

(No Model.)

M. R. THURBER.

CAR COUPLING.

No. 255,701.

Patented Mar. 28, 1882.

Fig. 1.

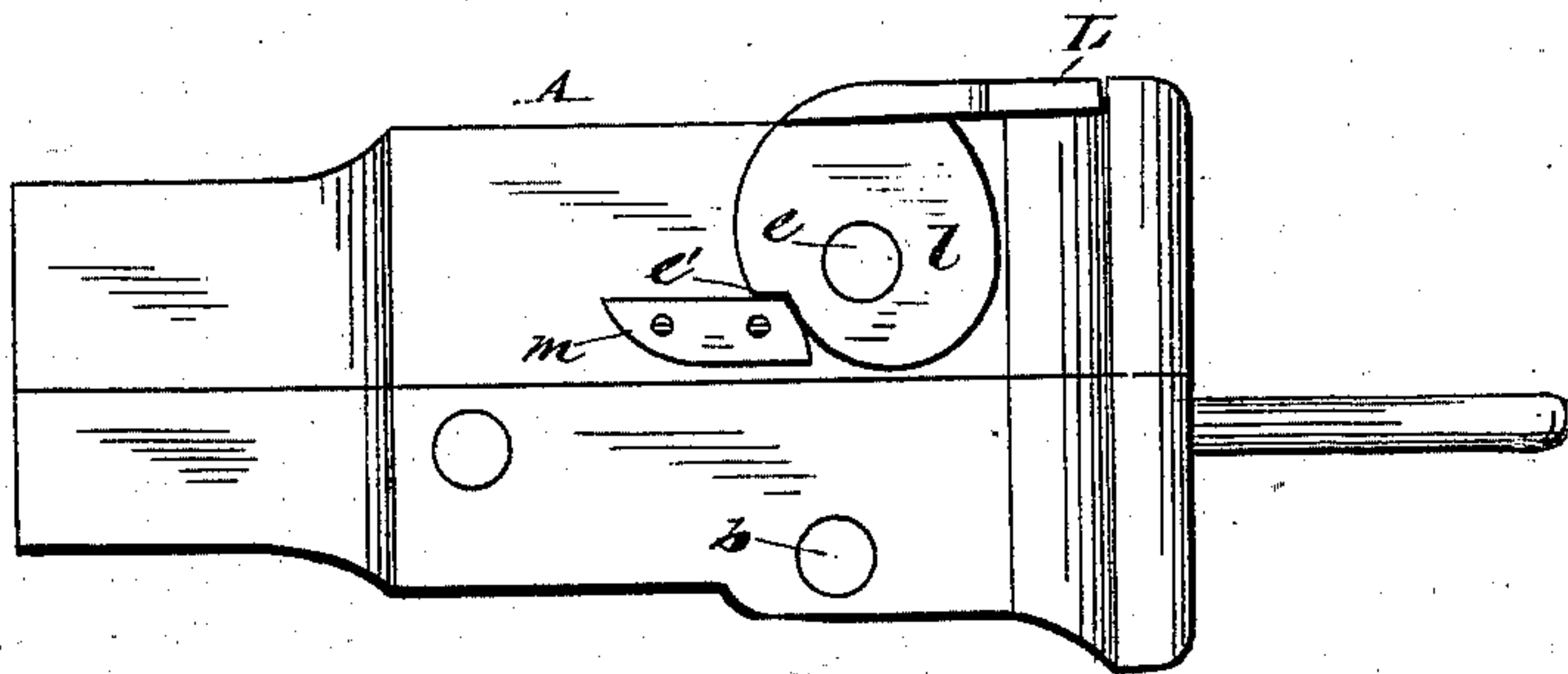


Fig. 2

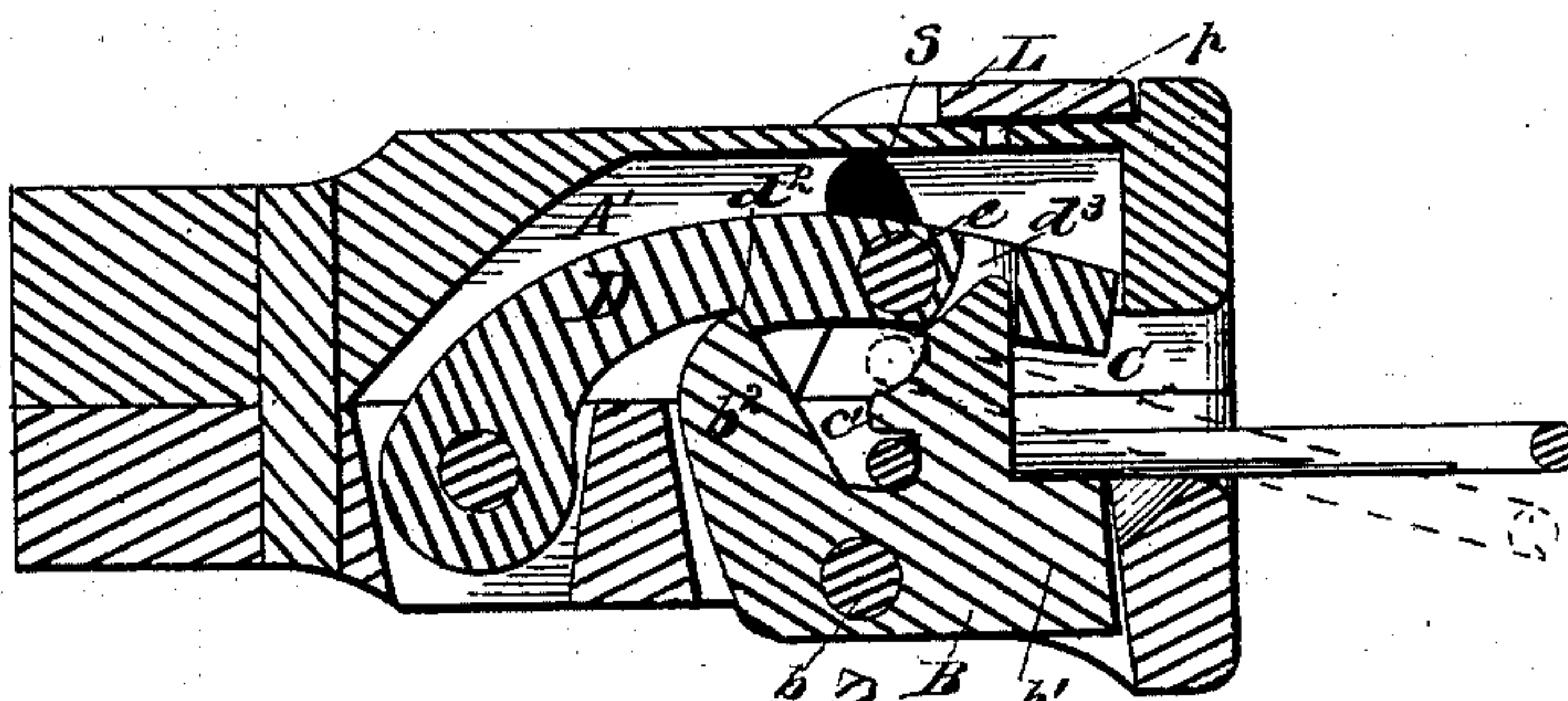


Fig. 3.

