

(No Model.)

W. SOMERVILLE, Sr.
HORSESHOE.

No. 435,104.

Patented Aug. 26, 1890.

Fig. 1.

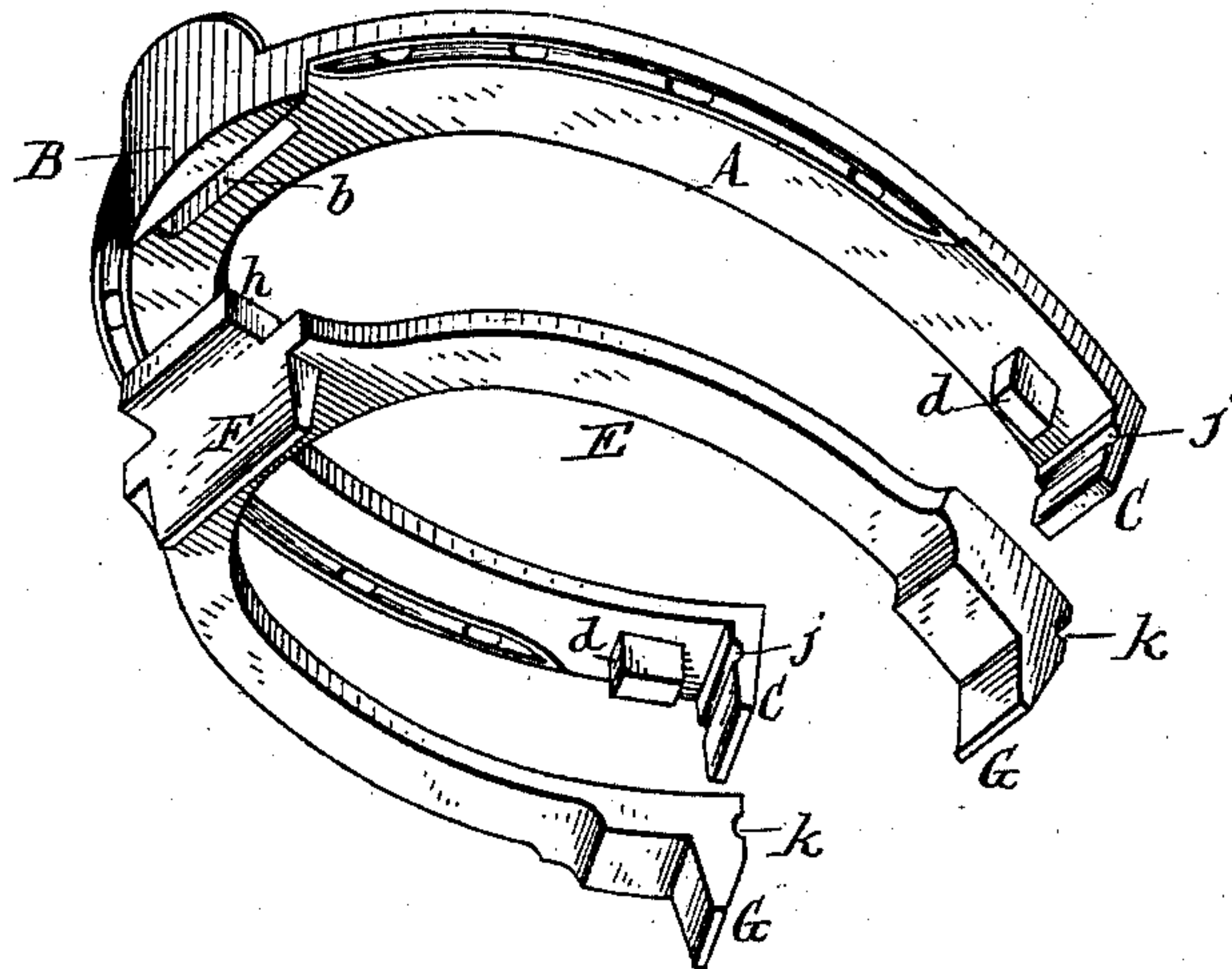


Fig. 2.

