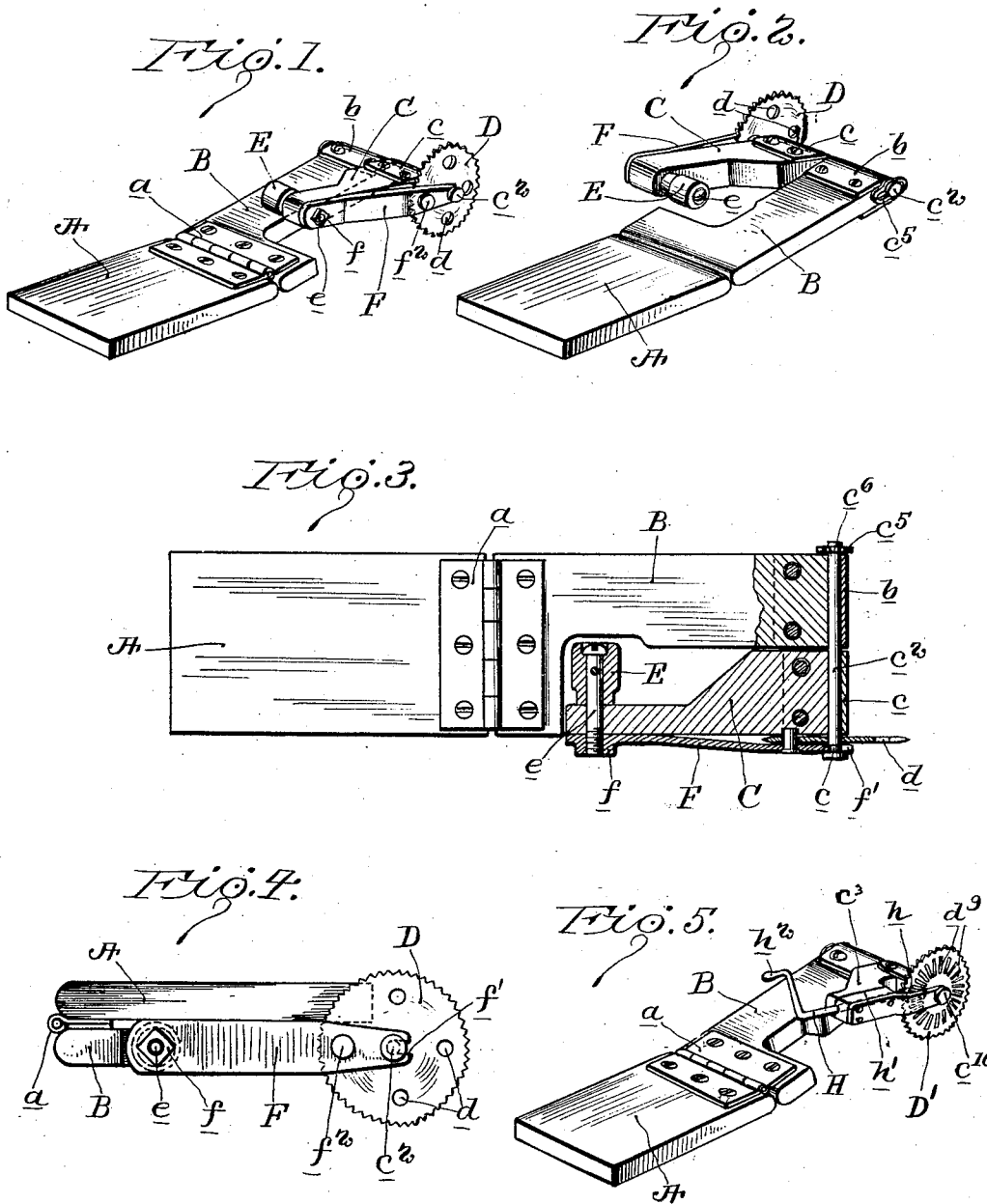


F. J. PIEPER.
FLOOR CUTTING TOOL.
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1,234,690.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FERDINAND J. PIEPER, a citizen of the United States, residing at Alton, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Floor-Cutting Tools, of which the following is a specification.

My invention relates to that class of tools employed in cutting a kerf in floor boards to give a start for the keyhole saw which is used to finish the cut.

The object of the invention is to provide a simple, cheap and effective tool for the purpose named in which the body of the tool is foldable into small compass and in which the cutter may be readily shifted to present new cutting surfaces or easily removed for sharpening.

A further object is to provide a folding base which may be used either side up and a reversible cutter thereon.

These objects I accomplish by the construction shown in the accompanying drawing, in which:

Figure 1 is a perspective of the tool in position of use.

Fig. 2 is a similar view of the tool in reversed position.

Fig. 3 is a sectional plan thereof.

Fig. 4 shows the tool in the folded position.

Fig. 5 is a perspective of a different kind of cutter.

A designates the base or foot piece formed of a flat length of wood or other suitable material adapted to be held flat upon the floor by the operator's foot, and B is an extension thereof; members A and B being hinged together at their abutting ends by a suitable hinge *a* so as to fold together.

The hinged extension B is cut away at one side or made narrower than the foot piece A, so as to accommodate the rocking cutter carrying arm C, which thus lies wholly within the plane of that side of the base or foot piece A. The outer end of the arm C is provided with a transverse bearing *c* in which is fixedly secured the cutter-carrying axis *c*² which is in the form of a long pin mounted to turn in a transverse bearing *b* on the free end of the hinged extension B and forming the axis of arm C. The cutter D is mounted on the outer end

of the axis *c*² close to the outer side of the rocking arm C. The cutter is in circular form with a toothed edge and is in its preferred form a circular saw provided with a series of four apertures *d*. The arm C is cut away on its inner side to permit a handle E secured to the inner side of its free end to lie wholly within the plane of the extension B and arm C when the parts are folded as in Fig. 4, and also to permit of the tool being used close up to the wash boards when the floor boards are to be cut at such points. The cutter side of the tool may be brought close up to a wash board, since the handle E projects inwardly and away from such board.

