

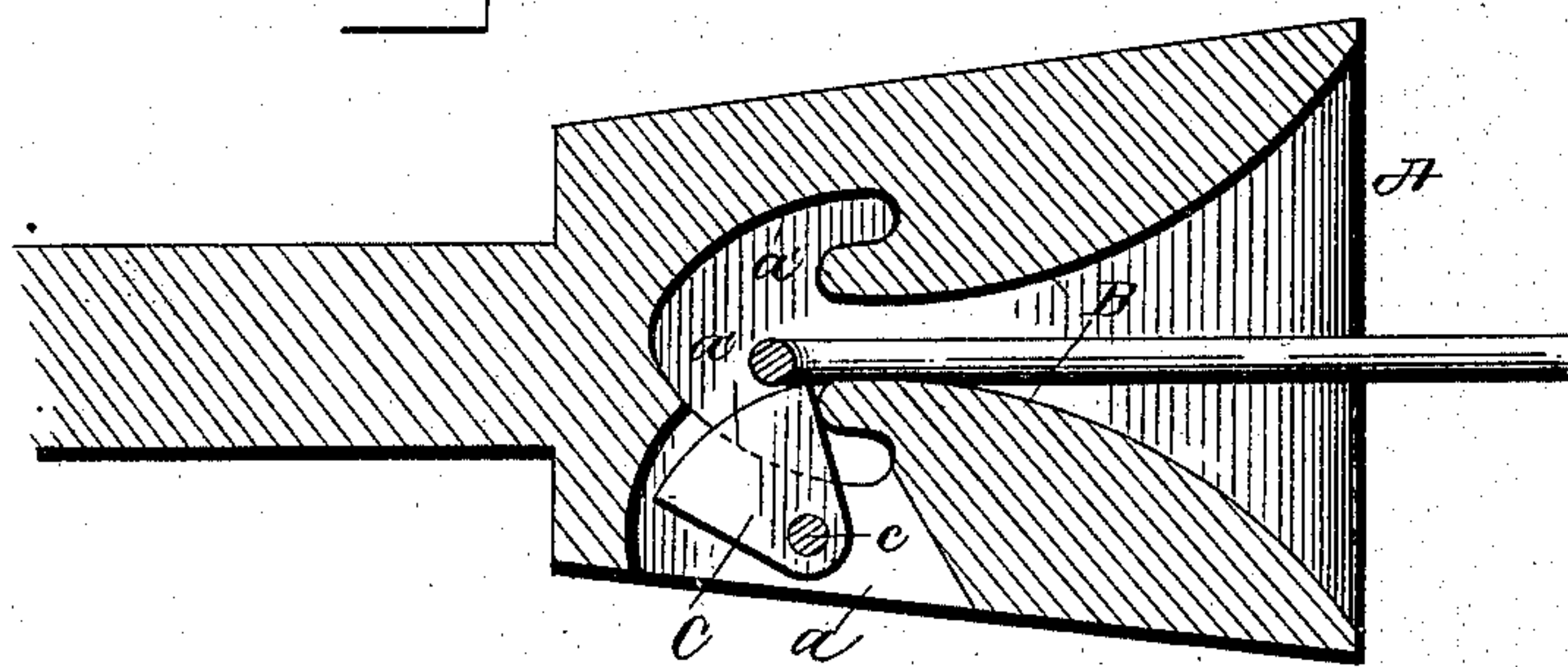
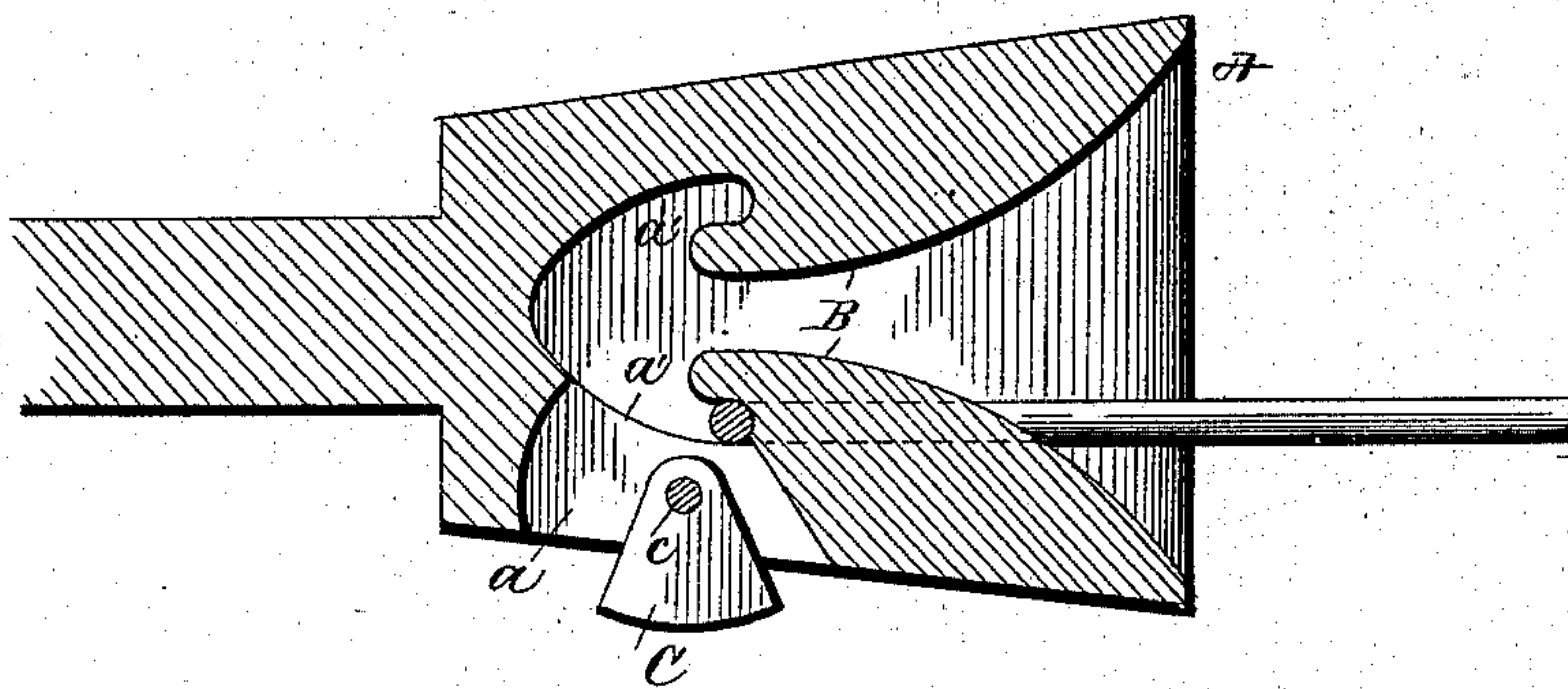