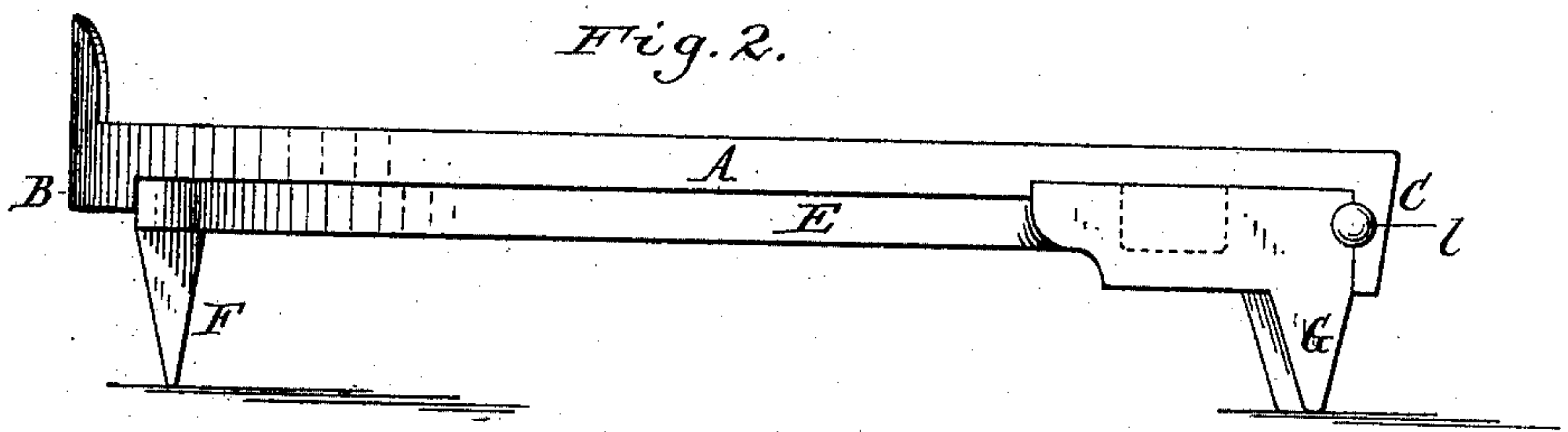


Fig. 3.

