(No Model.)

W. J. MAIER.

ROUGHING ATTACHMENT FOR HORSESHOES.

No. 588,937. Patented Aug. 24, 1897.

Fig. 1.

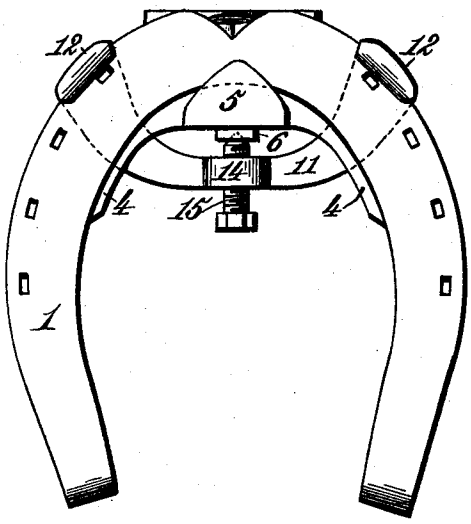


Fig. 2.

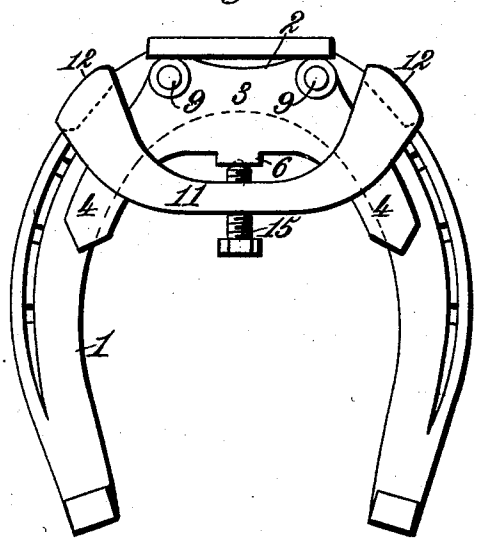


Fig. 3.

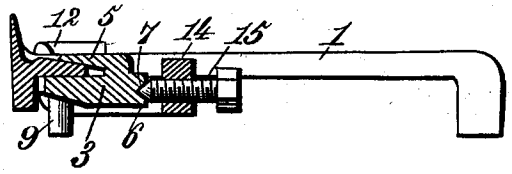
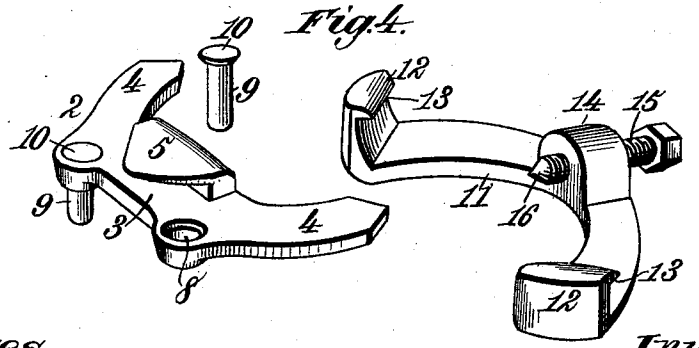


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM J. MAIER, OF WHEELING, WEST VIRGINIA, ASSIGNOR OF ONE-HALF TO WILLIAM S. ELLIFRITS, OF MARTIN'S FERRY, OHIO.

ROUGHING ATTACHMENT FOR HORSESHOES.

SPECIFICATION forming part of Letters Patent No. 588,937, dated August 24, 1897.

Application filed March 13, 1897. Serial No. 627,333. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. MAIER, a citizen of the United States, residing at Wheeling, in the county of Ohio and State of West Virginia, have invented new and useful Improvements in Roughing Attachments for Horseshoes, of which the following is a specification.

My invention relates to roughing attachments for horseshoes, and has for its object to provide a simple and improved attachment of the character described which will be capable of withstanding the constant pounding and hammering to which they are subjected and which may be readily applied to and removed from ordinary horseshoes while on the horse's feet without the aid of skilled labor or special tools.

It has for its further object to provide such an improved attachment with removable and interchangeable toe-calks which when worn or damaged may be removed from the attachment and readily replaced by new ones.

To these ends my invention consists in the features and in the construction, arrangement, and combination of parts hereinafter described, and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a top plan view showing my improved attachment applied to a horseshoe. Fig. 2 is a bottom plan view thereof. Fig. 3 is a vertical central section, and Fig. 4 is a perspective view of the different parts of the attachment separated.

