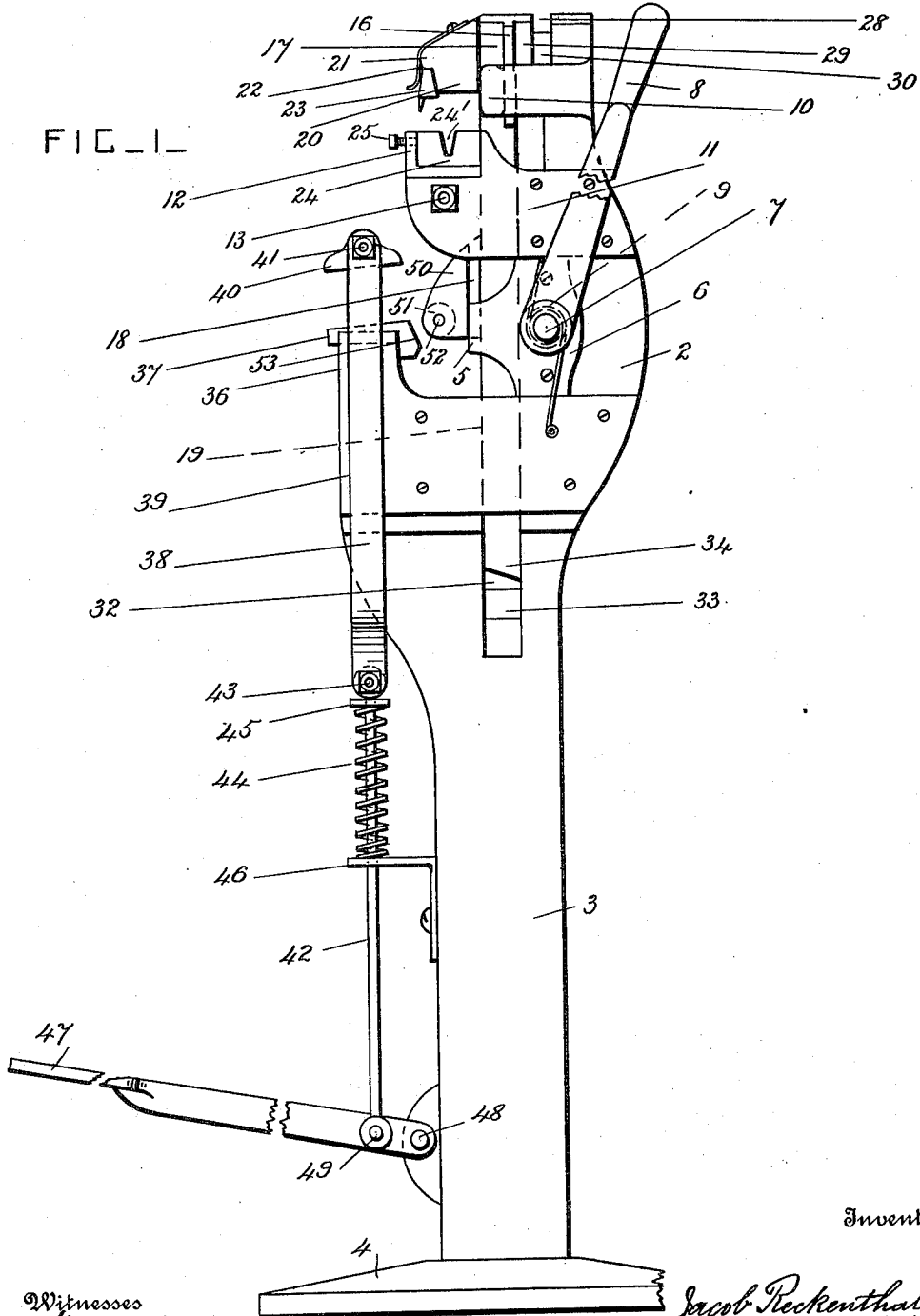


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 CALC MACHINE,  
 APPLICATION FILED SEPT. 16, 1911.

1,032,703.

Patented July 16, 1912.