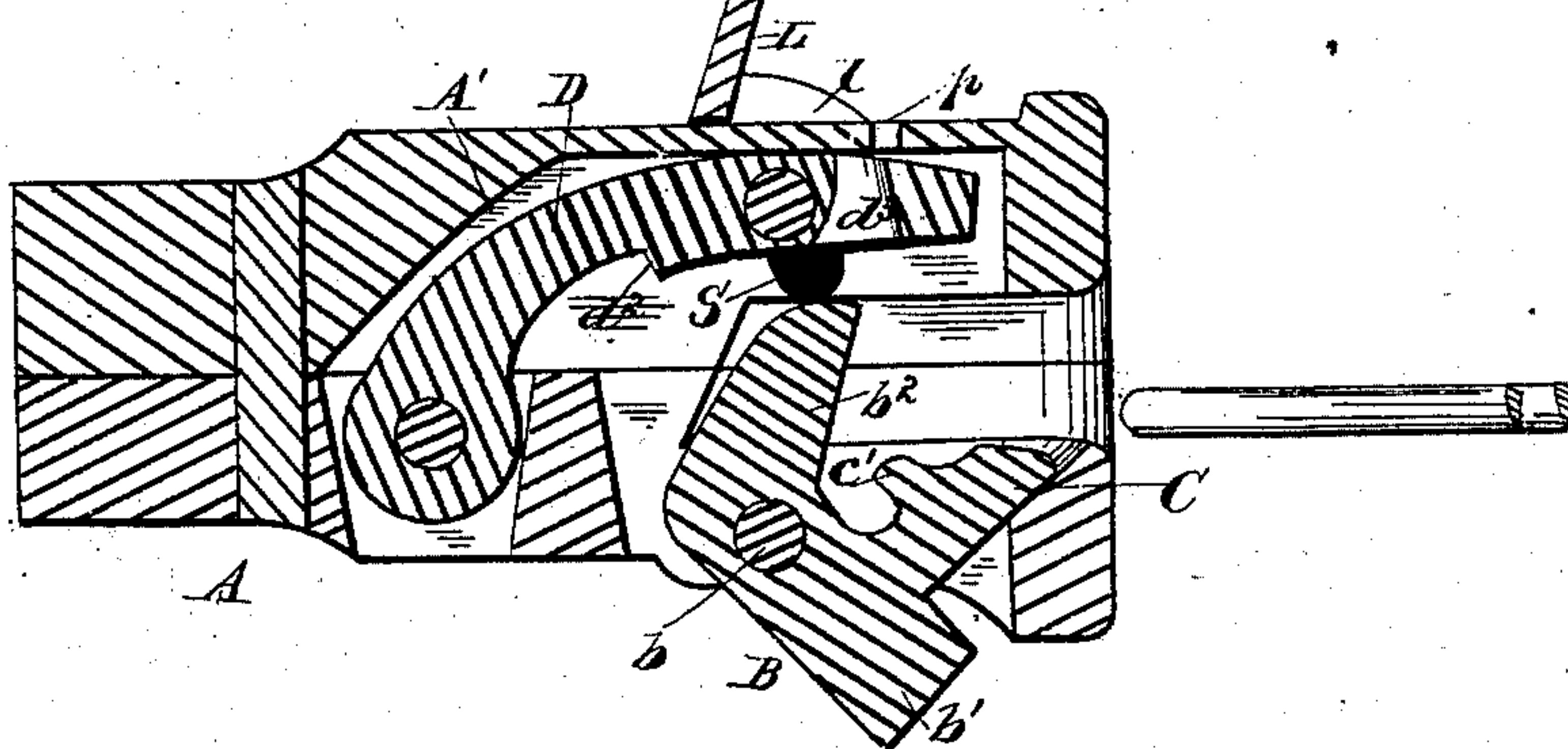
