Aug. 17, 1943. H. R. BARTLETT 2,327,239

JIG SAW

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Fig. 1.

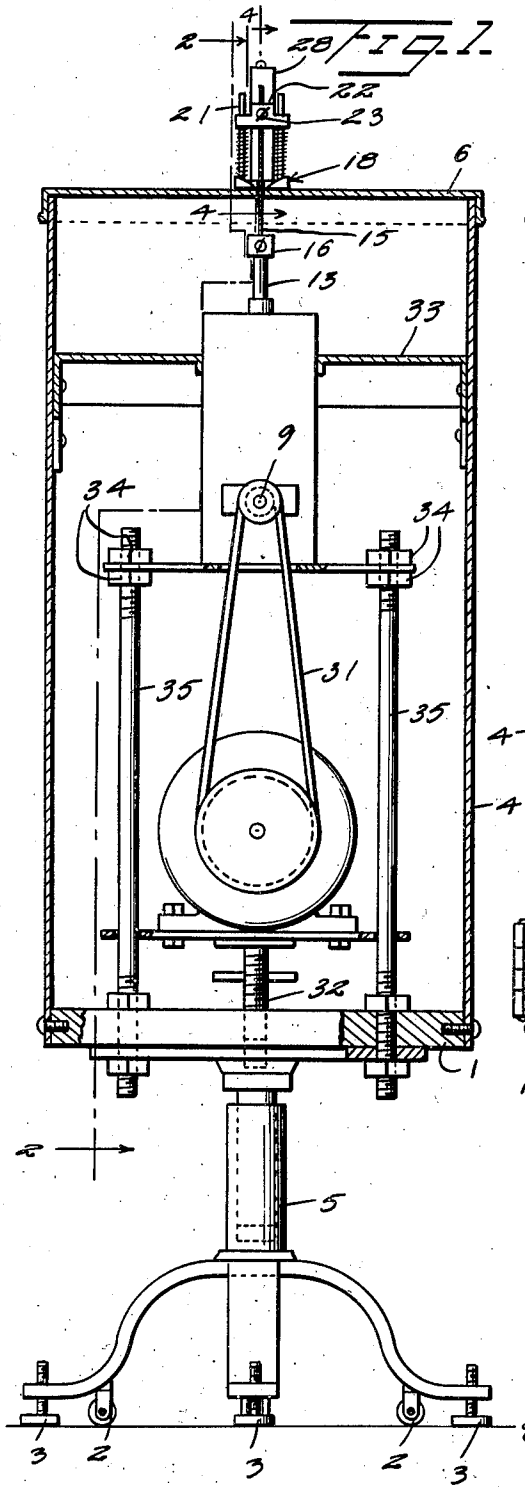
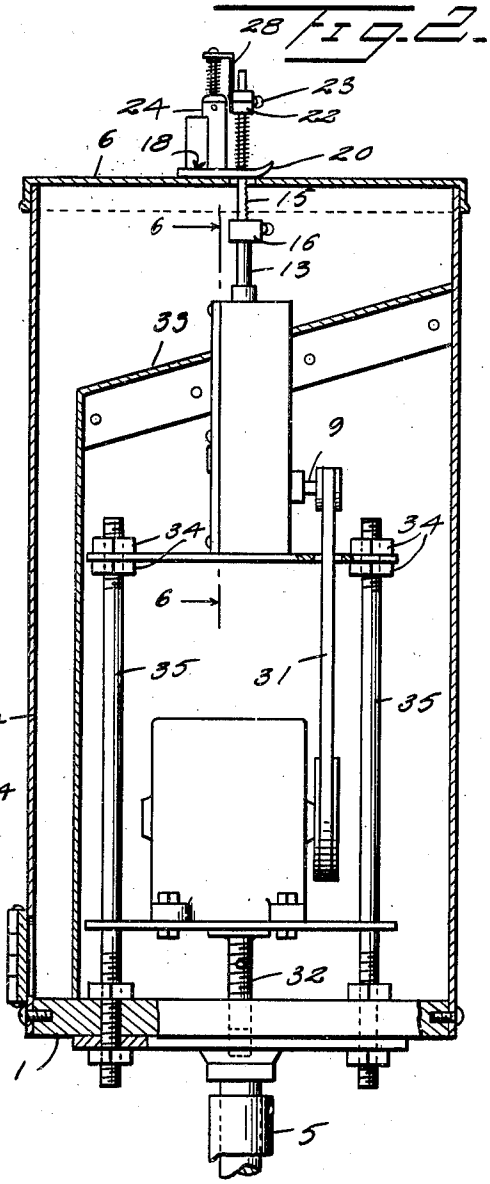