2 SHEETS-SHEET 1.



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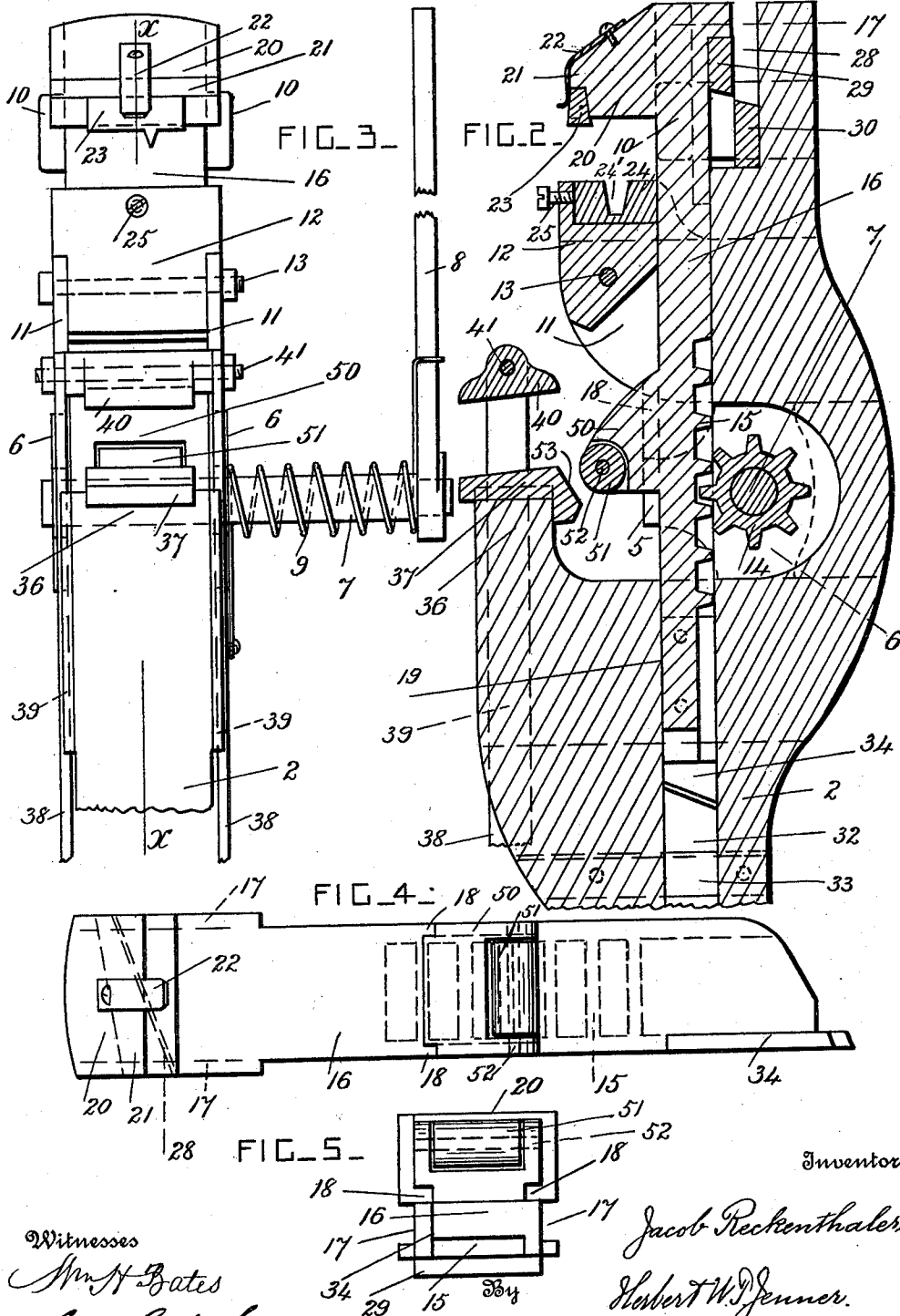
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# UNITED STATES PATENT OFFICE.

JACOB RECKENTHALER, OF CAMPIA, WISCONSIN.

## CALK-MACHINE.

1,032,703.

Specification of Letters Patent.

Patented July 16, 1912.

Application filed September 16, 1911. Serial No. 649,594.

*To all whom it may concern:*

Be it known that I, JACOB RECKENTHALER, a citizen of the United States, residing at Campia, in the county of Barron and State of Wisconsin, have invented certain new and useful Improvements in Calk-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to machines used by horseshoers for setting and welding the toe calks, and for forming the heel calks, used in connection with horse shoes; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a side view of a calk machine constructed according to this invention. Fig. 2 is a vertical section through the upper part of the machine, taken on the line  $x-x$  in Fig. 3, and drawn to a larger scale. Fig. 3 is a front view of the upper part of the machine. Fig. 4 is a detail front view of the slide. Fig. 5 is an end view of the slide.

The machine is provided with a frame 2 which is mounted on a pedestal or column 3 having a base 4. Two lower guides 5 are secured to the sides of the frame by plates 6, and 7 is the operating shaft which is journaled in the plates 6. The plates 6 are substantially flat, and each guide 5 consists of a rectangular lug (see Fig. 2) which projects laterally from the plate and engages with a longitudinal groove in the edge of the slide 16 (see Figs. 2 and 5) hereinafter more fully described. An operating lever 8 is secured to one end portion of the shaft 7, and 9 is a spring coiled upon the shaft 7 and normally holding the lever 8 in a raised position.

Upper guides 10 are secured to the frame above and parallel to the lower guides 5, and 11 are plates secured to the sides of the frame between the guides 5 and 10, and projecting beyond the frame at the front of the machine. A removable block 12 is secured by a bolt 13 between the projecting portions of the plates 11.

A toothed pinion 14 is secured on the shaft 7 between the plates 6, and is arranged to gear into a toothed rack 15 formed on the back of a slide 16. The slide 16 has grooves 17 and 18 at its end portions which slide ver-

tically on the upper and lower guides 10 and 5 respectively. The slide also slides between the plates 11, and its lower end portion works in a hole 19 in the frame.

