Nov. 20, 1951 P. THOMSON 2,575,645

COLLAPSIBLE STAND FOR SUPPORTING HODS AND THE LIKE

Filed Nov. 1, 1948 2 SHEETS—SHEET 1

Fig. 1

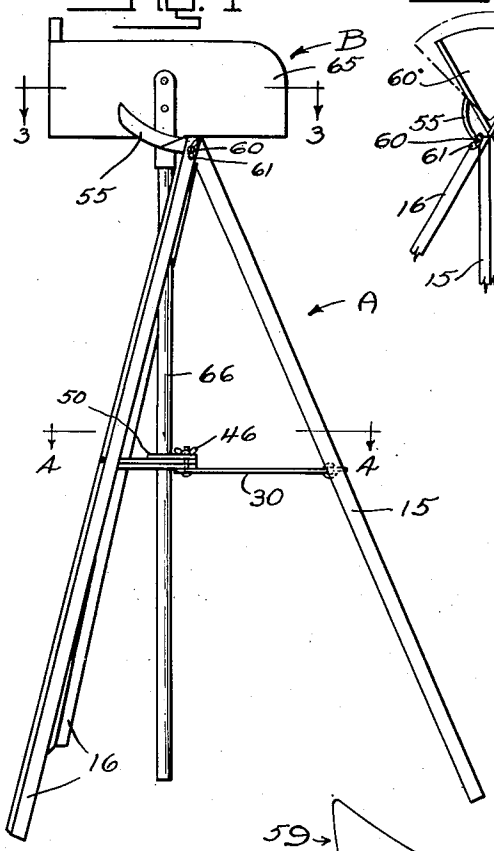



Fig. 14

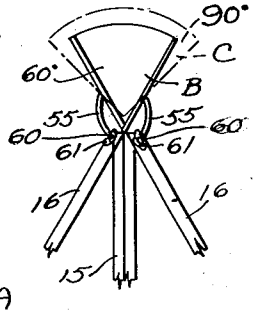



Fig. 2

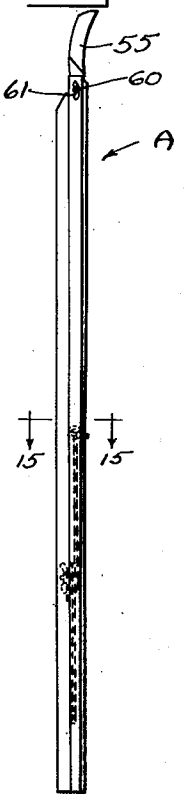
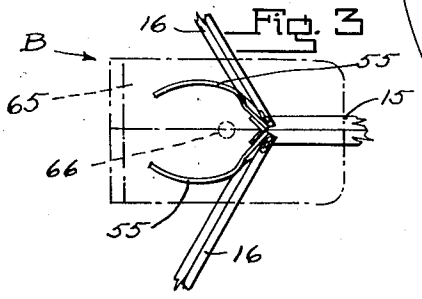



Fig. 3



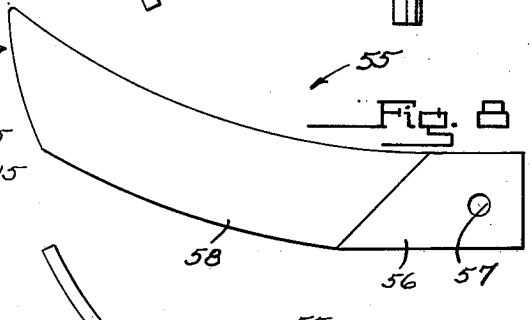




Fig. 8

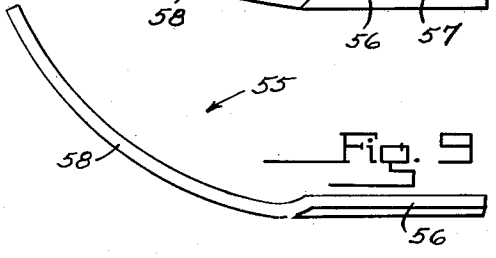
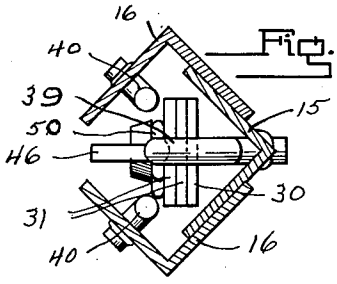