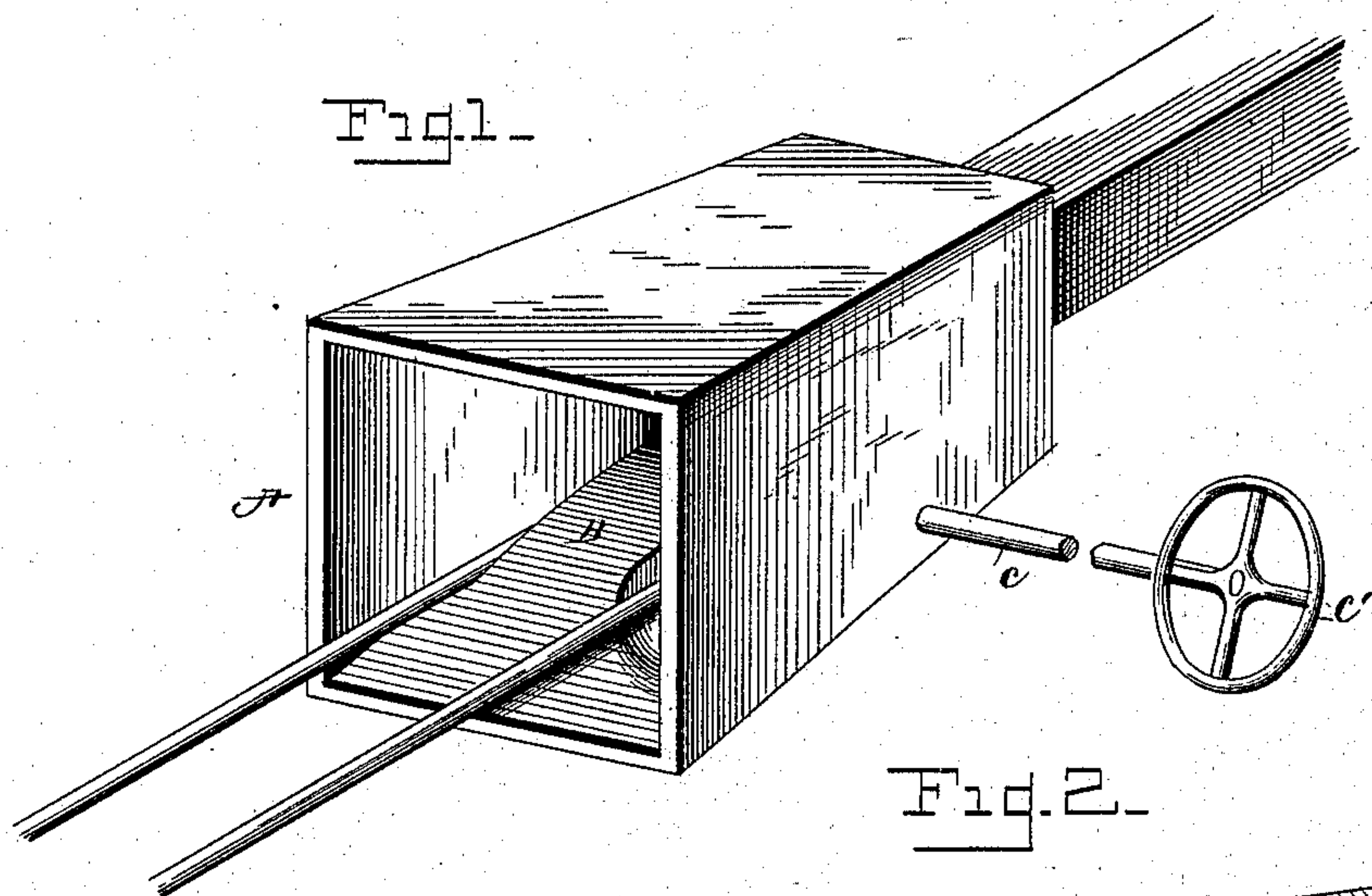
(No Model.)