Fig. 2.



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Fig. 3.

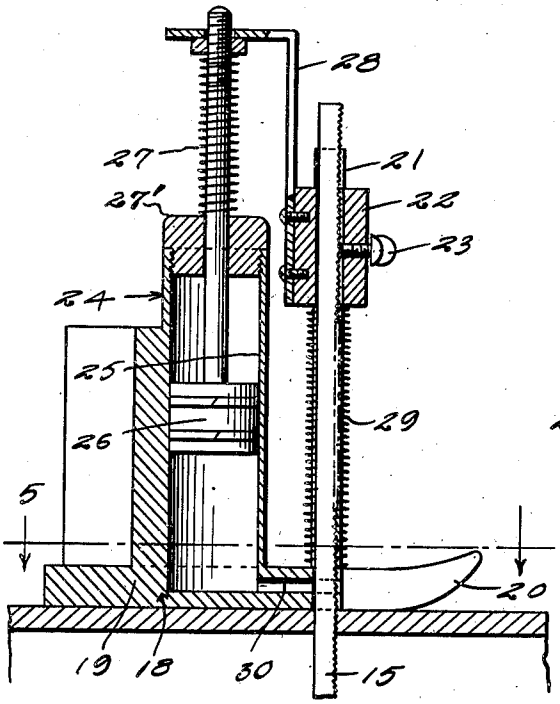
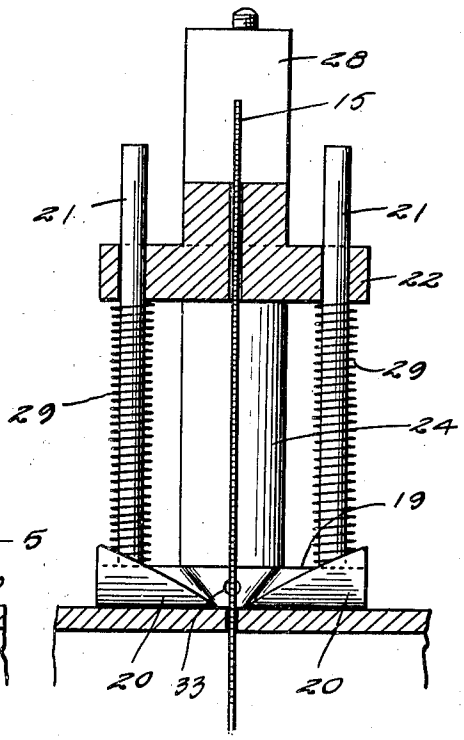


Fig. 4.



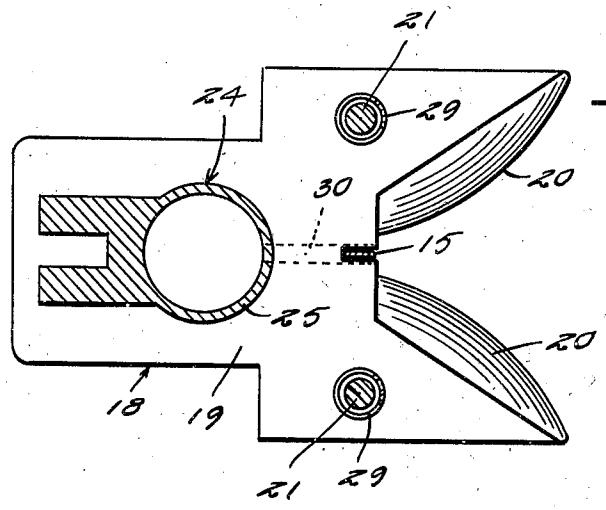


Fig. 5.

