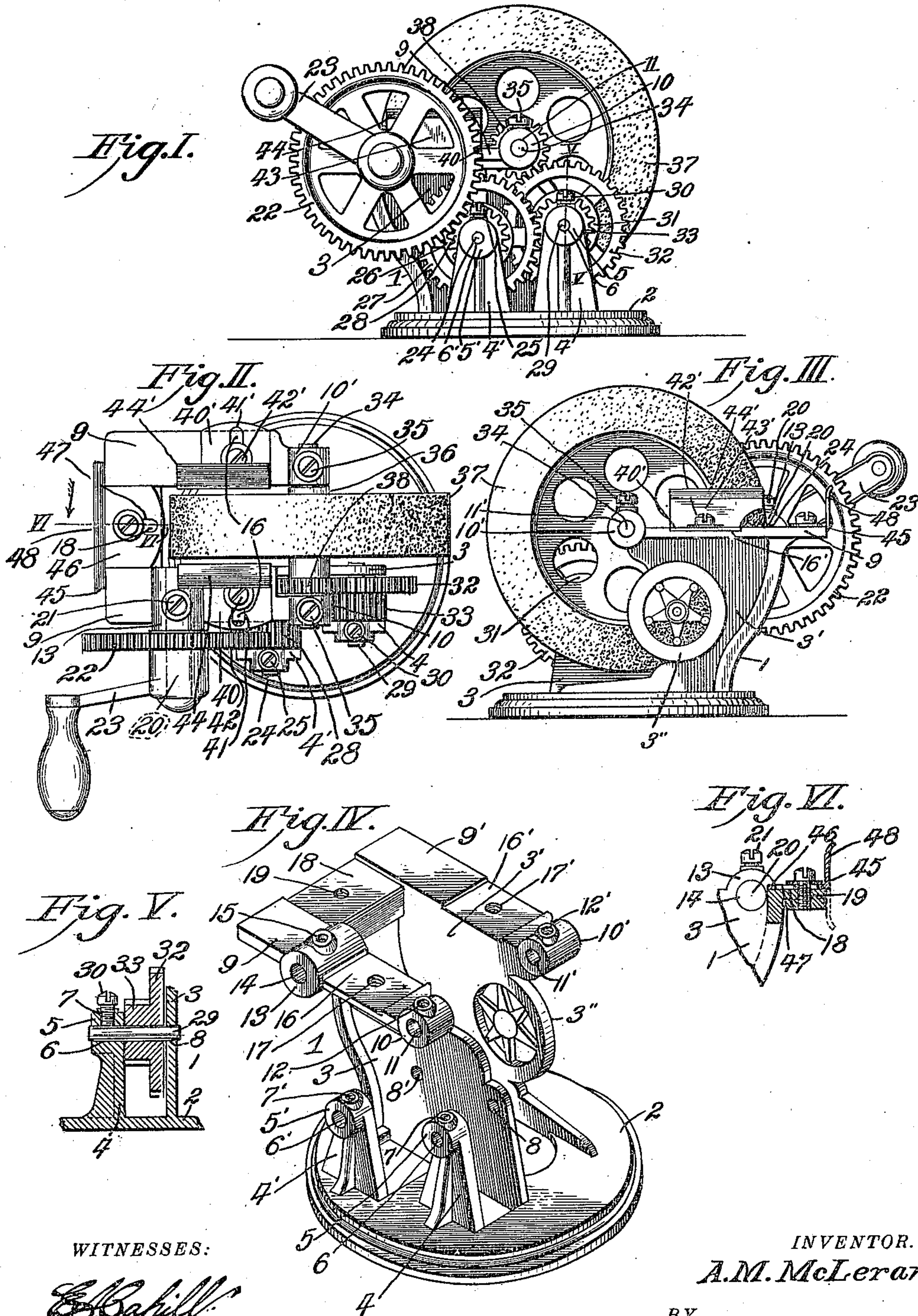


A. M. McLERAN.
GRINDING DEVICE.
APPLICATION FILED JUNE 1, 1909.

960,378.

Patented June 7, 1910.



WITNESSES:

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GRINDING DEVICE.

960,378.

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To all whom it may concern:

Be it known that I, ALVORD M. McLERAN, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Grinding Devices; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to grinding devices and has for its object to provide a device of that class for household or small shop use.

It is a further object of my invention to provide brackets for guiding a knife or shears while being ground, and which may be adjusted to compensate for the wearing of the stone.

It is a further object of my invention to provide a simple and economical grinder containing the improved details of structure hereinafter described and pointed out in the claim, reference being had to the accompanying drawings, in which—

Figure I is a side view of a grinding device constructed according to my invention. Fig. II is a plan view of same. Fig. III is a side view opposite Fig. I. Fig. IV is an enlarged perspective view of the wheel frame. Fig. V is a sectional view on the line V—V, Fig. I. Fig. VI is a sectional view on the line VI—VI, Fig. II.

