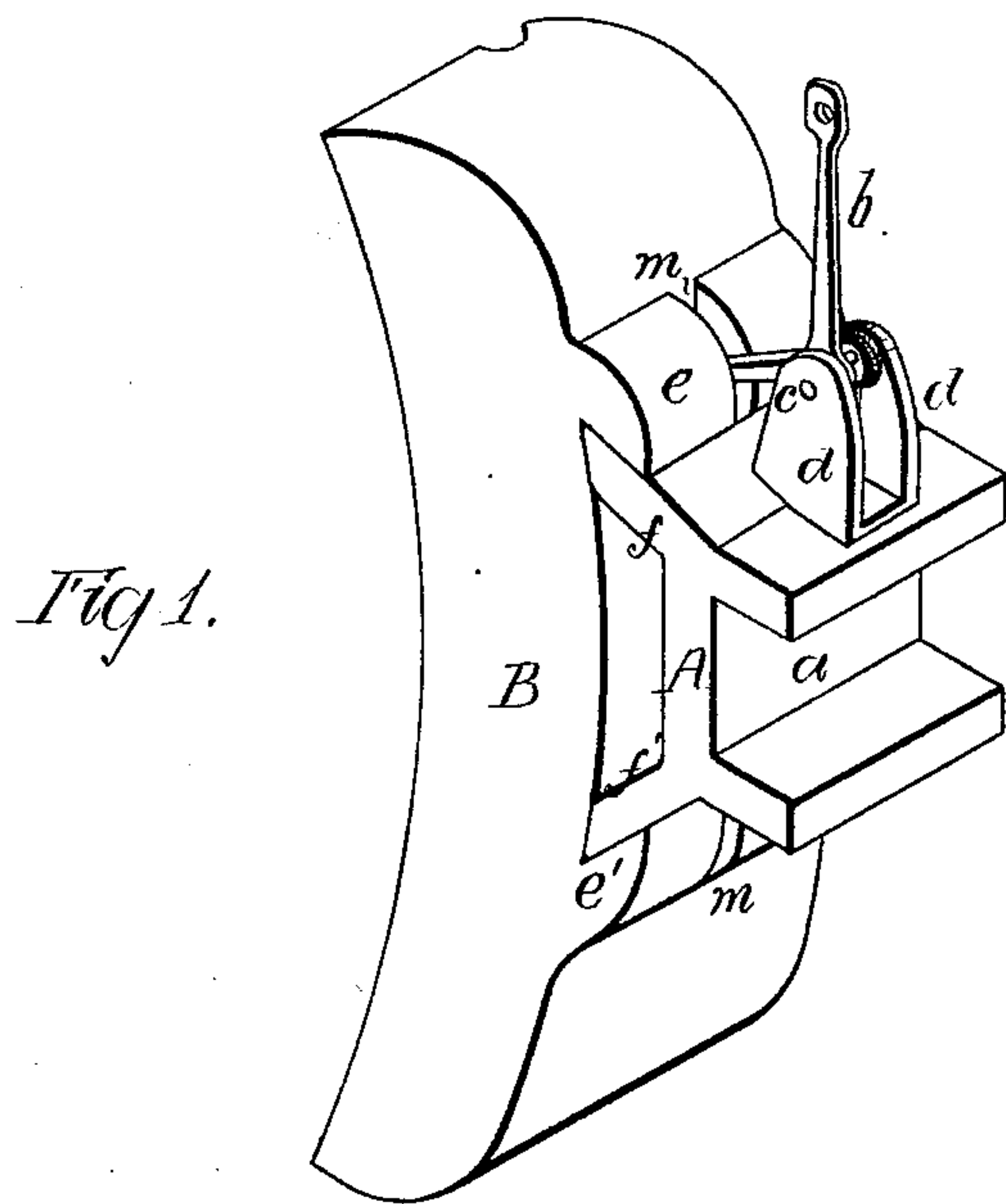


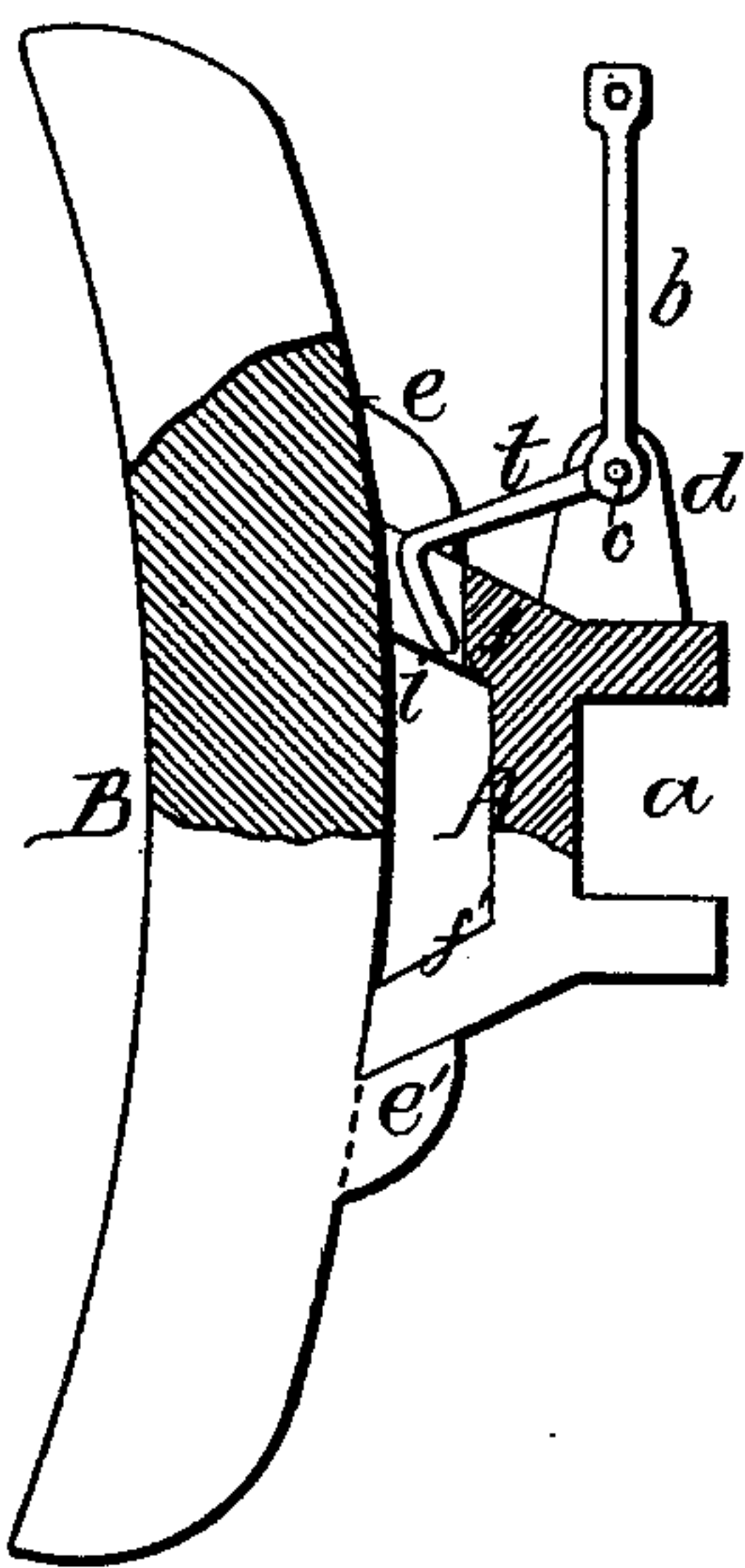
W. S. RICHARDSON.  
Car-Brake.

No. 197,175.

Patented Nov. 13, 1877.