Fig. 9

Fig. 15




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COLLAPSIBLE STAND FOR SUPPORTING HODS AND THE LIKE

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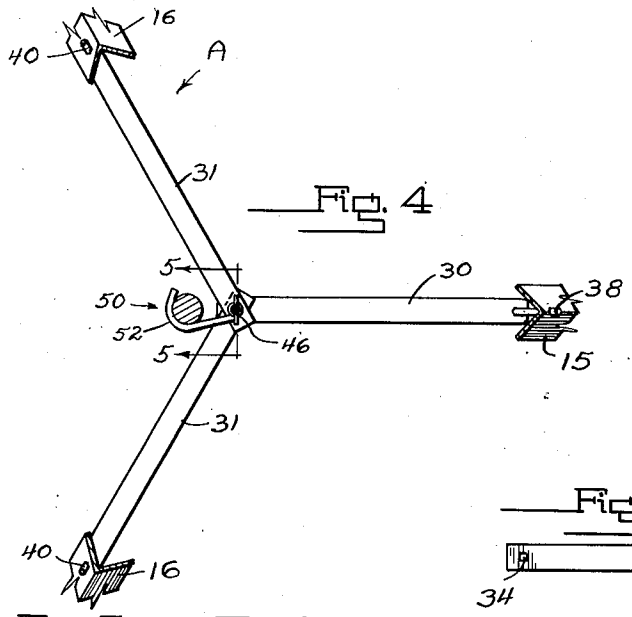



Fig. 4

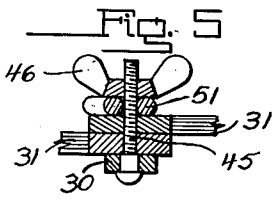



Fig. 5

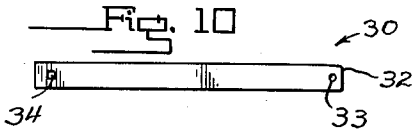



Fig. 10

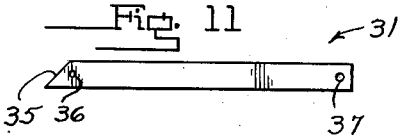



Fig. 11

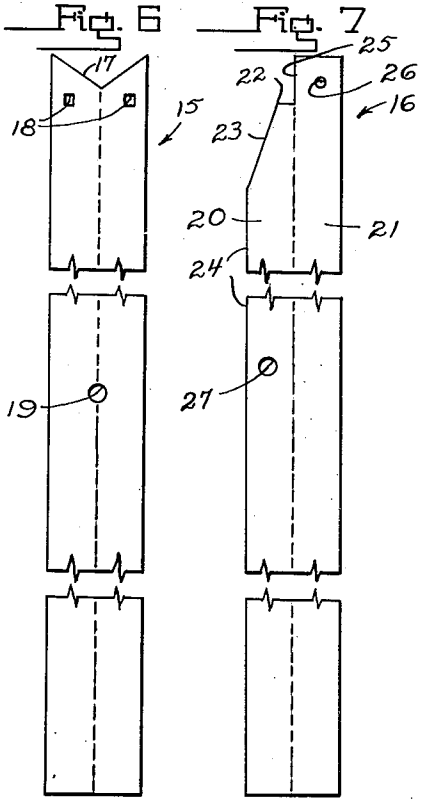



Fig. 6




Fig. 7

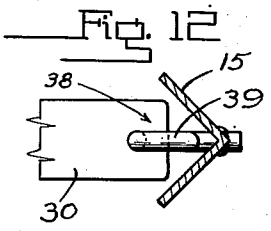



Fig. 12

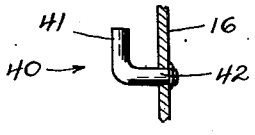



Fig. 13

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## COLLAPSIBLE STAND FOR SUPPORTING HODS AND THE LIKE

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Application November 1, 1948, Serial No. 57,813

