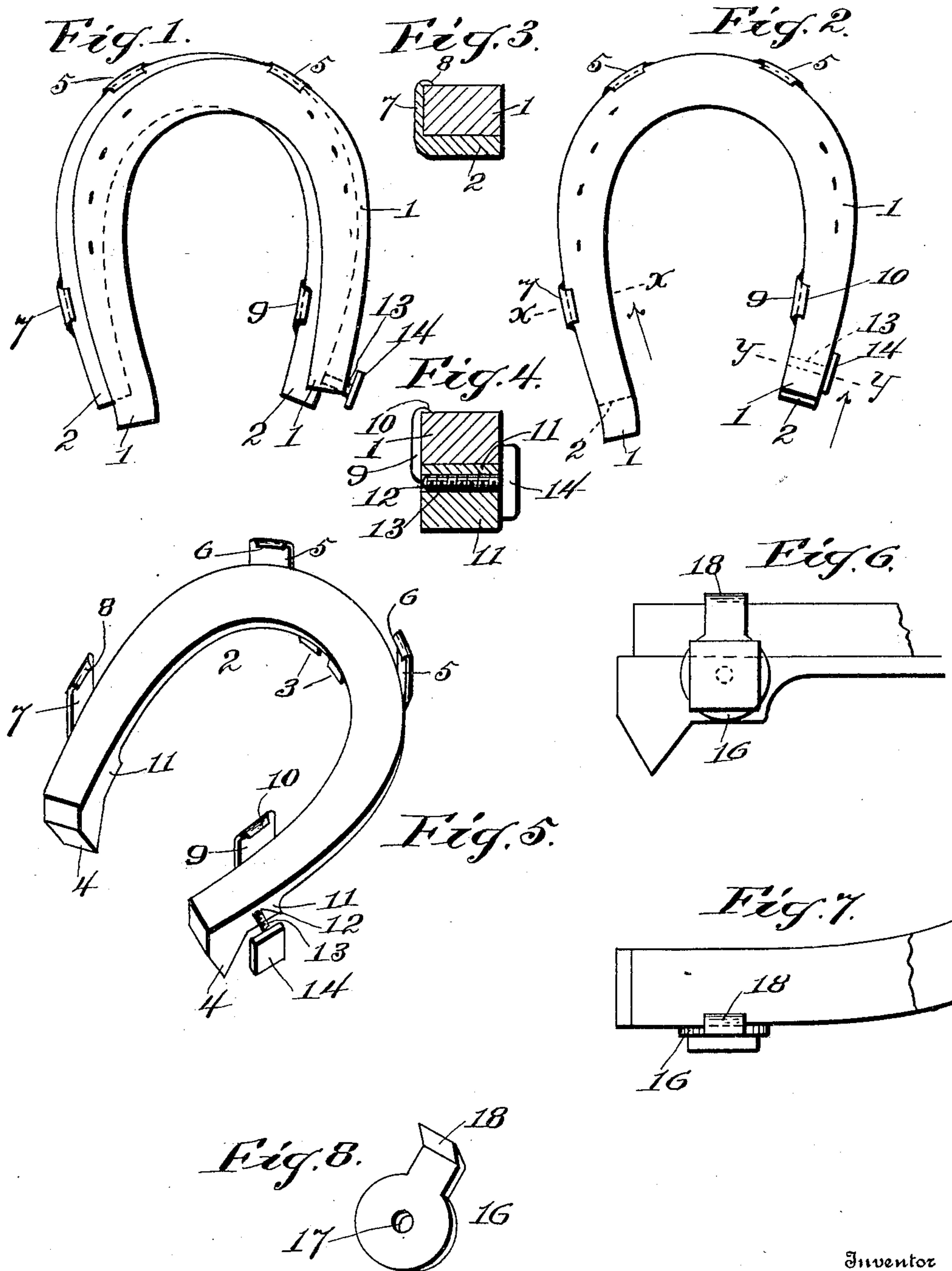


No. 784,441.

PATENTED MAR. 7, 1905.

A. SMITH.
ROUGHENER SHOE FOR HORSESHOES.
APPLICATION FILED JAN. 11, 1905.



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ROUGHENER-SHOE FOR HORSESHOES.

SPECIFICATION forming part of Letters Patent No. 784,441, dated March 7, 1905.

Application filed January 11, 1905. Serial No. 240,560.

To all whom it may concern:

Be it known that I, ALBERT SMITH, a citizen of the United States, residing at Bowie, in the county of Prince George and State of Maryland, have invented certain new and useful Improvements in Roughener-Shoes for Horse-

shoes, of which the following is a specification.

