

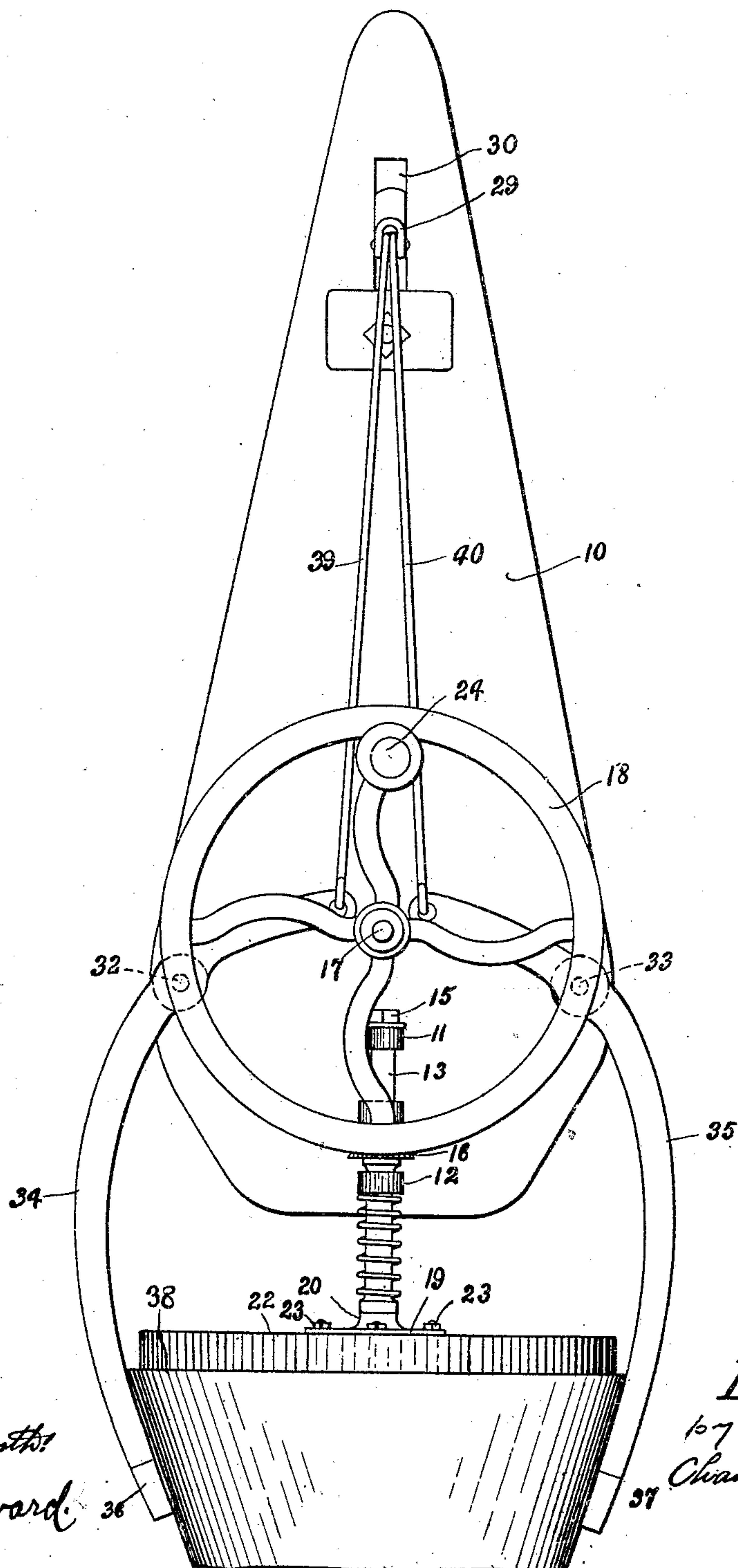
E. CRONIN.
HOOF PARING MACHINE.
APPLICATION FILED MAY 18, 1909.

955,252.