E. W. ALLEE.

CAR COUPLING.

No. 322,339.

Patented July 14, 1885.



WITNESSES

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# UNITED STATES PATENT OFFICE.

ELIAS WILSON ALLEE, OF LYNNVILLE, IOWA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 322,339, dated July 14, 1885.

Application filed April 20, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, ELIAS W. ALLEE, a citizen of the United States, and a resident of Lynnville, in the county of Jasper and State of Iowa, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to  
10 which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to automatic car-couplings; and it consists in a draw-head having  
15 an interior coupling-hook cast integral therewith and adapted to engage the end of a coupling-link of ordinary construction, and a cam-piece arranged at the bottom of the draw-head in rear of the hook in such a manner that  
20 when the said cam-piece is elevated into contact with the inner operative end of the said hook it will form an incline or bridge over which the end of the coupling-link passes in removing the link from the draw-head.

Referring to the annexed drawings, Figure 1 is a perspective view of a draw-head in which my invention is embodied, showing a coupling-link of ordinary construction in engagement therewith. Fig. 2 is a longitudinal vertical  
30 sectional view through the center of the draw-head, showing the cam-piece resting in its normal inoperative position; and Fig. 3 is a similar view showing the cam-piece elevated into its operative position to admit of the  
35 coupling-link being withdrawn from the draw-head.

