

(No Model.)

G. A. BULLOCK.  
Brake Shoe.

No. 232,933.

Patented Oct. 5, 1880.

Fig. 1.

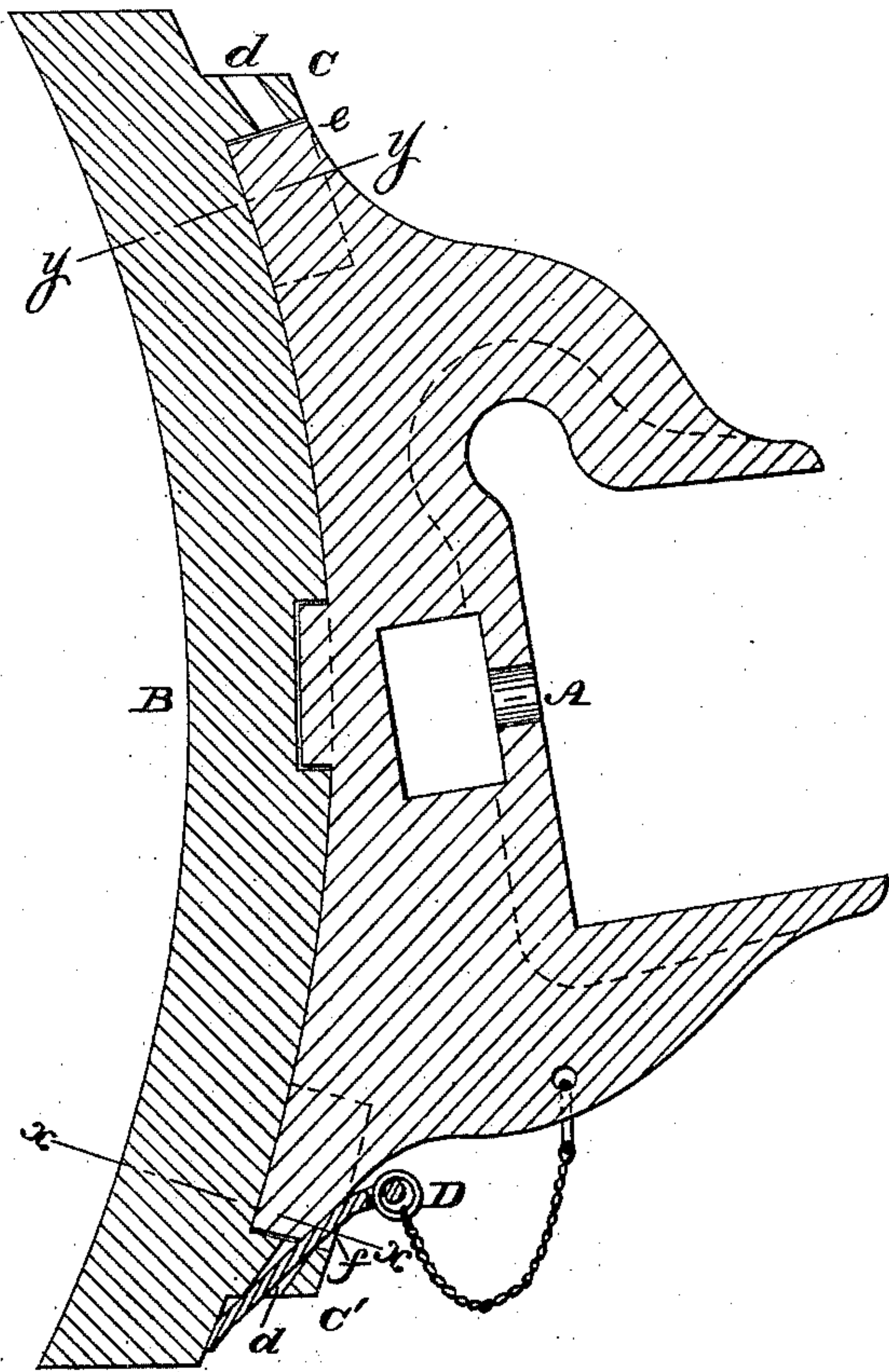


Fig. 2.

