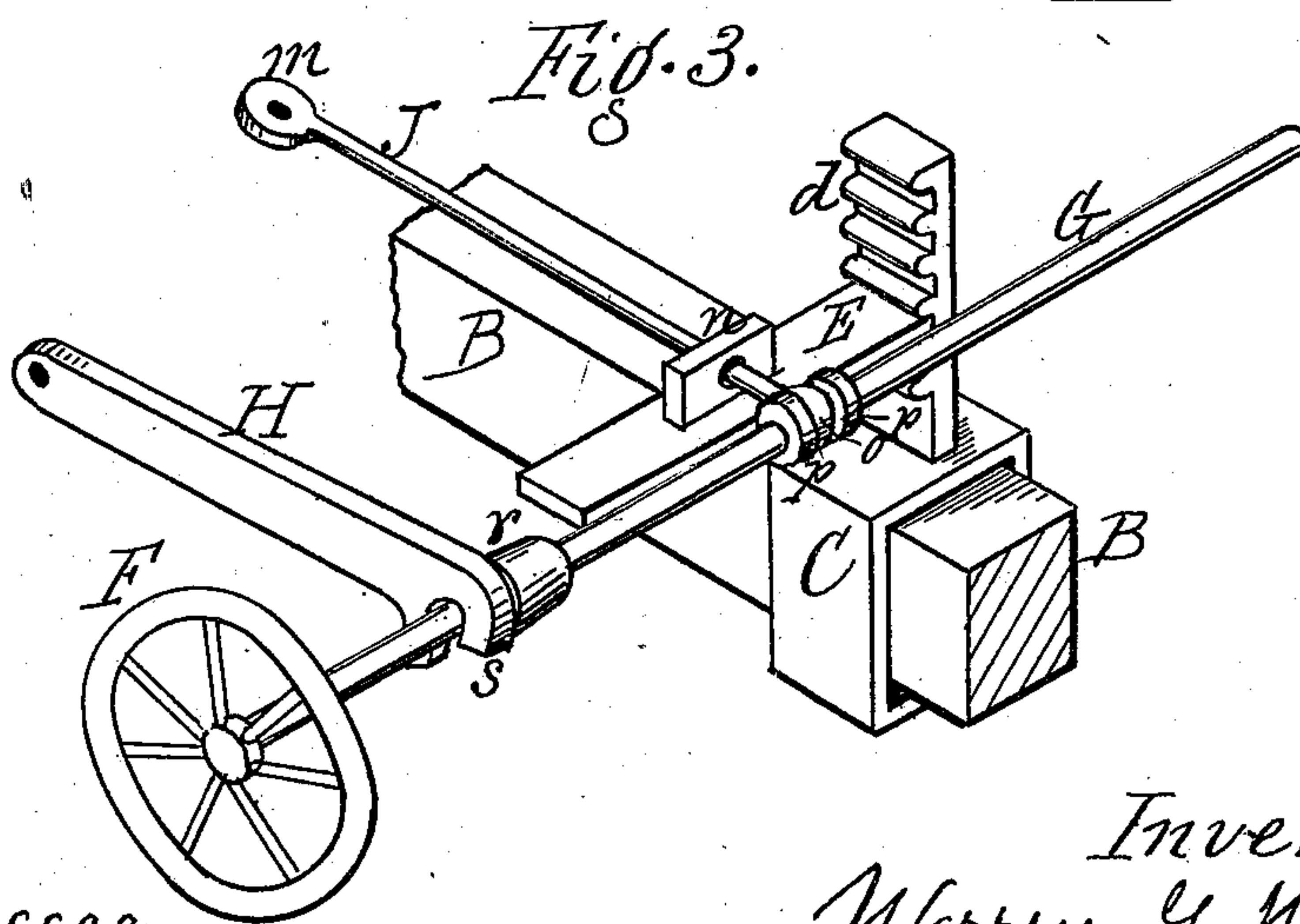
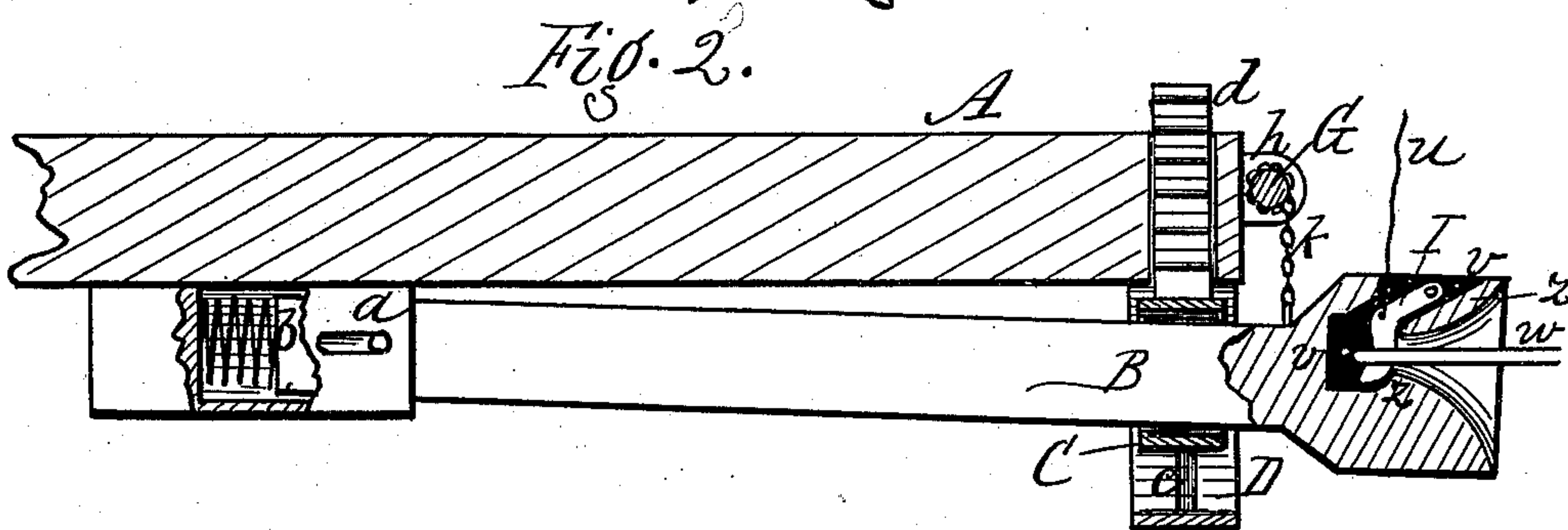