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Fig. 7.

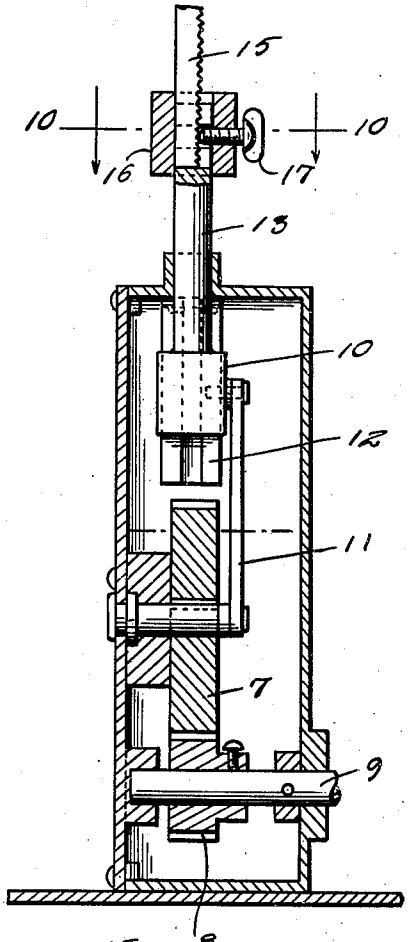
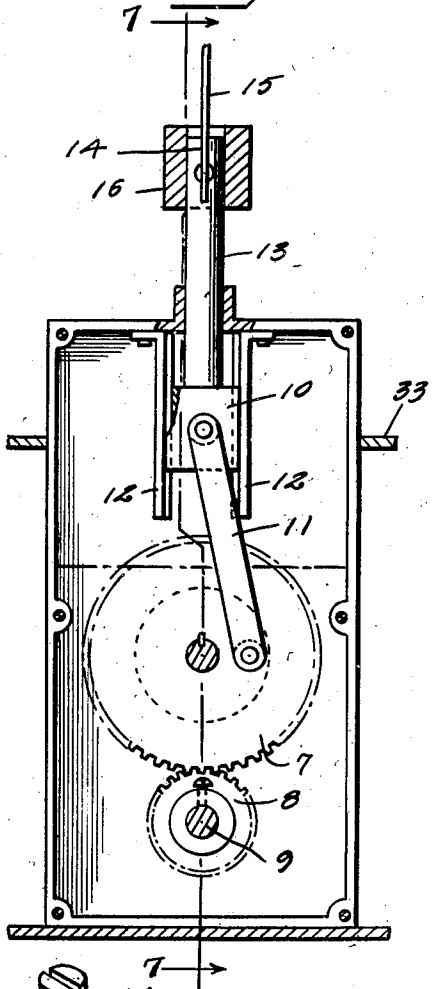


Fig. 6.



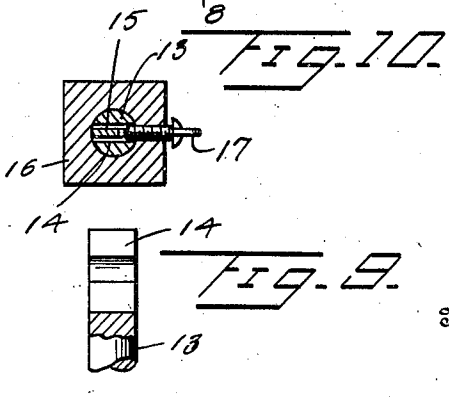


Fig. 10.

Fig. 9.

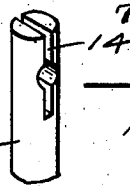


Fig. 8.