Patented Apr. 19, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

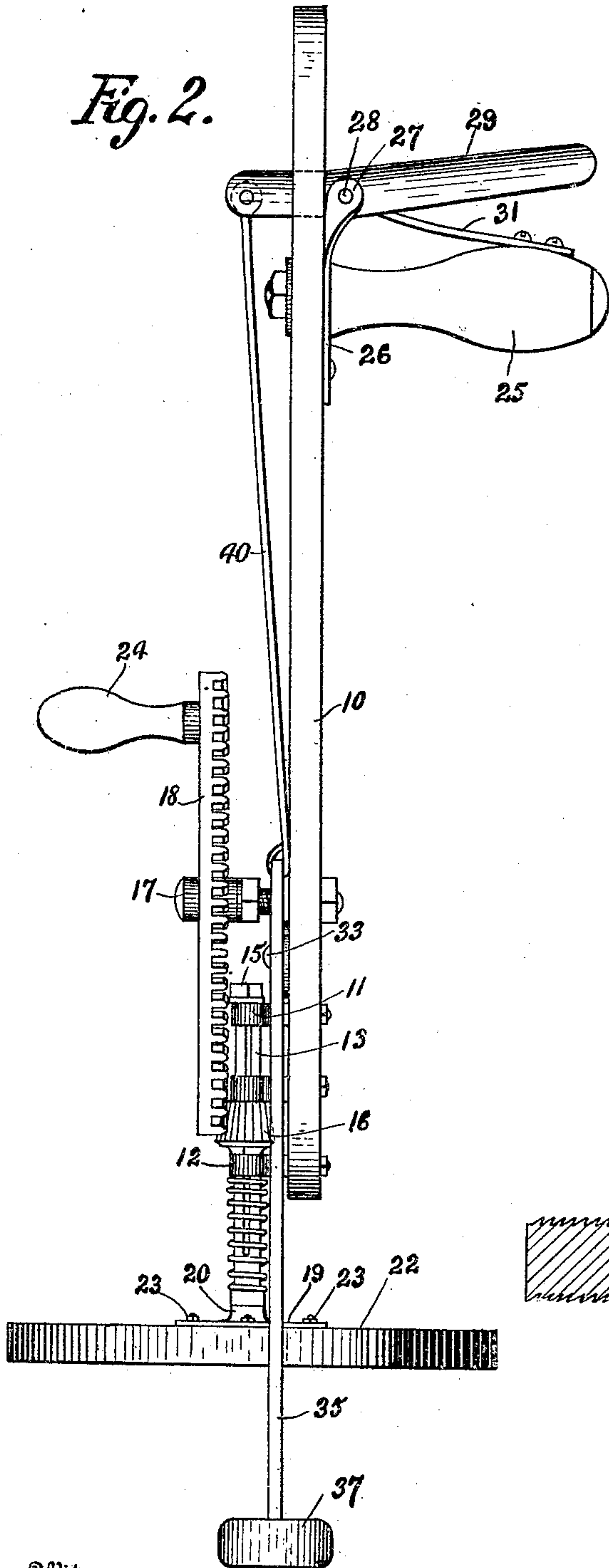
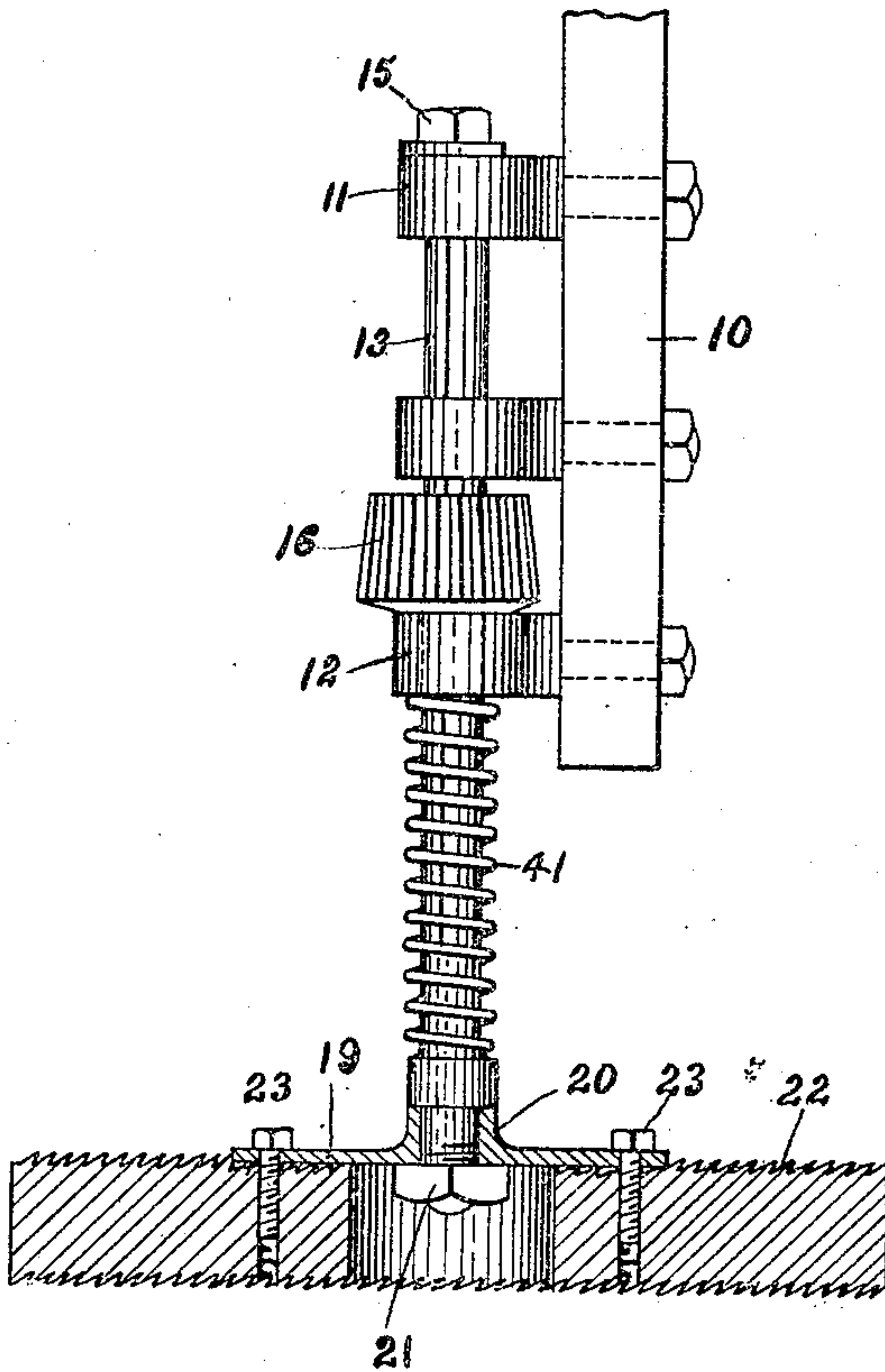