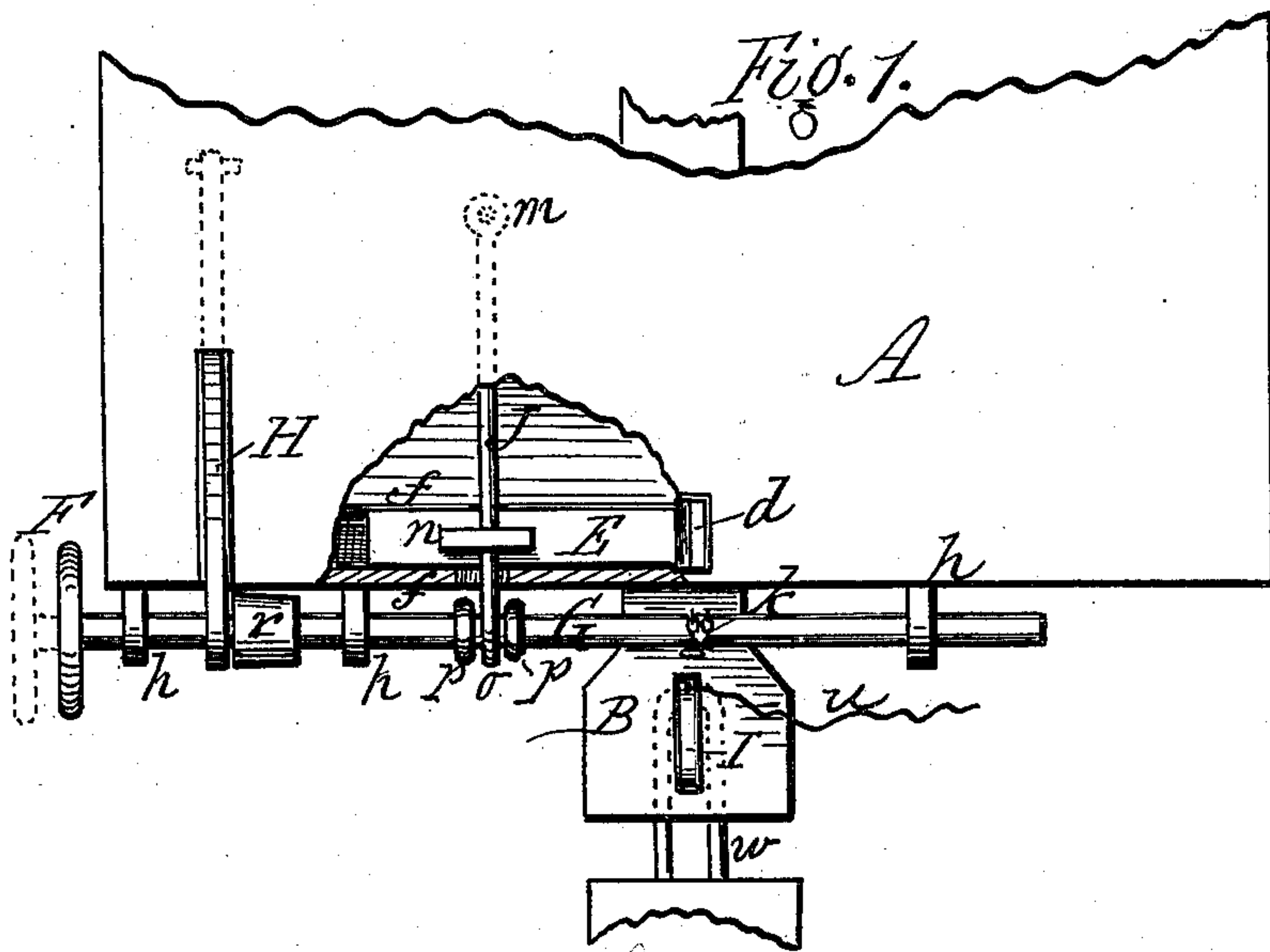


