

(No Model.)

2 Sheets—Sheet 1.

J. C. LOOK.
AIR BRAKE COUPLING.

No. 598,348.

Patented Feb. 1, 1898.

Fig. 1.

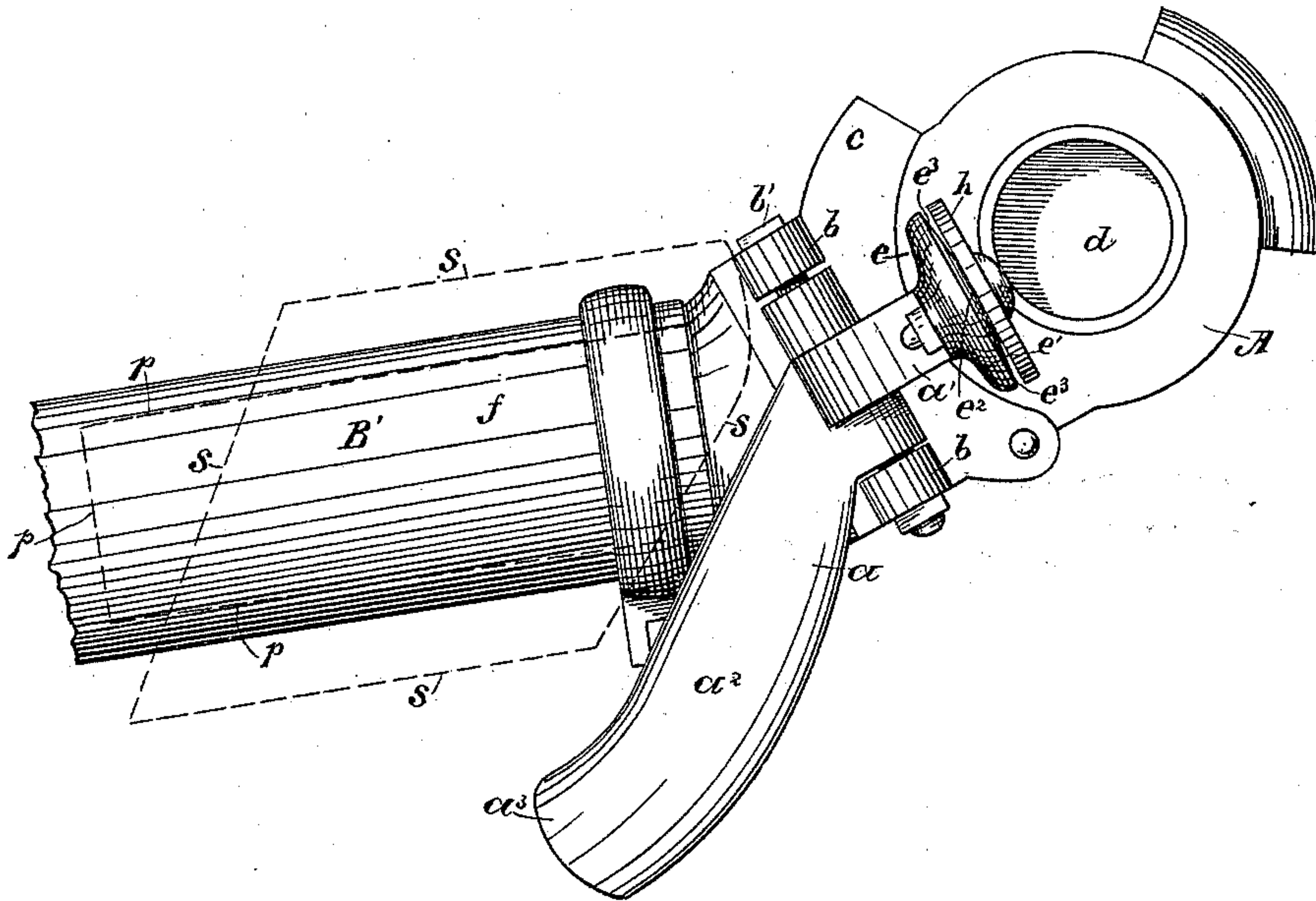
