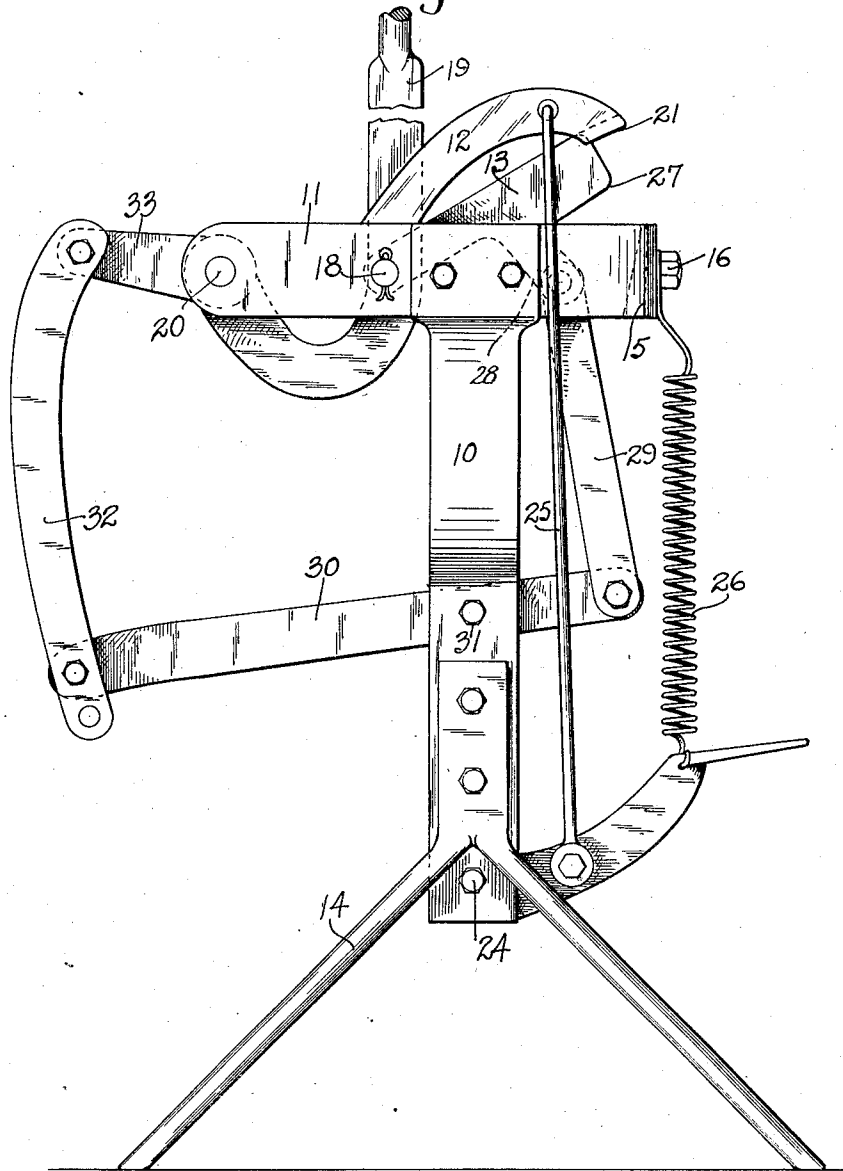


1,055,006.

