

J. CHRISTY.  
BRAKE SHOE.

No. 49,948.

Patented Sept. 12, 1865.

Fig. 1.

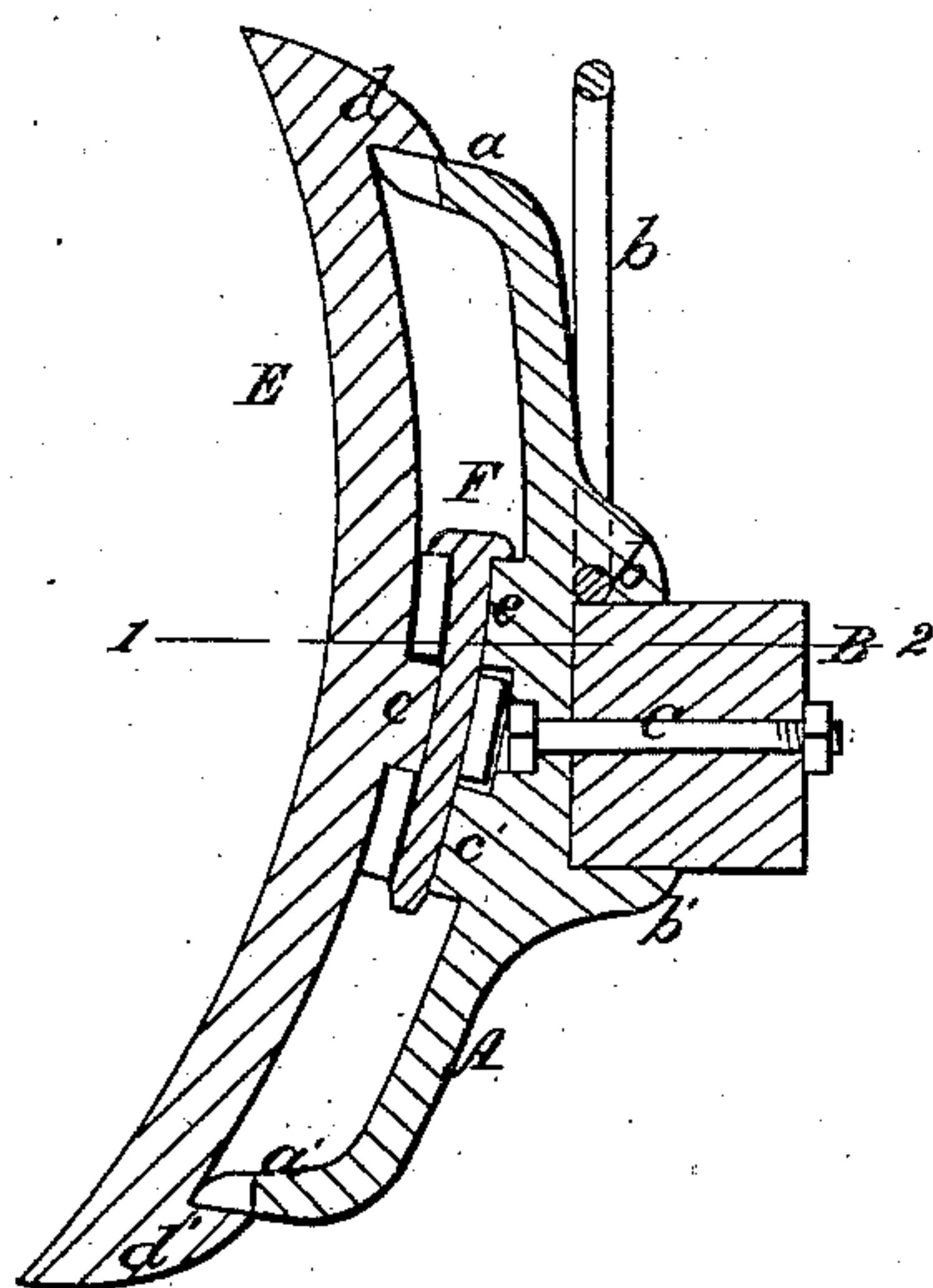
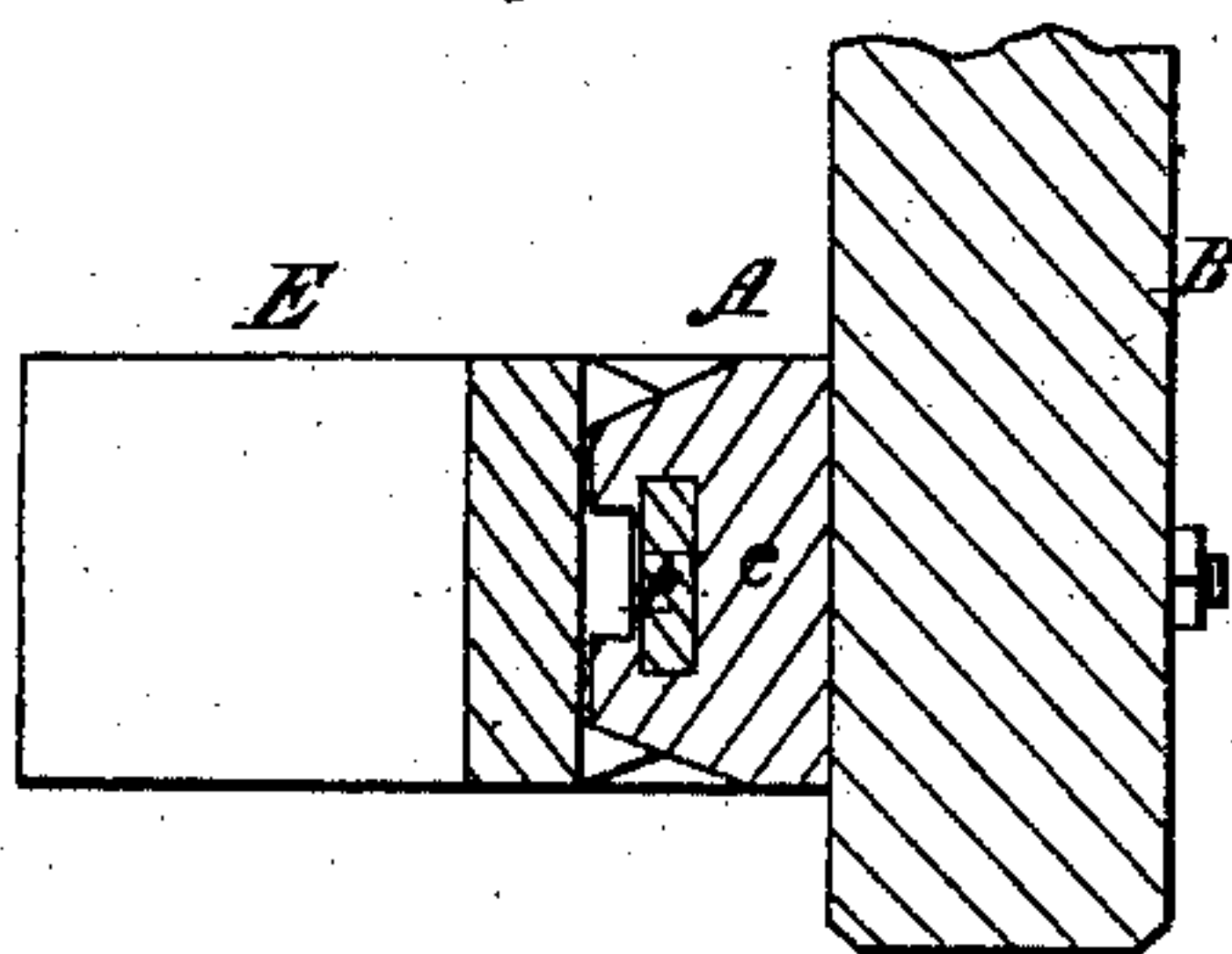