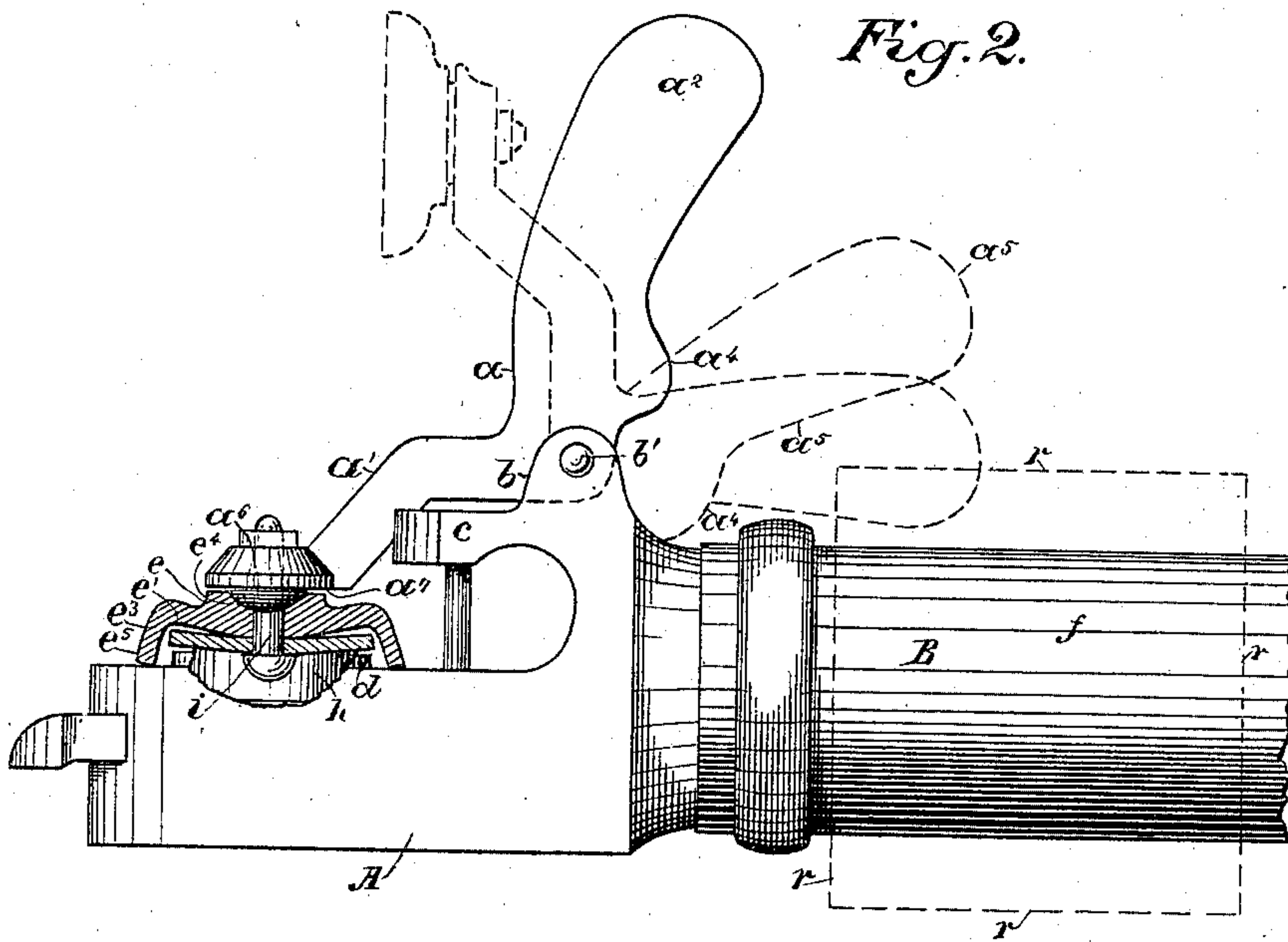


Fig. 2.



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Fig. 3.