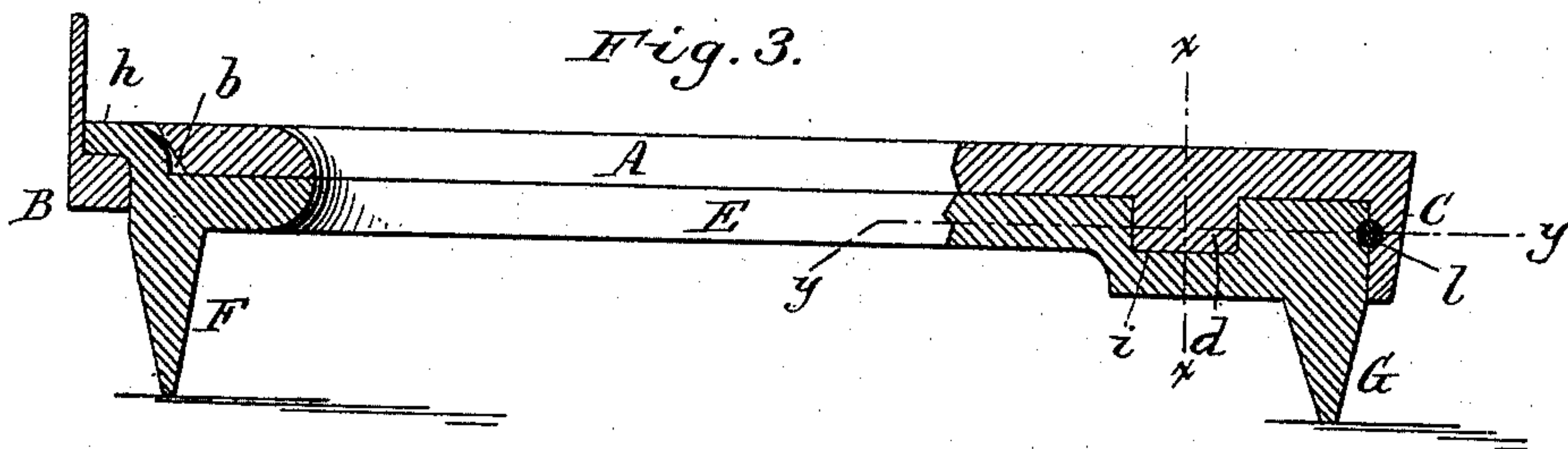


Fig. 4.

