

Feb. 8, 1927.

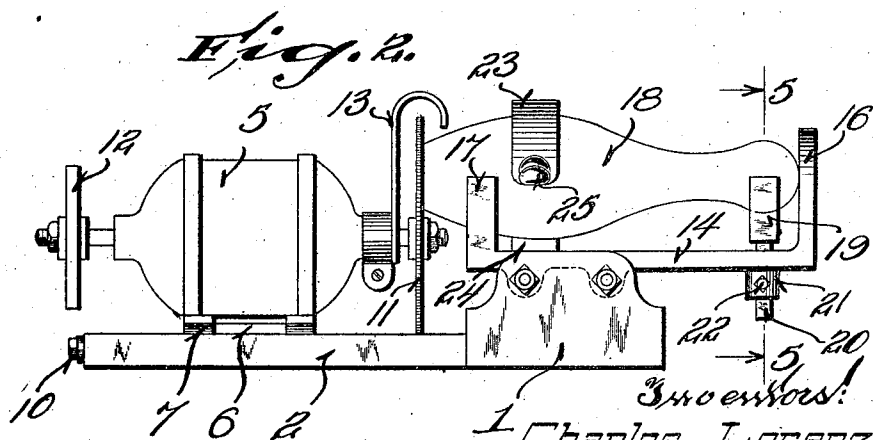
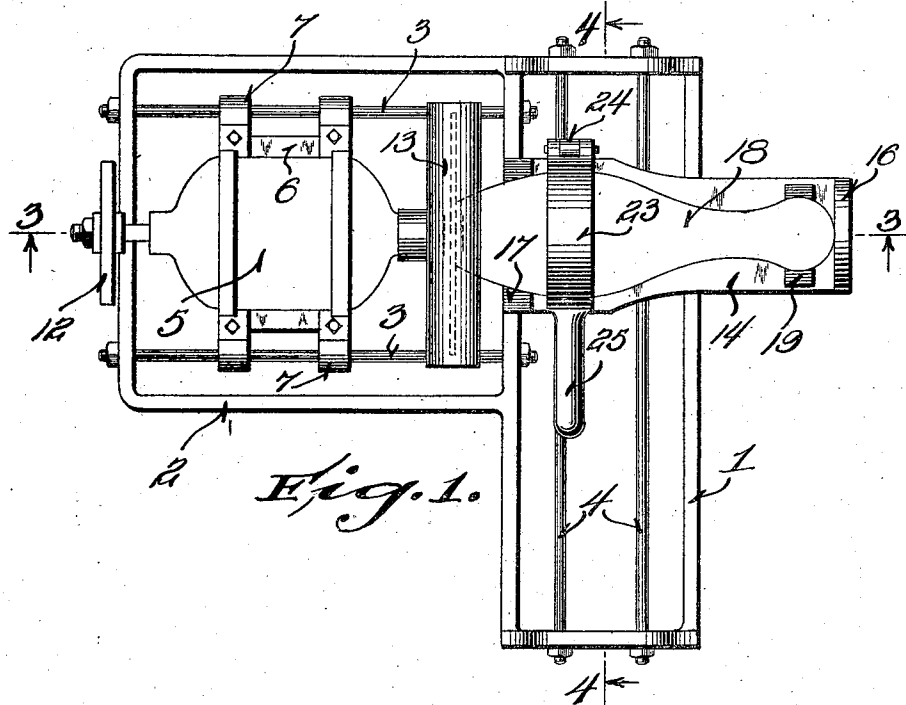
C. LORENZ ET AL

1,616,909

AUTOMATIC PIN TRIMMER

Filed April 9, 1926

2 Sheets-Sheet 1



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Fig. 3.

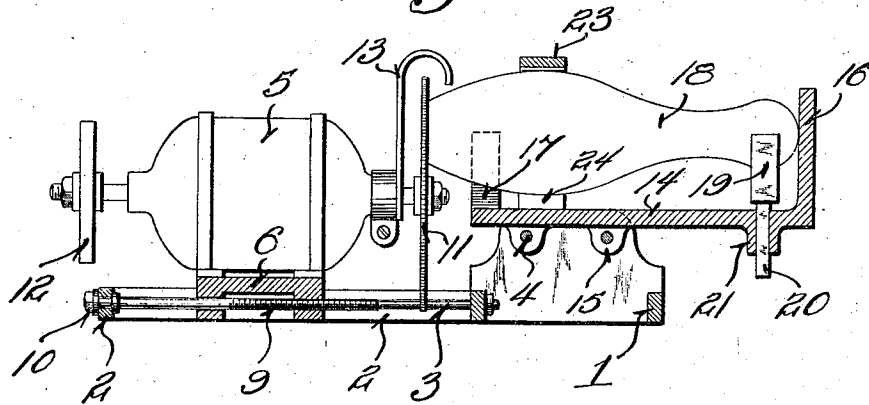


Fig. 4.

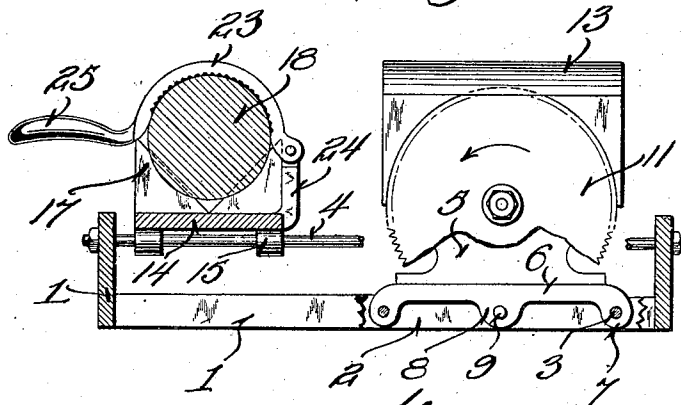
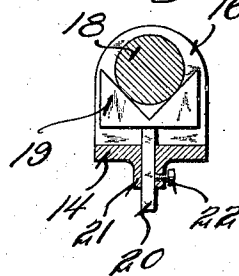


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES LORENZ, EMIL KUNISH, AND DELMER E. SEITZ, OF MANITOWOC, WISCONSIN.