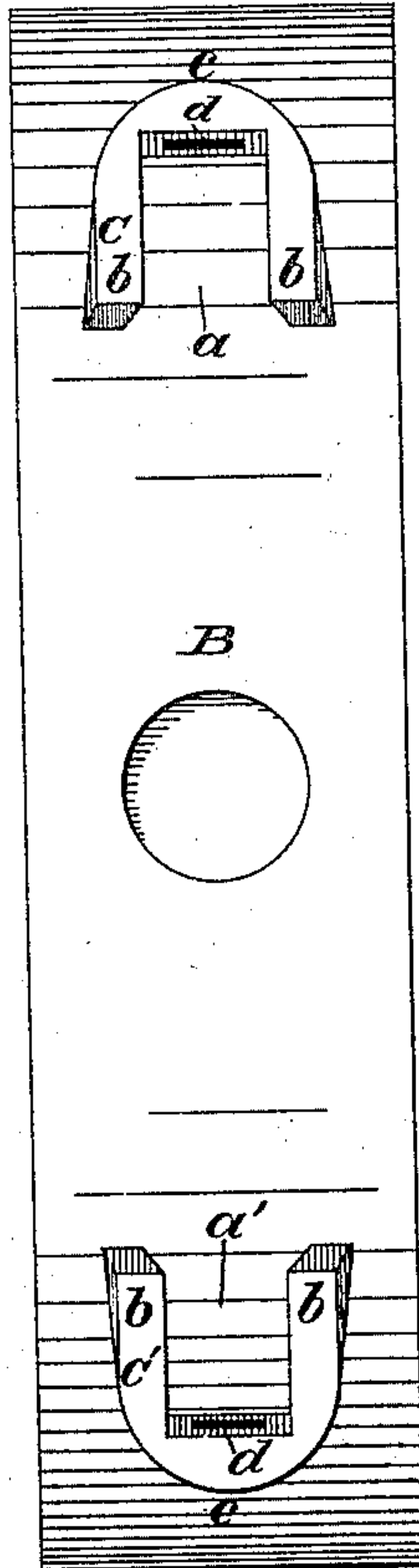


Fig. 3.

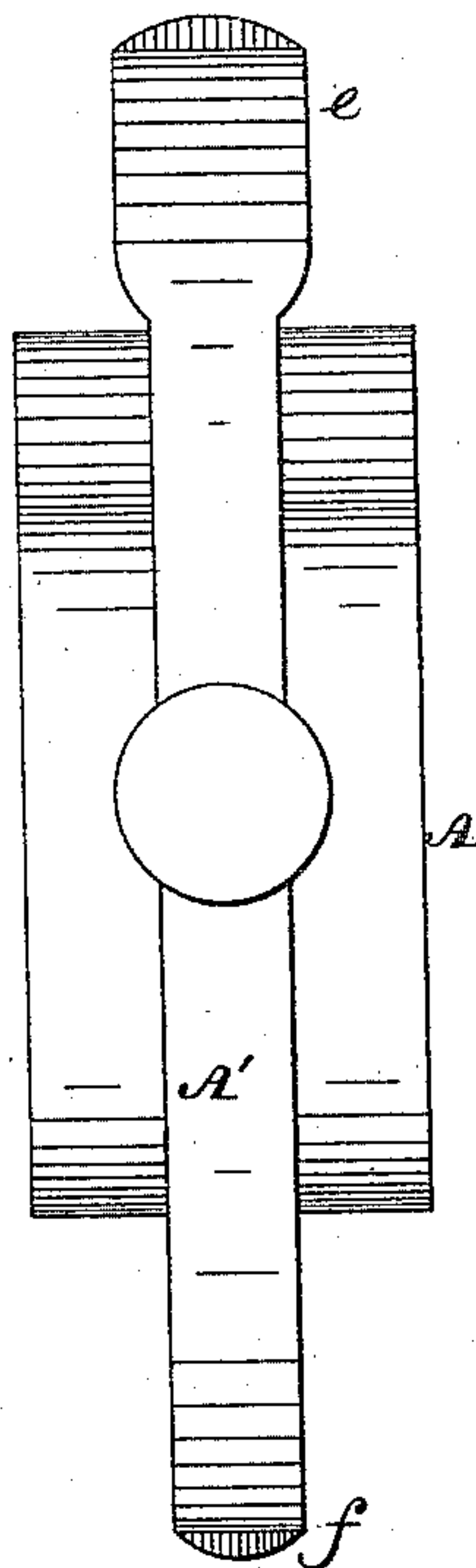


Fig. 4.

