April 10, 1951 A. MacLEOD 2,548,114

WORK SUPPORTING AND CLAMPING STAND

Filed April 7, 1948 2 Sheets-Sheet 1

Fig. 1.

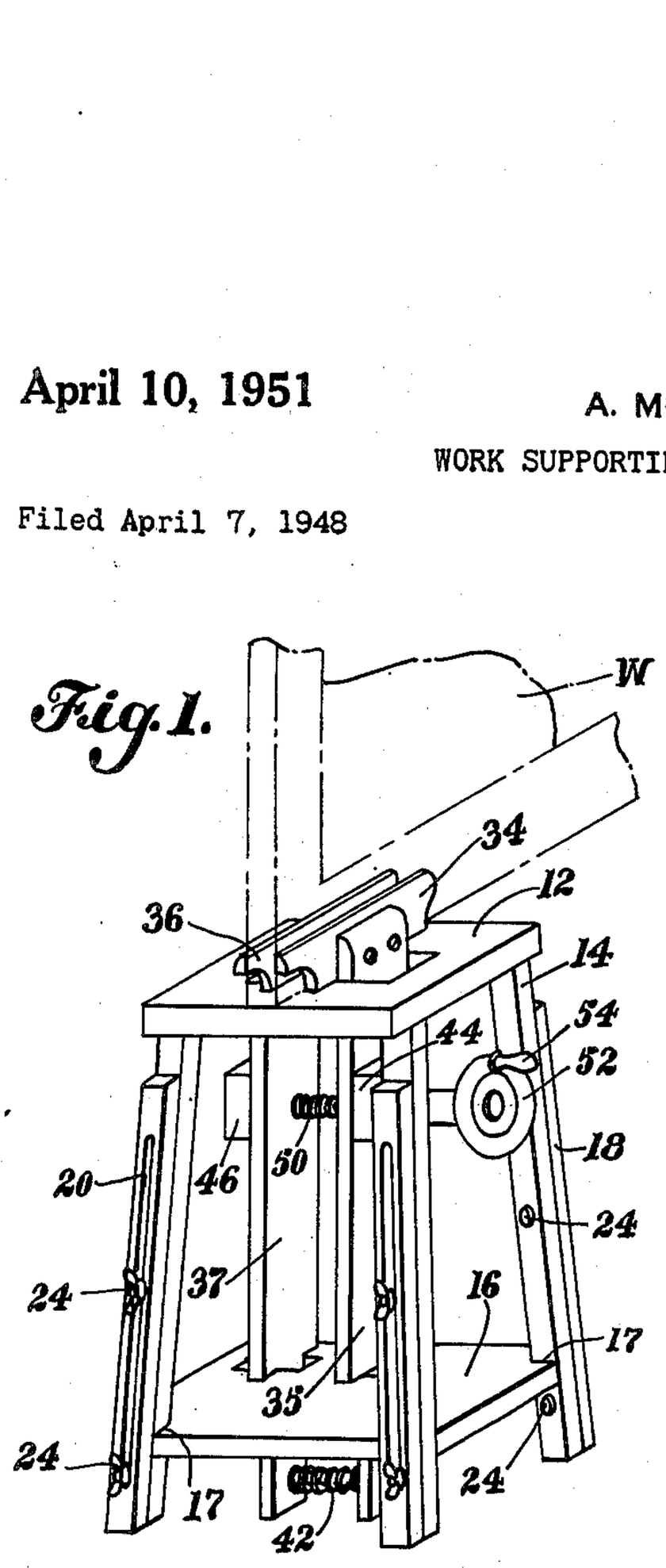


Fig. 4.

