H. KOESTER.

PORTABLE GROOVING, SLOTTING, AND CUTTING TOOL.

APPLICATION FILED JUNE 6, 1908.

906,724. Patented Dec. 15, 1908.

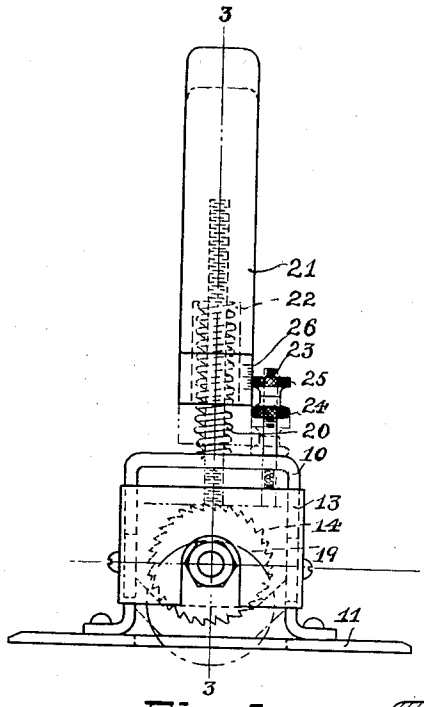


Fig. I.

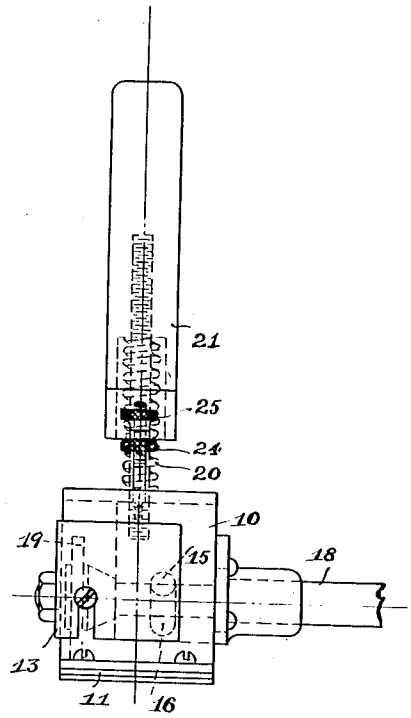


Fig. II.

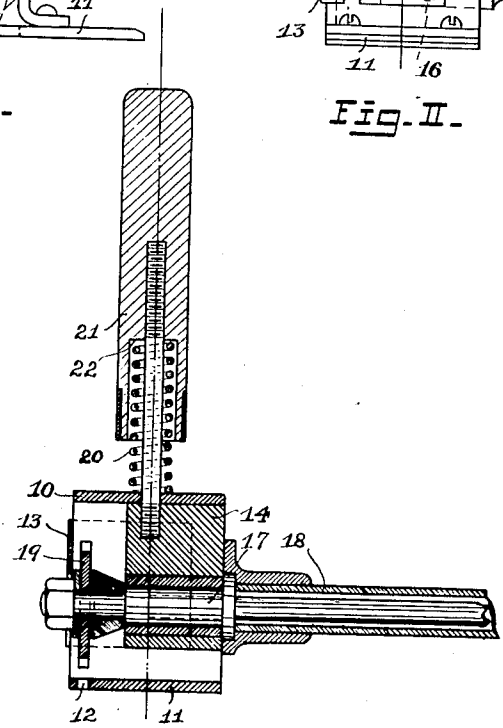


Fig. III.

Witnesses:
Gisbert Mertelmeyer.
Carl F. Koester

Inventor
Herman Koester
By his Attorney Fred'k A. Schuetz

UNITED STATES PATENT OFFICE.

HERMAN KOESTER, OF HOBOKEN, NEW JERSEY, ASSIGNOR OF ONE-HALF TO GISBERT C. A. MERTELMEYER, OF WATERBURY, CONNECTICUT.

PORTABLE GROOVING, SLOTTING, AND CUTTING TOOL.

No. 906,724. Specification of Letters Patent. Patented Dec. 15, 1908.

Application filed June 6, 1908. Serial No. 437,058.

To all whom it may concern:

Be it known that I, HERMAN KOESTER, a citizen of the United States, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Portable Grooving, Slotting, and Cutting Tools, of which the following is a specification.

My invention relates to portable tools, and particularly to a portable grooving, slotting and cutting tool.

It has for its object to simplify the construction of such tools, and to safeguard the cutter in such a manner as to avoid all danger of injury to the operator as well as to the work and the cutter itself, even though the tool be temporarily laid aside without shutting off the power.