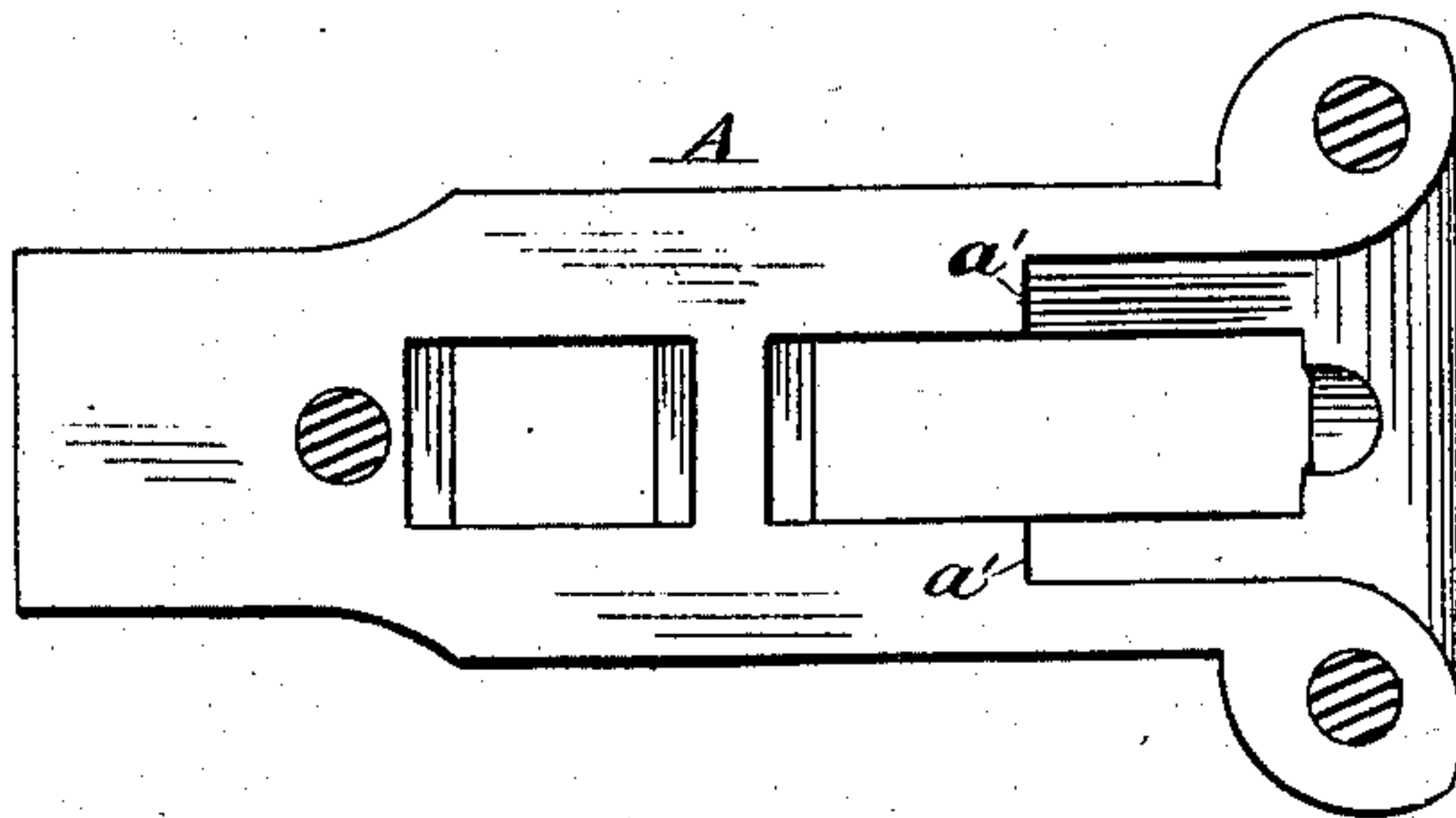