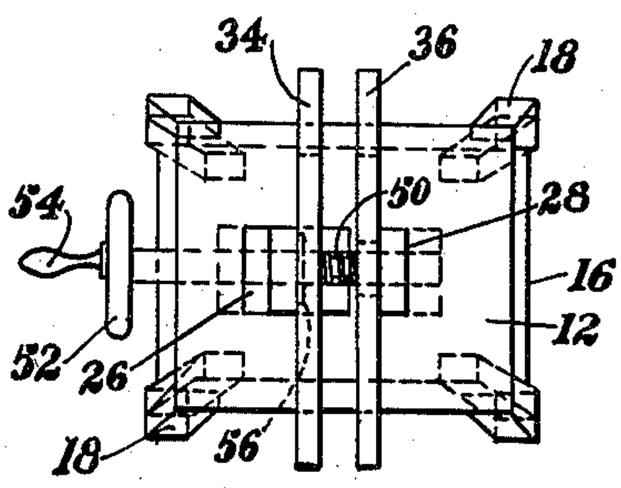


Fig. 2.

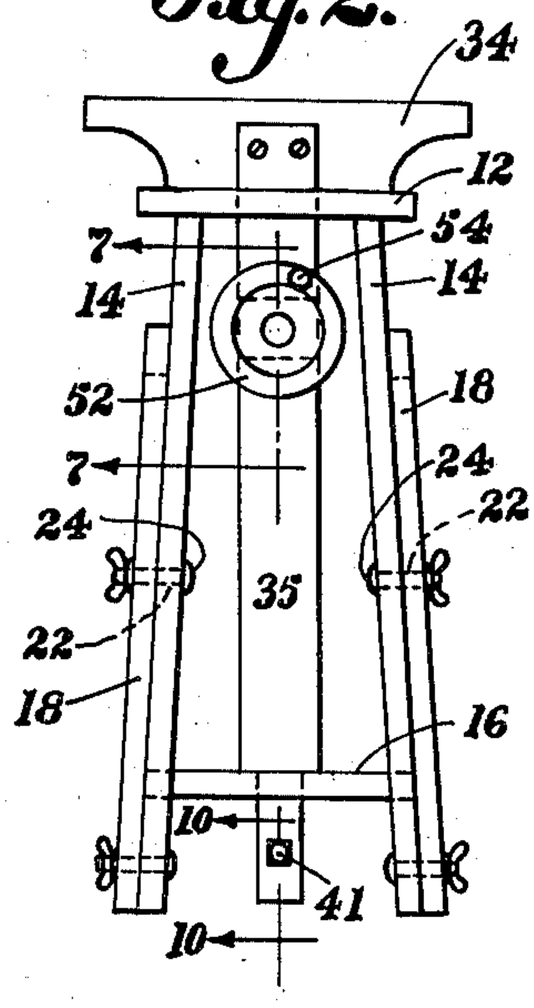
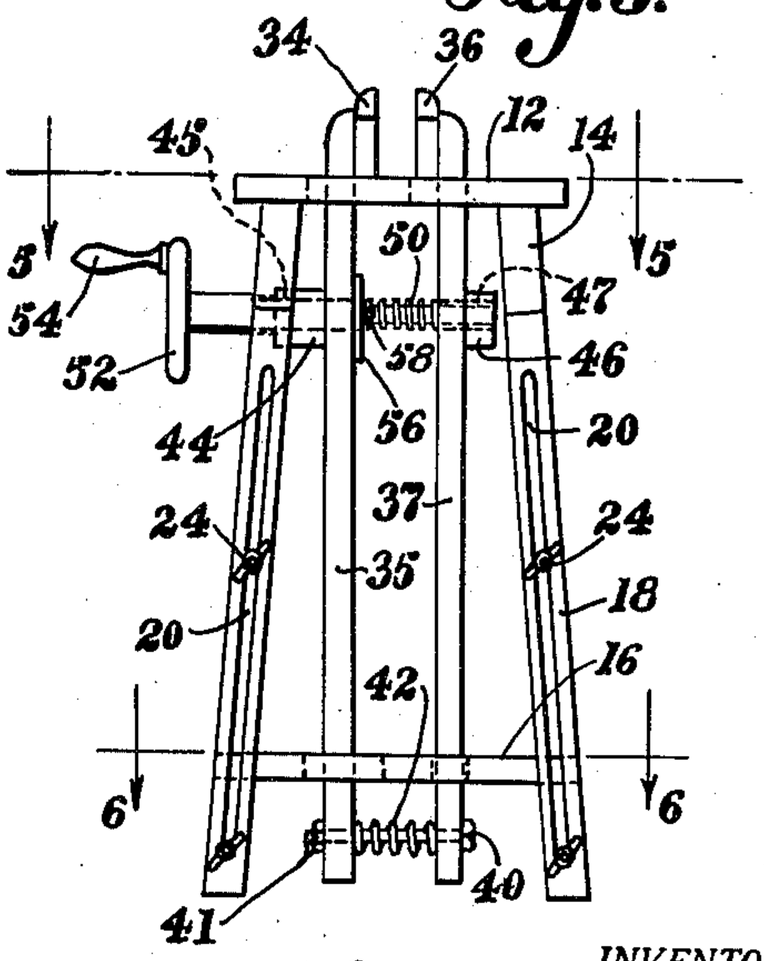