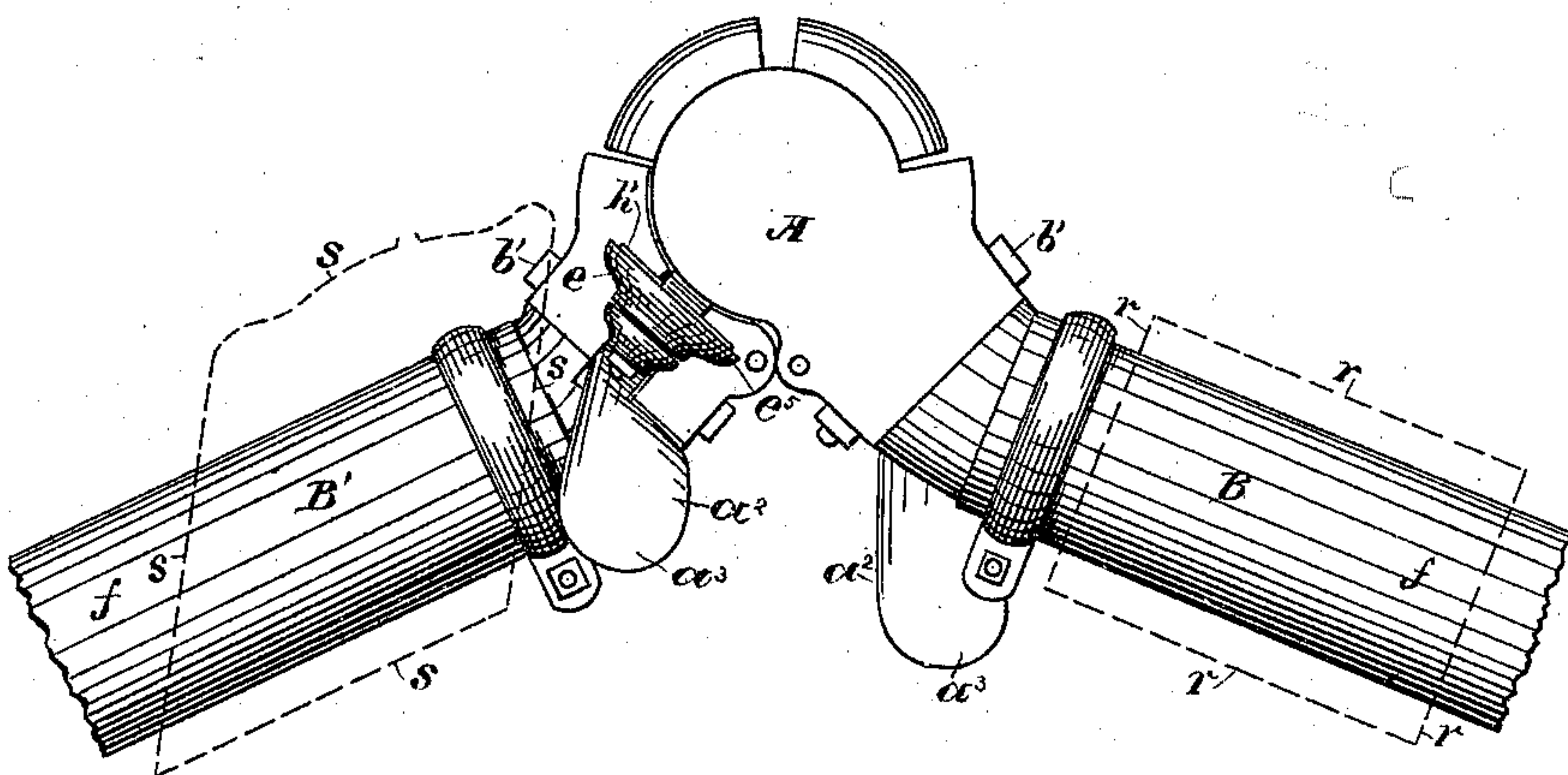


Fig. 4.