7 Claims. (Cl. 248—163)

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This invention relates to folding or collapsible stands and more particularly to plural leg stands with the legs pivoted at the head. An example of the use of such a stand is a support for detachably retaining a hod upright.

An important object of the invention is to provide a stand which includes a plurality of pivoted legs and a pair of arms for supporting an object, as a hod, in a steady position but which object may be removed from the stand.

Another important object is to provide a stand for hods having body portions of various sizes.

Still another important object is to provide a stand which is readily collapsed into a compact, trim assembly for transportation, storage or the like, with no parts liable to become lost or mislaid and the collapsed legs of the stand providing a housing for portions of the assembly.

Other objects and advantages of the invention will be apparent during the course of the following detailed description of the invention taken in connection with the accompanying drawings, forming a part of this specification, and in which drawings:

Fig. 1 is an elevation of the new stand extended and supporting a hod in an upright position.

Fig. 2 is an elevation of the stand collapsed.

Figs. 3 and 4 are horizontal sections of the stand taken on their respective lines of Fig. 1.

Fig. 5 is a vertical section, substantially on the line 5—5 of Fig. 4.

Fig. 6 is a flattened out showing of a leg of the novel stand.

Fig. 7 is a flattened out showing of one of a pair of other legs of the stand.

Fig. 8 is a plan and Fig. 9 an edge view of one of a pair of arms forming parts of the new stand.

Figs. 10 and 11 are plans of two braces employed in the stand.

Fig. 12 is a top plan of a brace attaching means of the stand.

Fig. 13 is an elevation of one of a pair of other brace attaching means.

Fig. 14 is an end elevation of one hod body, in full lines, and of another hod body, in dotted lines, illustrating the adaptability of the stand to hods having body portions of various sizes.

Fig. 15 is an enlarged horizontal section of the novel stand collapsed and with the section taken substantially on the line 15—15 of Fig. 2.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of the invention and wherein similar reference characters designate corresponding parts throughout the several views, the letter A designates the new

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stand and the letters B and C hods supported thereby.

The new stand includes a plurality of legs and, in the example shown, there is one leg 15 and a pair of legs 16. The legs may be of angle iron and the leg 15 is shown, in Fig. 6, in a flattened-out condition, with its upper end edge 17 forming substantially a V, which forms a part of a cradle to be subsequently described. Spaced below this edge is a pair of bolt shank-receiving substantially square openings 18, one in each half leg, and below the openings 18 is a preferably circular opening 19 with its axis intersecting the bend line of the angle iron leg 15.

One of the angle iron legs 16 is shown flattened out in Fig. 7 and one half leg 20 is shorter than the other half leg 21 being reduced at one end portion to provide an edge or abutment 22 substantially normal to the bend line or longitudinal axis of the leg 16 and shorter in length than the width of the half leg 20. These abutments limit pivotal movement of arms 55 to be subsequently described. From the outer end of this edge 22, the edge 23 extends downwardly and outwardly to the outer edge 24 of the half leg 16, whereby the edges 22 and 23 form an obtuse angle. The edge 22 is below the plane of the upper edge of the half leg 21 so that there is an edge 25 joining the edge 22 and normal thereto. This edge 25 may align with the bend line of the leg 16. The half leg 16 has a perforation 26 below its upper end edge and the half leg 20 has a perforation 27 intermediate its ends. By comparing Figures 6 and 7, it will be noted that the perforation 27 is spaced a less distance from the upper edge of the leg 16 than is the opening 19 from the upper edge of the leg 15.