Fig. 3.



INVENTOR.
Angus MacLeod
BY Harold E. Cole
Attorney

April 10, 1951 A. MacLEOD 2,548,114

WORK SUPPORTING AND CLAMPING STAND

Filed April 7, 1948 2 Sheets-Sheet 2

Fig. 5.

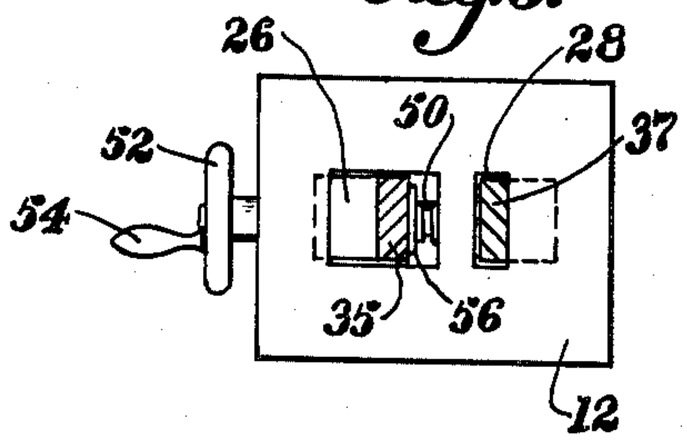


Fig. 6.

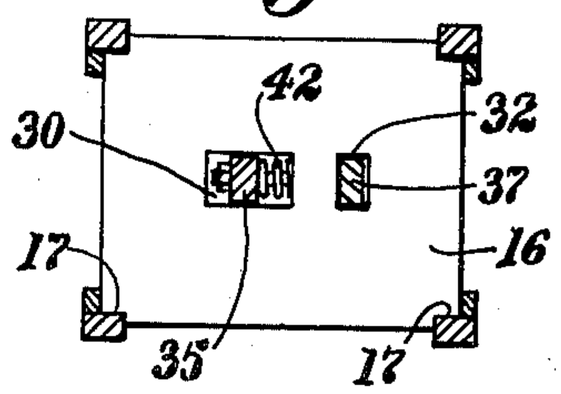


Fig. 7.

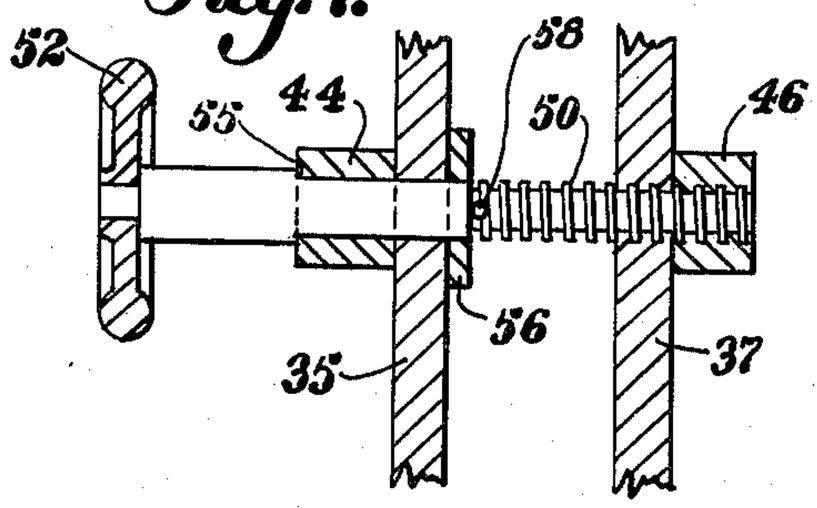


Fig. 10.