Referring more in detail to the parts:—
1 designates the frame of the device, which is preferably cast in a single piece having the base 2, vertical cheeks 3—3' and standards 4—4'. The standards are both at the outer side of the cheek 3 and are set at unequal distances therefrom, for a purpose presently set forth. On the upper ends of the standards 4—4' are the boxes 5—5' having horizontal apertures 6—6' and threaded apertures 7—7' which extend through the bodies of the boxes and connect with the first named apertures. The cheek 3 extends upwardly above the boxes 5—5' and has apertures 8—8' in alinement with the horizontal box apertures. On the top of and projecting laterally from the cheeks are the shelves 9—9', each of which is extended backwardly a short distance from the flange upon which

it is supported, and is provided, at its forward end, with a box 10—10', the shelf 9 being slotted at its forward end to receive one of the driving gears presently described. The boxes 10—10' are provided with alining apertures 11—11' and with the threaded apertures 12—12' which communicate with those first named. In the shelf 9 is a box 13, having a horizontal aperture 14 and a threaded aperture 15 which communicates with aperture 14. In the upper face of shelf 9, between the boxes 12 and 14, is a down set socket 16, having a screw hole 17, and in the shelf 9', in horizontal alinement with socket 16, is a similar socket 16' having the screw hole 17'.

18 designates a shelf which connects the rear ends of the shelves 9—9' and has the screw hole 19. The upper face of shelf 18 is below the level of the body shelves and on substantially a level with the upper faces of the socketed portions 16—16'.

The cheek 3 is preferably solid with the exception of the apertures noted, while the cheek 3' is cut backwardly and provided with a skeleton design to ornament and decrease the weight of the frame, and preferably comprising an outset ring 3'' upon which the name of a manufacturer or dealer may be cast.

20 designates an axle which fits snugly within the aperture 14 in box 13 and is held firmly in position by the set screw 21. The outer end of the axle is projected laterally from the box and carries a large gear wheel 22, the hub of which is provided with a crank 23.

24 designates an axle which fits snugly within the aperture 6' of box 5 and within the aperture 8' in the cheek 3, and is held firmly in position by the set screw 25. Rev- olubly mounted on axle 24 is a hub 26, having a large gear wheel 27 and a small gear wheel 28, the latter meshing with the crank wheel 22.

29 designates an axle which fits snugly within the aperture 6 in box 5 and within the aperture 8 in the cheek 3, and is held firmly in position by the set screw 30. Rev- olubly mounted on axle 29 is a hub 31, having a large gear wheel 32 and a small gear wheel 33, the latter meshing with the large intermediate wheel 27.

34 designates an axle which extends across the frame and fits snugly within the aper-

tures 11—11' in the boxes 10—10', and is held firmly in position by the set screws 35—35'. Revolvably mounted on the axle 34 is a hub 36, which carries an emery or like wheel 37 and has a small gear wheel 38 meshing with the large gear 32 on hub 31, the gear wheel 38 being located in the offset in the shelf 16, in order to line with its driver.

Mounted on the cheek shelves at the sides and at one end of the stone are brackets, each of which has a base 40—40' that fits within a respective socket 16—16' so that its edges hold against the socket edges and prevent displacement. Each socket base has a slot 41—41' through which a set screw 42—42' may be projected into the screw hole 17—17', in order that the bracket may be held firmly in an adjusted position. Each bracket is also provided with a member 43—43' which is spaced from its base to enable a knife blade to fit between same and the stone and has a beveled flange 44—44' upon which the blade of a shear may be rested and guided while being ground.

45 designates a back bracket having a base 46 adapted to seat on the rear shelf 18 and abut, at the sides, against the shelves 9—9'. This base has a slot 47, through which a set screw may be projected into the screw hole 19 and has a rest 48. Rest 48 is intended for use in grinding chisels or the like on the periphery of the stone, and may be turned downwardly to the position indicated in dotted lines Fig. VI, when not in use.

When the device is to be used for grinding knives the blade is placed between one of the side brackets and the side of the stone,

the space therebetween being adapted to receive the blade so that its edge is held against the stone in grinding position. When the stone wears away, the bracket may be moved inwardly to compensate for the wear. In grinding shears, the blade is laid on one of the bracket flanges so that the beveled edge will bear against the side of the stone at the proper angle. In grinding chisels or the like the blade is rested on the end bracket flange and held against the periphery of the stone, to produce a "hol-low" grind. It is readily apparent that the brackets may be replaced when necessary without affecting the frame or wheel.

Having thus described my invention, what I claim as new therein and desire to secure by Letters-Patent is:—

A grinding machine frame cast in one integral piece and comprising a base 2, a pair of cheeks 3, bearing stands 4 and 4' rising from the base adjacent one of the cheeks, said stands being provided with shaft bearings, said cheeks having integral outwardly projecting lateral shelves 9, 9' and connected at one end by a shelf 18, shaft bearings 10 and 13 integral with one lateral shelf, and a shaft bearing 10' in alinement with said bearing 10 and integral with the other lateral shelf; all of said bearings being provided with set-screws for holding shafts in position.

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

ALVORD M. McLERAN.

Witnesses:

MYRTLE M. JACKSON,
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