The same letters of reference indicate corresponding parts in all the figures.

Referring to the several parts by letter, A represents the draw-head, which is cast with the interior rearwardly-inclined hooks, B, both on its upper and lower interior sides, each of which is beveled upon its upper forward side, so that the coupling-link will slide easily up  
45 the said inclined surface in entering the draw-head. As the cars are slacked up for the purpose of coupling them, the end of the coupling-link, after passing over the upper inclined portion of the said hook, falls by its own weight  
50 upon the lower inclined surface, *a'*, of that portion of the recess of the draw-head back

of the coupling-hook, and as the cars move apart from each other the end of the coupling-link, following the downward-inclined surface, is drawn beneath the operating inner end of the hook B so as to engage firmly therewith, as shown in Fig. 2 of the drawings. 55

In a vertical slot, *a*, immediately to the rear of the hook B, works a cam-piece, C, secured upon a transverse shaft, *c*, which is of a length slightly greater than the width of the car, and has secured upon each end a hand-wheel, *c'*, to admit of the cam-piece being operated by the brakeman from the side of the car, thereby obviating all necessity for getting between the cars, which is a frequent source of accidents. The cam-piece is somewhat triangular in shape, and the transverse shaft *c* passes through it near one of its ends or corners, so that it will of its own weight turn or fall down  
60 in the slot *a* when not in use, out of the way of the coupling-link, as shown in Fig. 2. 65

When it is desired to uncouple the cars, the train is slacked up, which disengages the ends of the coupling-link from the hooks B and forces them up the incline *a'* to a point back of the cam-piece C. The transverse shaft carrying the cam-piece is now rotated by means of one of the hand-wheels at its ends, so as to elevate the cam-piece C into its operative position with one of its ends or corners bearing against the point of the hook B, as shown in Fig. 3, so that when the cars move apart again the end of the coupling-link, instead of passing under the hook B, will ride  
80 up over the inclined side of the cam-piece C (which closes or cuts off the entrance to the space beneath the hook-point) and over the inclined top of the hook out of the draw-head, thereby uncoupling the cars. When the  
85 brakeman removes his hand from the wheel *c'*, the cam-piece falls by its own weight down within the slot *a*, so as to leave the hook B free to engage the coupling-link, when the car is again coupled to another. 95

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of my improved car-coupling will be readily understood without requiring further explanation. 100

It will be seen that my coupling device is exceedingly simple in construction, and is de-



void of all springs or complicated mechanism which is liable to break or get out of order.

The draw-head is made double, as shown—that is to say, it is provided at both its upper 5 and lower sides with an interior coupling-hook and suitable openings for the cam-piece and its operating-shaft—so that in case the hook on the inner lower side of the draw-head becomes broken the draw-head may be reversed 10 in a few moments by any person and the cam-piece and its operating-shaft secured in what will then be the lower side of the head, so as to operate the same as before, thereby effecting a considerable saving both in time and 15 money.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of the draw-head having 20 ing the interior coupling-hook and the cam-piece arranged at the bottom of the draw-head in rear of the hook, for the purpose set forth.

2. The combination of the draw-head hav- 25 ing the interior rearwardly-extending coup-

ling-hook integral therewith and the cam-piece secured upon a transverse shaft at the bottom of the draw-head in rear of the hook, as set forth.

3. The combination of the draw-head hav- 30 ing the interior coupling-hook, the transverse shaft arranged at the rear of said hook, and the cam-piece secured centrally upon the transverse shaft, for the purpose set forth.

4. The reversible draw-head having at both 35 its upper and lower sides the interior rearwardly-extending coupling-hook, the vertical slot for the cam-piece, and the horizontal opening for the transverse shaft upon which the said cam-piece is secured, in combination 40 with the cam-piece and its operating-shaft, as set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

ELIAS WILSON ALLEE.

Witnesses:

C. R. DIXON,

C. M. MENDENHALL.