

W. S. SHOTWELL.

Car Coupling.

No. 67,368.

Patented July 30, 1867.

FIG. 1

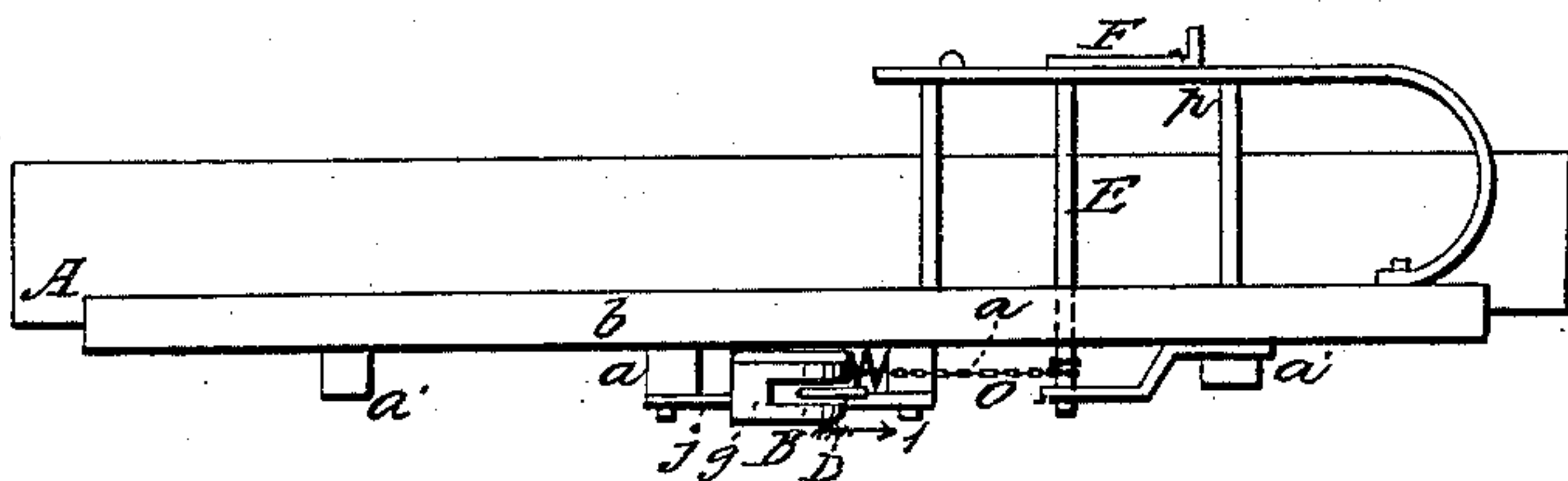


FIG. 2

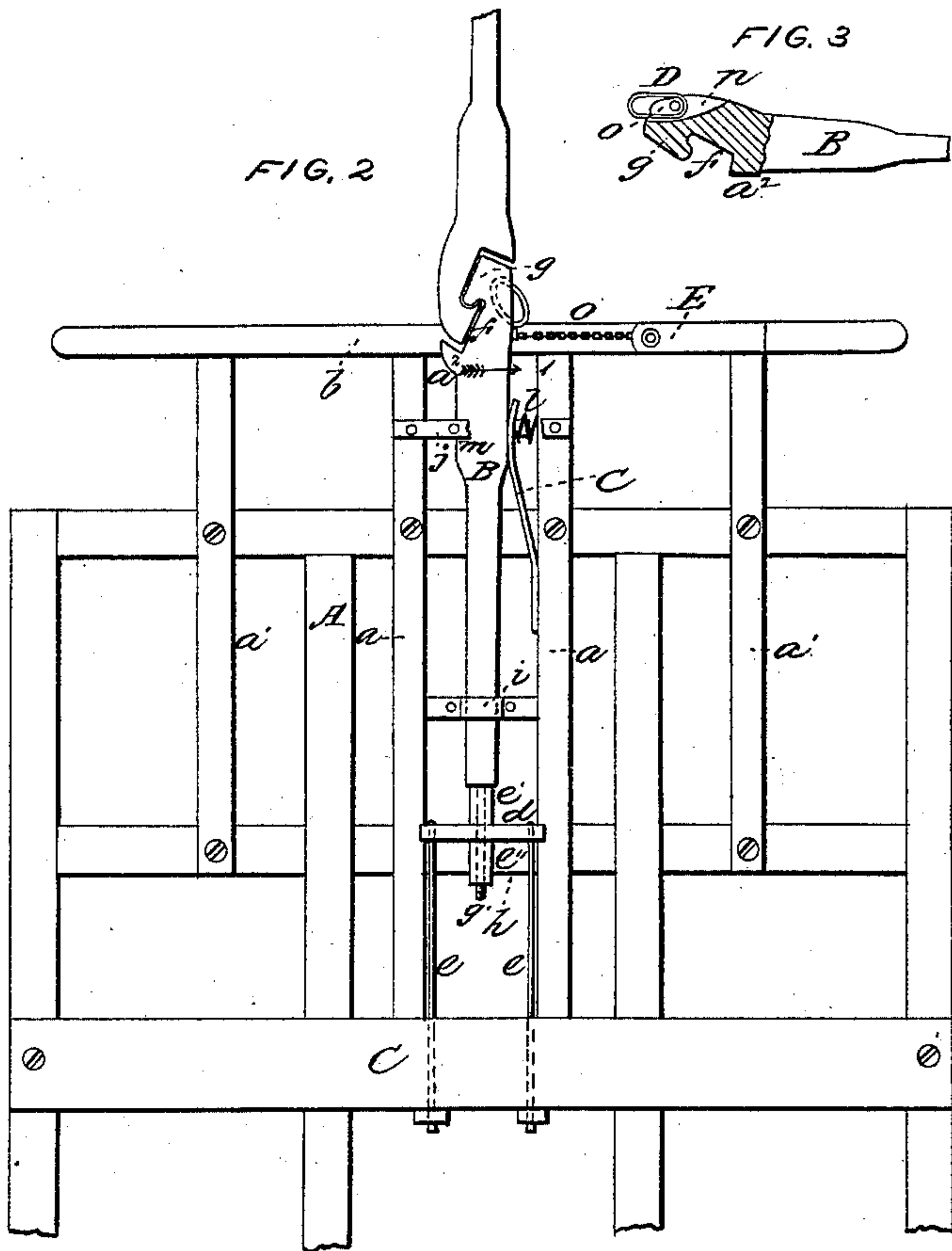
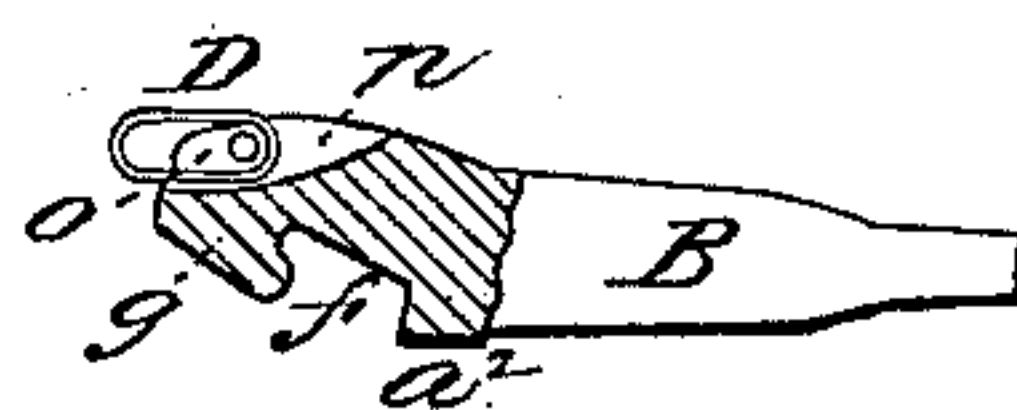


FIG. 3



WITNESSES:  
Theo. Fische.  
Hm. Furver.

INVENTOR:  
Walter S. Shotwell  
Per Myron L.  
Attorneys

# United States Patent Office.

WALTER S. SHOTWELL, OF PATERSON, NEW JERSEY.

Letters Patent No. 67,368, dated July 30, 1867.

## IMPROVED DRAW-HEAD FOR RAILROAD CARS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, WALTER S. SHOTWELL, of Paterson, in the county of Passaic, and State of New Jersey, have invented a new and improved Draw-Head for Railroad Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved draw-head for railroad cars, and in a novel application of the draw-head to the cars, whereby the draw-heads are rendered self-coupling, capable of being uncoupled or disconnected with facility, and also capable of being used, when necessary, with the ordinary link-coupling. In the accompanying sheet of drawings—

Figure 1 is a front view of my invention applied to the bed or platform of a railroad car.

Figure 2, an inverted plan of the same.

Figure 3, a detached view of the outer part of a draw-head, partly in section.

Similar letters of reference indicate like parts.

