Nov. 26, 1957 C. W. HAACK 2,814,321

COLLAPSIBLE DOOR HOLDING STAND

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Fig. 1

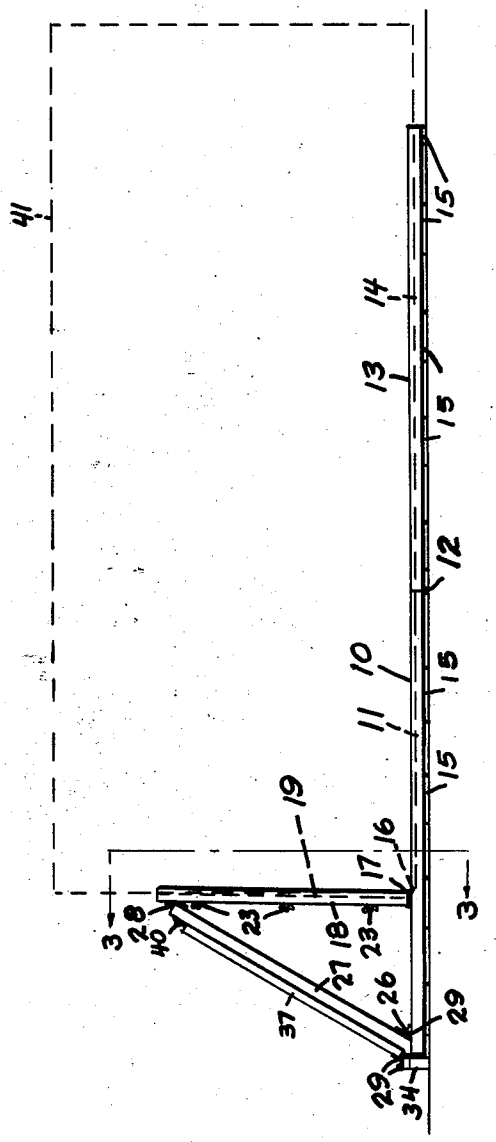
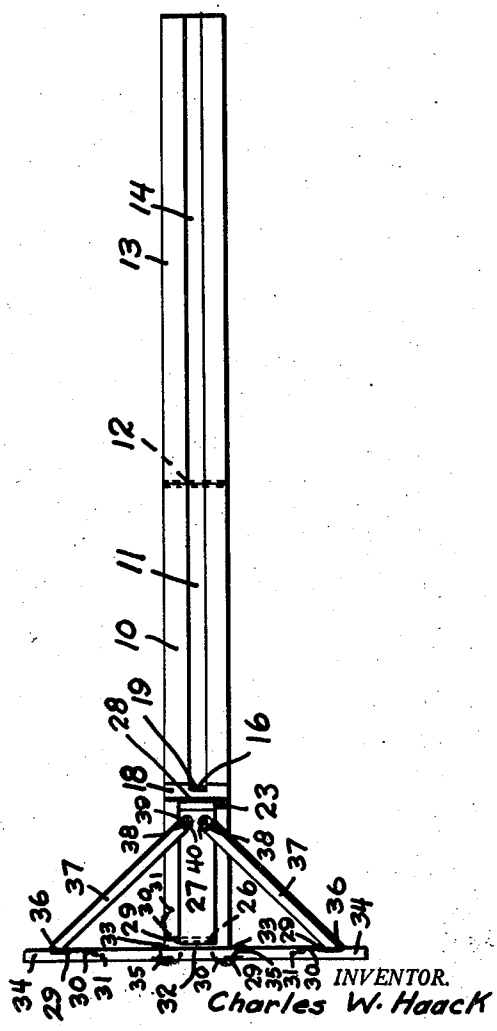


Fig. 2



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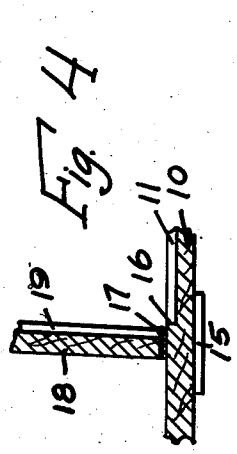


