Aug. 14, 1962 J. D. PROFFIT 3,049,336

CARPENTER'S TOOL

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Fig. 1

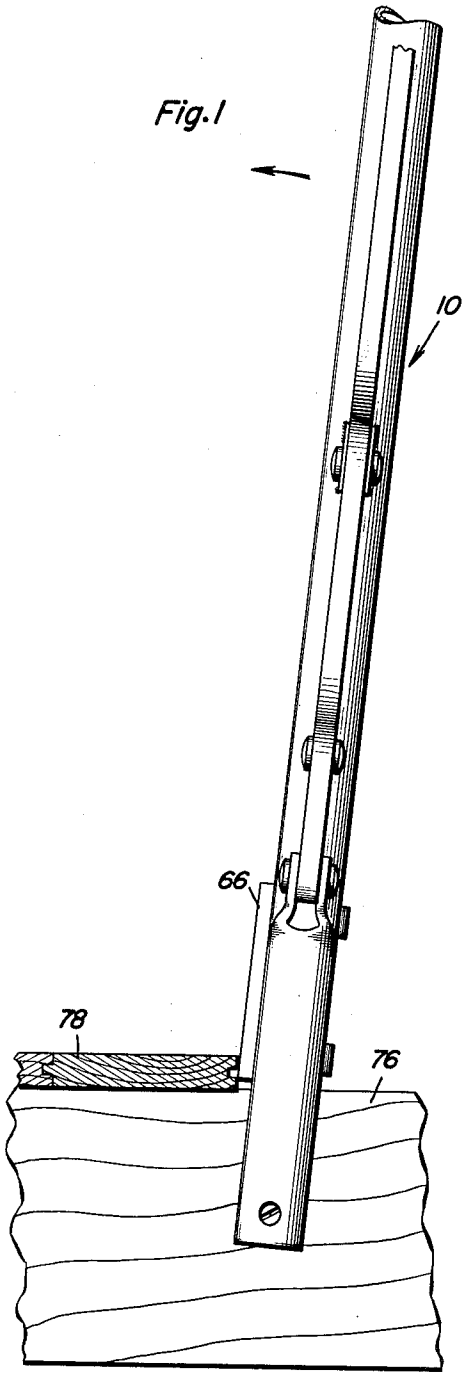
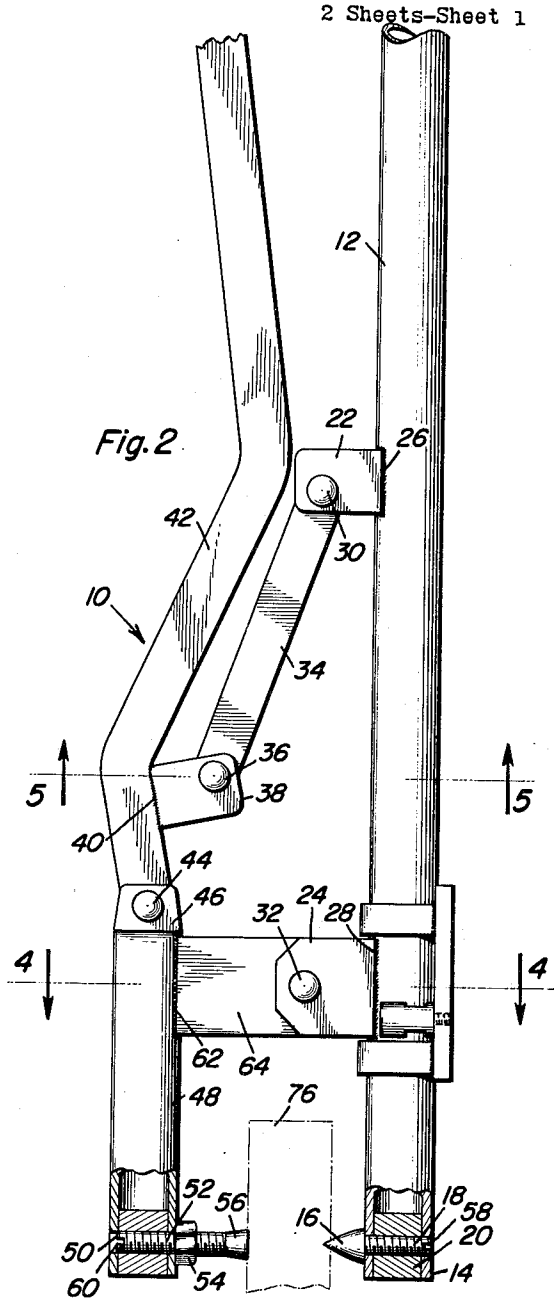