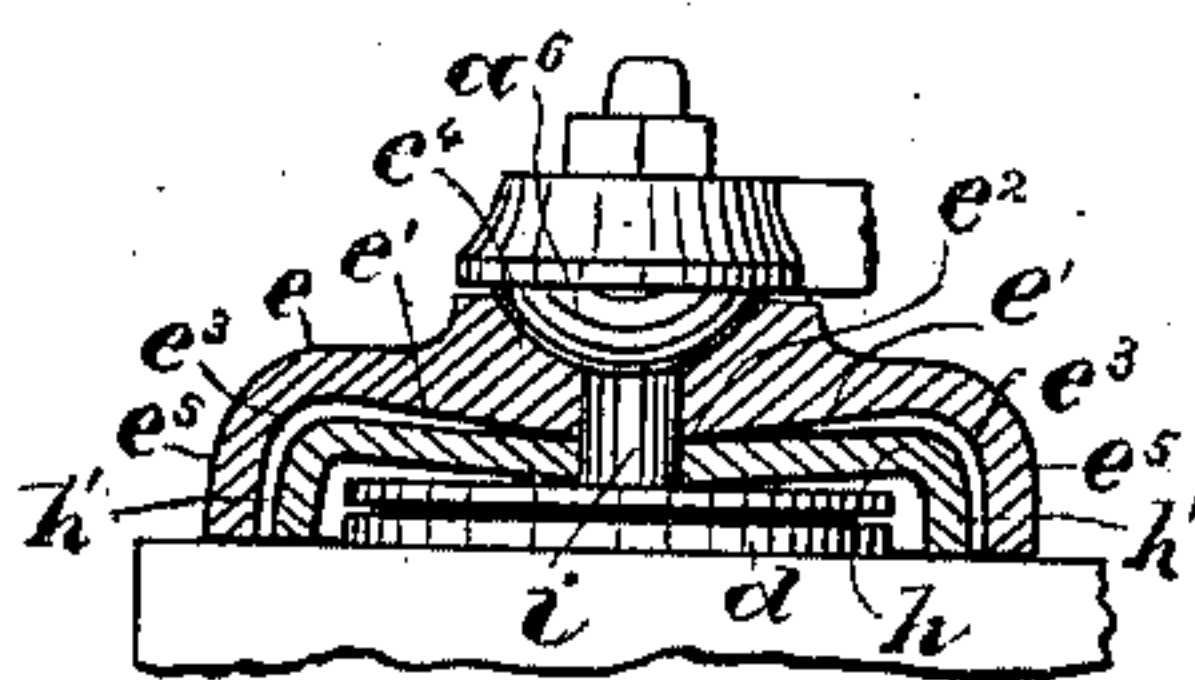


Fig. 5.