The slide 16 is a rectangular bar, and it has a projecting block or jaw 20 at its upper end which overlaps the block 12. The block 20 has a lip 21 at its front, and 22 is a spring secured to the block 20 and overlapping the said lip. A calk 23 of any approved construction is held against the lip 21 by the spring 22, and the block 12 is provided with a die 24 of any approved form, which is held in position by a set-screw 25. These two blocks 12 and 20 are used first in setting the calk in the horseshoe, and subsequently for welding the calk to the shoe. The die 24 has a groove or slot 24' for receiving the calk during the welding operation, the horse shoe being held with the calk downward at that stage of its manufacture. The groove 24' is arranged out of line with the lip 21 and the calk which is supported against this said lip.

A gap 28 is formed between the upper part of the back of the slide 16 and the frame, and a shear blade 29 is secured to the back of the slide. A similar shear blade 30 is secured to the frame, and the cutting edges of these blades are arranged diagonally. This shears is used to cut off worn toe calks from horseshoes.

A gap 32 is formed below the frame in the upper part of the pedestal, and 33 is a shear blade secured on one side of the pedestal crosswise of the gap 32 and at its lower end. A shear blade 34 is also secured to the bottom end portion of the slide 16 and it works in connection with the blade 33. This shears is used to cut off worn heel calks from horseshoes, and for shortening the heel portions of the shoes.

A block 36 is arranged to project upwardly from the lower part of the frame at a little distance in front of the slide 16, and a removable clamping plate or block 37 is supported by this block 36. Two bars 38 are provided and are arranged to slide vertically in guide grooves 39 in the ends of the block 36. A clamping plate 40 is pivoted or otherwise connected by a pin or bolt 41 to the upper end portions of the bars 38, and this clamping plate is arranged over the clamping plate 37.

The lower end portions of the two bars 38 are provided with inclined portions, and are

connected to an operating rod 42 by a pin 43. A spring 44 is arranged around the rod 42 between a washer plate 45 on the rod and a bracket 46 secured to the pedestal.

5 This spring normally holds the upper clamping plate in its raised position.

A treadle 47 is pivoted to the pedestal by a pin 48, and is connected to the lower end portion of the rod 42 by a pin 49.

10 The middle portion of the front of the slide has a curved projection or block 50 which is preferably provided with a roller 51 journaled on the pin 52 and arranged opposite a beveled surface 53 on the rear side 15 of the lower clamping plate 37. This projection or roller is used for turning over the heel portions of the horse shoe to form heel calks. The heated heel portion of the horse shoe is thrust between the two clamping 20 plates 37 and 40, and is secured by pressing down the treadle.

The slide is then depressed by means of the operating lever, so that the roller 50 bends over the end of the horse shoe and 25 forms it into a calk.

The toe calk is set in the horse shoe by attaching the calk to the block 20 with its stem downward. The toe portion of the horse shoe is heated and is placed on the 30 lower block or die, and the stem of the calk is then forced into a hole in it by depressing the operating lever. The two parts thus temporarily connected are then brought to a welding heat, and are welded together 35 by pressure between the opposed blocks or dies, and by means of the said operating lever.

The shears at the upper and lower parts of the slide are actuated by the same operating 40 lever which works the slide up and down, and any objects inserted between the opposed shear blades may be cut off.

In order to cut off the worn toe calk the slide is raised until the toe calk can be 45 slipped under the upper shear blade, and the shoe then rests in a vertical position on the side portions of the upper guides 10

with its heel portions uppermost. The calk is cut off when the slide is depressed by means of the operating lever. 50

Dies and clamping plates of any approved form are used in this machine, and they can be removed and replaced from time to time to adapt the machine to blunt calks, sharp calks, and horse shoes, of all the 55 various sizes and shapes met with in the course of following the business of shoeing horses.

What I claim is:

1. In a calk machine, the combination, 60 with a supporting frame provided with forwardly projecting guide plates at its sides, said plates being arranged in pairs and at different levels and forming channels which are open in front, of a slide arranged in the 65 channels and connected to the plates by tongues and grooves, said slide having on its front side a block or jaw which projects forwardly of the said channels, driving mechanism for reciprocating the slide, and 70 a stationary block or jaw provided with side plates which are secured to the said frame.

2. In a calk machine, the combination, 75 with a supporting frame provided with plates at its sides having laterally projecting guide lugs arranged in pairs and at different levels, of a slide which slides between the said plates and which has longitudinal grooves in its edges for engaging with the 80 said guide lugs, said slide having also a projecting block or jaw at its upper end, driving mechanism for reciprocating the said slide, and a removable block or jaw arranged under the upper block or jaw and 85 provided with supporting plates which are secured to the frame and arranged between the upper and lower pairs of guide lugs.

In testimony whereof I have affixed my signature in the presence of two witnesses. 90

JACOB RECKENTHALER.

Witnesses:

R. M. WHITAKER,  
OSCAR G. JENSEN.