May 27, 1930. M. DADERKO 1,760,818

PORTABLE HAND OPERATED POWER DRIVEN PLANE

Filed Dec. 10, 1929 2 Sheets-Sheet 1

Fig. 1.

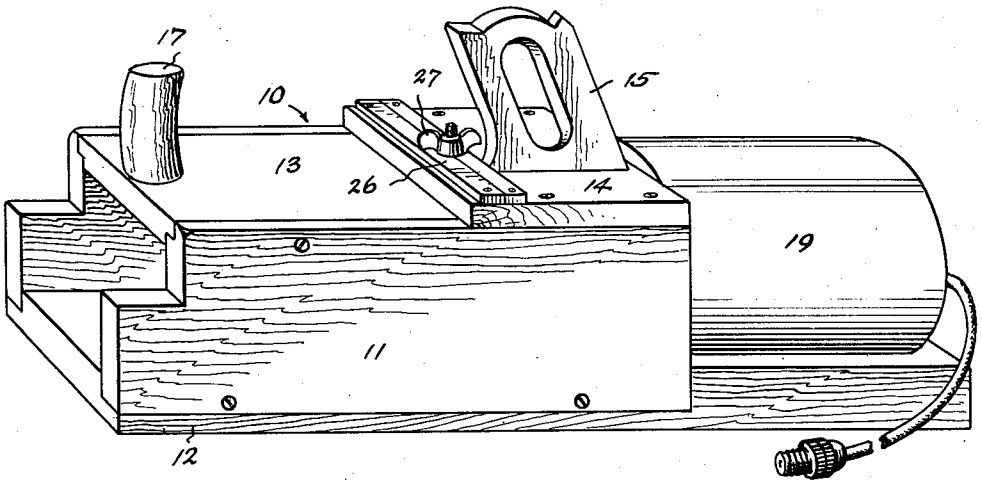
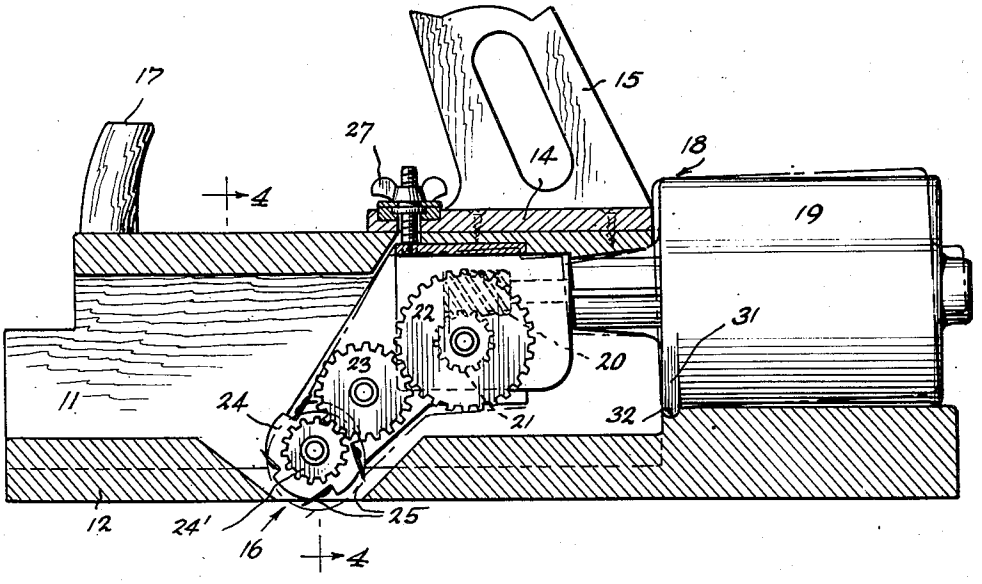


Fig. 2.



Michael Daderko
INVENTOR

BY Victor J. Evans
ATTORNEY

WITNESS: H. Frank

May 27, 1930. M. DADERKO 1,760,818

PORTABLE HAND OPERATED POWER DRIVEN PLANE

Filed Dec. 10, 1929 2 Sheets-Sheet 2

Fig. 3.