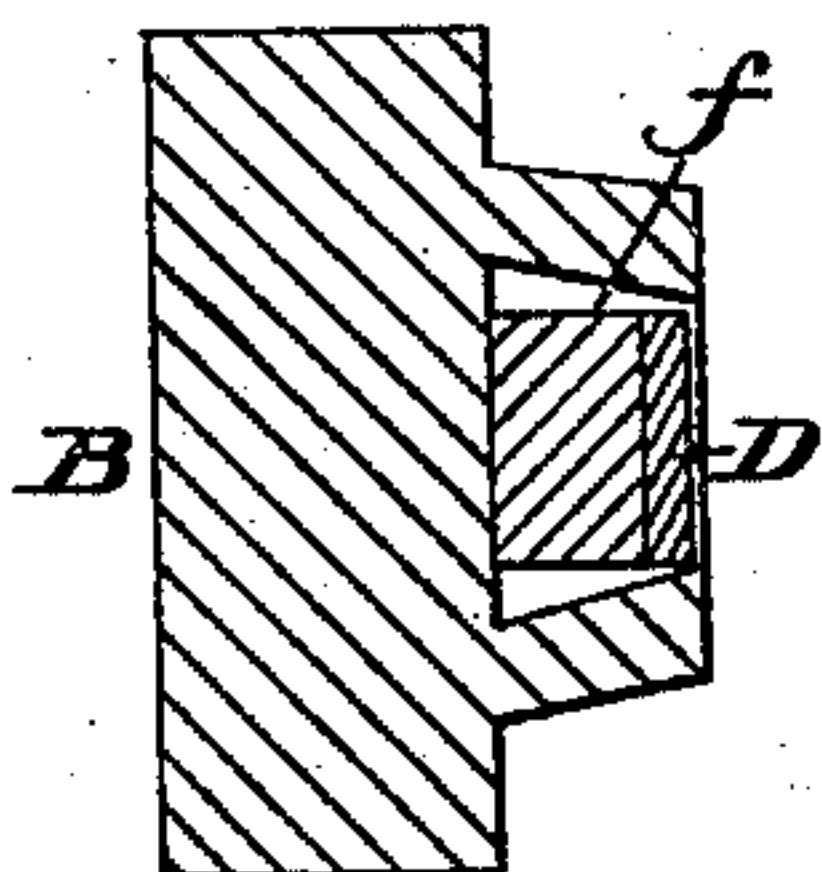
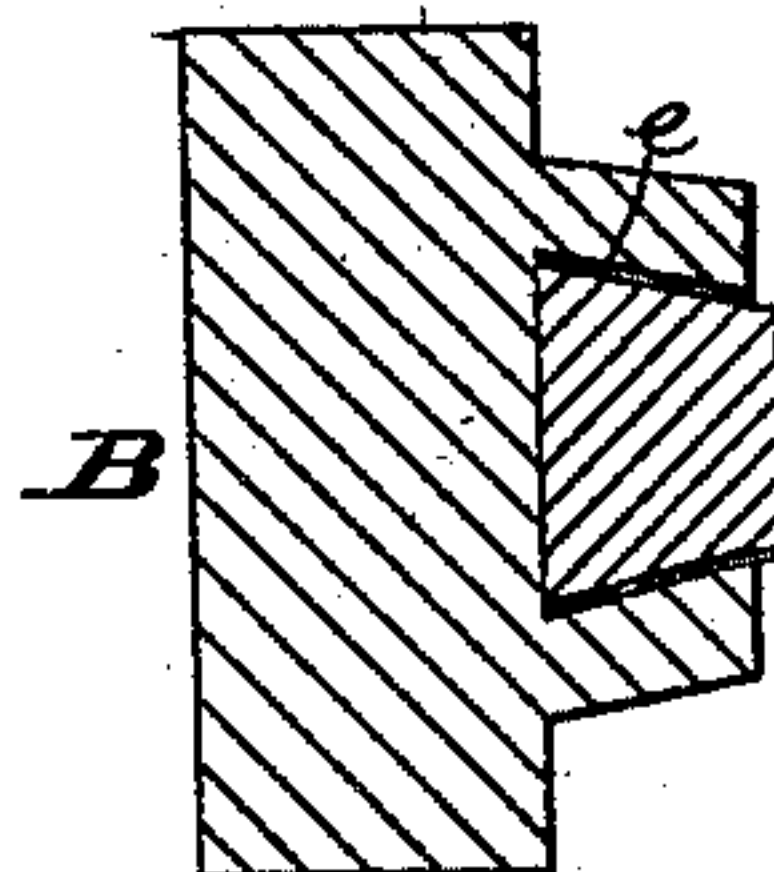