A bolt *e* extends through handle E, arm C, and into a nut *f* on the outer end of a locking device F formed of a flat plate lying close to the outer side of arm C and having at its opposite end a notch *f*¹ engaging an annular groove *c*³ in the outer extremity of the cutter axis *c*² and holding the cutter thereon. The locking plate also has a locking pin *f*² entering one of the apertures *d* in the cutter D and also entering a hole in arm C, if desired. Thus by unscrewing the bolt *e* plate F may be moved outwardly to withdraw pin *f*² and permit the cutter D to be given a quarter turn to bring a new sharp portion into operative position. The adjustment of the cutter may thus be readily effected and the cutter may be removed from its axis by disengaging the notched end of plate F therefrom.

The cutter axis *c*² may be held from slipping out of the bearing *b* by any suitable means, such as a cotter *c*⁵ straddling groove *c*⁶.

In use the base A is placed on the floor and held there by the operator's foot and the extension B will now extend upwardly at an angle with the cutter D resting on the floor board at the point to be cut. The rocking arm C will be raised by its handle and rocked back and forth; the operator bearing down thereon to effect the feed of the cutter into the wood. As soon as the cutter has cut its way through the board a keyhole saw may be employed to finish the cut so that no hole is required to be bored as a starter for such saw to thereby mar the work.

The tool is reversible and by placing the foot piece as in Fig. 1 a kerf can be sawed

close up to the baseboard in the right hand corner of a room, while in the reversed position shown in Fig. 2 the cutter is adapted for close work in a left hand corner. Moreover, when folded but little space is required in a tool box.

Referring now to Fig. 5, it will be seen that I have provided means for giving the cutter D' complete rotary motion. This is effected by providing the cutter with a circular series of radial gear forming slots d^9 with which mesh the teeth of a tapering pinion h on the inner end of a shaft H mounted on a bearing h' carried by the arm c^3 carrying the cutter axis c^{10} . The shaft H at its outer end has a hand crank h^2 by means of which it may be turned to rotate the cutter. The shaft H and its handle will lie within the space occupied by the rocking arm C in Figs. 1 and 2. In both forms the foot piece A has the hinged extension and the reversible tool operating arm or shaft.

What I claim is:

1. A floor cutting tool comprising a horizontal foot piece to be held to the floor by the operator's foot, a vertically swinging extension hinged at its inner end to the forward end of said foot piece, and a cutter mounted at the outer or free end of the extension parallel with the side thereof and provided with an operating device.

2. A floor cutting tool comprising a horizontal foot piece to be held to the floor by the operator's foot, a vertically swinging extension hinged at its inner end to the forward end of said foot piece and cut away at one side, and a cutter mounted at the outer or free end of said extension and provided with an operating device lying within the cut away side of said extension.

3. A floor cutting tool comprising a horizontal foot piece, a vertically swinging extension hinged at its inner end to the forward end of the foot piece, a rocking arm pivoted at one end to the free end of said extension, a toothed cutter mounted at the outer side of the pivoted end of said rocking arm to rock therewith.

4. A floor cutting tool comprising a horizontal foot piece provided with a longitudinally extending, vertically swinging hinged extension, a rocking arm journaled at the free end of said extension, a circular toothed cutter mounted at the outer side of the hinged end of said extension; said cutter being rotatable to bring different portions of its toothed surface into cutting position,

and means for locking the cutter to the rocking arm when so adjusted.

5. A floor cutting tool comprising a horizontal foot piece provided with a longitudinally extending, vertically swinging hinged extension, a rocking arm having a transverse pin or axis at one end journaled across the free end of said extension, a circular toothed cutter having a central aperture engaging the end of said axis or pin at the outer side of the rocking arm, and a series of adjusting apertures therebeyond, and a locking plate engaging the end of the pin or axis at the outer side of the cutter to hold same on the pin and provided with a pin engaging any one of the saw apertures, and means securing the plate separably to the rocking arm.

6. A floor cutting tool comprising a horizontal foot piece provided with a longitudinally extending hinged extension adapted to fold over upon said foot piece and cut away at one side, a rocking arm adapted to fold within the cut away portion of the extension, and pivotally connected at one end to the free end of the extension, a circular toothed cutter mounted adjustably at the outer side of the hinged end of the rocking arm, and means for locking the cutter to the arm when adjusted.

7. The combination with a rocking cutter arm having a transverse axis or shaft across one end, a support on which said shaft or axis is journaled; the end of the shaft at the outer side of the arm being provided with an annular groove, a circular toothed cutter on said grooved end and having a series of openings, a locking plate extending along the outer side of the arm and having a notched forward end engaging said annular groove, a transverse pin on the locking arm engaging one of the cutter apertures to lock the cutter to the arm; a nut at the other end of the plate, and a handle at the inner side of the free end of said rocking arm and having a bolt extending through the arm into the nut on the locking arm.

8. A floor cutting tool comprising a reversible base or support and a reversible cutter actuating member pivotally connected to one end of said support to swing above either face of the base or support for right or left hand work, and a cutter carried by said actuating member parallel with the side of the base or support.

In testimony whereof I affix my signature.
FERDINAND J. PIEPER.