A represents one end of the bed of a railroad-car, the portion on which the platform is laid, and  $a a a^1 a^1$  are four parallel bars, secured by bolts or otherwise to the under side of the bed, and all projecting a certain distance beyond its end and framed into a bar,  $b$ , which is parallel with the end of the bed, as shown clearly in fig. 2. The two inner or central bars  $a a$  extend further back than the other two  $a^1 a^1$ , and have their rear ends framed into a stout cross-bar,  $c$ , of the bed; and between the two bars  $a a$  there is fitted a cross-bar,  $d$ , the ends of which are "let in"  $a a$ , which is also shown clearly in fig. 2. This cross-bar  $d$  is connected by bolts  $e e$  with the cross-bar  $c$ , which bolts not only secure the cross-bar  $d$ , but also the bars  $a a$  firmly in position. B represents a draw-head, the front end of which is bevelled at one side, and has a notch,  $f$ , made in it, of such a shape as to form a hook,  $g$ , at its front end. A shoulder,  $a^2$ , is also formed upon the draw-head in such a manner that as the cars approach each other the end of the draw-heads will strike such shoulder, preventing them from passing each other and the bumpers of the cars from striking. The rear end or part  $g'$  of the draw-head is of cylindrical form, and passes through the cross-bar  $d$ , said cylindrical portion having two springs  $e' e''$  upon it, of India rubber or other suitable elastic material, one spring  $e'$  being in front of the cross-bar  $d$ , and the other  $e''$  behind it, (see fig. 2,) a nut,  $h$ , being on the end of  $g'$ . By means of these springs the draw-heads are made to yield slightly as they strike each other in coupling, thus relieving partially the shock upon the shoulder  $a^2$ . The draw-head passes through a guide,  $i$ , between the bars  $a a$ , and it also rests upon a cross-bar,  $j$ , these latter-named parts being so arranged as not to interfere with a longitudinal sliding movement of the draw-head. C represents an elastic plate which is attached to the inner side of one of the bars  $a$ , is curved inward to a certain extent, and has a pin,  $k$ , projecting horizontally from it, which pin passes into a spiral spring,  $l$ , attached to the same bar  $a$  as the plate C. This spring  $l$  has a tendency to keep the draw-head B pressed against a pin or stop,  $m$ , on the cross-bar  $j$ , and also to keep the draw-heads of two adjoining cars locked together, as will be perfectly understood by referring to fig. 2. When the cars come in contact the draw-heads are allowed to yield or give to avoid jars and concussions by virtue of the springs  $e'$ , and in sudden pulls in starting the springs  $e''$  serve the same end. In consequence of having the spring  $l$  arranged and applied as shown, it does not interfere in the least with the longitudinal movement of the draw-head, nor can the latter interfere with the spring. In the outer end of the draw-head there is made a horizontal slot,  $n$ , in which a link, D, is fitted and secured by a pin,  $o$ . This link is allowed sufficient play in the slot  $n$  to admit of being moved back in the slot, entirely out of the way when not in use, and also admit of being drawn out, so that it may fit in an ordinary draw-head and be secured therein by the ordinary drop-pin. Thus, by this simple link-attachment, my improved draw-head is rendered capable of being used with those of the ordinary kind provided with a drop-pin to pass through the link. The draw-head bears against the under side of a cross-bar between  $a a$  above  $j$ , which, in connection with the cross-bar  $j$ , causes it to be held perfectly steady and firm, so far as vertical play or movement is concerned. When the draw-heads of two adjoining cars come in contact they connect themselves, as will be readily seen. In order to disconnect them a chain,  $p$ , is attached which is connected to the lower end of a vertical shaft, E, at the front end of the platform, said shaft having a crank, F, on its upper end, by turning which the



chain is wound upon the shaft and the draw-head drawn or moved in the direction indicated by arrow 1. The crank F may be held in position to prevent the draw-heads from coupling when desired, by means of a catch, *p*.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The shoulders  $a^2$  upon the draw-heads B, constructed as described, whereby the draw-heads are prevented from slipping by each other when brought together, substantially as herein shown and described.

2. In combination with the above, I claim the springs  $e'$   $e''$  upon the inner end of the draw-head and upon each side of the cross-bar  $d$ , whereby the shock of the draw-head upon the shoulders  $a^2$ , as they approach each other, is partially relieved, substantially as described for the purpose specified.

. WALTER S. SHOTWELL.

Witnesses:

BENJN. D. DONEMUN,  
CHARLES KEELER.