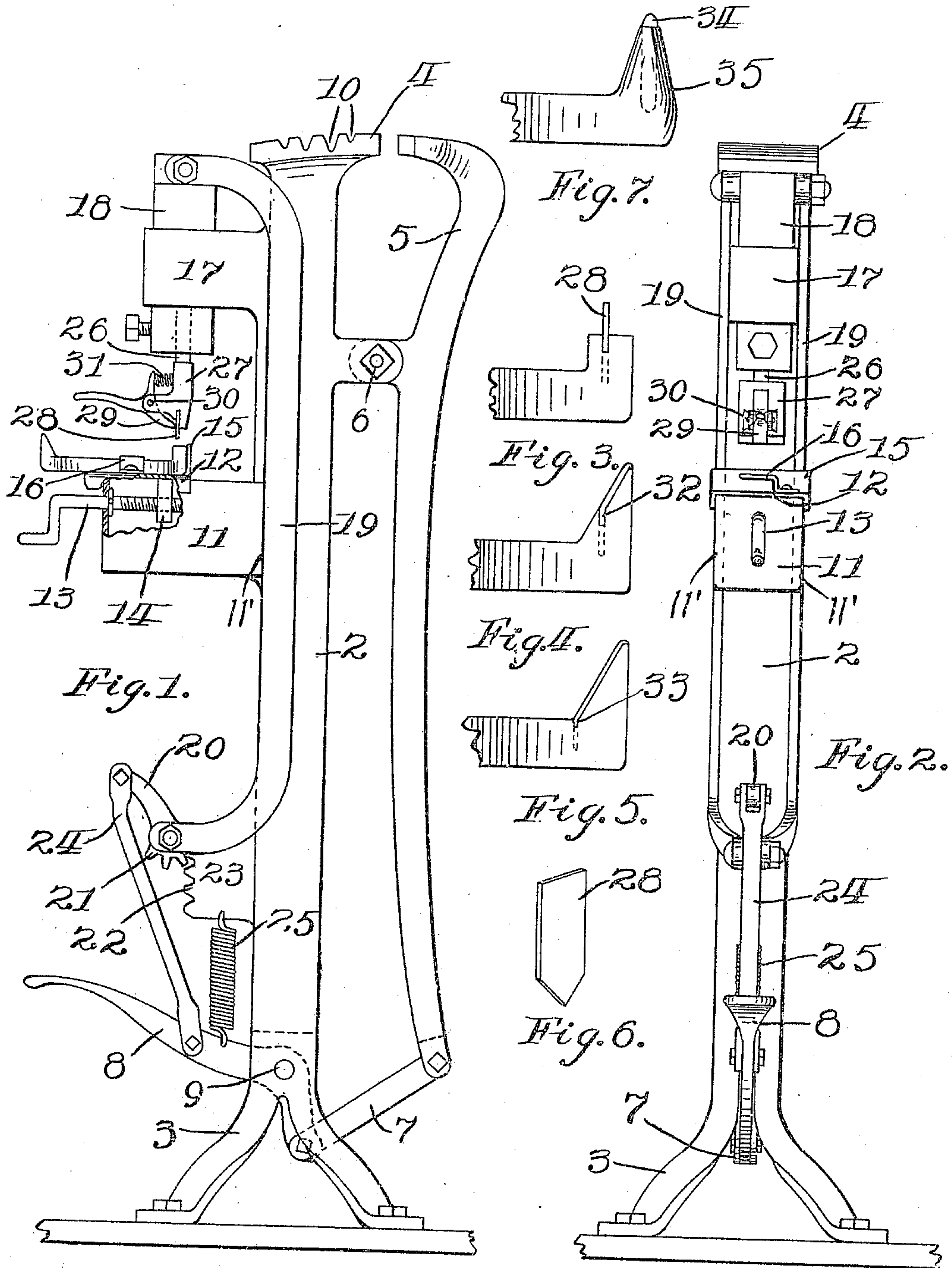


A. ERICKSON.
MACHINE FOR FACING HORSESHOE CALKS.
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Witnesses:
R. A. Fischer.
J. A. Berington

Inventor:
August Erickson,
by: Paul & Paul
His Attorneys.

UNITED STATES PATENT OFFICE.

AUGUST ERICKSON, OF NEVIS, MINNESOTA.

MACHINE FOR FACING HORSESHOE-CALKS.

948,693.

Specification of Letters Patent.

Patented Feb. 8, 1910.

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To all whom it may concern:

Be it known that I, AUGUST ERICKSON, of Nevis, Hubbard county, Minnesota, have invented certain new and useful Improvements in Machines for Facing Horseshoe-Calks, of which the following is a specification.

In facing horseshoe calks drawn up out of the metal at the heel of the shoe, it has been customary heretofore to heat the calk and form a socket therein by means of a chisel for the insertion of the steel plate. This operation has been slow and laborious and the object of my invention is to provide means whereby the steel facing can be easily and quickly mounted in the calk of the shoe.

A further object is to provide a machine of simple, economical construction and very effective for the purpose designed.