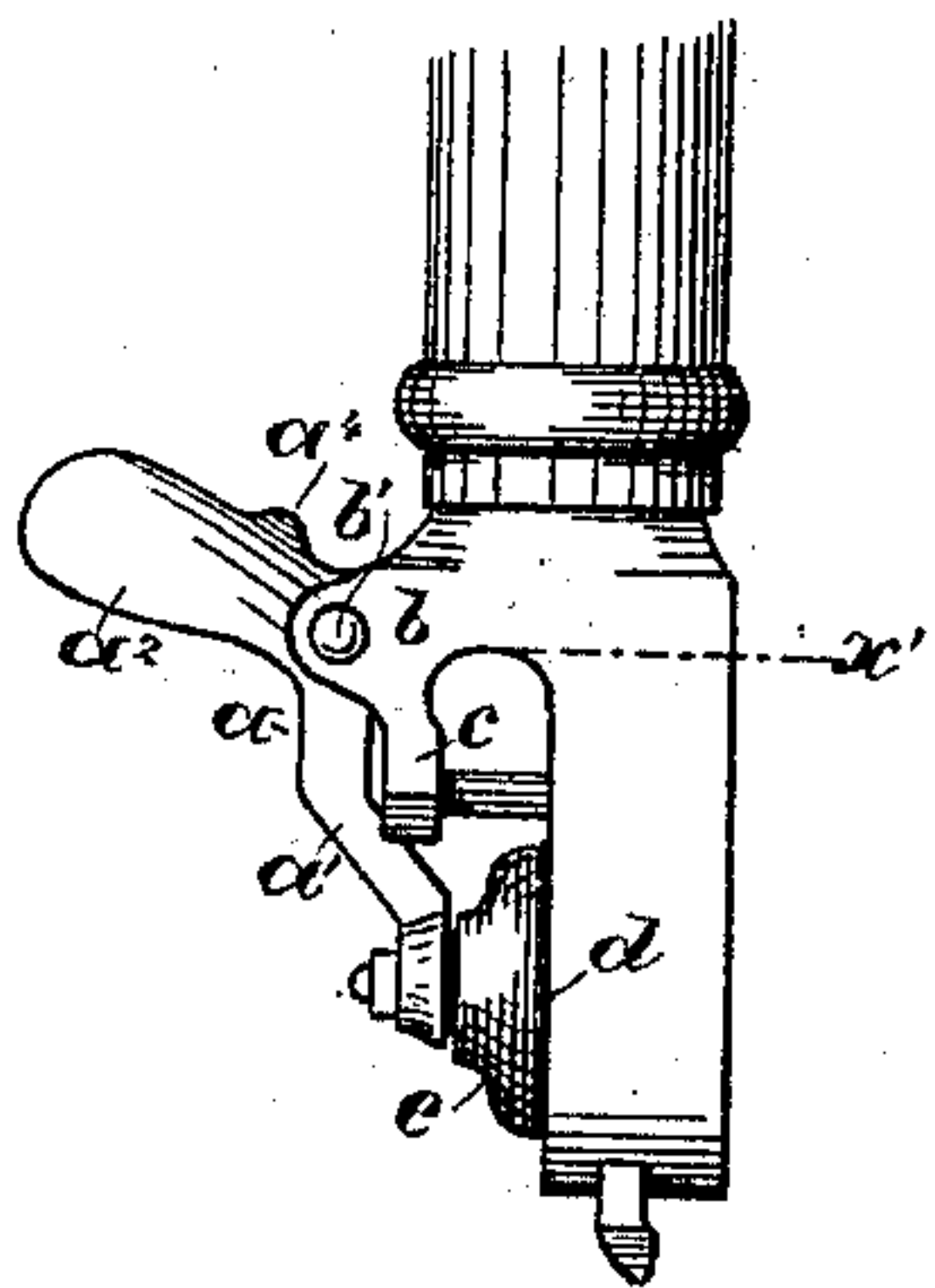


Fig. 6.