W. G. HAWLEY.

CAR-COUPLING.

No. 174,133.

Patented Feb. 29, 1876.



Witnesses.
E. B. Smith
Jacob Spahr

Inventor.
Warren G. Hawley,
per R. F. Osgood,
Atty.

UNITED STATES PATENT OFFICE.

WARREN G. HAWLEY, OF RUSHVILLE, NEW YORK.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 174,133, dated February 29, 1876; application filed January 29, 1876.

To all whom it may concern:

Be it known that I, WARREN G. HAWLEY, of Rushville, in the county of Ontario and State of New York, have invented a certain new and useful Improvement in Car-Couplings; and I 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 accompanying drawings, in which—

Figure 1 is a plan of one end of a freight-car platform showing my improvement. Fig. 2 is a longitudinal vertical section. Fig. 3 is a perspective view of the parts for adjusting the draw-head.

My improvement is specially designed for freight-cars, but is also applicable to passenger-cars. It relates to a draw-head that is vertically adjustable to cars of different heights; and the invention consists, in the combination, with a draw-head, of a loop, rack, pawl, sliding shaft, and pivoted arms, arranged as hereinafter more fully described.

A represents the platform of a freight-car. B is the draw-head. The draw-head is attached under the platform, so as to be vertically adjustable in front, to adapt it to couple with cars of varying heights. The rear end rests in a box, *a*, that has a coiled spring, *b*, behind it, to break the shock when the cars strike together. The front end rests in a loop, C, which has side ribs or lugs running in grooves *c* of a way, D, attached to the under side of the platform, by which the loop is kept in a vertical position as it moves up and down. This loop is combined with the other parts as follows: *d* is a stiff rack attached to the top of the loop C, extending up through the platform. E is a pawl or slide within the platform, which moves laterally in ways *f f*, and engages with the teeth of the rack. G is a shaft resting in bearings *h h h* at the end of the platform, and having at one end a hand-wheel, F, which rests outside the car. This shaft is capable of both a rotary and an end or longitudinal motion. A chain, *k*, connects the draw-head B with the shaft, so that by turning the latter the draw-head may be raised or lowered.

J is a rock-arm, pivoted at *m* within the platform. It passes through a lug, *n*, on top of the pawl E, and its front end has a loop, *o*,

that embraces the shaft G between two shoulders, *p p*, on said shaft. As the shaft G is thrown backward in a longitudinal direction, as indicated by the dotted lines in Fig. 1, the rock-arm J will move with it, thereby drawing the pawl E out from its engagement with the rack *d*, thereby allowing the loop C to be raised or lowered in the way D to adjust the draw-head higher or lower. When the adjustment is made, the reverse or inward motion of the shaft G will re-engage the pawl and rack, and hold the loop supporting the draw-head in a fixed position. It will be observed that the shaft G serves the double purpose of raising the draw-head by its rotary motion, and dogging it by its end motion.

r is a circular stop on the shaft G. H is a pivoted arm, forming a latch or catch, arranged to turn up and down vertically, and having an open hook end, *s*, which strikes over and engages on the shaft G. When the shaft is moved in endwise, so as to engage the pawl with the rack, the hook *s* rests outside the stop *r* and prevents back motion, as shown in Figs. 1 and 3, but when raised it allows the back movement of the shaft, and it then rests and rides on top the circular stop *r*, not interfering at all with the rotary motion of the shaft in raising or lowering the draw-head, to position.

I is a hook, which rests within a slot, *v*, of the draw-head, and with which engages the link or shackle *u*. The hook is pivoted at the top, and is raised by a cord or chain, *w*. The lower end of the hook is made curved, as shown, so that when the link is engaged therewith the curve will prevent accidental disengagement. When under strain the back of the hook rests against shoulders *z z*, and the great strain is thereby removed from the pivot of the hook.

The devices above described are very convenient for changing the adjustment of the draw-head, and for holding it in place at any adjustment. It is especially adapted to freight-cars, as the adjustment, as well as the coupling, can be made from the outside.

What I claim as new is—

1. The combination, with the draw-head B, provided with the hook I, of the loop C, rack *d*, pawl E, shaft G, and pivoted arms J H,

all arranged as described, to operate in the manner and for the purpose specified.

2. The combination, with the vertically adjustable loop C, provided with the rack *d*, of a laterally-movable pawl, E, and a pivoted rock-arm, J, connecting the pawl with the movable shaft C, as and for the purpose specified.

3. The shaft G, capable of a rotary and longitudinal motion, constructed with the circular stop *r*, for the purpose of allowing the rid-

ing of the latch H when thrown up thereon, as herein shown and described.

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

WARREN G. HAWLEY.

Witnesses:

R. F. OSGOOD,

E. B. SCOTT.