March 9, 1926. 1,576,448

B. R. MUDRA

MACHINE FOR REFINISHING BOWLING ALLEY PINS

Filed Jan. 28, 1924

FIG. 1.

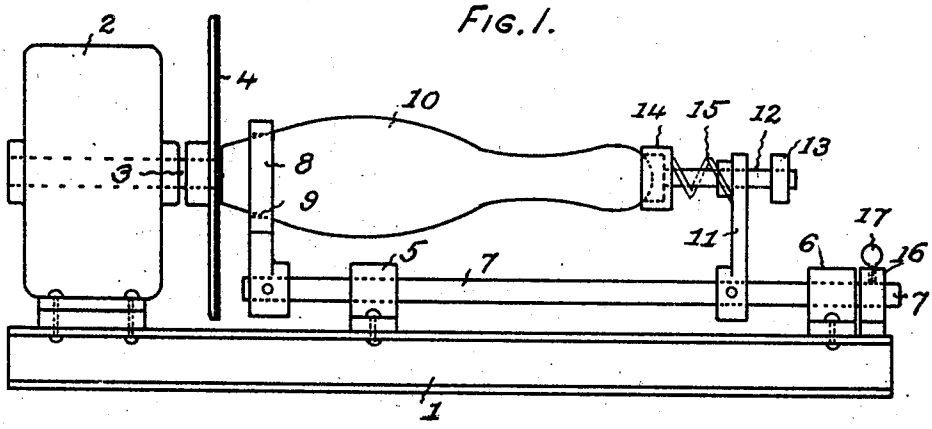
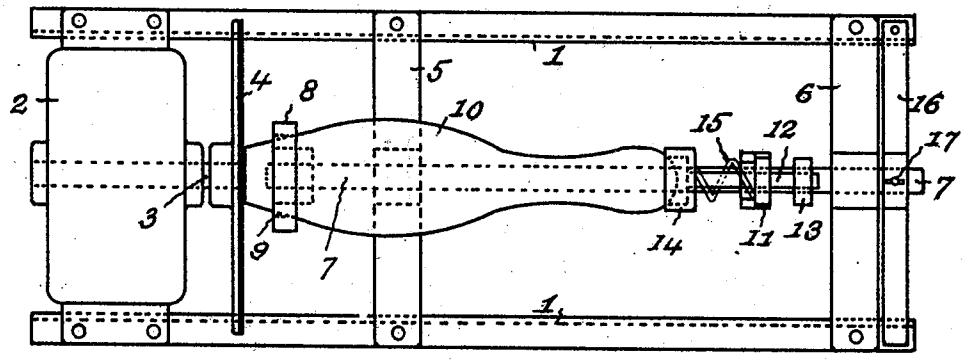


FIG. 2.



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Patented Mar. 9, 1926. 1,576,448

UNITED STATES PATENT OFFICE.

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MACHINE FOR REFINISHING BOWLING-ALLEY PINS.

Application filed January 28, 1924. Serial No. 688,960.

To all whom it may concern:

Be it known that I, BOHUMIL R. MUDRA, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Machines for Refinishing Bowling-Alley Pins, of which the following is a specification.

This invention relates to machines for refinishing and cleaning bowling alley pins, and has for its object:—

To provide a simple and convenient structural formation and combination of parts whereby the bowling alley pin is accurately and effectively held in proper stationary condition during the operation of the refinishing or of the cleaning means, and with which a ready removal and substitution of different types of rotary refinishing and cleaning heads and tools found most suitable in the successive steps of the operation, can be attained, more especially the means by which the bottom or resting end of the pin is refinished or cleaned, all as will hereinafter more fully appear.

In the accompanying drawing:

Fig. 1, is a side elevation illustrating the arrangement of parts in refinishing the bottom or resting surface of a bowling alley pin.

Fig. 2, is a plan view of the same.

Like reference numerals indicate like parts in both views.

Referring to the drawing, 1 designates the machine base or shears, preferably of the parallel rail type shown, and which in the present construction carries an electric or like motor 2, the armature or motor shaft 3 of which constitutes the live spindle of the machine, and to such end is formed for the interchangeable attachment of any one of the series of revoluble refinishing tools 4, such as multiple drill heads, wire brushes and disk sanders, generally used in the polishing trade.

5 and 6 designate transversely arranged bridge heads secured to the base 1 in spaced relation and formed with central bearing orifices for the longitudinally extending guide stem of the work holder now to be described.

7 designates the longitudinal guide stem above referred to, adapted to have a sliding and a turning movement in the central orifices of the bridge heads 5 and 6 aforesaid.

8 designates an upright head secured at its lower end to the forward end of the guide stem 7, with its upper portion formed with a circular orifice 9 adapted to receive and position the tapering lower end portion of a bowling alley pin 10 during the operation of the machine.

11 designates a companion head secured at its lower end to the rear portion of the guide stem 7, with its upper portion formed with a guide orifice or bore adapted to receive and guide a work holding means as follows:—

12 designates a spindle mounted for longitudinal adjustment in the aforesaid guide orifice of the head 11 aforesaid, and provided at its rear end with a stop collar 13 and at its forward end with a hollow head or shell chuck 14 adapted for holding engagement with the rounded top or head of the bowling alley pin 10 aforesaid. Said engagement is of a yielding nature and is maintained by an inter-posed spring 15 as shown.

16 designates a transversely arranged bridge head detachably secured to the rear end of the guide stem 6 aforesaid by a set screw 17, and adapted, when fixedly attached to said stem and with its respective ends resting upon the top of the base 1, to prevent any turning movement of said stem and the work holding parts mounted thereon. With the bridge head 16 loose upon the stem 7, said stem and its associated parts are capable of a free turning or oscillatory movement in order to move the bottom or resting surface of the pin 10 across the face of a refinishing head or wheel 4 carried by the motor shaft 3, in the operation of resurfacing the bottom or resting face of a bowling alley pin 10.

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

1. In a machine for refinishing bowling alley pins, the combination of a base, a stem mounted for turning and longitudinal adjustment on said base, work holding heads mounted in spaced relation on said stem with their upper ends formed for holding engagement with opposite end portions of the work, a transverse bridge piece having end bearings on the base and central engagement with an end of the aforesaid stem, means for fastening the bridge piece to said stem to hold the same against turning movement,

and a power shaft revolubly mounted on the base and formed for end attachment of a refinishing tool or head.

2. In a machine for refinishing bowling alley pins, the combination of a base, a stem mounted for turning and longitudinal adjustment on said base, work holding heads mounted in spaced relation on said stem with their upper ends formed for holding engagement with opposite end portions of the work, a transverse bridge piece having end bearings on the base and central engagement with an end of the aforesaid stem, a set screw mounted in said bridge piece and engaging said stem to hold the same against turning movement, and a power shaft revolubly mounted on the base and formed for end attachment of a refinishing tool or head.

Signed at Chicago, Illinois, this 25th day of January, 1924.

BOHUMIL R. MUDRA.