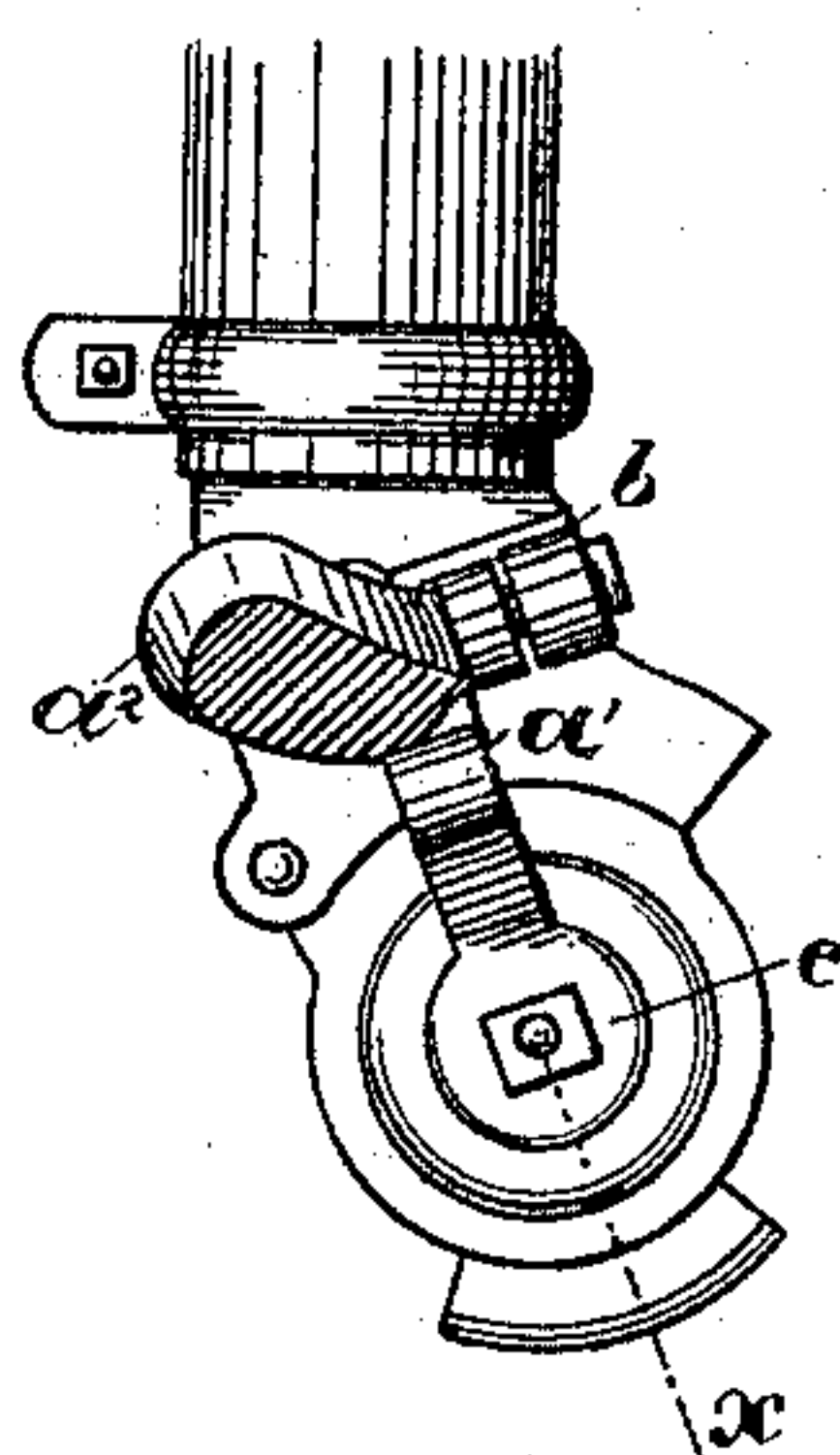
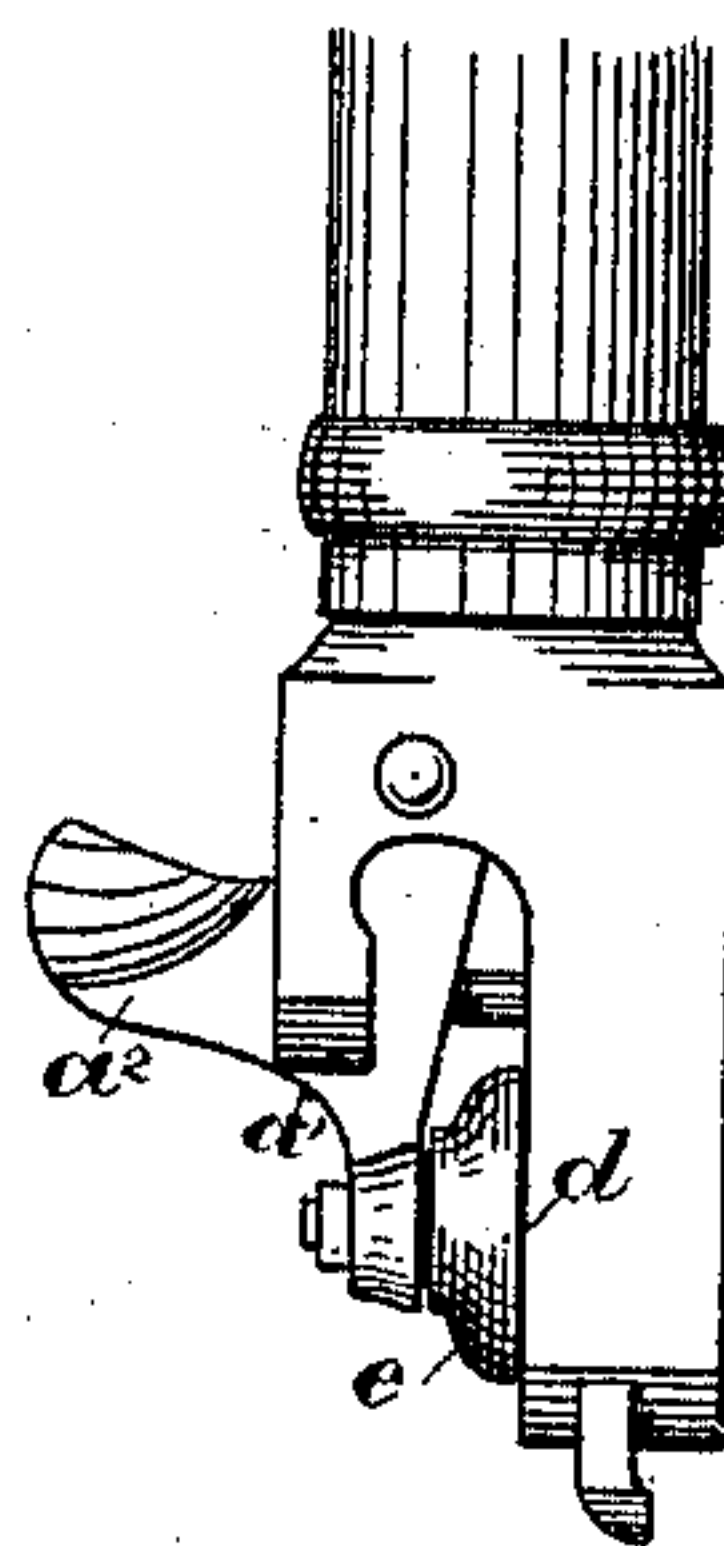


