Nov. 14, 1939. C. E. KOSTERMAN 2,180,244

POWER OPERATED KNIFE

Filed June 4, 1938

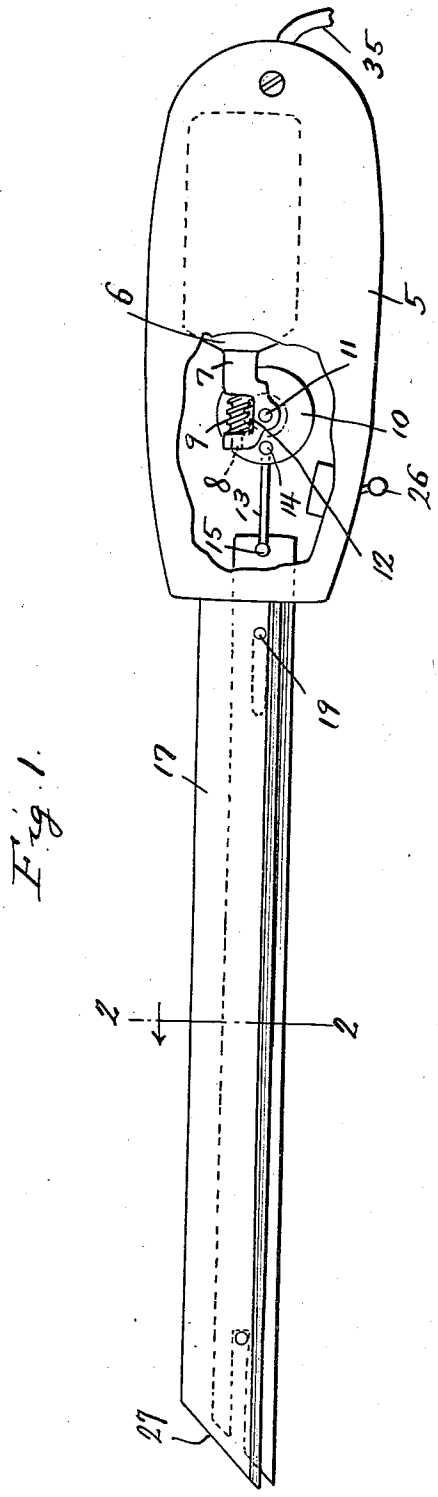

Fig. 1.

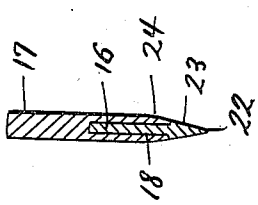

Fig. 2.

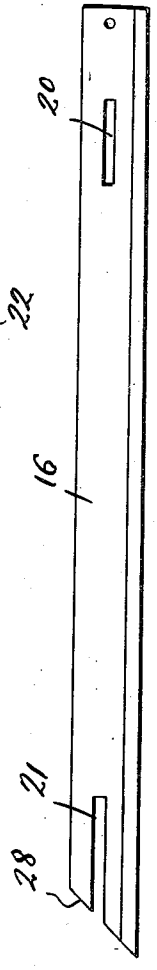

Fig. 3.

Inventor

Clem E. Kosterman

By Clarence A. O'Brien and Hyman Berman

Attorneys

Patented Nov. 14, 1939 2,180,244

UNITED STATES PATENT OFFICE

2,180,244

POWER OPERATED KNIFE

Clem E. Kosterman, Racine, Wis.

Application June 4, 1938, Serial No. 211,939

3 Claims. (Cl. 30—272)

The present invention relates to knives and has for its primary object to provide a power driven blade to facilitate the cutting operation.

More specifically the invention embodies a knife handle having an electric motor mounted therein, together with a blade sheath projecting from one end of the handle and within which the cutting blade is slidably mounted and operatively connected to the motor.

A further object of the invention is to provide a power operated knife of this character of simple and practical construction, which is efficient and reliable in performance, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming part hereof, wherein like numerals refer to like parts throughout, and in which

Figure 1 is a side elevational view with parts broken away and shown in sections.

Figure 2 is a sectional view through the sheath and blade taken substantially on a line 2—2 of Figure 1, and

Figure 3 is a side elevational view of the blade.

Referring now to the drawing in detail, the numeral 5 designates a handle which is hollow and within which is mounted an electric motor 6 having a bracket 7 projecting from the forward end thereof and within which the shaft 8 of the motor is journaled, an intermediate portion of the motor having a worm 9 formed thereon.

A wheel 10 is journaled in the bracket by a shaft 11, the wheel being provided with a worm gear 12 in engagement with the worm 9 for rotating the wheel.

A pitman rod 13 is pivotally mounted at one end as at 14 eccentrically on the wheel 10 and has its opposite end pivoted as at 15 to the rear end of a reciprocally mounted blade 16. Projecting forwardly from the handle 5 is a sheath 17, said sheath being of elongated flat construction and having one longitudinal edge formed with a longitudinally extending slot 18 within which the blade 16 is slidably mounted. A pair of pins 19 project transversely of the slot 18 and inserted in slotted openings 20 and 21 formed adjacent the rear and front ends respectively of the blade 16 to support the blade in position in the slot 18 of the sheath.

The blade 16 has one edge projecting slightly outwardly from the sheath and is formed with a knife or cutting edge 22. Inwardly of the cutting edge 22 the sides of the blade are formed with longitudinally extending shoulders 23 upon which the edges of the sheath 17 are seated, as will be apparent from an inspection of Figure 2 of the drawing.

Also the longitudinal side edges of the sheath immediately adjacent the projected edge of the blade are beveled as at 24 in the plane of the bevel of the blade.

An electric cord 25 enters the rear end of the handle for operatively connecting the motor with a suitable source of current and the under side of the handle is preferably provided with a switch 26.

In the operation of the device the rotation of the wheel 10 is transferred into reciprocating movement by the pitman 13 for operating the blade 16 in a manner as will be apparent.

The front ends of the sheath 17 as well as the blade 16 are rearwardly inclined as shown at 27 and 28 respectively in order that the blade will extend forwardly of the sheath during the cutting operation.

Having thus described the invention, what I claim is—

1. A power operated knife comprising a handle having a motor operatively mounted therein, a sheath projecting forwardly from the handle, a blade reciprocally mounted in the sheath and having one edge projecting therefrom and means operatively connecting the blade to said motor, said means comprising a bracket supported on the motor shaft, a worm on an intermediate portion of the shaft, a shaft projecting from the bracket at right angles to the motor shaft, a wheel including a gear journaled on the last named shaft for engagement with the worm and a pitman connecting the wheel to the blade.

2. A power operated knife comprising a handle having a motor operatively mounted therein, a sheath projecting from one end of the handle, said sheath being of elongated flat construction and having a slot in one edge portion thereof, a blade having one edge slidably mounted in the slot, longitudinal shoulders on each side of the blade abutting the slotted edges of the sheath, said blade having its exposed edge beveled and the sheath also having its slotted edge beveled in the plane of the beveling of the blade to facilitate movement of the blade and sheath into the work, a plurality of slotted openings in the blade, pins carried by the sheath inserted in said slotted openings for supporting the blade and means

operatively connecting the blade to the motor for reciprocally operating the blade.

3. A power operated knife comprising a handle having a motor operatively mounted therein, a sheath projecting forwardly from the handle, a blade reciprocally mounted in the sheath and having one edge projecting therefrom and means operatively connecting the blade to said motor, said sheath and blade having rearwardly and upwardly uniformly inclined front edges providing a pointed end at the bottom thereof.

CLEM E. KOSTERMAN.