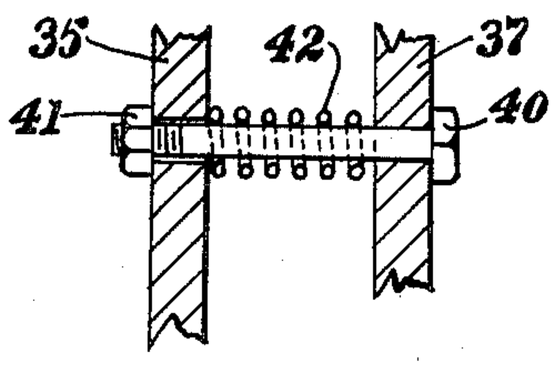


Fig. 8.

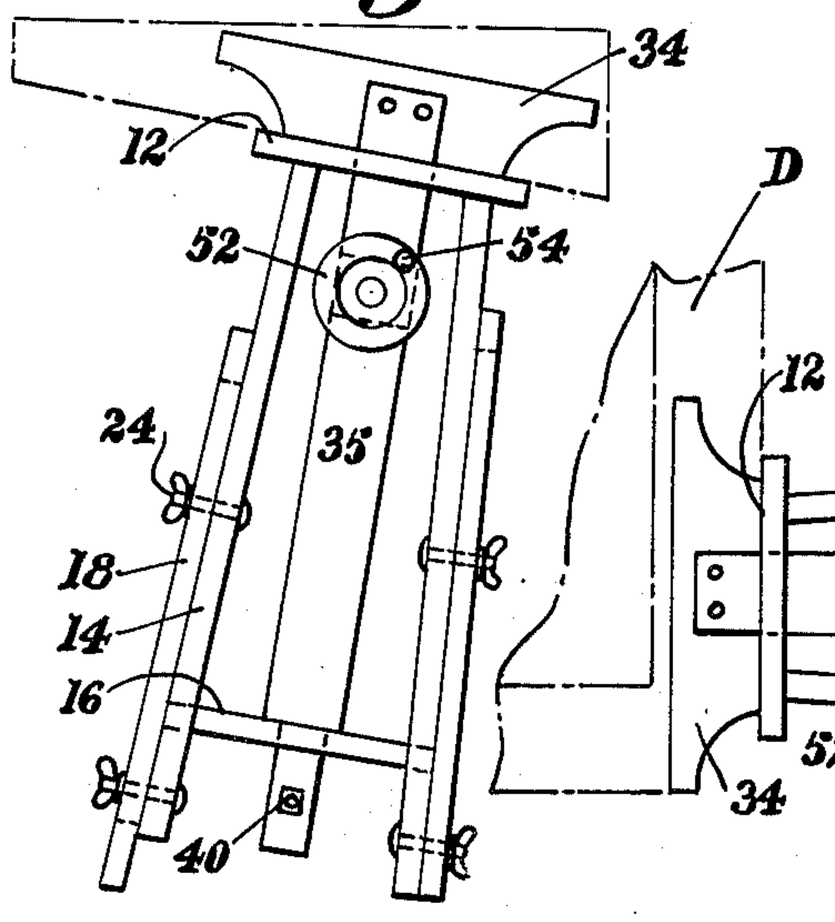
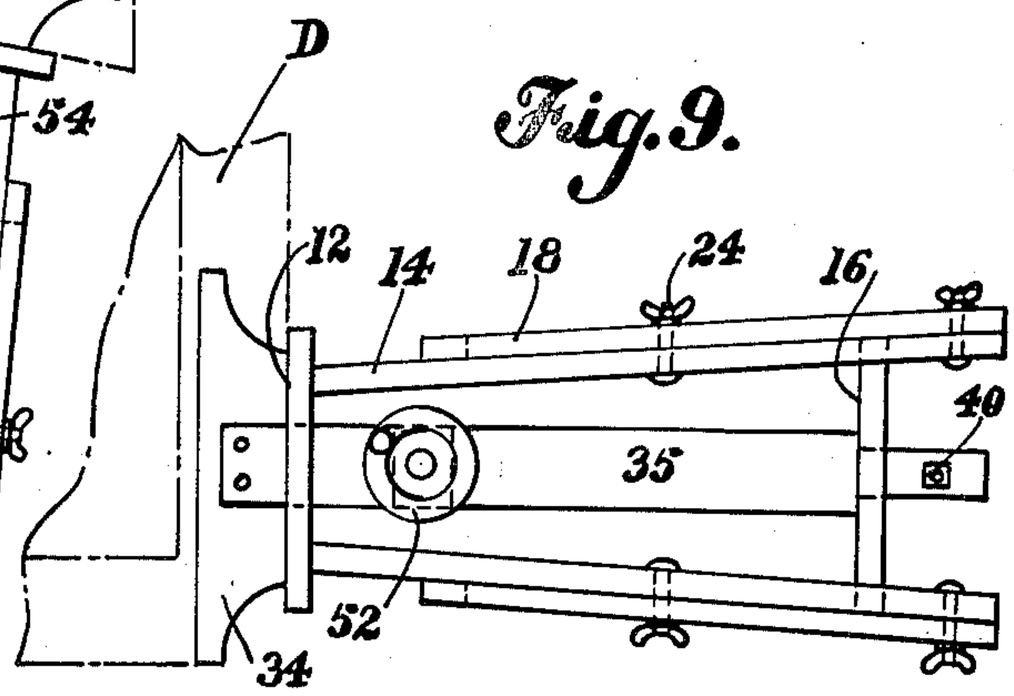