Fig. 3.



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UNITED STATES PATENT OFFICE.

ELI CRONIN, OF NORTON, TERRITORY OF NEW MEXICO.

HOOF-PARING MACHINE.

955,252.

Specification of Letters Patent.

Patented Apr. 19, 1910.

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To all whom it may concern:

Be it known that I, ELI CRONIN, a citizen of the United States, residing at Norton, in the Territory of New Mexico, have invented certain new and useful Improvements in Hoof-Paring 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 devices for paring the hoofs of horses and for like purposes, and has for one of its objects to provide a simply constructed device whereby the hoofs of horses may be clamped and held in position during the paring operation.

With this and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claims.

In the drawings illustrative of the preferred embodiment of the invention, Figure 1 is a side elevation of the improved device. Fig. 2 is an edge view of the same. Fig. 3 is a sectional detail view of the paring disk and its supporting mechanism.

The improved device comprises in general a base member 10 in the form of a plate, preferably of metal and as light as possible consistent with the strains to which it will be subjected. The plate 10 is provided with two bearings 11—12 spaced apart through which a shaft 13 is detachably supported, the shaft having a threaded terminal to receive a clamp nut 15, operating against the inner face of the bearing 11. By this means the shaft is detachably supported in its bearings 11—12, the object to be hereafter explained.

Detachably mounted upon the shaft 13 is a gear pinion 16, and mounted for rotation upon a stud 17 upon the plate 10 is a gear wheel 18 engaging with the pinion 16. By this means the rotation of the gear 18 will rotate the gear 16 and the shaft 13, as will be obvious. The portion of the shaft 13 which passes through the pinion 16 is preferably grooved or of other irregular shape, so that when inserted into the pinion the shaft will be rotated when motion is imparted to the pinion by the gear 18, the pinion having the usual key to fit the groove.

Connected to the outer end of the shaft 13 is a disk 19, the disk being provided with a hub 20 through which the shaft extends and with a clamp nut 21 upon the opposite side

of the plate 19 to provide a suitable coupling means between the plate and the shaft. A spring 41 surrounds the shaft 13 between the bearing 12 and the hub 20, and operates to maintain the disk 22 yieldably in its operative position relative to the hoof, and thus materially increases the utility and efficiency of the device, as the abrading element will yield in event of an abnormally hard hoof being encountered, and thus prevent undue friction or strain upon the hoof or the operator. The abrading element is represented as a whole at 22, and is preferably in the form of a flat disk connected to the plate 19 by screws or other detachable devices 23. The plate 22 is provided upon its opposite sides with suitable abrading elements such as rasp teeth or the like, and is reversible upon the disk 19 so that when one side is worn the other side can be disposed outwardly by simply removing the screws 23. If preferred the rasp teeth upon the opposite sides of the disk may be of different sizes so that a coarse or a fine abrading surface may be quickly produced by reversing the position of the disk. The disk is preferably formed in annular shape as shown, the cavity within the disk providing means for the reception of the binding nut 21, so that no part of the latter projects beyond the abrading face of the disk.

