; hence I prefer to make the couplers rotatory within the carrier-bars, and to make them extensible at both ends of the carrier-bars, yet neither of these features is indispensable. In fact, I believe that in practice the coupler at one end of each bar might be rigidly connected therewith without impairing the usefulness of the construction.

What I claim is—

1. In a carrier, the combination of two parallel lines of chain, carrier-bars between the chains, articulating and extensible couplers connecting the carrier-bars and the chain, and carriers mounted on the bars, substantially as set forth.

2. In a carrier, the combination of two parallel lines of chain, carrier-bars, and articulating extensible and rotatory couplers connecting the carrier-bars with the chain, substantially as set forth.

3. In a carrier, the combination of two parallel lines of chain, carrier-bars, and extensible couplers pivoted to the chains, substantially as set forth.

4. In a carrier, the combination of two parallel lines of chain, carrier-bars between the chain, and couplers pivoted at their ends to the chain and loosely connected at their opposite ends to the carrier, substantially as set forth.

5. The combination, with a drive-chain provided with a projection adapted to support a carrier, of a coupler pivoted to the projection and a carrier mounted upon and loosely connected with the coupler, substantially as set forth.

6. The combination, with a drive-chain provided with a projection adapted to support a carrier, of a two-part coupler overlapping opposite sides of the projection and connected therewith by a pivot, and a carrier connected with the coupler, substantially as set forth.

7. The combination, with a drive-chain provided with a projection adapted to support a carrier, of a coupler pivoted to the projection and a carrier provided with an opening to

receive and surround the coupler, substantially as set forth.

5 8. The combination, with a drive-chain provided with a projection adapted to support a carrier, of a two-part coupler connected with the projection and a tubular carrier-bar mounted upon the two-part coupler, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN L. TAPLIN.

Witnesses:

C. N. LOREY,
GEO. H. FICKARDT.