Fig. 4

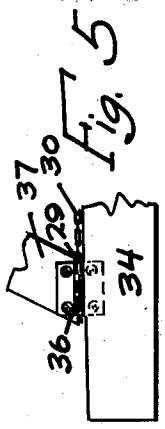


Fig. 5

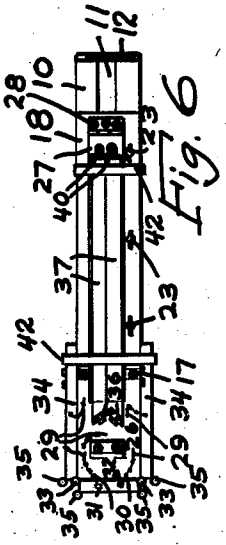


Fig. 6

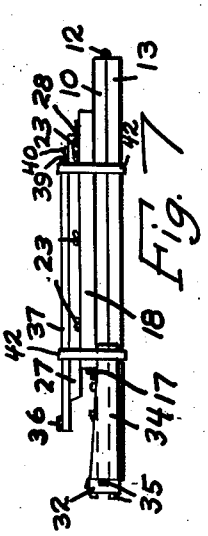


Fig. 7

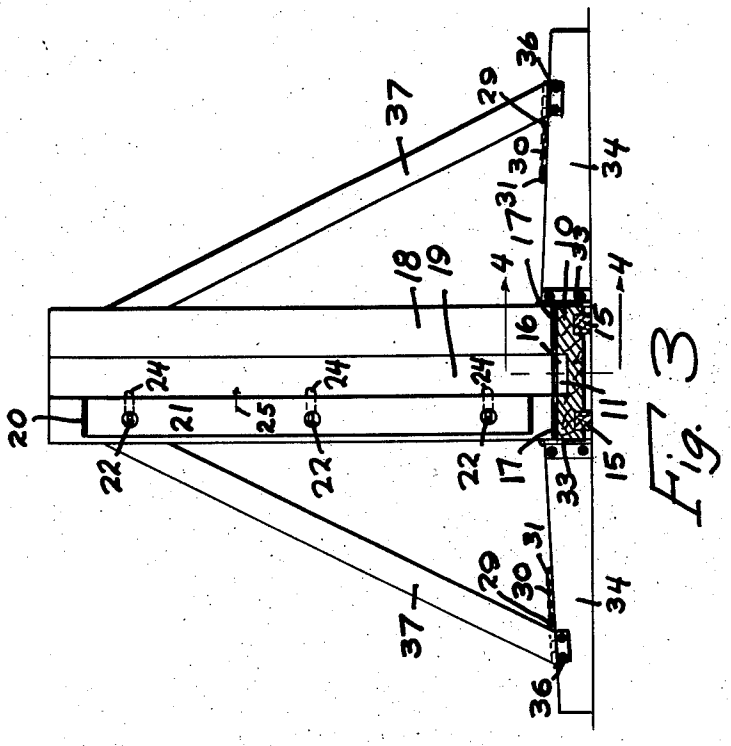


Fig. 3

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COLLAPSIBLE DOOR HOLDING STAND

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Application December 1, 1955, Serial No. 550,320

1 Claim. (Cl. 144—296)

My invention relates to a door jack.

An object of my invention is to provide a door jack for the purpose of securing a door while it is being planed during the fitting of said door to the door jamb structure.

A further object of my invention is to provide a door jack which can be readily folded up to a very compact form so that it can be transported from place to place thereby eliminating the need for a long and cumbersome door jack.

A further object of my invention is to provide adjustable features on the door jack so that it can be accommodated to various door thicknesses.

With these and other objects in view, my invention consists in the construction, arrangement, and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of the door jack,

Figure 2 is a plan view of Figure 1,

Figure 3 is an enlarged sectional view taken along the lines 3—3 of Figure 1,

Figure 4 is an enlarged sectional view taken along the lines 4—4 of Figure 3,

Figure 5 is a detail,

Figure 6 is a plan view of the door jack in its collapsed or portable form, and

Figure 7 is a side elevation of Figure 6.

My invention contemplates the provision of a door jack which can be placed upon the floor and wherein a door can be placed in the jack and planed off where required so that the door can be properly fitted into its surrounding structure or framework, and wherein the jack can be collapsed to a minimum mass for transporting the same.

I have used the character **10** to designate a section of the jack which is made of a flat board, and formed in the member **10** is the groove **11**.

Hinged at **12** to the member **11** is a further piece **13** of the same general shape as the member **11** which also has a continuing groove **14** which is of the same configuration as the groove **11** and which groove extends to the end of the board piece **13**. The members **10** and **13** include a series of spaced blocks **15** attached therein (also see Figure 3), these blocks being adapted to rest upon the floor surface so that the restricted areas thus provided will allow the jack to be moved along the floor without marring, and will allow readier movability, it being noted that these blocks **15** are so spaced that when the member **13** folds under the member **10**, the blocks **15** in the member **13** will be positioned between the corresponding blocks in the member **10** so that the device will fold neatly.