An operating handle 24 is connected to the wheel 18, while a relatively large holding handle 25 is connected to the opposite side of the base plate 10 from the stud 17 and its wheel 18. By this means the operator holds the member 10 by grasping the handle 25 with one hand while operating the handle 24 with the other hand. Arranged between the inner end of the handle 25 and the base plate 10 is a small plate 26 having spaced ears 27 thereon, the ears having a transverse pin 28 extending therethrough.

Pivoted upon the plate 26 is a lever 29, the lever extending at one end over the handle 25, and extending at the other end through a slot 30 through the plate 10. A spring 31 is arranged between the handle 25 and the lever 29 to maintain the latter yieldably in distended position, or normally spaced away from the handle, the object to be hereafter explained.

Pivoted at 32—33 to the plate 10 are two grip levers 34—35, the levers extending to a point in advance of the abrading disk 22 and provided with grip plates 36—37 at

their outer ends, the grip plates being adapted to bear against the hoof of the horse, during the abrading operation. The outline of a hoof is represented at 38 with the plates 36—37 in engagement therewith and the abrading disk in position in contact with the "sole" of the hoof.

Connected between the free end of the lever 29 and the inner shorter ends of the levers 34—35 are connecting rods 39—40. By this means it will be obvious that when the lever 29 is compressed toward the handle 25 the outer shorter ends of the levers 34—35 will be moved away from the abrading disk 22 and the clamp members 36—37 moved inwardly in contact with the hoof, and will thus firmly grip the same and couple it to the plate 10 and its attached mechanism.

When the hoof is to be pared the operator grasps the handle 25 in the left hand and arranges the clamp members 36—37 at opposite sides of the hoof and compresses the lever 29 with the same hand which grasps the handle and thus holds the hoof in position to be operated upon by the abrading disk, which is actuated by simply rotating the wheel 18 by power applied to the handle 24. By slightly decreasing the pressure upon the lever 29 the clamp members 36—37 may be adjusted upon the hoof to change the location of the abrading disk as required without removing the implement from the hoof. Thus by a little practice the operator can readily pare the whole surface of the hoof uniformly, and prepare it for the reception of the shoe.

The operation of the machine is uniform and effective, and produces a surface which is uniform in shape, and does not cut the hoof unevenly, which is frequently done when paring knives are carelessly used.

The improved device will operate uniformly upon all sizes of hoofs, and upon hoofs of all conditions and degrees of hardness, and will operate with equal facility upon soft or hard hoofs without injury thereto.

The improved device is simple in construction, can be inexpensively manufactured, and operated by any ordinary horse-shoer without previous practice or skill.

What is claimed is:—

1. In a device of the class described, a supporting member, an abrading element

mounted for rotation upon said supporting member, levers mounted to swing upon said supporting member and extending in advance of said abrading element and adapted to grasp a hoof from opposite sides in advance of said abrading element, and means carried by said supporting member for rotating said abrading element.

2. In a device of the class described, the combination of a supporting member, an abrading element mounted for rotation upon said supporting member, hoof gripping devices movable toward and away from each other and operating in advance of said abrading element, means carried by said supporting member for operating said hoof gripping device, and means carried by said supporting member for rotating said abrading element.

3. In a device of the class described the combination of a supporting member, an abrading element mounted for rotation upon said supporting member, means carried by said supporting member for rotating said abrading element, levers swinging upon said supporting member and with hoof gripping devices at their free ends, a supporting handle carried by said supporting member, a lever adjacent to said supporting handle, and means whereby said lever is caused to move said levers toward and away from each other.

4. In a device of the class described the combination of a supporting member, spaced bearings carried by said supporting member, a shaft detachably mounted for rotation in said bearings, a plate carried by said shaft, an annular abrading element, means for detachably and reversibly coupling said abrading element to said plate, hoof gripping devices carried by said supporting member and movable toward and away from each other, means carried by said supporting member for actuating said hoof gripping devices, and means carried by said supporting member for rotating said shaft and the abrading element carried thereby.

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

ELI CRONIN.

Witnesses:

E. E. MAYES,

H. N. DONOHOO.