2 SHEETS—SHEET 1.

Fig-1-



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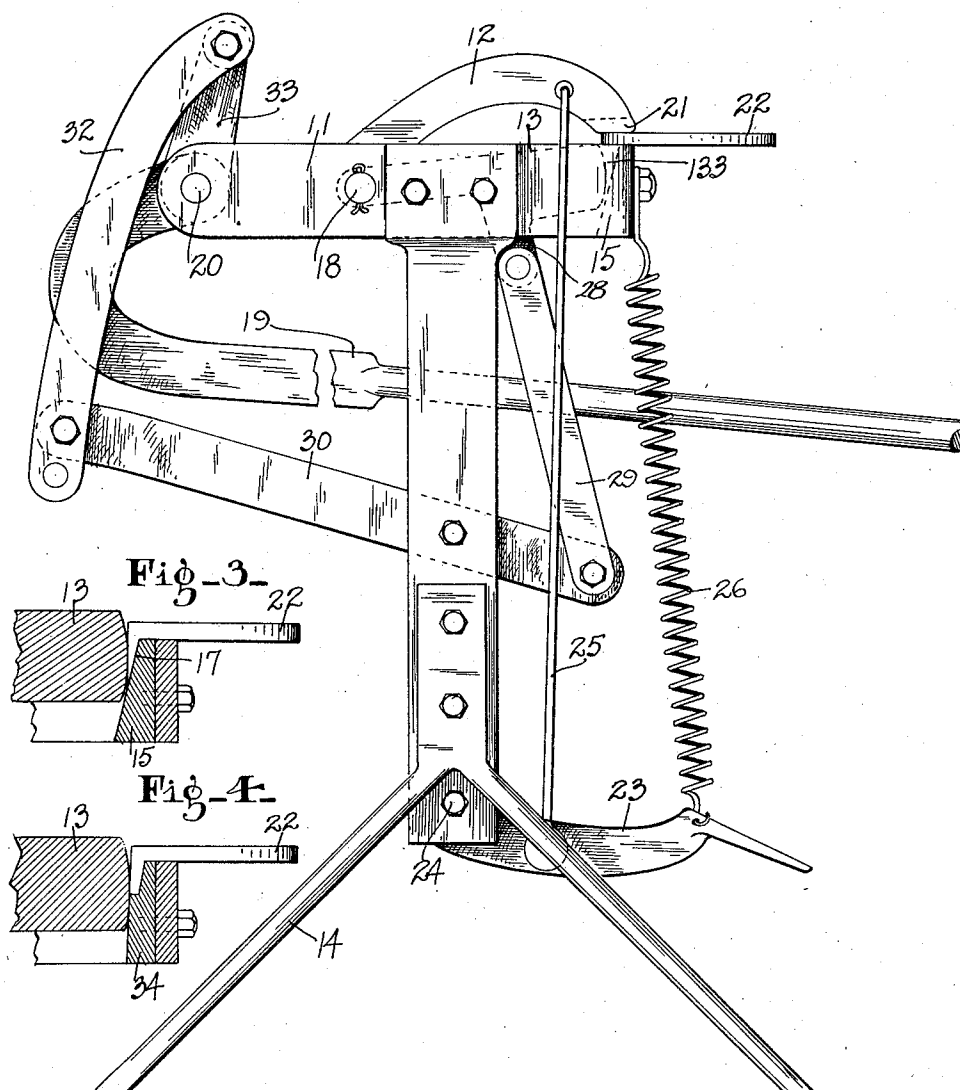
J. WOOD.
MACHINE FOR FORMING HEEL CALKS ON HORSESHOES.
APPLICATION FILED FEB. 23, 1912.

1,055,006.

Patented Mar. 4, 1913.

2 SHEETS-SHEET 2.

Fig-2-



WITNESSES:

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JAMES WOOD, OF NOBLESVILLE, INDIANA.

MACHINE FOR FORMING HEEL-CALKS ON HORSESHOES.

1,055,006.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed February 23, 1912. Serial No. 679,448.

To all whom it may concern:

Be it known that I, JAMES WOOD, a citizen of the United States, and a resident of Noblesville, county of Hamilton, and State of Indiana, have invented a certain useful Machine for Forming Heel-Calks on Horse-shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

The object of this invention is to facilitate the forming of heel calks of horse shoes and consists essentially of means for simultaneously bending and shaping the calk and shearing away the surplus metal necessary to the shaping. This means includes a die having a suitable recess which is substantially the shape of the calk in vertical longitudinal section and a jaw or bar movable with reference to the die upon the end of the horse shoe so as to bend it down into the die and shear away the surplus metal.

The shape of the calk is determined by the shape of the recess in the die and it may be triangular or substantially rectangular, as desired.

Along with the foregoing there is means for holding the horse shoe in place above the die while it is being sheared.

The device is a very simple one in both construction and operation.

The nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings, Figure 1 is a side elevation of the machine with the parts in idle position. Fig. 2 shows the same, but with a horse shoe held in position and with the parts of the machine shown in operated position. Fig. 3 is a cross section through the dies of Fig. 2, showing a heel calk being formed. Fig. 4 shows the same, but with a modified form of die being used.

In detail there is shown in the drawings a horse shoe heel calk forming machine having a vertical frame bar 10 with a horizontal frame 11 secured upon the upper ends and with a pedal operated clamp 12 and a lever operated forming, bending and shearing jaw or bar 13 by means of which a horse shoe may be held and heel calks formed thereon and sheared to any desired shape. The vertical frame bars 10 are supported by means of legs 14, although any other means would suffice.