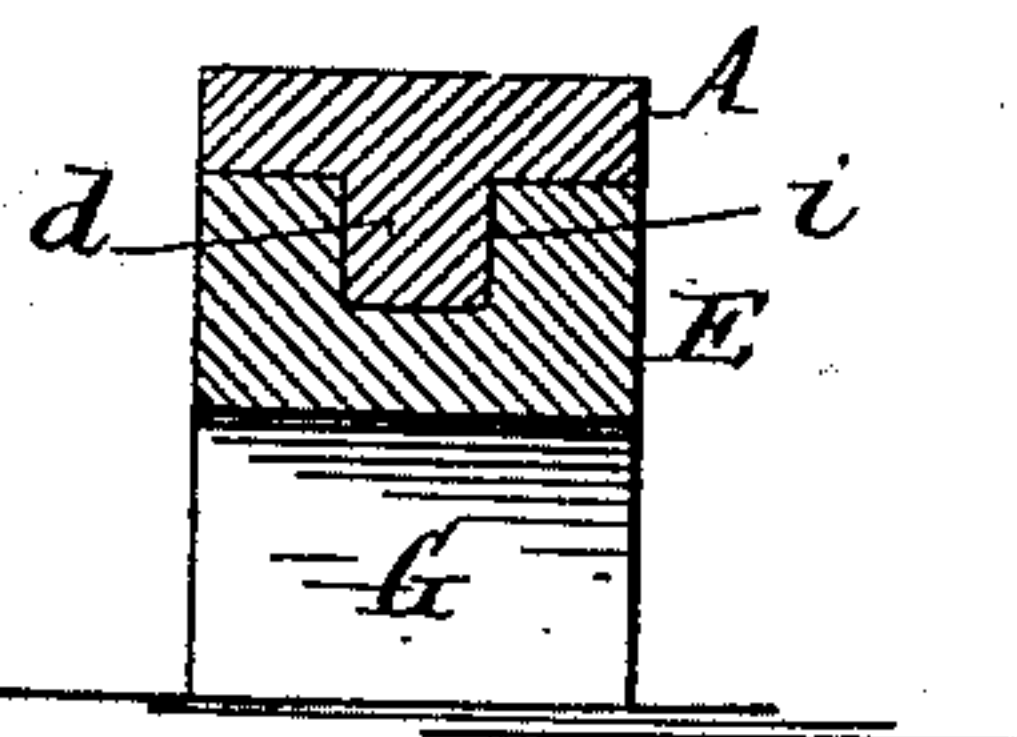
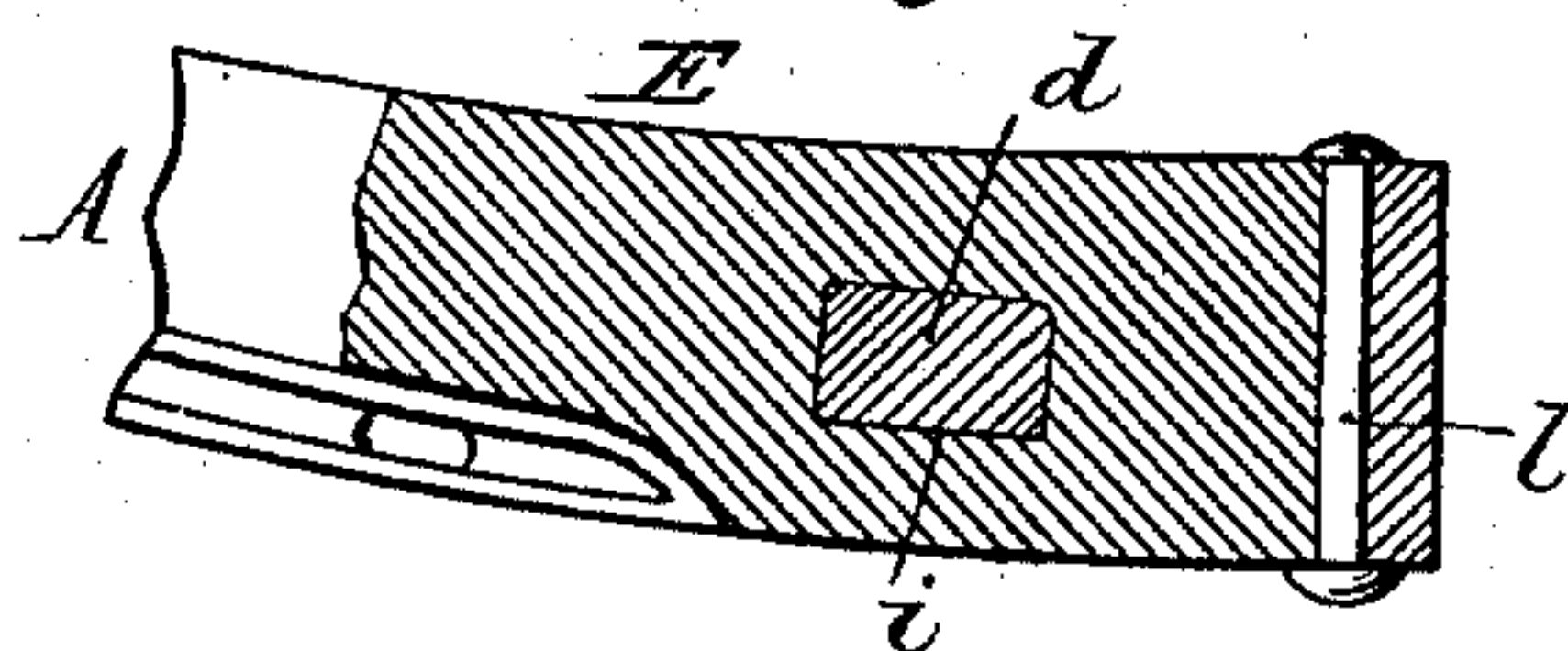