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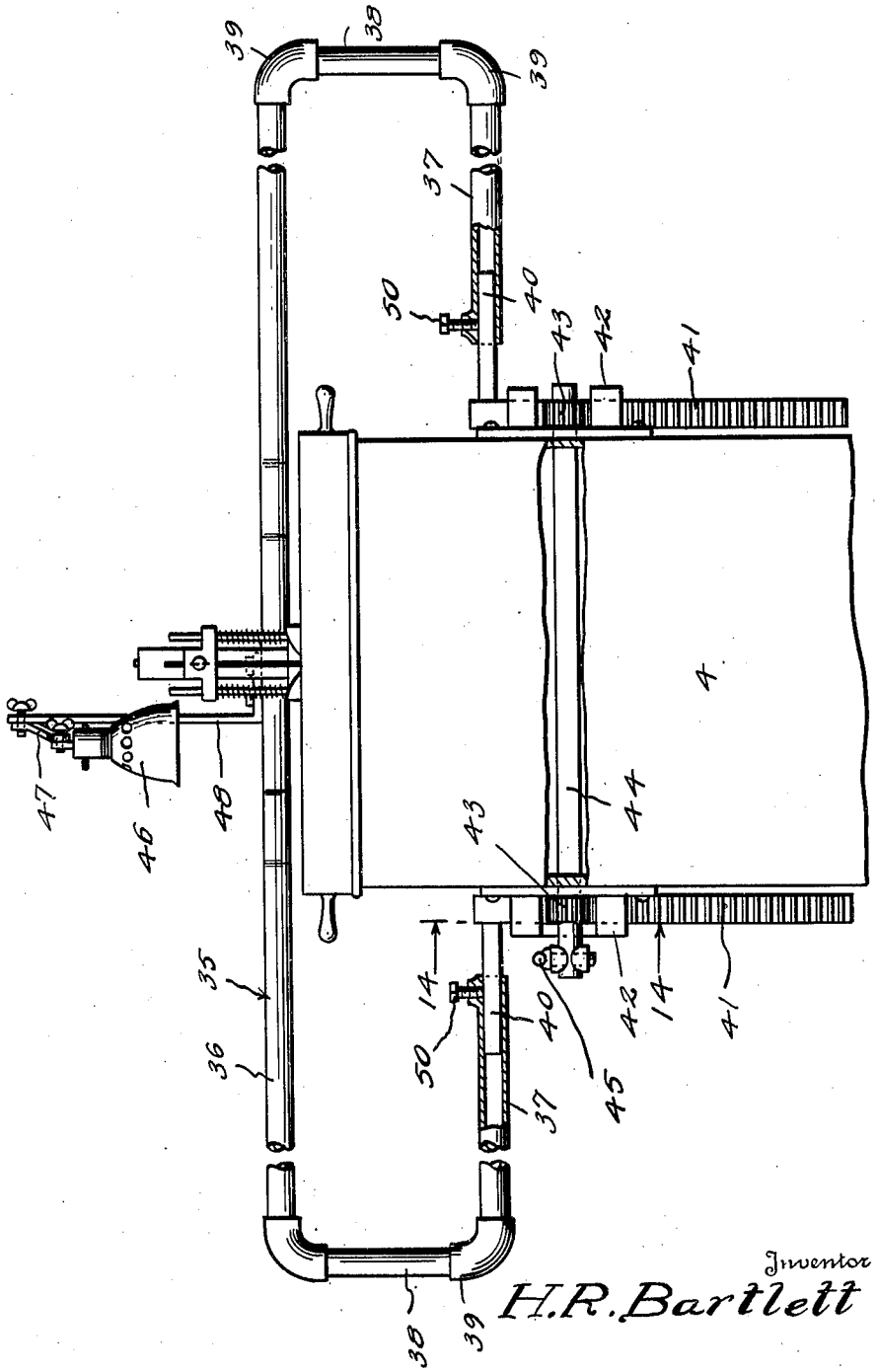


FIG. 11.

