This invention relates to an attachment adapted to be secured to a power saw table for the purpose of supporting a drill member thereon and has for its primary object the provision of such mechanism which may be rapidly and easily attached to and removed from a power saw table.

Another object of this invention is to provide an improved attachment assembly provided with various adjusting mechanisms to permit the assembly to be very rapidly manipulated so as to place the drill bit assembly in proper relation to an associated power saw table.

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 a plan view of the attachment;
Figure 2 is an end view of the attachment as mounted on a power saw table;
Figure 3 is a longitudinal section taken substantially along the plane of section line 3—3 in Figure 1;
Figure 4 is a horizontal section taken substantially along the plane of section line 4—4 in Figure 3;
Figure 5 is a vertical section taken substantially along the plane of section line 5—5 in Figure 1; and
Figure 6 is a perspective view of the main supporting frame assembly.

Referring now more particularly to the drawings, reference numeral 10 indicates a conventional power saw table which is provided with the usual depending flange or skirt 12 and with a vertical fence member 14. As is conventional, the fence is guarded by rail members 16 provided at opposite sides of the power saw table on the skirt portion 12 thereof.

The attachment consists of the main frame section indicated generally by the reference character 18 and shown most clearly in Figure 6 and will be seen to include a pair of spaced arm members 20 and 22 which are provided with notched end portions 24 and 26 which rest upon the side edge of the power saw table. These arms are interconnected by a channel shaped member which includes the vertical bight portion 28 and upper and lower leg portions 30 and 32, the legs being provided with vertically aligned openings 34 and 36 for a purpose presently apparent.

Extending forwardly from the channel shaped member is a supporting arm portion 38 which includes a plate member 40 at its extremity provided with tapped apertures 42 and 44, the plate being integral with the arm portions 46 and 48 rigidly connected to the previously mentioned bight 28. A brace member 50 is pivotally connected at its forward end by means of a pivot pin member 52 to the bracket arms 46 and 48 and in cooperation therewith a crosstrainer 54 is carried between the bracket arms 46 and 48 which is provided with a tapped aperture for receiving a bolt member 56 which projects therethrough and bears against the undersurface of the brace member 50 as will be most apparent from Figure 5. The free end of the brace member 50 is provided with beveled end edges 58 which are adapted to bear against the free edge of the skirt 12 when the attachment is initially positioned on the machine, and the brace member 50 also includes a depending flange portion 60 tapped for the reception of an adjusting screw member 62 having an enlarged head 64 provided for the purpose of bearing against the inner surface of the skirt 12 and rigidifying the securement between the attachment and the power saw table.

A supporting platform assembly is provided for carrying the conventional hand drill portion shown and the supporting platform will be seen to consist of two slidably interconnected sections 68 and 70 removably secured together by means of fasteners 72 such that these sections can be extensibly related for carrying drill members of varying lengths.

Fastening bolts 74 are rigidly secured to the forward end of the sections 68 and carry clamped portions 76 and 78 adapted to frictionally engage the spindle block 80 of the electric drill and hold the same on the platform. As an aid in longitudinally aligning the power drill 82, the rearward end of the section 78 is provided with a vertical flange 83 having a vertically elongated slot 84 therein.

A plate member 86 is carried in face-to-face relation with the flange 82 and for this purpose is provided with an elongated slot 88 receiving the fastening members 90 connected to the flange 82 and by means of which vertical adjustment of the plate 86 may be had. The plate carries a bolt member 92 which projects through the elongated slot 84 in the flange 82 and which is adapted to be engaged against the handle portion of the power drill 66 to maintain the same in properly located position.

The forward end of the section 68 is provided with vertical leg portions 94 and 96 having horizontally disposed turned ears 98 and 100 at their upper ends aperture to receive the post members 102 and 104 as will be readily apparent. These post members extend through the previously mentioned apertures 34 and 36 in the upper and lower legs 30 and 32 of the channel shaped member 20 interconnecting the arms 20 and 22 and these bolts are rigidly connected to the main frame sections by means of a channel member 106 which is provided with vertically aligned apertures receiving the posts and which carries a bolt member 108 engaged with a nut 110 rigidly secured to the bight portion 28 and by means of which the two channel sectioned members may be clamped together against the posts 102 and 104 to effect a rigid connection therebetween.