The horizontal frame 11 is substantially

U-shaped with the closed part of the U extending to a right angle, as shown in Fig. 1, and upon the inner side of said closed part, the dies 15, see dotted lines in Figs. 1 and 2, are secured by means of a bolt 16. Said dies have suitable depressions or cut away portions 17 upon the left-hand face and spaced apart a distance equal to the distance between the heels upon the horse shoe upon which it is desired to form heel calks. A pivoted bar 18 extends through the legs of the horizontal frame 11 and upon said bar and in the opening of the U, the clamping bar 12 is pivotally mounted and within the clamping bar, the shearing bar 13 is mounted. At the extreme left-hand end of the frame 11 a bell crank lever 19 is pivoted by means of a pin 20. The clamping bar 12 is also somewhat U-shaped in form and, as before mentioned, is pivoted upon the pin 18. The sides of said bar lie in a vertical plane and the end 21 normally lies in a horizontal plane such that when said bar is moved to the position shown in Fig. 2, the end 21 will bear against the horse shoe 22 and hold the same against the horizontal frame 11 with the heels of said shoe projecting inwardly over the die 15. There is a foot pedal 23 pivoted at 24 upon the lower end of the vertical frame 10 and pivotally connected to the clamping bar 12 by means of rods 25, one upon either side of the frame 11. There is a spring 26 secured to said frame and to the foot pedal 23 by means of which said foot pedal and said clamping bar are returned to their normal positions when said foot pedal is released.

The heel forming and shearing bar 13 mounted within the clamping bar 12 upon the pin 18 has its right-hand end formed concentrically with said pin and is hardened to form a cutting edge 27 thereon. There is a downward projection 28 upon the lower side of said shear which is pivotally connected with one end of a link 29, whose other end is pivoted to one end of a lever 30 which is fulcrumed between its ends on a pivot 31 extending through the bars 10 and with the other end pivoted to one end of a link 32 which is also pivoted in the free end 33 of the bell crank lever 19.

The operation of the machine is as follows: The heels of the horse shoe 22 being properly heated, are clamped over the dies 15 by depressing the foot lever 23, after which the bell crank lever 19 is moved from

the position shown in Fig. 1 toward that shown in Fig. 2. This, through the connecting link 32, lever 30 and link 29, will cause the cutting edge 27 of the shear 13 to bear
 5 against the inwardly projecting heels of the horse shoe 22 and will bend them downward, filling the depressions within the dies 15 and shearing away the surplus metal, thus, at one operation, forming, shearing
 10 and finishing the calks 33 upon said horse shoe 22. The lever 19 is then thrown back to the normal position, shown in Fig. 1, and the clamp 12 is released by removing the foot from the pedal 23 and the finished
 15 horse shoe may be removed from the machine.

In Fig. 4 a modified form of die 34 is shown as substituted in place of the die 15 for the purpose of forming a calk with a blunt instead of pointed end. The particular form of die, however, constitutes no essential part of the invention as many different shapes may be used with equal facility, provided that the upward face of the
 20 die is concentric with and has the same radius as has the cutting edge 27 of the shear 13.

I claim as my invention:

1. A machine for forming heel calks for
 30 horse shoes including a main frame, a vertically disposed die removably secured within the end of said frame upon which the horse shoe is adapted to be placed, a yoke frame pivoted to the rear part of the main
 35 frame with the forward end of the yoke frame adapted to move down upon the free end of the main frame for holding the horse shoe in place, a pedal bar, a rod connecting the pedal bar with said shoe holding bar, a
 40 spring connecting the pedal with the main

frame so as to hold the shoe holding bar normally elevated, a jaw-like bar fulcrumed in the rear part of the main frame with the forward end vertically movable adjacent the rear surface of the die, an actuating lever, and a connection between said
 45 actuating lever and jaw-like bar for oscillating the latter.

2. A machine for forming calks on horse shoes including a main frame, a supporting
 50 frame, a vertically disposed die removably secured within said main frame upon which the horse shoe is adapted to be placed, a clamping frame fulcrumed upon said main frame with the forward end thereof adapted
 55 to move down upon said main frame for holding the horse shoe in place, a foot lever fulcrumed upon said supporting frame, a rod connecting said foot lever and said clamping frame, a spring tending to normally hold said clamping frame in an in-
 60 operative position, a shear bar fulcrumed at one end on said main frame and with the other end adapted to be moved adjacent one side of said die, a link having one end
 65 pivotally connected with said shear bar to one side of the fulcrum, a lever fulcrumed on said supporting frame and pivotally connected to the other end of said link, an operating lever fulcrumed on said main
 70 frame, and an operative connection between said operating lever and said first-mentioned lever.

In witness whereof, I have hereunto affixed my signature in the presence of the
 75 witnesses herein named.

JAMES WOOD.

Witnesses:

C. M. GENTRY,
 RUTH FAUST.