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Fig. 13.

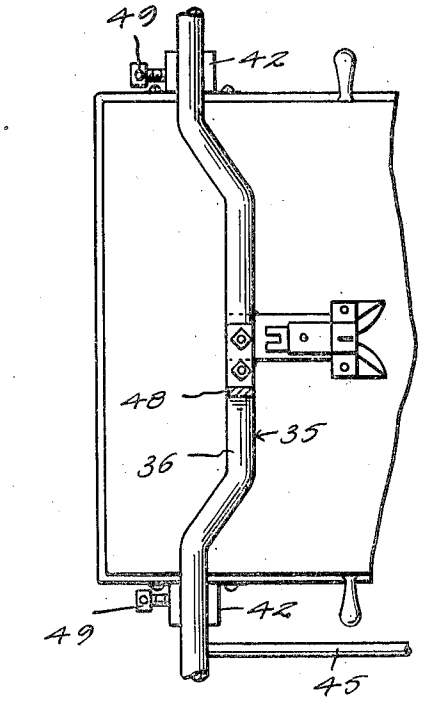


Fig. 12.

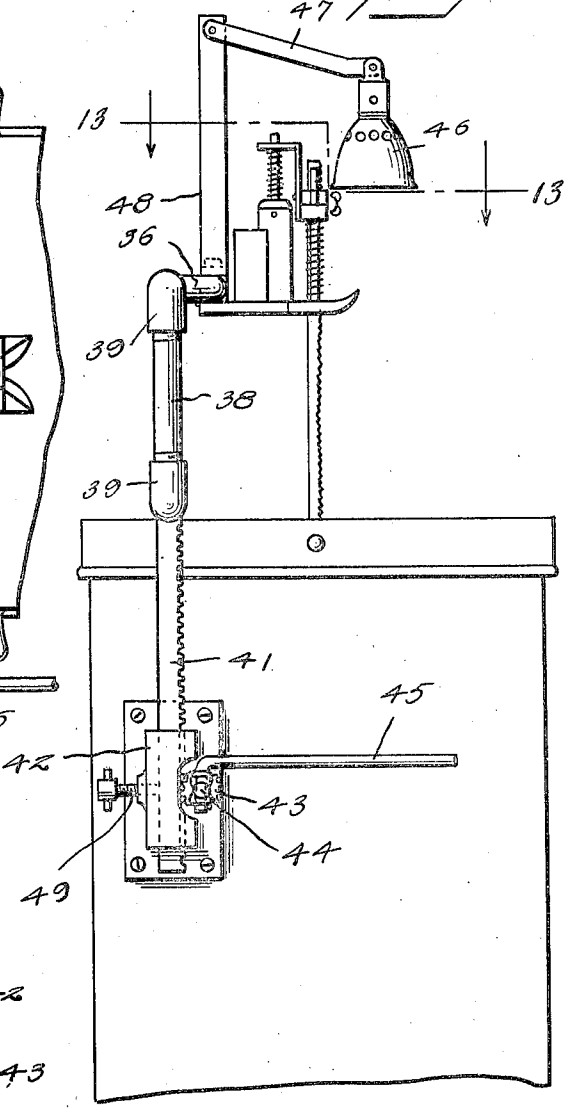
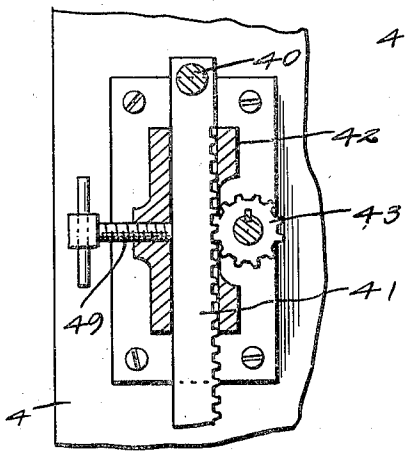


Fig. 14.