My invention consists generally in various construction and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a machine, embodying my invention, Fig. 2 is a front view of the same, Figs. 3, 4, and 5 are detail views, illustrating the manner of forcing the steel plate into the shoe calk, Fig. 6 is a detail view of one of the steel plates used for facing the calk, Fig. 7 is a detail view, illustrating a calk with a steel plug thrust therein.

In the drawing, 2 represents a frame having a base 3 and a fixed jaw 4 at its upper end.

5 is a movable jaw pivoted at 6 and adapted to cooperate with the fixed jaw to grip the horseshoe between them. A link 7 connects the lower end of the movable jaw 5 with one end of a treadle 8 that is pivoted at 9 on the lower portion of the frame 2. By the depression of this treadle, the jaws 4 and 5 will be closed to clamp the shoe. The jaw 4 is provided with a series of depressions 10 therein, corresponding to the shape of the shoe toe calk and designed to receive the calk when the end of the shoe is bent over, while its shank is held between the jaws 4 and 5. The depressions are of different depths and are arranged at intervals in the upper surface of the jaw 4, so that the shoe can lie flatwise on this jaw with the toe calk fitting in one of the depressions, the heated heel of the shoe can then be

bent down around the edge of the jaw to form a heel calk and gripped during such formation between the jaws 4 and 5.

11 is a shelf or support mounted on the frame and 12 is a carriage mounted on said support and movable horizontally thereon by means of a crank 13 having a threaded connection with a block 14 that depends from the carriage 12. The carriage is adapted to support a horse shoe thereon and has a stop 15, against which the horse shoe is pressed. A clip 16 is provided on said support and overhangs the shank of the horseshoe. By means of the crank 13 the carriage and horseshoe may be moved back and forth until the calk is centered directly beneath the plunger whereon the facing plate is mounted.

17 is a guide projecting from the upper portion of the frame 2 and 18 is a plunger vertically slidable therein and pivotally connected with bars 19 which extend down on each side of the support 11 and are pivotally connected with a lever 20 having a rounded end provided with teeth 21, which engage teeth 22 on a web 23. Projections 11' serve as guides for the bars 19. A link 24 connects the lever 20 with the treadle 8 and a spring 25 normally holds the treadle and link in their raised position. In the plunger 18 a spindle 26 is secured carrying a fixed jaw 27 having a seat therein to receive the steel facing plate 28. A movable jaw 29 is pivoted at 30 and is held in yielding contact with the steel plate by a spring 31. When the plate is inserted between these jaws, it will be securely held and the seat of the jaw 27 will form a rigid backing for the plate 28 and hold it securely in place during the operation of thrusting it into the calk.

In using the device, the calk is first heated and its flattened upper end inserted beneath the steel plate carried by the jaws above. The treadle 8 is then depressed and bars 19 are drawn down causing the pointed end of the plate to penetrate the calk until it has been forced into the hot metal the desired distance. The shoe is then removed and the calk drawn out until its softer metal incloses and protects the steel plate on both sides. As the calk wears away, the end of the steel plate will be exposed and will wear sharp as its upper end protrudes from the softer metal of the calk.

Fig. 3 illustrates the manner of forcing the steel plate into a new calk, and Figs. 4 and 5 illustrate the manner of mounting the facing plate on the calk where it has been drawn out and the broad flat end surface shown in Fig. 3 has disappeared.

It will be noted in Fig. 4 that the socket 32 is formed in the inclined surface of the calk and half way between its base and point and the plate then bent over to form a facing for the outer end of the calk. In Fig. 5, the socket 33 is formed at the base of the calk to receive the steel plate, which covers the entire inclined surface. In Fig. 7 a steel plug 34 is forced into the round calk 35, which is heated to the required degree before the operation is performed.

I claim as my invention:

1. The combination, with means for supporting a horse shoe having calks formed thereon, of a plunger arranged above said support, jaws carried by said plunger and adapted to receive and support a steel facing plate, and means for depressing said plunger and jaws to force said facing plate into the shoe calk, said depressing means including bars pivotally connected at their upper end with said plunger, a lever pivotally connected with the lower ends of said bars and having a rounded end provided with a series of teeth, a fixed web having teeth in engagement with the teeth of said lever and a

treadle device operatively connected with said lever, substantially as described.

2. The combination, with a frame, of a plunger vertically slidable therein, a fixed jaw mounted on said plunger and having a seat, a pivoted jaw arranged to engage and clamp a steel plate in said seat, a spring for yieldingly holding said pivoted jaw against said plate, a carriage mounted in said frame beneath said jaw and adapted to support a horse shoe, the calk thereof being heated sufficiently to allow the lower end of said plate to be forced therein, and means for depressing said plunger and jaw, substantially as described.

3. The combination, with a frame, of a plunger vertically slidable therein, jaws carried by said plunger and arranged to clamp a steel plate, a carriage mounted in said frame beneath said jaw and adapted to support a horse shoe, the calk thereof being heated sufficiently to allow the lower end of said plate to be forced therein, and a lever mechanism connected with said plunger for depressing it and said jaw.

In witness whereof, I have hereunto set my hand this 27th day of February 1909.

AUGUST ERICKSON.

Witnesses:

O. N. ERICKSON,
J. H. HALVORSON.