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN C. LOOK, OF SAN JOSÉ, CALIFORNIA.

AIR-BRAKE COUPLING.

SPECIFICATION forming part of Letters Patent No. 598,348, dated February 1, 1898.

Application filed July 16, 1897. Serial No. 644,806. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. LOOK, a citizen of the United States, residing at San José, county of Santa Clara, State of California, have invented an Improvement in Air-Brake Couplings; and I hereby declare the following to be a full, clear, and exact description of the same.

The object of the improvement is to provide a dust-cap for the air-port of the coupling that will close automatically when left separate and open automatically when raised to the connecting position without in any manner interfering with the position required by the hand in the manipulation, and also to provide means for adjusting the cap and more perfectly sealing the port. It is more properly an improvement on the invention described by me in Serial No. 629,787, filed March 29, 1897, and lies principally in the position occupied by the weight which actuates the closing and opening of the device.

In the drawings, Figure 1 is a face view of the coupling raised to the connecting position. Fig. 2 is a top view of a coupling in the act of being tilted, the cap being closed, but open in dotted lines and in section on line x of Fig. 6. Fig. 3 is a side view of two couplings in the act of being united. Fig. 4 is a sectional view of a dust-cap, taken on line x of Fig. 6. Fig. 5 is a side view of a coupling separate and dependent. Fig. 6 is a face view of a coupling separate and dependent. Fig. 7 is a side view of a coupling separate and dependent.

The improvement consists of the crank-shaped lever a , pivoted between ears bb . One part of the lever a' is provided with a cap e to close the air-port d . The other part is the weight a^2 , which furnishes the power to hold the cap against the port. (See Figs. 5, 6, and 7.)

The coupling A is made of cast metal, and the pipe f is of rubber, with the metal of the coupling extending into the pipe, as indicated by dotted lines $p p p$, Fig. 1, to form the union.