The posts rigidly carry a support bar member 112 by virtue of frictional engagement therewith. This frictional engagement is effected between the split end portions of the bar and the posts inasmuch as the split ends of the bar straddle the post and are clamping engaged therewith by means of the bolt members 114 and 116 in the manner shown most clearly in Figure 4. The bar is tapped for the reception of a hand wheel bolt 118, which bears against the arched portion 120 of a supporting strap member which has its opposite ends 122 and 124 apertured for the reception of the post members and secured to the previously mentioned ears 98 and 100. Therefore, when the hand wheel is manipulated, the bar 112 being secured in place on the posts, a fine vertical adjustment of the section 68 and consequently the drill bit, will be effected.

In operation, it will be readily apparent that the arm portions 20 and 22 are engaged with the edge of the power saw table with the beveled edges 58 of the brace member 50 engaged against the lower edge of the skirt 12 and with an adjusting bolt member 126 carried in one of the thread apertures of the plate portion 40 bearing against the undersurface of the table in the manner shown most clearly in Figure 3. The attachment is at this time in position to be properly located with respect to the power
saw table and to this end the adjusting bolt 126 is manipulated, as is the bolt member 62, to dispose the drill bit 128 in parallelism with the power saw table. When the attachment is properly located with respect to the power saw table, the bolt member 62 is manipulated to effect a rigid connection between the attachment and the power saw table. At this point, it is desirable to adjust the vertical height of the platform assembly such as to achieve the proper vertical positioning of the drill bit 128. The approximate vertical height is obtained by loosening the clamping bolts 114 and 116 and manipulating the assembly to approximately the correct position. Thereafter, the hand wheel bolt 118 is turned to locate the drill bit in the exact position desired.

When the drill bit 128 is positioned in the desired manner, the fence 14 is located as to achieve the proper location of the holes to be drilled by the bit 128 in the work which is indicated by the reference character 138. With one edge of the work engaged in the fence 14, the work is advanced against the drill bit 128 to form the dowel hole 140 therein as will be most readily apparent from the construction as shown in Figure 3.

To properly gauge the depth of penetration of the drill bit in the work, a gauge member 130 is provided. The gauge is slidable carried by means of the apertured ears 132 attached to one of the vertical leg 94 of the supporting bar 96. The spring 134 will cant the cam lock washer 132' binding upon the shank of the gauge member. In this respect, it will be noted that the cam lock washer includes a projection 135 engaging its adjacent ear 132 such that the spring 134 will cant the cam lock washer and cause binding on the gauge. The depending portion 136 of the gauge is adapted to engage the work being drilled after the desired depth of penetration has been reached, the gauge, of course, being preset to the proper location with respect to the forward end of the drill bit.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, 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 shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. An attachment for power saw tables, comprising a main frame section including a pair of arm members adapted to engage the edge of a saw table, bracket arms rigid with said arm members and adapted to project beneath a saw table, a plate member carried at the free ends of said bracket arms, an adjusting bolt threadly engaged with said plate member and adapted to engage the undersurface of a saw table, a brace member pivotally secured adjacent the free end of said bracket arms, a bolt carried by said bracket arms and bearing against the undersurface of said brace member, a drill platform, a pair of vertical posts carried by said main frame section, means for securing said platform to said posts for vertical movement thereon, and means on said platform for securing a power drill thereto.

2. The combination of claim 1 wherein said brace member is provided with a beveled edge at its free end adapted to engage the skirt of a saw table.

3. The combination of claim 1 wherein said brace member is provided with a beveled edge at its free end adapted to engage the skirt of a saw table and a bearing structure carried by said brace member including a head adapted to engage against a saw table skirt.

4. The combination of claim 1 wherein said arm members are provided with notched end portions adapted to engage the edge of a saw table.

5. The combination as set forth in claim 1 wherein said drill platform comprises a pair of overlying laterally adjustable sections, and said drill securing means includes a screw located at the rear of one of said sections.

6. The combination as set forth in claim 1 wherein said means for securing said platform to said post includes a frame member including a transverse arch portion through which said posts are reciprocally received, a bar member secured between said posts beneath said arch portion, and an adjusting screw connected between said arch portion and bar member.

7. An attachment for power saw tables, comprising a main frame section including a pair of arm members adapted to engage the edge of a saw table, bracket arms rigid with said arm members and adapted to project beneath a saw table, a plate member carried at the free ends of said bracket arms, an adjusting bolt threadly engaged with said plate member and adapted to engage the undersurface of a saw table, a brace member pivotally secured adjacent the free end of said bracket arms, a second adjusting means carried by said bracket arms and bearing against the undersurface of said brace member, a drill platform, a pair of vertical posts carried by said main frame section, means for securing said platform to said posts for vertical movement thereon, and means on said platform for securing a power drill thereto.

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