

(No Model.)

O. E. BROWN.
HORSESHOE.

No. 481,271.

Patented Aug. 23, 1892.

Fig. 1.

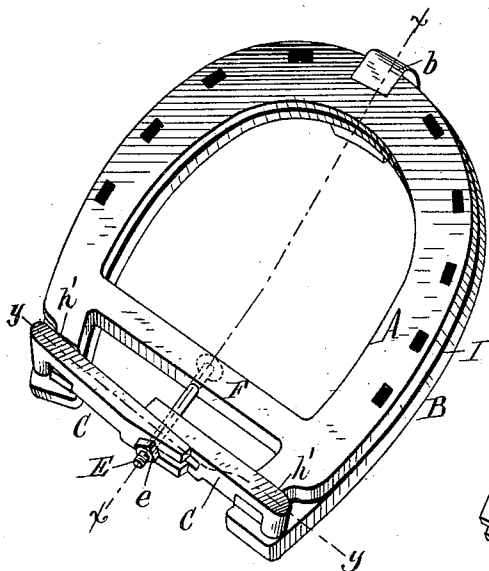


Fig. 2.

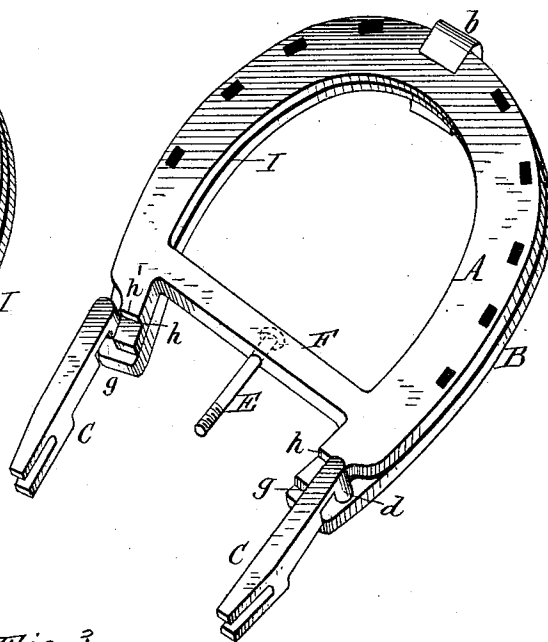


Fig. 3.

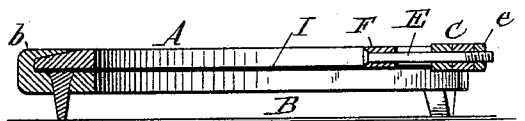
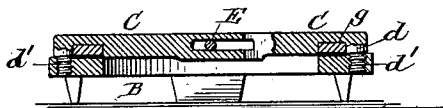


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

OSCAR E. BROWN, OF BUFFALO, NEW YORK.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 481,271, dated August 23, 1892.

Application filed November 14, 1891. Serial No. 411,921. (No model.)

To all whom it may concern:

Be it known that I, OSCAR E. BROWN, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Horseshoes, of which the following is a specification.

This invention relates to double or compound horseshoes, which consist of an upper shoe secured to the hoof of the animal and a lower auxiliary shoe removably attached to the upper shoe.

The object of my invention is the provision of a secure and reliable lock for fastening the lower shoe to the upper shoe, which will permit the lower shoe to be readily applied to and removed from the upper shoe whenever it becomes necessary to renew the lower shoe or resharpen its calks.

My invention has the additional object to cushion the horseshoe, so as to reduce the force of its impact against the pavement and relieve the animal of the stiff unyielding impact of ordinary shoes.

In the accompanying drawings, Figure 1 is a perspective of my improved horseshoe, showing the lower shoe secured to the upper shoe. Fig. 2 is a similar view showing the locking-levers swung outward to the position in which they permit the lower shoe to be detached from the upper shoe. Fig. 3 is a longitudinal section of the shoe in line *x x*, Fig. 1. Fig. 4 is a cross-section in line *y y*, Fig. 1.

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

A represents the upper shoe, which is fastened to the hoof of the animal by nails in the usual manner, and B is the lower detachable shoe. The latter rests with its upper surface against the under side of the upper shoe and is provided at its toe with an abutment or upwardly-projecting hook *b*, which overlaps the adjacent portion of the upper shoe, so as to hold the front portion of the detachable shoe in place upon the upper shoe, the latter being provided at its toe with a recess which receives said hook.