Included in the novel stand A is a brace means which also functions to sustain a releasable holding member to be subsequently described. The brace means comprises the brace member 30 shown particularly in Fig. 10 and a pair of brace members 31, one being shown particularly in Fig. 11. All may be flat bars or rigid straps.

The brace member 30 may be provided with one reduced end edge 32 by beveling or rounding this edge and, inwardly of this edge is a bolt shank receiving opening 33 while inwardly of the opposite edge may be a substantially square opening 34.

As may be seen in Fig. 11 the brace member 31 has one end edge 35 diagonal with the longitudinal edges of the member 31, with a hook-receiving perforation 36 inwardly of the edge 35 and a bolt shank-receiving opening 37 inwardly

of the opposite edge. It is preferred that one brace member (in the example shown, the brace member 30) be permanently but movably secured to a leg (the leg 15 in the example shown) of the stand A and the other brace members (in the example shown, the brace members 31) being removably secured to both the other brace member and to each other as well as to the legs 16. This is effected, in so far as the brace member 30 is concerned, by providing an eyed member 38 with its eyed portion 39 extending through the perforation 33 and with its shank extending into the perforation 19 and secured to the leg 15 as by welding. Of course the eyed portion 39 extends inwardly as shown in Fig. 12.

In Fig. 13 is shown one of the two means which may be employed to detachably couple the brace members 31 to the legs 16 and is a hook 40 with the hook portion 41 adapted to extend into either of the perforations 36 and the shank portion 42 extends into an opening 27 in a leg 16 and secured to the leg, as by welding. Since the edges 35 of the brace members 31 are disposed as described and illustrated and the hooks 40 extend inwardly, the brace members 31 are detachable from the legs 16.

Referring now to Fig. 5, it will be seen that all three brace members 30 and 31 are detachably connected and, in addition, there is connected means to detachably secure a handle, stem or support, as a hod stem, in place. The connection means may be a carriage bolt 45 and wing nut 46 therefor. The squared portion of the carriage bolt shank may extend into the opening 34 and the cylindrical portion thereof into and through the openings or perforations 37.

Again referring to the means to detachably secure a handle, stem or support to the stand A, I prefer to employ a hook member 50, shown particularly in Figs. 4 and 5, with an eyed portion 51 encircling the shank of the carriage bolt 45 and its hooked portion 52 constructed and arranged to hook around the handle, stem or support.

The legs 15 and 16 form a tripod and at their upper, converging ends is disposed a hod body support means or cradle portion. This support means comprises a pair of arms 55, one being shown particularly in Figs. 8 and 9, and each comprising a leg engaging portion 56 provided with a perforation 57 and a hod body-engaging portion 58 having an outer edge 59. The portion 56 is offset or stepped with respect to the portion 58 and the portion 58 is preferably arcuate, both as may be seen in Fig. 9. The arms 55 converge downwardly and are pivotally secured to the tripod as by a pair of carriage bolts 60, with their squared portions extending into the squared openings 18 of the leg 15 and their cylindrical shanks extending into and through the perforations 57 in the arms 55. Wing nuts 61 may be provided for the bolts 60 so that the arms may be made to assume various positions irrespective of the positions of the legs 15 and 16, either extended or folded. That is, while the extended position of each leg is limited as is now obvious, the limited positions of the legs in no wise affects the angular positions of the arms 55 with respect to the legs, since the nuts of the carriage bolts 60 may be loosened in order to swing the arms on the bolt shanks (pivots) and adjust the arms as desired. The carriage bolts 60 not only afford this connection of arms and leg, but also connect the legs 16 to the leg 15 since their shanks extend through the openings 26 of the legs 16.

In Fig. 1, a hod B is shown in position, supported by the novel stand A, with the V-shaped hod body 65 carried by the arms 55 and the stem 66 extending downwardly and embraced by the hook 50 as may be seen in Fig. 4. The V-shaped end edge 17 of the leg 15 contributes to the formation of the cradle and the edges 22 limit pivotal movements of the arms 55 so that, even if the pivotal connections of arms and leg becomes loosened the arms cannot swing downwardly so far as to cause falling or tipping of the hod. It is now clear that hods, such as B and C, having various angular body shapes may be accommodated, as illustrated in Fig. 14 in full and dotted lines.