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UNITED STATES PATENT OFFICE

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JIGSAW

Herbert R. Bartlett, Barron, Wis.

Application December 12, 1941, Serial No. 422,746

4 Claims. (Cl. 143—70)

This invention relates to new and useful improvements in jig saws, and consists in the novel features of construction, combination and arrangement of parts illustrated in the accompanying drawings and more particularly pointed out in the appended claims.

In the accompanying drawings, which are for illustrative purposes only and are therefore not drawn to scale:

Figure 1 is a side elevation, partly in section, of the complete assembly.

Figure 2 is a vertical longitudinal section, taken on the line 2—2 of Figure 1.

Figure 3 is an enlarged detail sectional view of the adjustable foot and associated parts.

Figure 4 is an enlarged detail vertical section, taken on line 4—4 of Figure 1.

Figure 5 is a horizontal section, taken on line 5—5 of Figure 3.

Figure 6 is an enlarged vertical transverse section, taken on line 6—6 of Figure 2.

Figure 7 is a vertical transverse section, taken on line 7—7 of Figure 6.

Figure 8 is a detail perspective view of the upper end of the plunger.

Figure 9 is a detail sectional view of the upper end of the plunger.

Figure 10 is a horizontal section, taken on line 10—10 of Figure 7.

Figure 11 is an enlarged front elevational view of the upper end of the housing, showing the use of a stabilizing frame, light, etc.

Figure 12 is a side view of the device illustrated in Figure 11 of the drawings.

Figure 13 is a horizontal section, taken on line 13—13 of Figure 12 and Figure 14 is a vertical transverse section, taken on line 14—14 of Figure 11.

Referring to the drawings for a more particular description of my invention, and in which drawings like parts are designated by like reference characters throughout the several views, the numeral 1 represents the base, which is mounted on the casters 2 and equipped with the adjustable rubber feet 3.

A housing 4 for the working parts, is rotatably mounted on the standard 5, and may be revolved in a complete circle without change in floor position. The aforesaid housing is provided with a removable table top 6, which is simply a cover without fastenings and allows immediate access to the housing for the purpose of changing blades, oiling and general inspection.

The power unit for the saw consists of the larger and smaller intermeshing gears 7 and 8 (Fig. 6), the latter of which is fastened directly to the power shaft 9 and the former being keyed to the main bearing. The larger gear 7 is connected to the cross head 10 by the connecting rod or pitman 11. The cross head 10 works in the guide-way 12, and is provided with the plunger 13. The plunger 13 is provided at its upper end with a slot 14 to receive the lower end of the saw blade 15, which is held in place by the solid steel chuck or block 16 and set screw 17.

My improvements further comprise the adjustable foot 18 adapted to hold down the material to be cut. This foot consists of a solid metal base 19 (Fig. 3), cut to form two V-shaped runners 20 curved upwardly at their front ends. Two perpendicular steel posts 21 are mounted on the base of the adjustable foot and the upper end of the saw blade is held firmly in place by the one piece chuck 22 and set screw 23.

The air pump 24 is disposed at right angles to the base and comprises the hollow tubular vertically disposed casing, in which works the plunger 25. The upward stroke of the plunger 26 is accomplished by a compression spring 27 on the outside of the pump. This spring encircles the plunger rod with its lower end resting on the top of the cap 27'. The downward movement of the plunger aforesaid is accomplished on the power stroke of the saw blade, by means of a bracket 28 attached to the chuck 22, which slides up and down on the steel posts 21. Two compression springs 29 on the aforesaid posts serve to hold down the entire unit on top of the material to be cut. The air vent 30 is an important feature, being located directly back of the blade; thus the air is ejected only one-half inch from the pump and at this point the saw dust is blown from cutting view. The air vent 30 is drilled through the edge of the base in line with the blade to the interior of the pump.

The motor may be raised or lowered to tighten the belt 31 or change speeds through step up pulley, by means of the adjusting screw 32, directly under the motor (Figs. 1 and 2).