C C are horizontal locking levers or latches attached to the heels or rear portions of the lower shoe and whereby the rear portions of the latter are fastened to the upper shoe. These locking-levers are provided at their in-

ner ends with vertical pivots *d*, which turn in openings formed in the heels of the lower shoe. The pivots *d* are preferably provided with external screw-threads *d'*, and their openings are correspondingly threaded, as shown in Fig. 4. This construction permits the pivots to turn freely and at the same time confines them in their openings without the necessity of providing them with heads or similar retaining projections, which would wear off in time and permit the pivots to leave their openings. The locking-levers when in their normal position overlap the heels or rear portions of the upper shoe and are held in this position by a longitudinal screw or bolt E, attached to a cross-bar F, which connects the rear portions of the upper shoe. The outer bifurcated ends of the locking-levers straddle the bolt E and are held on the same by the nut *e* of the bolt. The inner ends of these levers overlap each other, and the nut *e* bears against the face of the outer lever, as shown. The inner portions of the locking-levers and the heels of the upper shoe are recessed at their contiguous portions, as shown at *g*, so as to render the upper surfaces of the locking-levers flush or nearly flush with the upper surface of the fixed shoe. By thus recessing the heels of the upper shoe shoulders *h* are formed on the heels of the upper shoe, against which the adjacent lower sides of the locking-levers abut. Upon tightening the nut of the bolt E the locking-levers are forced inwardly toward the connecting-bar F, which action causes the levers to move the lower shoe rearwardly on the upper shoe and draw the hook or abutment *b* of the lower shoe tightly against the toe of the upper shoe, the inner edges *h'* of the shoulder *h* serving as fulcrums for the lever in clamping the hook against the upper shoe. The locking-levers thus perform the double function of holding the rear portions of the lower shoe against the upper shoe and moving the lower shoe lengthwise upon the upper shoe for firmly clamping the hook *b* against the toe of the upper shoe. The lower shoe is readily detached from the upper shoe by removing the screw-nut from the bolt E and swinging the locking-levers outward so as to clear the heels of the upper shoe, as shown in Fig. 2, and then moving the lower shoe forward to disengage its hook from the recess of

the upper shoe. In applying the lower shoe its hook is first engaged with the recess of the upper shoe, and the locking-hooks are then swung inward over the heels of the upper shoe and clamped upon the bolt E by the nut e.

I is a cushion interposed between the adjacent faces of the two shoes for easing the blows or impact of the shoe against the pavement and relieving the legs of the animal. This cushion preferably consists of a strip of rubber, which is clamped between the two shoes.

The lower shoe is preferably provided with removable tapering calks, which are seated in upwardly-flaring openings in the lower shoe and are held in said openings by the upper shoe. The upper shoe may be used merely as a support for the attachment of the lower shoe, so that only the lower shoe need be removed for resharpening its calks or removing it when worn out, or, if desired, the upper shoe may be employed as a smooth shoe when the condition of the streets permits of such use and the lower shoe be applied when a shoe with calks is required.

I claim as my invention—

1. The combination, with the upper shoe, of the lower shoe provided at its toe portion with a hook interlocking with the adjacent portion of the upper shoe and at its rear end with a lever engaging with the rear end of the upper shoe, and a retaining device for locking the lever in place, whereby the two parts of the shoe are securely fastened together, substantially as set forth.

2. The combination, with the upper shoe, of the lower shoe provided at its toe portion with a hook interlocking with the toe of the upper

shoe and at its heel portions with locking-levers which overlap the heels of the upper shoe, and a retaining device whereby the levers are held in their locked position, substantially as set forth.

3. The combination, with the upper shoe provided at its heel with shoulders, of the lower shoe provided at its toe portion with a hook interlocking with the toe of the upper shoe and at its rear portions with locking-levers which overlap the heels of the upper shoe and bear against the shoulders thereof, substantially as set forth.

4. The combination, with the upper shoe having a cross-bar connecting its rear portions, of a lower shoe provided with a locking-lever engaging with a heel of the upper shoe, and a retaining-bolt attached to said connecting-bar and having a nut whereby the locking-lever is held upon the bolt, substantially as set forth.

5. The combination, with the upper shoe having its heels provided with shoulders, of the lower shoe provided at its front portion with a hook engaging with the toe of the upper shoe and at its rear portions with locking-levers overlapping the rear portions of the upper shoe and abutting against said shoulders, and a tightening-bolt arranged on the upper shoe and whereby the levers are held in their locked positions, substantially as set forth.

Witness my hand this 6th day of November, 1891.

OSCAR E. BROWN.

Witnesses:

JNO. J. BONNER,
F. C. GEYER.