Fig. 4.



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UNITED STATES PATENT OFFICE.

MILTON R. THURBER, OF SCRANTON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JAMES E. CARMOLT, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 255,701, dated March 28, 1882.

Application filed January 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, MILTON R. THURBER, of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of my invention. Fig. 2 is a longitudinal vertical section, showing the position of the parts when set for coupling; Fig. 3, a similar view, showing the position of the parts after the link has entered and the coupling has been effected. Fig. 4 is a sectional view of the draw-head, taken on the line *x x*, Fig. 1.

Similar letters of reference in the several figures denote the same parts.

My present invention has for its object to improve the construction and operation of the device for which Letters Patent No. 242,167 were granted and issued to me May 31, 1881; and it consists in certain improved details of construction whereby the parts are better protected from the weather, and whereby, also, the coupling is rendered more certain and the danger of accidental uncoupling avoided, all as I will now proceed to describe.

In the drawings, A represents the draw-head; B, an angular lever pivoted at *b* and working in a slot in the lower part of the draw-head and carrying an upwardly-projecting pin, C, near the end of its lower arm, *b'*, as shown in Figs. 2 and 3. The base of the arm *b²* of the lever B is brought nearer the pin C than in my old patent, and said arm, instead of being parallel with said pin, is inclined backwardly therefrom, as shown. This improved construction renders the operation of coupling more certain with the link in the draw-head of cars of different heights. In the old coupling, when the link entered at a downward angle, as of course it would when held by the draw-head of a higher car, it sometimes failed to enter far enough to effectively operate on the arm *b²*. In the present case, the base of the arm *b²* being nearer the pin C, or, in other words, farther forward, the inclined link is not required to enter so far before striking the said arm *b²*.

The latch D in the present invention is hinged in the lower part of the draw-head, instead of the upper part, as heretofore, and it plays within a recess, A', in the upper part, and is operated by a cross-bolt, *e*, which passes through its free end and also through oblong slots S in the sides of the draw-head, and has its bearings in the depending lugs or cams *l* of a lever-plate, L. The latch D, it will be observed, thus arranged is entirely within the draw-head, so that its operation cannot be impeded by the accumulation of snow or ice. When the lever-plate is turned down upon the upper face of the draw-head, as shown in Fig. 1, a shoulder, *e'*, on each of its side lugs or cams *l*, engages with and rests upon a stop, *m*, on the side of the draw-head, as shown; but when the said lever-plate is turned up the stops *m* form fulcrums for the cams *l*, and the cross-bolt is made to rise up in the elongated slots in the sides of the draw-head, thus causing the latch to be raised so as to disengage it from the pin C. When the lever-plate is turned down it covers the pin-hole *p* in the upper part of the draw-head, made for the use of an ordinary coupling-pin, and, as this is its normal position, it effectually prevents all snow and rain from passing into the interior of the draw-head. The cams of the lever-plate cover the elongated openings in the sides of the draw-head, and their shoulders *e'* so engage with the stops *m*, when the lever-plate is down, as to lock the parts and prevent accidental uncoupling. When the device is set for automatic coupling the angular lever and pin are in the position shown in Fig. 2. As the link of an approaching car enters the draw-head it strikes the face of arm *b²* and tilts the lever back on its pivot, thereby causing the latch to be swung upward, the pin C at the same time rising up through the link. When the end of arm *b²* reaches a shoulder, *d²*, on the latch the latch falls back to its original position, leaving the arm *b²* engaged with the shoulder *d²* and the pin C projected up through the perforation *d³* in the end of the latch, all as shown in Fig. 3.

In order to prevent the jamming of the arm *b²* by the link when the cars are in motion, the draw-head is formed with protecting-shoulders *a' a'* just in front of said arm *b²*, as shown in Fig. 4, and these shoulders form solid abut-

ments, against which the link can strike without danger to the arm of the lever behind them. To uncouple, it is only necessary to swing up the lever-plate L, which can be done from either side of the draw-head or from above it, as will be readily understood.

The pin C has one inch from its base an elongated knob, *c'*, for the purpose of elevating or lowering the coupling-link and holding itself adjusted either horizontally or lower to conform to the height of the car to be coupled, whether on a level with or lower than the car having the link attached to it, making it unnecessary for a man to guide the link in the act of coupling, and doing away with the necessity of a brakeman for that purpose. When the link is below the knob the link is horizontal; when above it inclines at an angle.

Having thus described my invention, I claim as new—

1. The combination, with the draw-head having the perforation *p* for the passage of an

ordinary coupling-pin and the elongated openings S in its sides, of the cam-lever L and the cross-bolt *e* and latch D, the top of said cam-lever operating to close the pin-perforation when the latch is down, so as to entirely prevent the passage of snow, rain, &c., into the draw-head through said perforation, substantially as described.

2. The combination, with the draw-head having the elongated openings in its sides and the latch and angular lever carrying the pin, of the cross-bolt *e*, the cam-lever and its cams, and the stops on the sides of the draw-head, substantially as described.

3. The pin C on the angular lever B, having the projection *c'* on its rear side, forming a positive angular shoulder for holding the link in horizontal position, substantially as described.

MILTON R. THURBER.

Witnesses:

HORATIO N. PATRICK,
F. N. JENNINGS.