Now in grasping the couplings for the purpose of connecting the two, they are taken as near the coupling-heads as possible, as a firm hold can only be had at the juncture of the pipe and coupling, and the one held in the

right hand (marked B) is grasped straight across the pipe, as indicated by dotted lines $r r r r$, Fig. 3, also Fig. 2, and the one held in the left hand, (marked B'), which is the one farther away, is grasped with the hand underneath, and in raising to the connecting position the hand assumes the position as marked in the diagonal dotted lines $s s s s$, Fig. 3, also Fig. 1, and while the couplings are being raised to the tilted position shown in Fig. 3 the pivot b' is thrown past the center, and the weights $a^2 a^2$ fall rearwardly and open the caps while the hands are grasping the pipes. Therefore that the hands may not interfere with the weight or the weight with the hands the weight is made in such a way as to pass under the hand or stop short of the hand. In passing under the hand, which is considered to be the more preferable, the weight has to be made heavier the more it falls out of line of the pivot, and so is started at the pivot b' and slants toward the end a^3 .

The stop a^4 , Figs. 2 and 5, is for resting the weight at any desired point, and may rest it at dotted line a^5 , in which case no slant would be necessary, as the weight is stopped short of the hand.

The cap e may be made rigid with the lever a' , as in Fig. 1, or adjustable, as in Fig. 2.

The cap e has an oval face e' , with the center e^2 for resting within the port. In the center of the cap is bolted the cover h , which may be of rubber or other flexible material. Between the rim of the cover and the cap is a space $e^3 e^3$, which allows any part of the cover to press backward until all the rim of the cover and gasket meet or until the rim of the cap rests on the coupling.

In Fig. 2 a hollow adjustable cap is shown, being adjusted by means of the ball-and-socket bearing. The socket e^4 is fitted in by the ball a^6 . A rim a^7 passes around the ball, as only a limited amount of adjusting space is needed. A bolt i passes through the cover h , the cap e , and the lever a' , which hold all firmly together. The rim e^5 may rest on the face of the coupling. The manner of adjusting is to press the cap e until all the rim rests on the face of the coupling and then tighten the bolt i , after which the cap remains in the same place.

Fig. 4 has a hollow cap, with a hollow cover of flexible material within, both to rest on the face of the coupling, with the aforesaid moving space for the within cover, the rim h' to first strike the coupling and then press back to allow the rim e^5 to strike.

c is the compressing-arm.

Dotted line α' , Fig. 5, is the cross-section of the compressing-arm.

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

1. In an air-brake coupling, a device for closing the port consisting of a weighted lever 15 pivoted to the coupling in the line of the direction of the pipe, said lever to close the port automatically by reason of the weight when the coupling is separate and dependent, and to open automatically by reason of the weight 20 when tilted beyond the perpendicular line of the pivot, and the said weight when tilted to rest in a manner to leave the pipe free for hand manipulation.

2. In an air-brake coupling, a device for 25 closing the port, consisting of a weighted lever pivoted to the coupling in the line of the direction of the pipe, said lever to close the port automatically by reason of the weight when the coupling is separate and dependent, and 30 to open automatically by reason of the weight when tilted beyond the perpendicular line of the pivot and the said weight when tilted to rest below the line of the pipe in a manner to leave the pipe free for hand manipulation.

3. In an air-brake coupling, a device for 35 closing the port consisting of a weighted lever pivoted to the coupling in the vicinity of the cross-section of the compressing-arm, said lever to close the port automatically by reason of the weight when the coupling is separate 40 and dependent, and to open automatically by reason of the weight when tilted beyond the perpendicular line of the pivot, and the said weight when tilted to occupy a position below the middle of the said pivot, and to pitch 45 at an angle away from the line of the pipe.

4. In an air-brake coupling, a pivoted device for closing the port, with the port end provided with a cap adjustable by means of a ball-and-socket bearing. 50

5. In an air-brake coupling, a pivoted device for closing the port, with the port end provided with a cap having a flexible cover, and the point of connection of the cover to fall within the orifice of the port, and moving 55 space for the rim of the said cover.

6. In an air-brake coupling, a pivoted device for closing the port, with the port end provided with a hollow cap, and a hollow cover of flexible material within, and moving 60 space for the rim of the within cover.

In witness whereof I have hereunto set my hand.

JOHN C. LOOK.

Witnesses:

DALTON Z. LOOK,
V. L. EARNSHIELDS.