A saw dust pan or collector 33 is employed in connection with my device, and delivers the saw dust to an opening at the bottom.

Eight nuts 34 on the four steel posts 35 are provided to adjust the exact centering of the saw blade.

In the modified form of my invention illustrated in Figures 11 to 14, inclusive, of the drawings, I employ a stabilizing frame 35, consisting of the upper and lower horizontal pipe sections 36 and 37, connected together at their outer ends

by the vertical pipe sections 38 and elbows 39. The stabilizing frame 35 extends across and beyond opposite sides of the housing 4 and is connected by means of the horizontal rods or trunnions 40, to the upper ends of the vertical rack bars 41. The rack bars 41 work through the guide blocks 42 fastened to opposite sides of the housing 4, and co-act with the pinions 43, carried by opposite ends of the transverse shaft 44. The shaft 44 is provided at one end with the hand lever 45, and an electric light 46 is carried by the horizontal arm 47, adjustably fastened at its inner or rear end to the upper end of the standard 48, fastened at its lower end to the central portion of the upper pipe section 36 of the stabilizing frame 35. The stabilizing frame may be raised or lowered to any desired position by means of the hand lever 45 and is held at the desired adjustment by the screws 49 or other equivalent means. The stabilizing frame 35 may be held at the desired lateral adjustment by means of the screws 50 carried by the inner ends of the lower pipe sections 37. By means of my stabilizing frame, the operator is permitted to raise and lower the foot, blower and light, as desired. Further, the stabilizing frame may be adjusted either vertically or laterally to permit absolute stabilization of the foot, perfect centering of the saw blade and the cutting of material up to seven inches in thickness.

From the foregoing description taken in connection with the drawings, it is thought that the construction, operation and advantages of my invention may be readily understood, without requiring a more extended explanation.

Various changes in the form, proportions and minor details of construction may be resorted to without departing from the principles or sacrificing any of the advantages of my invention, as defined in the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A jig saw comprising a base, a housing mounted thereon, a saw blade extending through the top of the housing, a power unit mounted in the housing, for the saw blade, a motor in the housing for driving the saw blade, a stabilizing frame extending across and beyond opposite sides of said housing, a hold down foot arranged at the top of the housing and carried by said stabilizing frame and manually operated means for raising and lowering said stabilizing frame with respect to the housing.

2. A jig saw comprising a base, a housing mounted thereon, a saw blade extending through the top of the housing, a power unit for the saw blade, a motor in the housing for driving the power unit, a stabilizing frame extending across and beyond opposite sides of the housing, a hold down foot arranged at the top of the housing and carried by said stabilizing frame, manually operated means for raising and lowering said stabilizing frame with respect to the housing, means for holding the stabilizing frame in adjusted position and means for adjusting the stabilizing frame laterally with respect to the housing.

3. A jig saw comprising a base, a housing mounted thereon, a saw blade extending through the top of the housing, a power unit for the saw blade, a motor in the housing for driving the power unit, a stabilizing frame extending across and beyond opposite sides of the housing, a hold down foot arranged at the top of the housing and carried by said stabilizing frame, manually operated means for raising and lowering said stabilizing frame with respect to the housing, means for holding the stabilizing frame in adjusted position, means for adjusting the stabilizing frame laterally with respect to the housing, a standard carried by the stabilizing frame, a horizontal arm adjustably fastened at one end to the upper end of the standard and an electric lamp carried by the free end of said horizontal arm.

4. A jig saw comprising a base, a housing mounted thereon, a saw blade extending through the top of the housing, a power unit for the saw blade, mounted in the housing, a motor in the housing for driving the saw blade, a stabilizing frame extending across and beyond opposite sides of the housing, a hold down foot arranged at the top of the housing and carried by said stabilizing frame, and manually operated means for raising and lowering said stabilizing frame with respect to the housing, said manually operated means comprising vertical rack bars, a horizontal shaft, pinions carried by said shaft and co-acting with said rack bars and a hand lever at one end of said horizontal shaft.

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