For this purpose my invention consists in certain novel features of construction set forth in the specification and shown in the accompanying drawings, in which—

Figure 1 is a front elevation of the tool. Fig. 2 is a side elevation. Fig. 3 is a section on the line 3—3, Fig. 1.

Similar characters of reference designate corresponding parts throughout the several views.

Referring to the drawings, 10 indicates a stationary vertical protecting frame having sides and a top, but open in front and at the back. This frame is fixed to a base plate 11 provided with a suitable guiding edge and a slot 12. A protecting guide plate 13 covers part of the front of said frame and is secured to the sides of the same in such a manner as to be readily removable for the purpose of changing the cutter.

Within the stationary frame 10 is fitted a movable block 14 having arms 15 guided in grooves 16 in the sides of the stationary frame. A shaft 17 passes through the block 14, and is connected at the rear of the block to a flexible power connection 18 which is driven by a suitable motor or the like (not shown). At the front of the block and upon the other end of the shaft 17 is mounted a rotary cutter or saw 19 adapted when the block is depressed, to pass partly through the slot 12, and extend below the base plate 11 as shown in dotted lines, Fig. 1. The block 14 is normally held in raised and out of working position by means of a spring 20 fitted about the handle 21, a portion of which passes freely through the top of the stationary frame 10 and is secured to the movable block 14. The said spring 20 is held between the top of said stationary frame and a shoulder 22 of the handle 21. A stud 23 also passes freely through the top of frame 10 and is secured to the movable body 14. This stud carries at its upper end an adjustable stop 24 and locking nut 25 by means of which the amount the block 14 may be depressed is regulated and the depth of the cut controlled. A suitable scale 26 is provided on the handle 21, registering with the top of the nut 25 to determine the depth of cut.

The tool is suitable for grooving, slotting or cutting various materials as wood, slate, metal, etc., and is guided by hand along a pattern marked on the material to be cut, the cutter 19 being depressed by pressing down the handle 21, and the depth of cut being limited as already described. So soon as the handle 21 is released, however, the cutter 19 is automatically drawn out of working position by spring 20; and is so protected in this position by stationary frame 10, base plate 11, and guide plate 13 as to be incapable of causing injury to itself, to the work, or to the operator, and may thus be temporarily laid aside without shutting off the power.

I claim:—

1. A portable grooving, slotting or cutting tool, comprising: a base plate provided with a guiding edge and a slot; a stationary vertical frame secured thereto having sides and a top, but open in front and at the back; a protecting guiding plate across the front of said frame; a movable block guided within said stationary frame; a shaft passing through said block; a rotary cutter attached thereto near the front of said block, and adapted to partly pass through the said slot in the base plate when depressed; a flexible power connection attached thereto at the back of said block; and means to normally hold said movable frame and its rotary cutter out of working position.

2. A portable grooving, slotting or cutting tool, comprising: a base plate provided with a guiding edge and a slot; a stationary vertical frame secured thereto having sides and a top, but open in front and at the back; a removable protecting guiding plate across the front of said frame; a movable block guided within said stationary frame; a shaft passing through said block; a rotary cutter attached thereto near the front of said block; a flexible power connection attached thereto at the back of said block; means to normally

hold said movable block and its rotary cutter out of working position; and adjustable means to limit the depth of the cut.

3. A portable grooving, slotting or cutting tool, comprising: a base plate provided with a guiding edge and a slot; a stationary vertical frame secured thereto having sides and a top, but open in front and at the back; a removable protecting guiding plate across the front of said frame; a movable block guided within said stationary frame; a shaft passing through said block; a rotary cutter attached thereto near the front of said block; a flexible power connection attached thereto at the back of said block; a handle provided with a shoulder, and having a portion thereof passing freely through the top of said stationary frame, but secured to said movable block; and a helical spring held between the top of said stationary frame and the said shoulder.

4. A portable grooving, slotting or cutting tool, comprising: a base plate provided with a guiding edge and a slot; a stationary vertical frame secured thereto having sides and a top, but open in front and at the back; a removable protecting guiding plate across the front of said frame; a movable block guided within said stationary frame; a shaft passing through said block; a rotary cutter attached thereto near the front of said block; a flexible power connection attached thereto at the back of said block; a handle provided with a shoulder having a portion thereof passing freely through the top of said stationary frame, but secured to said movable block; a helical spring held between the top of said stationary frame and the said shoulder; and a stud secured to the top of said movable block, passing freely through the top of the stationary frame, and provided with an adjustable stop.

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

HERMAN KOESTER. [L. S.]

Witnesses:

GISBERT MERTELMYER,

ANTHONY MICHEL.