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM SOMERVILLE, SR., OF BUFFALO, NEW YORK.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 435,104, dated August 26, 1890.

Application filed March 3, 1888. Serial No. 266,055. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SOMERVILLE, Sr., of the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Horseshoes, of which the following is a specification.

This invention relates to that class of horseshoes which consist of an upper plate, which is secured to the foot of the horse, and a lower plate or shoe, which is detachably secured to the upper plate and provided with sharp calks, as shown, for instance, in Letters Patent of the United States No. 322,652, granted to me July 21, 1885. In the horseshoe described in the said Letters Patent the rear ends of the calk-plate are provided with tenons, which enter between lugs formed on the rear ends of the upper plate. This construction, while answering the purpose, requires considerable labor for fitting the parts together.

The object of my present invention is to provide a simpler means for securing the rear ends of the calk-plate to the upper plate; and it consists of the improvements which will be hereinafter fully set forth, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of the shoe, showing the two plates thereof separated. Fig. 2 is a side elevation of the shoe. Fig. 3 is a vertical longitudinal section thereof. Fig. 4 is a cross-section in line *x x*, Fig. 3. Fig. 5 is a horizontal section in line *y y*, Fig. 3.

Like letters of reference refer to like parts in the several figures.

A represents the upper plate, having the form of an ordinary horseshoe and provided with the usual nail-holes, so that it can be secured directly to the foot of the horse.

B represents a toe-lug formed on the under side of the front end of the plate A, and C C represent heel-lugs formed on the under side of the rear ends of said plate. The upper plate A is provided at its front end in rear of the toe-lug B with an opening *b*.

d d represent downwardly-projecting tongues or tenons formed on the under side of the upper plate A, a short distance in front of the heel-lugs C C.

E represents the lower plate, which is made of the proper form to fit against the under

side of the upper plate A, and is provided at its front end with a sharp toe-calk F, and near its rear ends with sharp heel-calks G G. The lower plate E is provided at its front end above the toe-calk F with a forwardly-projecting tenon *h*, which enters the opening *b* in the upper plate A, and secures the front end of the lower plate to the upper plate.

i i represent openings or sockets formed in the lower plate E, near the rear ends thereof, and receiving the tenons *d* of the upper plate. The tenons *d* hold the rear ends of the lower plate E against lateral movement on the upper plate A. The straight rear ends of the lower plate bear against the straight front sides of the heel-lugs C of the upper plate. The rear ends of the lower plate E, in which the sockets *i* are formed, are preferably enlarged, as shown, to give the shoe the proper strength at these points.

j represents transverse semicircular grooves or depressions formed in the straight front faces of the heel-lugs C C, and *k* are similar grooves formed in the adjacent straight faces of the rear ends of the lower plate E, which grooves form with the grooves *j* circular openings, in which are inserted locking pins or bolts *l*, as clearly shown in Figs. 2 and 3. These locking-pins firmly secure the rear ends of the lower plate E to the upper plate of the shoe. The grooves *j k* are formed by drilling a hole through the contiguous portions of the heel-lugs C C and the rear ends of the lower plate E after the plates have been placed against each other. The locking-pins *l*, when inserted in the grooves *j k*, tend to force the lower plate forwardly on the upper plate, the pins being preferably made slightly larger in diameter than the grooves, and the sockets *i* in the lower plate large enough to permit a slight forward movement of the tenons *d* in the sockets. Any looseness between the two plates by reason of shrinkage of metal, or in fitting the plates, or from other causes, can be thus readily taken up by the pins *l* and a perfectly firm and rigid fastening of the lower calk-plate to the upper plate obtained. This construction forms a cheap and reliable fastening, which requires but very little fitting, and enables the shoe to be constructed very light and at small cost. When the calks of the lower plate become worn, the latter can be

readily detached from the upper plate to sharpen its calks by removing the locking-pins *l*, or be replaced by a new calk-plate when its calks become worn to such an extent
5 as to render the plate unserviceable.

I claim as my invention—

In a horseshoe, the combination, with an upper plate A, provided with a toe-lug B, an opening *b*, arranged in rear of said toe-lug,
10 heel-lugs C C, having straight front faces, transverse semicircular grooves *j*, formed in said front faces, and downwardly-projecting tenons *d*, arranged in front of said heel-lugs, of a lower calk-plate E, provided at its front
15 end with an upwardly and forwardly projecting tongue *h*, which engages in the opening *b*, and having straight rear ends fitting against the front faces of the heel-lugs C C, trans-

verse semicircular grooves *k*, formed in the rear ends of the calk-plate E, opposite the 20 grooves *j*, and forming with the grooves *j* a circular opening intersecting the adjacent meeting ends of the two plates, sockets *i*, adapted to receive the tenons *d*, and cylindrical locking-pins *l*, arranged in the circular 25 openings formed by the grooves *j* and *k*, whereby the rear ends of the calk-plates are attached to the upper plate, substantially as set forth.

Witness my hand this 25th day of Feb- 30
ruary, 1888.

WM. SOMERVILLE, SR.

Witnesses:

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