When collapsed, as in Fig. 2, the arms 55 may be swung to the position shown, providing a very compact, trim assembly with the detached braces 31 hanging downwardly from the brace 30 which, in turn, hangs downwardly from its connection with the leg 15, and all contained within a housing formed by the collapsed angle iron legs.

Various changes may be made to the form of the invention herein shown and described without departing from the spirit of the invention or scope of the claims.

What is claimed is:

1. In a stand for a hod, a pair of downwardly converging arms providing a hod body cradle, a plurality of legs, means pivoting said arms to said legs, brace means for said legs, and means carried by said brace means to detachably secure the depending stem of said hod to said stand when said hod body is supported by said cradle, comprising a hook member removably encircling said stem.

2. In a folding stand, a plurality of legs, each comprising a length of angle iron, support means, pivoting means pivotally connecting said legs together and said suppport means to said legs, brace means, comprising a plurality of brace members, means pivoting one of said brace members to one of said legs, means detachably securing the other brace members to the others of said legs, and means carried by said brace means to detachably couple an object to said support when a portion of said object is supported by said support means, said first pivoting means being constructed and arranged so that when said stand is folded said legs will provide a housing with said brace means and said means to detachably couple an object to said support both disposed within said housing.

3. In a stand for supporting a hod having a substantially V-shaped body portion, said stand including a plurality of upwardly-converging legs; a pair of downwardly-converging curved arms constructed and arranged to provide a cradle for said body portion, means pivotally connecting and releasably retaining in selected adjusted positions, one with respect to the others, a first of said legs, a second of said legs and one of said arms, at the upper ends of said first and second of said legs and at the lower end of said arm; and means pivotally connecting and releasably retaining selected adjusted positions, one with respect to the others, a third and said second of said legs and the other of said arms, at the upper ends of said second and third legs and lower end of said other of said arms.

4. In a stand for supporting a hod having a

substantially V-shaped body portion and a depending portion, said stand including a plurality of upwardly-converging legs; a pair of downwardly-converging arms constructed and arranged to provide a cradle for said body portion, means pivotally connecting a first of said legs, a second of said legs and one of said arms, at the upper ends of said first and second of said legs and at the lower end of said arm; means pivotally connecting a third and said second of said legs and the other of said arms, at the upper ends of said second and third legs and lower end of said other of said arms; brace means for said legs; and means carried by said brace means to detachably secure said depending portion to said stand against accidental oscillation of said depending portion.

5. In a stand for a substantially V-shaped body, a plurality of legs, one of said legs having a substantially V-shaped upper edge; means providing a cradle for said body, comprising a pair of arms and said edge, with said arms converging toward said edge; and means securing said legs together at their upper ends and said arms to said legs at the lower ends of said arms.

6. In a stand for a substantially V-shaped body, a plurality of legs, one of said legs having a substantially V-shaped upper edge; means providing a cradle for said body, comprising a pair of arms and said edge, with said arms converging toward said edge; means securing said legs together at their upper ends and said arms to said legs at the lower ends of said arms; and means limiting pivotal movement of said arms in one direction, comprising a pair of abutments



carried by one of said legs and disposed in the path of pivotal movement of said arms in one direction.

7. In a stand for holding a substantially V-shaped body upright, three upwardly-converging legs of angle iron, two of said legs having one of their angle iron portions reduced in height at their upper ends, providing abutments and the third of said legs having an upwardly opening recess defined by a substantially V-shaped upper edge of said third of said legs; means providing a cradle for said body, including a pair of downwardly converging arms, pivotally carried by and extending above said legs, and said means also including said edge; said abutments being disposed in the paths of pivotal movement of said arms when said arms are upraised.

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