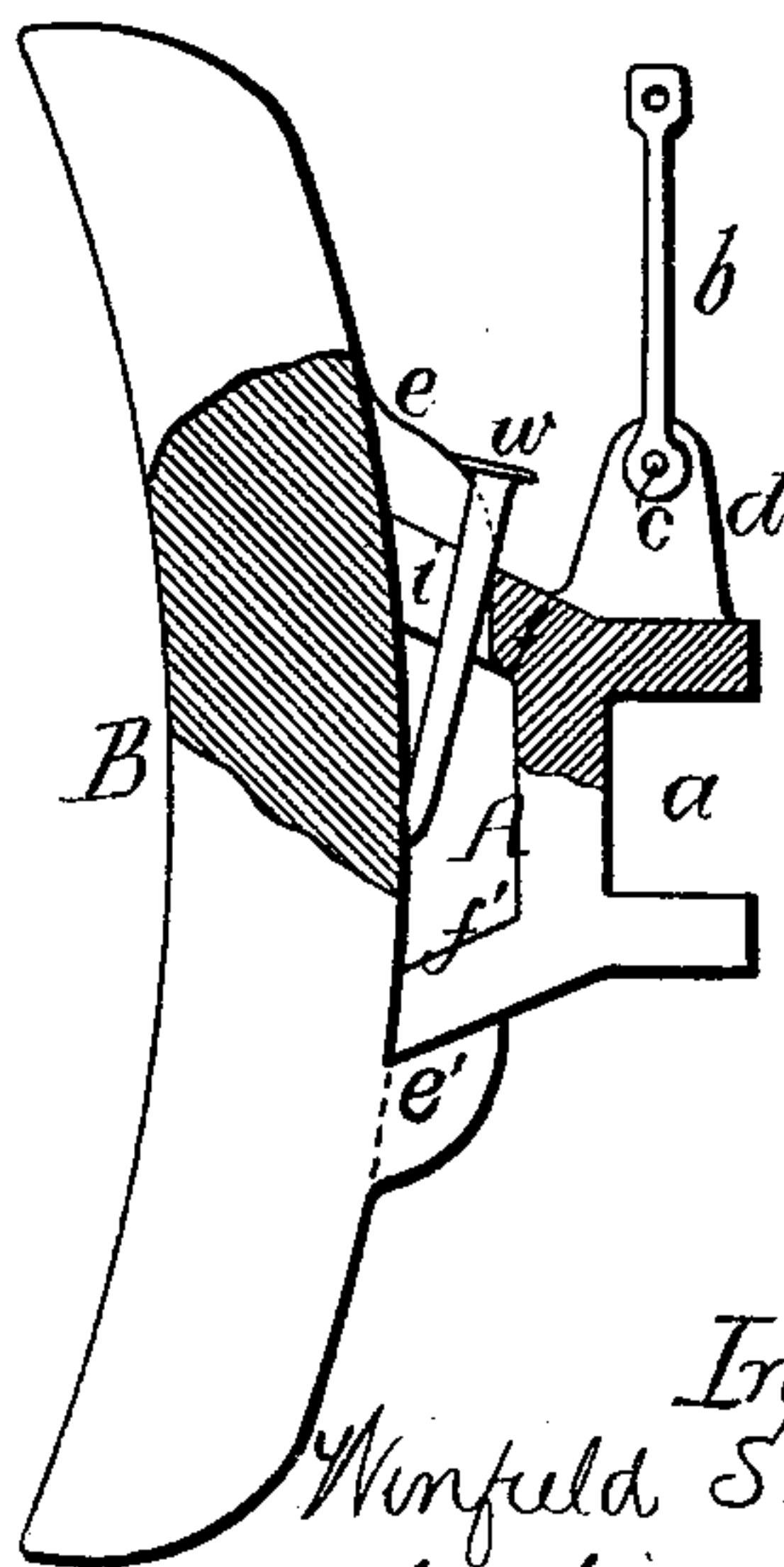


*Fig 2.*



Witnesses  
Richard L. Gardiner  
Harry Smith

*Fig 3.*



Inventor  
Winfuld S. Richardson  
by his Attorneys  
Howson Wom

# UNITED STATES PATENT OFFICE.

WINFIELD S. RICHARDSON, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **197,175**, dated November 13, 1877; application filed September 13, 1877.

*To all whom it may concern:*

Be it known that I, WINFIELD S. RICHARDSON, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Car-Brakes, of which the following is a specification:

The object of my invention is to provide simple and economical means whereby a car-brake shoe and sole-plate may be connected together, an object which I attain in the following manner, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of my improved car-brake shoe with the sole-plate in position; Fig. 2, a side view of the same, partly in section; and Fig. 3, a view of a modification.

A is the brake-shoe, having in the rear the usual recess *a* for the reception of the end of the brake-beam, to which it is secured, and provided at the top with a link, *b*, by which the shoe is suspended from the bottom of the car, this link being hung to a pin, *c*, carried by lugs *d d* on the shoe A.

B is the sole-plate, curved to conform to the periphery of the wheel, and having in its front edge, in the present instance, a recess adapted to the flange of the said wheel.

On the rear of the sole-plate B are two inclined lugs, *e e'*, forming a dovetailed recess, to which are adapted the inclined projections *f f'* of the brake-shoe A. Each of the lugs *e e'* has a central slot, *m*, a similar slot, *i*, being formed on the projection *f*, so that when the sole-plate B has been slipped laterally over the projections *f f'* of the shoe A until the slot *m* of the uppermost lug *e* is in line with the slot *i* of the projection *f*, said sole-plate may be firmly retained in position, either by

means of a hook, *t*, hung to the pin *c*, and adapted to the slots, as in Fig. 2, or by a spike, *w*, inserted as in Fig. 3. When wholly or partially worn out, the sole-plate may be released, prior to removal from the brake-shoe, by simply elevating the hook *t* or drawing out the spike *w*.

The object of slotting both lugs *e e'* is to permit the sole-plate to be reversed when it becomes worn out at the bottom, at which point the wear is always the greatest.

I am aware that inclined projections in the sole-plate and brake-shoe, for forming a dovetail connection between the two, have heretofore been used, and also that slotted lugs on the sole-plate and shoe have been combined with a retaining-bolt; but the inclined projections and the slotted lugs have heretofore been independent of each other, whereas in my invention the same inclined lugs by which the dovetail connection is made are slotted and combined with a pin or hook for preventing lateral movement, thereby considerably simplifying and cheapening the device.

I claim as my invention—

The combination of the sole-plate B and its inclined lugs *e e'*, having slots *m*, with the brake-shoe A, its inclined projections *f f'*, slot *i*, and a pin or hook adapted to the slots *m* and *i*, and serving to retain the sole-plate in position laterally on the shoe, as set forth.

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

WINFIELD S. RICHARDSON.

Witnesses:

HERMANN MOESSNER,  
HARRY SMITH.