The groove **11** extends to the abutment portion or shoulder **16** (see Figure 4) and hinged at **17** adjacently to the portion **16** is an upwardly extending flat post or abutment unit **18** which extends at a slight angle as

shown in Figure 4, and which includes a vertically positioned further groove **19** which is in alignment with the grooves **11** and **14**, the groove **19** also including a cutaway portion at **20** which receives the vertically positioned flat strip **21** to which is attached at **22** to suitable washers, the spaced wing nuts **23** which pass through slots **24**, which slots **24** are provided in the member **18**, movement of the strip **21** inwardly in the direction of the arrow **25** providing means whereby varying thicknesses of doors can be held within the groove **19**.

Hinged at **26** to one end of the member **10** is an angularly extending brace member **27** which is also hinged at **28** to the rear of the vertically positioned member **18**, however, the hinge **26** includes a removable hinge pin **29** which is secured to a chain **30** which is attached at **31** to the member **10**, so that when the hinge pin **29** is removed, the brace **27** will be disengaged.

Securely attached to the rear of the member **10** is a transverse piece **32** which is hinged at **33** to the further outwardly extending pieces **34** which are adapted to rest upon the floor, the character **35** indicating further interengaging hinge members having a similar removable pin such as **29** and being attached to further chains **30** which are attached at **31** to the various pieces as shown clearly in the various figures. Also hinged at **36** to the members **34** are the further braces **37**, the hinges **36** also including the hinge pins **29** allowing removal thereof and the same type of chains as described.

The braces **37** are hinged at **38** to the small ears **39** which ears are pivotally secured by means of suitable screws **40** to the brace member **27**.

Figures 1 and 2 show the jack in its normal operating position, and in use one edge of the door, which is indicated by the dotted lines character **41**, is placed in the grooves **14**, **11** and **19** as clearly shown in Figure 1, it being noted that the door will abut against the abutment portion **16**, and an upper point on the member **18**, due to the slight angularity of the member **18**, whereby the door is thus contacted at only two points at the top thereof, which in effect secures the door and eliminates marring of the door at the upper edge.

It will be obvious that an edge of the door can thus be conveniently planed, with the door thus being held rigidly until the surfaces will fit within the frame properly. Either edge of the door can be thus seated in the grooves for the planing operation, the function of the movable strip **21** being already explained hereinabove whereby doors of varying thicknesses can be accommodated.

Since the jack is relatively large in its expanded and operating position, it is important to collapse the same to a minimum size, which I shall now explain. It should first be observed that the removable pin **29** is used in a variety of locations such as at the hinge **26**, at the hinge joints **35**, and at the hinge joints **36**, Figure 5 clearly showing how these hinge joints are made, one of the parts of the hinge interlocking with the other parts, for instance, as shown in Figure 5, the hinge at **36** including one hinge flap attached to the member **34** and the other to the brace **37**, this structure therefore being provided wherever the removable pins **29** are used. In collapsing the arrangement, first, all of the hinge pins **29** are removed from the hinges **26**, **36**, and **35**, and next, the piece **13** is folded at the hinge **12** beneath the piece **10**, and then the piece **18** is folded downwardly against the piece **10**, and next, the braces **37** are pivoted inwardly on the pivoting points **40** where they will lie directly against each other, and next, the outspread legs **34** are folded inwardly against the side of the entire arrangement, and then any type of straps **42** are strapped about the arrangement as clearly shown in Figures 6 and 7

whereby the unit is in its completely collapsed position and can be readily carried from place to place, examination of Figures 6 and 7 clearly illustrating the various members in their collapsed position.

The arrangement can be quickly set up by merely reversing the process, and it will now be seen that I have provided the advantages mentioned in the objects of my invention with various other advantages being readily apparent.

Some changes may be made in the construction and arangement of the parts of my invention without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim as my invention:

A door jack comprising a horizontally positioned base member having a longitudinal groove therein for receiving a side edge of a door, a substantially vertically positioned member attached to said base member and having a further groove therein substantially in alignment with said groove, said substantially vertically positioned member being slightly pitched from the vertical, and further including a laterally movable strip for accommodating varied door thicknesses, said horizontally positioned member including a pair of mutually pivoted sections whereby said sections can be folded together, said sections including floor abutment bosses, a brace hinged to said substantially vertically positioned member, said brace being directly behind said substantially vertically positioned member, said substantially vertically positioned member being hinged to said horizontally positioned member, and including a hinge for hinging to said horizontally positioned member, an end piece attached at the rear of said horizontally positioned member including laterally positioned legs hinged thereto, said laterally positioned legs including further hinge portions including further hinge pins whereby removal of said further hinge pins will allow folding of said legs inwardly, further normally angularly positioned braces pivoted to said brace, and removably hinged to said laterally positioned legs and including still further hinge pins at the hinging points thereof, said further normally angularly positioned braces being pivotally secured toward the upper end of said brace whereby said angularly positioned braces can be folded inwardly after removal of said still further hinge pins.

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