Fig. 9.



INVENTOR.
Angus MacLeod
BY Harold E. Cole
Attorney

Patented Apr. 10, 1951

2,548,114

UNITED STATES PATENT OFFICE

2,548,114

WORK SUPPORTING AND CLAMPING STAND

Angus MacLeod, Boston, Mass.

Application April 7, 1948, Serial No. 19,620

1 Claim. (Cl. 144—288)

1

This invention relates to holding apparatus which also will serve as a carpenter's jack.

The principal object of my invention is to provide a new and novel holding or gripping apparatus that will fixedly hold large objects such as windows and doors while they are worked upon at any desired height.

Another object is to so construct said apparatus that it is convenient to work upon a window, door or the like held by it whether standing upright or on its side.

A further object is to so construct said apparatus that it holds a door or window at a convenient height and yet doesn't take so much floor space that it interferes with the workman.

I am aware that vises and gripping apparatuses are well known; but my especial purpose has been to provide one that is especially convenient for a carpenter or other woodworker who works on large articles such as doors and windows.

The foregoing and other objects which will appear as the nature of the invention is better understood, may be accomplished by a construction, a combination and operative arrangement of parts such as is disclosed by the drawings and specification. The nature of the invention is such as to render it susceptible to various changes and modifications, and, therefore, I am not to be limited to said disclosure; but am entitled to all such changes therefrom as fall within the scope of my claim.

In the drawings:

Figure 1 is a perspective view of my apparatus showing a window in dot and dash lines, held therein. Figure 2 is a front elevational view of my apparatus, and Figure 3 is a side elevational view and Figure 4 is a top plan view thereof.

Figures 5 and 6 are sectional views taken on the lines 5—5 and 6—6 respectively of Figure 3.

Figure 7 is an enlarged, sectional view taken on line 7—7 of Figure 2.

Figure 8 is a front elevational view of my apparatus in tilted position, the dot and dash lines showing an article held thereby.

Figure 9 is a front elevational view showing my apparatus lying on its side, and holding a door shown in dot and dash lines.

Figure 10 is an enlarged, sectional view taken on the line 10—10 of Figure 2.