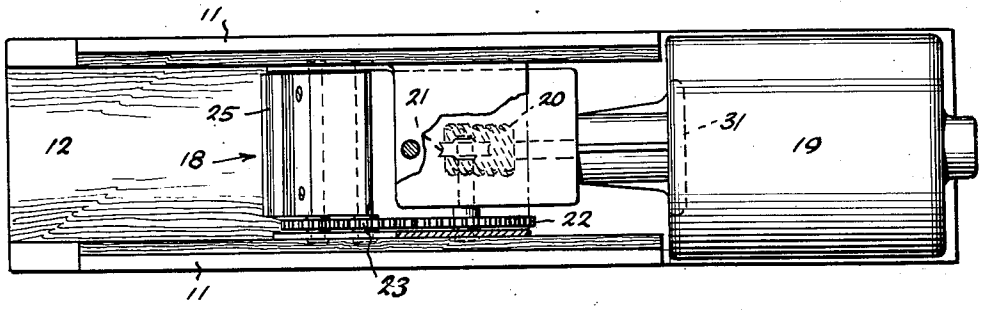


Fig. 4.

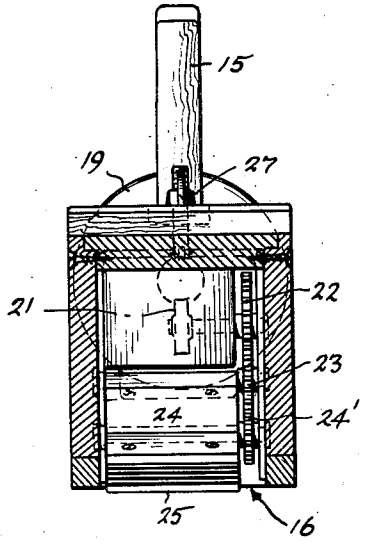
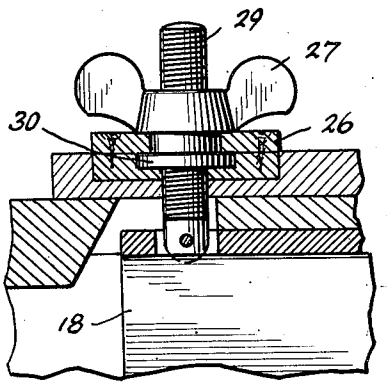


Fig. 5.



Michael Daderko
INVENTOR

BY Victor J. Evans
ATTORNEY

WITNESS: J. Frank

Patented May 27, 1930 1,760,818

UNITED STATES PATENT OFFICE

MICHAEL DADERKO, OF SUMMIT HILL, PENNSYLVANIA

PORTABLE HAND-OPERATED POWER-DRIVEN PLANE

Application filed December 10, 1929. Serial No. 413,081.

This invention relates to portable hand operated power driven planes in which the cutting or planing mechanism and the actuating or power delivering device are incorporated as a single unit.

One of the objects of the invention is the utilization of the power delivering device for stabilizing the position of the cutting mechanism during the planing operation.

Another object of the invention is to provide a balanced unit, including the power delivering means and the structure operated thereby, in which a centrally located projecting base or fulcrum point finds a bearing in the housing or outer covering of the plane, so as to facilitate location of the cutting mechanism in various working positions.

A further object of the invention is the provision of a vertically movable longitudinally yieldable adjusting device for cooperating with a pivotally movable power delivering unit, to assure flexibility of the combined organization during adjustment of the same. The adjusting device is itself pivoted on the said unit and adjustably fixed to the housing of the plane.

Other objects and advantages of the invention will be hereinafter specifically pointed out, or will become apparent, as the specification proceeds.

With the above indicated objects in view, the invention resides in certain novel constructions and combinations and arrangement of parts, clearly described in the following specification and fully illustrated in the accompanying drawings, which latter show embodiments of the invention as at present preferred.

In the drawings:

Figure 1 is a perspective of my improved power driven plane.

Figure 2 is a longitudinal central vertical sectional view of the same, partly elevational.

Figure 3 is a partial top plan view, some of the parts being removed to disclose the interior structure.

Figure 4 is a vertical sectional view on the line 4—4 of Figure 2.

Figure 5 is a sectional detail view.