Fig. 5.



Witnesses:

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# UNITED STATES PATENT OFFICE.

GEORGE A. BULLOCK, OF NORWICH, CONNECTICUT.

## BRAKE-SHOE.

SPECIFICATION forming part of Letters Patent No. 232,933, dated October 5, 1880.

Application filed July 22, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE A. BULLOCK, a citizen of the United States, residing at Norwich, in the county of New London, State of Connecticut, have invented a new and useful Improvement in Brake-Shoes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a vertical section of the brake embodying my invention. Figs. 2 and 3 are views of contiguous parts of the liner and head. Fig. 4 is a horizontal section thereof in line *x x*, Fig. 1. Fig. 5 is a horizontal section in line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to brake-shoes; and it consists in the construction and combinations of the devices hereinafter duly set forth.

Referring to the drawings, A represents the head or stock, to which the brake-beam is bolted, and B the liner attached to said head.

On the back of the liner, at opposite ends thereof, are two similarly-formed sockets, C C', cast with or secured to the liner, and open toward each other, as more clearly shown at *a a'*, Fig. 2. The inner faces of the side walls, *b b*, of said sockets are dovetailed, and each cross-piece *c* has a diagonal opening, *d*, for the passage of the fastening-key D.

The ends of the neck-piece A' of the head A, which are adapted to enter the sockets C, are dissimilar in width, the upper end, *e*, being dovetailed, so as to lock with the socket C, and the lower end, *f*, adapted to enter the socket C' without locking with its dovetail walls *b*, it being remembered that the two sockets are similar in construction, while the two ends *e f* are different.

In order to connect the liner and head the end *e* of the head is moved into the socket C through the open end *a*, so as to lock therewith. The end *f* of the head is then pushed home into the socket C' by a motion directly toward the liner. The key D is now inserted through the opening *d* of the socket C' and presses against the back of the end *f* of the head A. As the opening *d* is diagonal, and

the key is in contact with the end of the head, the key is wedged between the head and socket, and thus forces the head firmly against the liner, separation of the two parts and rattling joints between them being thereby prevented. Both ends of the head are now securely connected to the liner, the end *e* by its dovetail connection with the socket C, and the end *f* by the key D, the side walls of the socket C' preventing lateral displacement of the end *f*. When the shoe is hanging in position the liner may be readily removed by withdrawing the key D and drawing the lower portion of the liner from the socket C', which offers no obstruction to such movement, and raising the shoe so that the socket C clears the end *e*. The liner, as removed, may now be reversed and reapplied. The socket C' now alone is slipped over the dovetailed end *e*, and the lower portion of the liner pressed against the end *f*, so that the socket C, now below, receives said end. The key D is now wedged as before, only that in this case it is passed through the opening *d* of the socket C, because it is always inserted in the opening of the lower socket.

The back of the liner may have an opening to receive a projection or lug on the middle portion of the neck A' of the head, and provide a central connection and bearing for said head and liner.

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

1. The liner having on its back two similar dovetailed sockets, C C', in combination with the head having two ends, *e f*, dissimilar in width, one of them being dovetailed, substantially as and for the purpose set forth.

2. The liner having two similar sockets, C C', with an opening, *d*, in each, in combination with the head having two dissimilar ends, *e f*, one of which is dovetailed, and the key D, substantially as and for the purpose set forth.

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