AUTOMATIC PIN TRIMMER.

Application filed April 9, 1926. Serial No. 100,850.

This invention relates to pin trimming machines.

Objects of this invention are to provide a machine adapted for the trimming of the bases of pins used in bowling alleys so that although the pins may become irregular on their bottoms, nevertheless, they may be quickly trimmed and restored to their correct condition.

More specifically, this invention has for its object the provision of a machine which may be accurately set to trim the pins to a predetermined extent, and which may be so adjusted that the axis of the pin will be held at right angles to the plane of the saw.

Further objects are to provide a compact machine which is of simple and strong construction, and which may be very readily operated, provision being made for automatically locking the pin in place by the manipulating handle for the pin carriage.

An embodiment of the invention is shown in the accompanying drawings, in which:—

Figure 1 is a plan view of the apparatus.

Figure 2 is a side elevation thereof.

Figure 3 is a sectional view approximately on the line 3—3 of Figure 1.

Figure 4 is a sectional view approximately on the line 4—4 of Figure 1, such view showing, however, the carriage in retracted position.

Figure 5 is a sectional view on the line 5—5 of Figure 2.

Referring to the drawings, it will be seen that the machine comprises a main frame consisting of two rectangular portions 1 and 2 which are integrally formed. A pair of guiding rods 3 are carried by the rectangular portion 2 and a pair of guiding rods 4 are carried by the rectangular portion 1. Preferably these guiding rods are each provided with threaded ends which pass through apertures in the frame and are provided with nuts on their outer ends so that the rods may be rigidly locked in place.

The machine is provided with an electric motor 5 which is mounted upon a motor base 6 provided with outwardly projecting apertured ears 7 slidably mounted upon the rods 3. Further, this motor base is provided with a central ear or depression 8 through which an elongated screw 9 is threaded. This screw is provided with a manipulating head 10 at its rear end and extends through the rear portion of the frame 2 as shown most

clearly in Figure 3. Further, it is to be noted that the screw is provided with shoulders so that it may not slip axially with reference to the frame 2. Consequently, adjustment of the screw moves the motor forwardly or rearwardly upon the supporting rods 3.

The motor is provided with a circular saw 11 at one end and may be provided with a buffing or polishing wheel 12 at its other end. Preferably, a saw guard 13 is positioned over the upper portion of the saw and is clamped about a portion of the motor, for example, the forward bearing, as shown in Figures 2 and 3.

A pin carriage 14 is provided with apertured ears 15 which slide upon the rods 4 as shown most clearly in Figures 2 and 4. This pin carriage is provided with an upstanding head or gauged-member 16 at its outer end, and is further provided with a V-shaped saddle portion 17 at its inner end adapted to receive the body portion of the pin 18. The head of the pin is received in a small saddle portion 19 located adjacent the gauging head 16. This saddle portion is provided with a squared shank 20 which passes through a correspondingly apertured boss 21 extending downwardly from beneath the carriage 14. It is adapted for adjustment vertically and may be locked in place by means of the set screw 22—see Figures 2 and 5.

It will be seen, therefore, that the axis of the pin may be accurately adjusted so that it is exactly perpendicular to the plane of the saw.

In order to hold the pin firmly in place, and also to provide a manipulating handle for the carriage, a clamping member 23 is pivotally carried by an upstanding lug 24 integral with the carriage. This clamping portion or member 23 is preferably curved and serrated on its under side so as to grip the pin, as shown most clearly in Figure 4. It is provided at its outer or free end with a manipulating handle 25 so that the operator may clamp the pin firmly in place by means of the handle 25, and also, may advance the carriage towards the saw.

It is to be noted particularly that the greatest accuracy may be obtained by this machine, and after an initial adjustment has been made, any number of pins may be rapidly sawed to provide a flat bottom at exact right angles to the axis of the pin.

It is clear also that the edges of the pin base may be smoothed by means of the polishing or buffing wheel, if desired.

It will be seen that an extremely simple and serviceable machine has been provided, and one which may be very rapidly operated.

It will be seen further that simple and reliable means have been provided for accuracy gauging the cut so that all of the pins may be similarly trimmed.

Further, it is to be noted that the utmost ease of adjustment is afforded, and that the amount of trimming may be adjusted to any value desired.

Although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

We claim:

A machine for trimming the bases of bowling pins comprising a base frame, a pair of

guiding rods carried by said base frame, a motor slidably supported by said rods, an elongated screw for advancing said motor, a saw directly carried by the shaft of said motor, a second pair of guiding rods carried by said frame and mounted at right angles to said first pair of rods, a carriage slidably mounted upon said second pair of guiding rods, said carriage having a saddle for receiving the body of the pins and having an adjustable saddle for receiving the head of the pins, a gauging lug projecting upwardly from said carriage and adapted to contact with the head of the pin, and a clamping member for locking the pins to the carriage.

In testimony that we claim the foregoing we have hereunto set our hands at Manitowoc, in the county of Manitowoc and State of Wisconsin.

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