Fig. 2



John D. Proffit
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

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Fig. 4

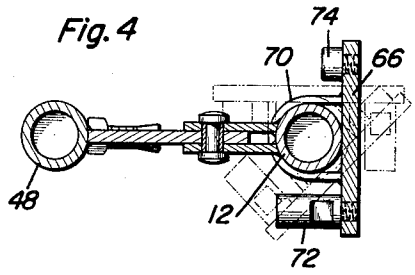
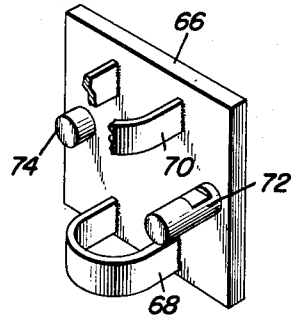


Fig. 3

Fig. 5

Fig. 6



John D. Proffit
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

United States Patent Office 3,049,336
Patented Aug. 14, 1962

3,049,336

CARPENTER'S TOOL

John D. Proffit, Rte. 1, Clarksville, Tenn.

Filed Feb. 3, 1958, Ser. No. 713,037
3 Claims. (Cl. 254—17)

This invention relates generally to a carpenter's tool and more particularly to a novel and improved tool to be utilized in paneling and decking.

In the laying of flooring, a problem often arises as to how to properly align and tighten the floorboards over the supporting joists. It is often impossible to align the floorboards by hand and to closely wedge them so that crevices do not exist between the boards. This is particularly true when the boards being utilized are warped and worn. Therefore, it is the principal object of this invention to provide a novel and improved carpenter's tool to enable floorboards to be closely aligned before the boards are nailed to the supporting joists.

In different type constructions, the supporting joists are either constructed so as to be parallel to the room walls or to be diagonally related to the walls. The floorboards are conventionally constructed so as to be related to the walls in a parallel perpendicular manner. It would be necessary for a carpenter's tool to be versatile and accordingly be functional under conditions utilizing diagonal joists or parallel joints (relative to the walls). It is therefore another object of this invention to provide a novel and improved carpenter's tool which is adaptable to be utilized with joist constructions of different selective types.

It is a further object of this invention to provide a novel and improved carpenter's tool which is easy to handle, highly efficient and reliable, and relatively inexpensive to manufacture.

In accordance with the above stated objects, below is described a novel and improved construction for a carpenter's tool which includes a jaw handle and an opposed complementary jaw pivotally related to the handle. The jaw member and jaw handle carry opposed projections for clampingly and swivelly maintaining a joist, a stud, or rafter therebetween. Furthermore, the construction includes a second handle member which controls the jaw action through a linked connection. The jaw handle carries a swivel plate thereon which is fixed in its longitudinal movement along the jaw handle but which is allowed to swivel limitedly about the jaw handle. The swivel plate carries two stop projections thereon for allowing the swivel plate to be utilized in either of two positions for structural utilization with joists of the diagonal or parallel type.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is an elevational front view of the invention shown in its operating environment;

FIGURE 2 is an elevational side view of the invention;

FIGURE 3 is another elevational side view of the invention showing the jaw handle and complementary jaw member in open position;

FIGURE 4 is a sectional view taken substantially along the plane 4—4 of FIGURE 2;

FIGURE 5 is a sectional view taken substantially along the plane 5—5 of FIGURE 2; and

FIGURE 6 is a perspective partially cutaway view of the swivel plate.

With continuing reference to the drawings, numeral

10 generally represents the tool comprising this invention having an elongated jaw handle or lever 12 being formed of strong rigid material, such as steel, and having a circular cross-sectional area. The jaw handle 12 comprises at one end portion a stationary jaw 14 having threaded therein a pivot spike 16 having a threaded shaft portion 18. The end of the jaw 14 is plugged as at 20 for supporting structurally the maintenance of the pivot spike 16 therein.

The jaw handle 12 has two pairs of projecting ears or arms 22 and 24 welded to the jaw handle as at 26 and 28. Each pair of projecting ears 22 or 24 has aligned apertures through the spaced ears for supporting a rivet 30 or 32 therethrough. Pivotally connected to the rivet 30 is a rigid arm 34 which is further pivotally connected to a rivet 36 affixed through two aligned apertures through a pair of projecting ears 38 welded as at 40 to a second handle member 42. The second handle member or lever 42 is in turn pivotally connected to a rivet 44 connecting a bifurcated portion 46 on a complementary pivoted jaw member 48. The complementary jaw member 48 is formed of a material identical to the material utilized in the jaw handle 12. The complementary jaw member 48 has an aperture therethrough at 50 which is internally threaded and threadedly accommodates a clamping screw 52. A nut 54 is threaded on the clamping screw 52 and longitudinally locks the screw 52 in the aperture 50. The screw 52 has a flattened end portion 56 which is adapted to bear against and clamp a joist, a stud, or rafter between the end 56 and the pivot spike 16. Both the pivot spike 16 and the clamping screw 52 may be longitudinally adjusted in their respective apertures by a screw movement utilizing either of the respective slots 58 or 60 for threading either the spike 16 or the screw 52 in its respective aperture.