Referring to the drawings, the numeral 1 indicates a horseshoe of any suitable or ordinary construction and applied to the horse's hoof in the usual manner. Adapted to be fitted to the forward under side of the shoe 1 is a plate 2, having a stout and strong body portion 3, that rests against the under side of the toe of the shoe and provided with two rearwardly-extending arms 4, which have a firm bearing against the bottom of the sides of the shoe, as shown. The body portion 3 of the plate is provided at its rear central portion with a tongue 5, that projects horizontally forward in parallelism with the body portion 3 and is adapted to fit between the hoof and the upper rear portion of the toe of the shoe to hold the plate in place. This portion of the plate 2 is also provided with a rearwardly-projecting boss 6, that is countersunk, as at 7, for the purpose hereinafter explained. The body portion 3 of the plate is provided with two countersunk perforations 8, in which are removably fitted cylindrical calks 9, provided with conical heads 10, that fit the countersinks. The calks are thus made interchangeable in the plate and their introduction in the perforations is facilitated and rendered easy. Moreover, when the plate is clamped to the shoe, as hereinafter explained, the heads of the calks impinge against the bottom of the shoe and have a broad and firm bearing thereon, while at the same time the plate also has a similar bearing against the shoe. The calks may or may not be sharpened or pointed, as found most desirable. The plate 2 is firmly clasped to the shoe by a clamp comprising an arched plate 11, that rests beneath the plate 2, and is provided at its forward ends with upturned curved clips 12, terminating in lips 13, that are bent into parallelism with the plate 11 and pass between the hoof and the shoe. As shown, the clips 12 are rounded and made somewhat larger and heavier than the arched portion of the clamp, the purpose of such construction being to add strength to these parts of the clamp and prevent the clips bending and pulling out when the clamp is tightened up. On the upper central portion of the clamp is formed a lug 14, which is provided with a threaded perforation in which is fitted a set-screw 15. The set-screw is provided with a conical point 16, that is adapted to engage the countersink 7 in the boss 6, before described.

To apply the roughing attachment, the plate 2 is first placed against the bottom of the shoe and the tongue 5 slipped between the shoe and the hoof. The clips 12 of the clamp 11 are next hooked over the toe of the shoe, the clips 13 being placed between the hoof and the shoe, and the set-screw is finally tightened up with a wrench or similar tool. In tightening up the screw the plate 2 is forced up firmly to the toe of the shoe, and at the same time the clamp is forcibly drawn rearward, forcing the lips 13 in between the

shoe and hoof. Both the plate 2 and the clamp 12 are thus firmly and tightly attached to the shoe and practically form a part thereof. Owing to the calks having conical heads that are fitted in countersunk perforations in the plate, said calks cannot possibly become loose or be lost, and the thrust or impact of said calks comes directly against the bottom of the shoe. The plate 2 has a broad firm bearing against both the toe and the two sides of the shoe, and being firmly clasped thereto by the clamp that extends entirely across said plate and its arms it is rendered exceedingly strong and durable to withstand the shock and hammering beneath the horse's footsteps. By means of the conical-pointed set-screw fitting the countersunk boss in the plate the attachment may be applied to symmetrical and crooked shoes alike, as the set-screw will center the device irrespective of any irregularities of the shoe, and as the clamp engages the shoe at each side of the toe the device may be applied to a shoe whether or not it be supplied with the ordinary toe-calk. It will also be noted that the plate 2 does not extend to the outer edge of the shoe, and hence the attachment can be applied to the shoe without interfering with the nails, rendering rasping of the latter unnecessary. By forcing the lips 13 between the hoof and the shoe the loss of the attachment is rendered impossible unless the shoe itself drops off.

Having described my invention, what I claim is—

1. In a roughing attachment for horseshoes, the combination with a plate 2 adapted to be fitted to the under side of a horseshoe and having a forwardly-projecting tongue 5 arranged to project over the upper rear side of the toe of the shoe, of conical-headed calks arranged in countersunk perforations in said plate and bearing against the under side of the shoe, a clamp extending across and beneath said plate and having clips engaging the forward upper edges of the toe of the shoe, and means for forcing said plate and clamp in opposite directions to clamp them to the shoe, substantially as described.

2. In a roughing attachment for horseshoes, the combination with a plate 2 adapted to be fitted to the under side of a horseshoe and having a forwardly-projecting tongue 5 arranged to project over the upper rear side of the toe of the shoe, of conical-headed calks arranged in countersunk perforations in said plate and bearing against the under side of the shoe, a countersunk boss 6 formed on the rear side of said plate, an arch-shaped clamp 11 extending across and beneath said plate and having clips 12 provided with lips 13 engaging the forward upper edges of the toe of the shoe, and a conical-pointed set-screw carried by said clamp and arranged to engage said countersunk boss to force the clamp and plate in opposite directions to clamp them to the shoe, substantially as described.

3. In a roughing attachment for horseshoes, the combination with a plate 2 having rearwardly-projecting arms 4, said plate being adapted to be fitted to the under side of a horseshoe, and having a forwardly-projecting tongue 5 arranged to project over the upper rear side of the toe of the shoe, of removable calks fitted in said plate, an arch-shaped clamp 11 extending across and beneath said plate and having clips 12 provided with lips 13 engaging the forward upper edges of the toe of the shoe, and a set-screw carried by said clamp and arranged to engage said plate to force the plate and clamp in opposite directions to clamp them to the shoe, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM J. MAIER.

Witnesses:
ED. M. HANDY,
ELMER C. GRIMES.