Fig. 2.



Witnesses,

Wm. Albert Stiel  
John Parker

Inventor,  
J. Christy,

per

H. H. Howson  
Att'y.

# UNITED STATES PATENT OFFICE.

JAMES CHRISTY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF, RUDOLPH DIRKS, AND E. H. ZITZMAN.

## IMPROVED BRAKE-SHOE.

Specification forming part of Letters Patent No. 49,948, dated September 12, 1865.

*To all whom it may concern:*

Be it known that I, JAMES CHRISTY, of Philadelphia, Pennsylvania, have invented certain Improvements in Brake-Shoes; 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, and to the letters of reference marked thereon.

My invention consists of a holder with two lugs on the face of the same and a sole with a lug on the back, the two being constructed and adapted to each other, as fully described hereinafter, so that they may be secured firmly together by a key which passes vertically through the said lugs.

My invention also consists of a key curved in such a manner that it cannot be thrown from its position by the jolting of the truck.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a sectional view of my improved brake-shoe, showing the same secured to the brake-beam; and Fig. 2 is a section on the line 1 2, Fig. 1.

A is a metal plate or holder, at the upper end of which is a projection, *a*, and at the lower end a similar projection, *a'*, and at the back of the holder are two projections, *b b'*, which embrace the brake-beam B, the holder being secured to the latter by a bolt, C.

E is the sole, which is curved to correspond to the wheel, against which it bears, and at the back of which is a lug, *c*, and two ribs, *d d'*, each of the latter being adjacent to the outer side of one of the projections *a a'*, the sole bearing against the ends of the said projections, and also against the ends of two lugs, *e e'*, on the face of the holder A. The lug *c* is such a distance above the lug *e'* that the lug *c* on the sole may project into the space between the two, and in each of the lugs *e e'* is an opening, and through all the lugs passes a curved key, F.

In the under side of the projection *b* is a recess, through which passes the link G, by which the shoe is suspended to the truck. When the sole has to be detached from the holder the key F is raised until its head strikes the under side of the projection *a*, the key being thus entirely

withdrawn from the lug *c*, so that the sole can be removed from the holder. When the sole is to be replaced it is brought to its first position and the key is pushed downward until it projects through all the lugs *e e'*, when the sole will be secured firmly to the holder.

As the pin F cannot be readily withdrawn from any but the two lower lugs, *c* and *e'*, its point remaining in the lug *c*, it will be always retained in the holder, and cannot readily be lost or mislaid. In consequence, also, of the curve given to the pin it cannot be thrown upward by the jolting of the truck, and is therefore retained steadily in its place, the usual expensive bolts, with nuts for holding the same, being thus dispensed with. It will be apparent, however, that should the key be lost any ordinary spike, or even a pin of tough wood, can be used as a substitute, inasmuch as there is little or no strain on the key.

In a brake-shoe constructed as above described the sole may be detached and replaced with that readiness and dispatch so essential in devices of this character. The shoe is simple, and may be cast without the use of expensive cores, and the sole may be used until but little excepting the lug *c* and ribs *d d'* remains. It will also be seen that a shoe of this character may be used on either end of the brake-beam.

If desired, there may be two lugs on the sole and but one on the holder. I however prefer the arrangement herein described.

I claim as my invention and desire to secure by Letters Patent—

1. The holder A, with its lugs *e e'*, and the sole E, with its lug *c*, constructed and secured together by the key F passing through the lugs, substantially as described.

2. The key F, for securing the sole E to the holder, the said key being curved, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES CHRISTY.

Witnesses:

CHARLES E. FOSTER,  
W. J. R. DELANY.