Welded to the complementary jaw member at 62 is an arm 64 which has an aperture therethrough which aligns with the aperture through the projecting ear 24 on the jaw handle 12 and accommodates the rivet 32. It will be apparent that a pivotal relationship exists between the arms 64 and the ears 24.

A swivel plate 66 is constructed of a flat hard material and fixedly supports thereon a pair of loops or U-shaped collar members 68 and 70. The collars 68 and 70 may be affixed to the swivel plate 66 in any desired manner but the utilization of a removable connection such as screws is preferable. The U-shaped collars 68 and 70 have a sufficient inner area so as to accommodate therethrough the jaw handle 12. The U-shaped collars 70 and 68 accommodate the jaw handle 12 with the ears 24 falling between the collars 70 and 68 so that the swivel plate is prevented from moving longitudinally along the jaw handle 12. However, it will be apparent that the swivel plate 66 may limitedly swivel about the jaw handle 12. The swivel plate 66 has two stop members 72 and 74 for assuring the desired limited swivel movement about the jaw handle 12. With particular reference to FIGURE 4, the swivel plate 66 is shown in dotted lines in the two operative positions for forcing flooring or paneling into alignment. When the swivel plate 66 is in the horizontal position being limited by the stop 74, the device may be utilized where the joists are constructed parallel and perpendicular to the walls. When the device is to be utilized in a room having joists of a diagonal construction, the swivel plate is swivelled to the second dotted position wherein the swivel movement is limited by the stop 72. Thus, the ears or arms 24 also function as abutments for the stops 72 and 74.

In the operation of this device, particularly referring to FIGURE 1, a support or structural member in the form of a joist or stud 76 is clamped between the clamp-

ing screw end **56** and the pivot spike **16**. If the flooring **78** or other workpiece is being installed perpendicular to the joist **76** the swivel plate **66** is swivelled to the position where it is stopped by the stop **74**. The swivel plate **66** then falls adjacent the flooring **78** and the jaw handle **12** may be pulled in the direction of the arrow **80** so as to force the swivel plate **66** against the flooring **78** so as to align and tighten the individual floorboards. The sharply pointed pivot spike **16** enables the entire device **10** to pivot about the spike **16** and clamping screw end **56** to compress the flooring. The particular handle construction including the linkages as at **34** and **64** assure a tight clamping action on the joist **76**. When the flooring **78** is tightened and no crevices exist between the individual floorboards, the flooring **78** may be nailed to joists **76** and properly aligned floor is assured.

It should be apparent to one skilled in the art that the use of this device is not limited to the installation of floors but is equally applicable in installing paneling on studs.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A carpenter's tool comprising an elongated cylindrical handle, a stationary jaw on one end of said handle, a pivoted jaw on the handle cooperable with the stationary jaw for receiving and gripping an elongated support therebetween for mounting said handle for swinging movement thereon, a lever pivotally mounted on the handle and operatively connected to the pivoted jaw, a pressure plate journaled longitudinally on the handle for swinging movement in opposite directions therearound and operatively engageable with an elongated workpiece to be secured to the support at an angle thereto, means for limiting the swinging movement of the plate in one direction for engagement with a workpiece to be secured at a given angle to the support, and means for limiting the swinging movement of the plate in the opposite direction for engagement with a workpiece to be secured at another given angle to the support, said first and said second named means comprising relatively long and short stops mounted on the plate on opposite sides of the handle and engageable therewith.

2. A carpenter's tool comprising an elongated cylindrical handle, a stationary jaw on one end of the handle, a pair of arms on the handle adjacent to said stationary jaw, a swinging jaw pivotally mounted on said arms and cooperable with the stationary jaw for receiving and gripping an elongated support therebetween for longitudinal swinging movement thereon, a lever pivotally mounted on the handle and operatively connected to the pivoted jaw, a pressure plate engageable with an elongated workpiece to be secured to the support at an angle thereto, spaced loops on said plate journaled on the handle with the arms therebetween for mounting said plate longitudinally on the handle for swinging movement in opposite directions therearound, means for positively limiting the swinging movement of the plate in one direction for engagement with a workpiece to be secured on the support at one predetermined angle, and means for positively limiting the swinging movement of the plate in the opposite direction for engagement with a workpiece to be secured to the support at another predetermined angle, said first and second named means including relatively long and short stops mounted on the plate with the handle therebetween and engageable with the arms.

3. A carpenter's tool comprising a lever, means on said lever for securing same for swinging movement on a structural member, a rotatable pressure plate journaled longitudinally on the lever and operatively engageable with workpieces to be secured on the member at various angles relative thereto, means for limiting rotation of the plate in one direction for engagement with a workpiece at a predetermined angle, and means for limiting rotation of the plate in the opposite direction for engagement with a workpiece at another predetermined angle, said first and second named means including abutments on the lever, and relatively long and short stops on the plate on opposite sides of the lever and engageable with said abutments.

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