As illustrated, my apparatus has a table support having a table top 12 below which are four supporting legs 14, as shown, and a base member 16. Said legs 14 extend below said base which they support. Said base has cut-out portions 17 at the corners and is affixed to said legs

2

14 by an adhesive or other well known means. Secondary legs 18 are attached to said legs 14, having longitudinal slots 20 therein to permit a wide range of adjustment with respect to said legs 14. Bolts 24 with wing nuts extend through said slots 20 and through holes 22 in said legs 14 to thereby hold each said secondary leg 18 to said leg 14. If it is desired to increase or decrease the height of my apparatus the said wing nuts are loosened on the bolts 24 and the secondary legs are slid with relation to said legs 14, as indicated at the left in said Figure 8. Various heights may be attained, or the apparatus may be slanted as shown in said Figure 8, by adjusting two of the secondary legs 18 only.

There is a relatively large opening 26 and a relatively small opening 28 in said table top 12. Directly below there also are similar large and small openings 30 and 32 respectively in said base member 16. A movable gripping member has a jaw 34 attached to which is a lower extension 35 which extends through said larger holes 26 and 30 in said table top and base respectively, the holes being large enough to thus permit lateral movement of said lower extension 35. Another gripping member, which is stationary, has a jaw 36 attached to which is a lower extension 37 which extends through said smaller holes 28 and 32 in said table top and base respectively.

A bolt 40 extends between and through the lower portions of said gripping member extensions 35 and 37 and it has a nut 41 at the outside. Between said extensions 35 and 37 and surrounding said bolt 40 there is preferably provided a coil spring 42 which is ordinarily under some tension, the degree depending upon the space between said extensions 35 and 37.

At the upper portion of said extension 35, at the outside, is a bearing block 44 which has a hole 45, not threaded, therein. Also at the upper portion of said extension 37, at the outside, is another bearing block 46 having a threaded hole 47 therein through which an adjusting lead screw 50 passes and screw threadedly connects, and extends to a hand wheel 52 which has a handle 54. Said lead screw 50 has a shoulder 55 formed thereon which is adjacent bearing 44.

There is a washer 56 movably mounted on said lead screw 50 which is kept in position by a cotter pin 58 extending through said lead screw 50 so that said washer 56 is always between said extension 35 and said cotter pin 58, consequently when said lead screw 50 is rotated by turning

said hand wheel 52 said movable gripping member extension 35 is moved towards or away from said extension 37 depending upon the direction of rotation of said hand wheel 52.

My apparatus is adapted to grip and hold a large object such as a window W indicated in said Figure 1 or a door D indicated in Figure 9. It may be tilted at various angles by adjustment of said secondary legs 18.

To operate, the door or other article to be held in my apparatus is set on said table top 12 between said two jaws 34 and 36 and said hand wheel 52 is rotated to thereby effect movement of said movable jaw 34 and extension 35 towards closing position. This movement of said jaw 34 and extension 35 toward the other jaw 36 and extension 37 is effected when the shoulder 55 of said lead screw 50 forcibly bears against said bearing 44, thus pushing it and said jaw extension 35 towards said extension 37. Said wheel 52 is rotated in the opposite direction to move said jaws farther apart.

What I claim is:

Holding apparatus comprising a table top and supporting legs therefor extending downwardly therefrom, a base member spaced downwardly from said top and between and supported by said legs, said table top having an opening extending therethrough, said base member having an opening extending therethrough, two gripping members embodying jaw portions above said table top and having extension portions extending

from said jaw portions through said table top opening downwardly and through and extending below said base member opening, a pin member extending between and connecting said extension portions below said base member, a coil spring on said pin member between said extension portions normally under compression, means connecting said extension portions below said table top and above said base member embodying a lead screw that screw-threadedly connects with one said extension portion and extends through the other said extension portion and abutment means on said lead screw one on each side of said other extension portion to move one said gripper member away from or towards the other upon actuation of said lead screw.

ANGUS MacLEOD.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
57,522	Leach	Aug. 28, 1866
591,618	Brocksmith	Oct. 12, 1897
1,059,830	Carter	Apr. 22, 1913
1,212,136	Giffin	Jan. 9, 1917
1,298,919	Erickson	Apr. 1, 1919
1,898,384	Noros	Feb. 21, 1933
2,011,197	Mordt	Aug. 13, 1935