This invention relates to horseshoes, and particularly to the class of composite horse-

shoes.

The object of the invention is to provide means for securing an overshoe-roughener to the shoes of horses while they are worn for purposes of roughening.

A further object of the invention is to provide novel and peculiar means operated in an overshoe and coacting with overshoe-clips to detachably connect the overshoe with ordinary horseshoes of various length, thickness, and

width.

A still further object of the invention is to provide an overshoe with inside and outside clips and a stud screwing into the overshoe transversely to connect the overshoe to ordinary horseshoes regardless of their length and shape.

For the purpose of attaching a roughener or overshoe to horseshoes, especially for fitting overshoes on horseshoes without removing the latter from the hoof, it is obviously desirable to use the ordinary horseshoe without the least alteration thereof, and to have an overshoe of simple construction and arrangement of parts and as few of the latter as possible. This I accomplish by using only a single screw or bolt to effect the clamping of the overshoe to the horseshoe, such accomplishment being obviously a great advantage not only in making the connection, but because there is no other working part or parts to be operated, and the varying length of a horseshoe or its projecting heels are accommodated by the overshoe.

My invention has special reference to the class of overshoe attachments employing set-

screws, screw-studs, or turnable buttons, which, as far as known to me, either overlap the horseshoe or depend from the horseshoe, so as to project through the overshoe, and all of such studs, buttons, and screws are positioned at various angles to the shoes, so that

either their stems engage the horseshoe or their heads impinge the overshoe or the top face of the horseshoe, but none of such screws or studs pass through the overshoe transversely without engaging the horseshoe and with their heads bearing on the outer edge of the horseshoe to clamp the latter between oppositely-situated clips, one of which is on the inner edge of the overshoe and the other on the outer edge of the overshoe.

It is therefore the purpose of this invention to overcome the various disadvantages, inconveniences, and other objections found in such attachments and to furnish an overshoe having a pair of clips and carrying an ordinary set-bolt which constitutes the sole means of attachment.

With these and various other objects, advantages, and improved results in view the invention consists in an overshoe for horseshoes having suitable heel and toe calks, an inner clip, an outer clip, and a transverse screw carried by the overshoe, the head of which screw engages the edge of the horseshoe to clamp the latter against said clips without removing the horseshoe from a horse.

In the accompanying drawings, forming part of this application, Figure 1 is a plan view showing the shoes in the act of being connected. Fig. 2 is a similar view showing the shoes connected. Fig. 3 is an enlarged section on the line *xx*, Fig. 2. Fig. 4 is a similar view on the line *yy*, Fig. 2. Fig. 5 is a perspective view of the overshoe. Fig. 6 is a side elevation of part of an overshoe-arm, showing a modification. Fig. 7 is a top view of the modification. Fig. 8 is a perspective view of the washer shown in Figs. 6 and 7.

The same numeral references denote the same parts throughout the several views of the drawings.

The horseshoe 1 employed to exemplify the invention is one of ordinary construction commonly known as a "smooth" shoe, and it is attached to the hoof of a horse in the usual manner. For purposes of illustration one heel of this shoe is shown longer than the other heel—such as are often used to prevent interference and which indicates the adaptability of my improved roughener or overshoe.

The roughener or overshoe 2 is preferably made of thin plate metal, which may be reduced in weight by forming apertures or openings therein, which openings may afford passage for shoes having toe and heels depending therefrom, or such toe may depend over the front of the overshoe and such heels may depend over the heels of the overshoe. The said apertures may also be used to attach supplemental calks between the toe and heel calks of the overshoe. Toe-calks 3 and heel-calks 4 are formed on the overshoe, and the latter is provided with front clips 5, having a thin inturned edge 6 to wedge in between the horseshoe and the hoof. These clips 5 act in the capacity of a movable fulcrum on the horseshoe-toe in adjusting the overshoe into position.

On the outer side edge of the overshoe is formed a clamping-clip 7, having a top edge 8 standing above the overshoe and inturned slightly over the outer edge of the overshoe. Opposite the clip 7 and projecting vertically from the inner side edge of the overshoe is a clamping-clip 9, having a top edge 10 projecting outwardly over the inner edge of the overshoe, so that the clip edges 8 and 10 point in the same direction.