In the particular embodiment of the invention selected for illustration in the drawings, the numeral 10 designates a housing or outer cover, preferably of wood, the respective lateral walls 11, bottom wall 12 and top wall 13 of which are held together by fastening elements, as shown; and while an additional top section 14, having a handle 15 rigid therewith, is removably held in place by like fastening elements, the bottom wall is provided with an opening 16, a further part of the structure being another handle 17 which is fixedly carried by the wall or section 13.

Removably incorporated in the housing 10 is a rigid frame 18 which includes the casing of an electric motor 19, while the forward part of the frame provides a cage in which the actuating mechanism of the planing device is housed. A worm 20 on the shaft of the motor meshes with a worm gear 21 on a shaft which also carries a driving gear 22 thereon. The shaft of this driving gear, as well as the stub shaft of an intermediate gear 23, are journalled in the wall of the frame 18, while the opposite ends of another shaft on which a cylinder 24 is fixed, are also journalled in the walls of said frame, there being a gear 24′ on said latter shaft.

In the illustrated embodiment of the invention I have shown a plurality of interchangeable blades 25 removably attached to the cylinder, but any other form of cutting blades or abrading member may, without departing from the invention, be mounted on the said cylinder.

Removably attached to the top section 14 is a transversely disposed bar 26 in which a wing nut 27, threadedly mounted on a bolt shank 29, is revolvable. This shank is freely movable in registering apertures in the bar 26 and section 14, while the flange 30 of the wing nut is retained against relative vertical movement by said bar.

The casing 19 is formed with a base rib 31 which is pivotally seated in a groove 32 of the base section 12 of the housing. Having inserted the frame 18 in the housing, with the section 14 and its bar 26 secured above the forward part of the frame, manipulation of the nut 27 is effective to adjust the position of the

cylinder 24, and its blades, relative to the plane of the bottom surface of the section 12. The motor 19 and cutting mechanism are shown in one position in full lines in Figure 2, with a blade 25 slightly below said bottom surface, while these parts are also shown in broken lines in the same figure with the motor raised and the blade 25 consequently lowered, as a result of revolving the nut 27.

While a motor of suitable dimensions and horse power is used, the rated speed or R. P. M. and the voltage of the motor may be variable, and the ratio of the teeth of the gear train of the cutting mechanism may be arranged according to requirements. The weight of the motor, relative to the location of the prevised fulcrum, should, however, always preferably be such as to overbalance the weight of the parts forward of such fulcrum, as will be understood.

The hereinbefore described construction admits of considerable modification without departing from the invention; therefore, it is the desire not to be limited to the precise arrangements shown and described, which are as aforesaid, by way of illustration merely. In other words, the scope of protection contemplated is to be taken solely from the appended claims, interpreted as broadly as is consistent with the prior art.

What is claimed as new, is:

1. A portable power driven hand plane comprising a housing having a groove therein, a power delivering unit including a motor casing having a rib thereon, said rib pivotally movable in said groove, and manually operable means retainable in said housing and carried by said unit for adjusting the position of the latter.

2. A portable power driven hand plane comprising a housing having a groove therein, a power delivering and planing unit including cutting mechanism and a casing having a rib thereon, said rib pivotally movable in said groove, and manually operable means adjustably mounted in said housing and carried by said unit for varying the position of the cutting mechanism relatively to said housing.

3. In a portable hand plane comprising a frame having a cutting device and an operating motor mounted therein, a housing accommodating said frame and having a groove therein, a rib provided on the casing of the motor and pivotally mounted in said groove, a retaining bar mounted on said housing and having an aperture therein, a threaded member pivoted on said frame and disposed in said aperture, and a rotatable element co-acting with said threaded member for moving said frame to adjust the cutting device relatively to said housing, there being an opening in the latter accommodating the cutting device.

4. In a portable hand plane comprising a frame having a cutting device rotatably mounted therein, said frame including a casing having a motor therein for operating the cutting device, a housing accommodating said frame and provided with a groove, a base rib on the casing of the motor, said rib pivoted in said groove, a threaded member pivoted on said frame, a bar carried by said housing and having an aperture therein accommodating said threaded member, and a rotatable element co-acting with said threaded member for moving said frame on its base pivot, substantially as and for the purpose described.

In testimony whereof I hereby affix my signature.

MICHAEL DADERKO.