On the outer face of the overshoe and extending forward from the heel-calks is an enlargement or lug 11, having a transverse screw-threaded hole 12, which may or may not extend entirely through the lug and which is preferably made in only one of said lugs. Into this hole 12 is screwed from the outer edge of the overshoe a set-bolt 13, having a suitable head 14, and the bolt may carry a suitable washer. The hole 12 is made close enough to the top face of the overshoe to position the bolt-head above the horizontal plane of the said face whether the bolt is screwed up or unscrewed, and the location of the bolt with respect to the overshoe-heel is such as to place the bolt-head forward of said heel, so as not to have the bolt-head project in rear of the heel. The lug 11 is of such depth as to have the bolt-head stand within and not protrude beyond the limits of the lug. By this arrangement the lug 11 and heel-calk 4 shield the bolt-head and protects its edges from any contact that might cause the bolt to turn accidentally. The bolt-head only projects above the plane of the overshoe sufficiently to impinge the outer edge of the horseshoe 1 without projecting above the inner face of the horseshoe.

In assembling or connecting the shoes without removing the horseshoe from a horse, the bolt being unscrewed sufficiently to place the bolt-head away from the lug 11 a distance equal to the distance covered by the overhanging clip edges 8 and 10, the overshoe toe-clips are hooked over the toe of the horseshoe and the overshoe is slid laterally flat on the horseshoe, with the toe-clips 5 acting as a movable

fulcrum, until the clips 7 and 9 and the clip edges 8 and 10 engage the horseshoe. Then the set-bolt is screwed up by a suitable wrench until the bolt-head has clamped the overshoe securely to the horseshoe. Under pressure of the bolt-head the overshoe is forced into proper place in conformity with the horseshoe. To remove the overshoe without removing the horseshoe, the parts are simply placed in such position as shown in Fig. 1 of the drawings.

It is obvious that the bolt may be provided with a suitable nut if found necessary and that two bolts may be used, with or without nuts, one in each heel of the overshoe.

Referring to the modification shown in Figs. 6, 7, and 8, the inner clamping-clip is omitted, and in lieu thereof a special washer 16 is provided having a bolt-hole 17 and a lip 18 to reach over the outer edge of the horseshoe and impinge the top surface thereof. When the bolt is screwed up, the washer not only forces the shoes in clamped position, as described in the preferred form, but the washer-lip holds this arm of the overshoe to the horseshoe. This arrangement is desirable with horseshoes much wider in the arms than the face of the overshoe.

In operating either form it will be observed that the action of the bolt-head produces a joint lateral and forward action of the shoes relative to each other and that the foot action of a horse tends to wedge the shoes more firmly together.

It will be understood that the overshoe-calks may be detachable, that there may be one or several of the clamping-clips, that the position of the latter may be varied as found most desirable in the practical application of the overshoe, and that the bolt may be worked from the inner side of the overshoe on the opposite heel in the same direction as shown in the drawings.

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

1. In means for attaching overshoes to horseshoes, the combination, with an overshoe having suitable toe-clips, a clamping-clip on the outer edge of one overshoe-arm and a clamping-clip on the inner edge of the other overshoe-arm, of a screw-stud working transversely in one of said arms and having a head to hold the shoes against lateral movement.

2. An overshoe for horseshoes having suitable toe-clips, clamping-clips one on the inner edge and the other on the outer edge of the overshoe-arms, and a bolt working transversely through one of the said arms and having a head to clamp the horseshoe against the clips.

3. A roughener-shoe for horseshoes having suitable toe-clips, clamping-clips one of which overhangs the outer edge and the other the

inner edge of the roughener, and a set-bolt opposed to the clips and working transversely in the roughener to connect the shoes.

4. The combination, with an overshoe for
5 horseshoes having suitable toe-clips, toe-calks and heel-calks, and a pair of clamping-clips one of which engages the outer edge and the other the inner edge of the horseshoe, of a screw-stud working transversely through the
10 overshoe to clamp the latter to the horseshoe.

5. The combination, with an overshoe for
horseshoes, suitable overshoe toe-clips, a lug on the outer face of the overshoe at each end thereof, and a clamping-clip projecting verti-
15 cally from each lug one of said clips being on the inside and the other on the outside of the overshoe, of a screw-bolt working transversely in one of the lugs to connect the shoes.

6. The combination, with an overshoe for
20 horseshoes, suitable overshoe toe-clips, and a

clamping-clip projecting from the outer edge of the overshoe, of a washer having a lip to engage the inner face of the horseshoe, and a bolt working through the washer and the over-
shoe to clamp the latter to the horseshoe. 25

7. The combination, with an overshoe hav-
ing suitable toe-clips, and the clamping-clips one of which is projected from the outer edge of the overshoe and has a top edge projecting inwardly and the other of which is projected 30 from the inner edge of said shoe and has a top edge projecting outwardly, and a bolt coacting with the clips to clamp the overshoe to a horseshoe.

In testimony whereof I affix my signature in 35 presence of two witnesses.

ALBERT SMITH.

Witnesses:

C. F. BELT,

J. ROSS COLHOUN.