April 10, 1951

W. H. DRAKE

TILT STAND

2,548,204

Filed Jan. 4, 1949

3 Sheets-Sheet 1

Fig. 1.

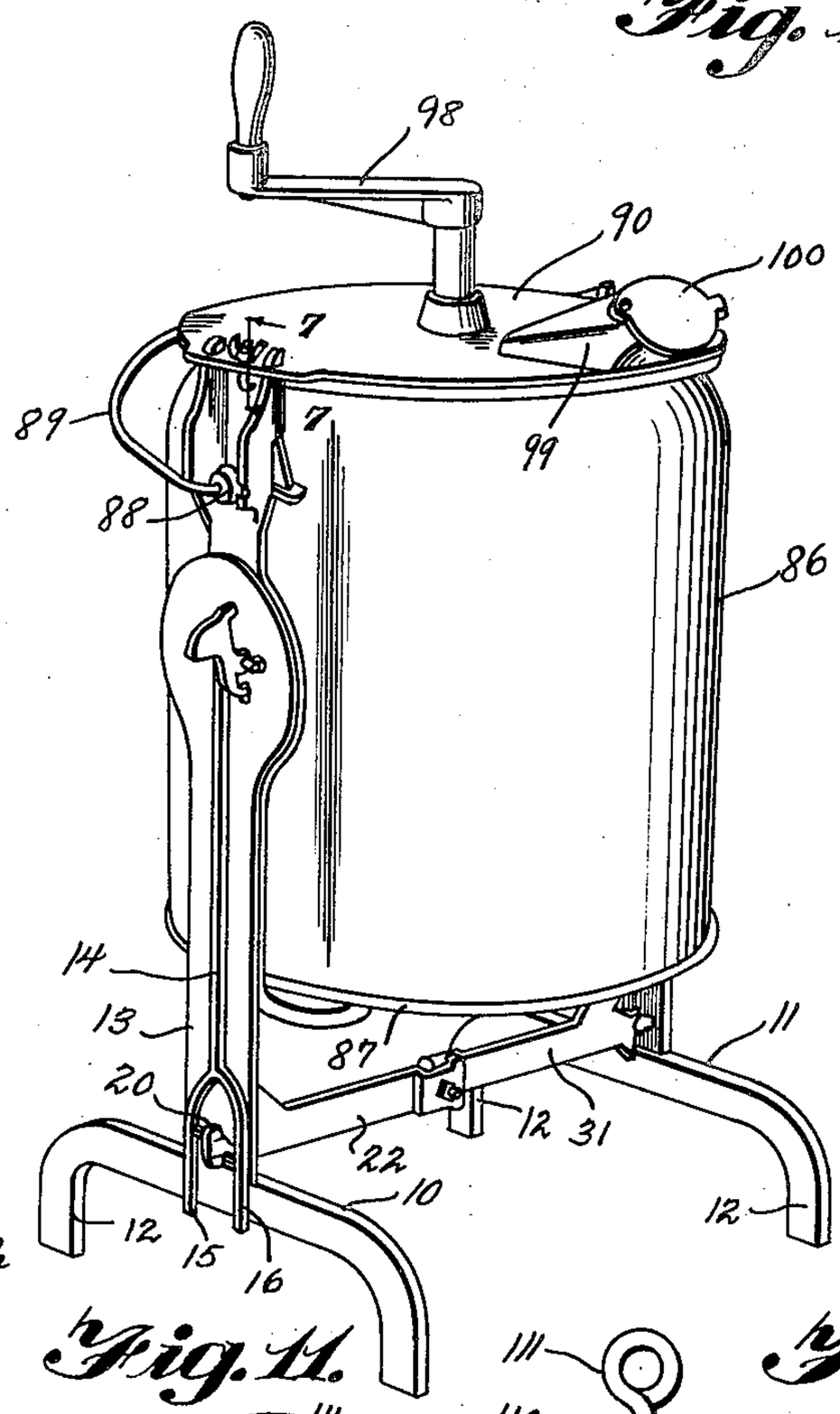

Fig. 10.

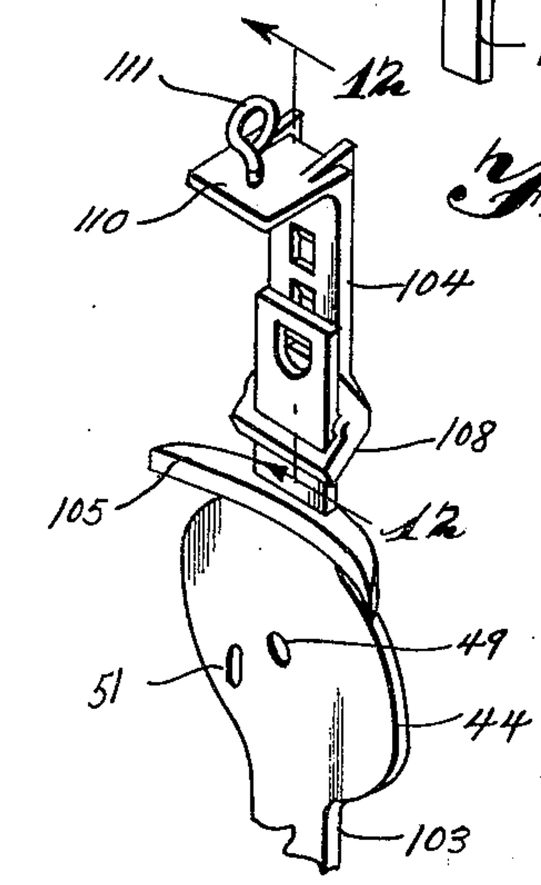

Fig. 11.

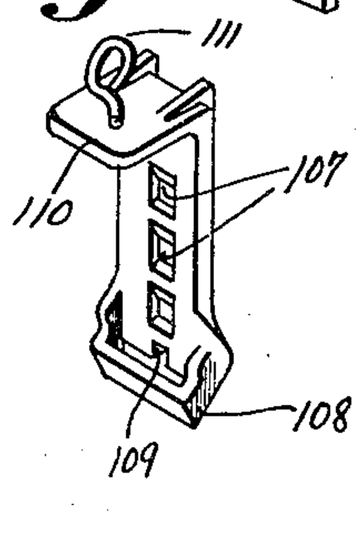

Fig. 12.

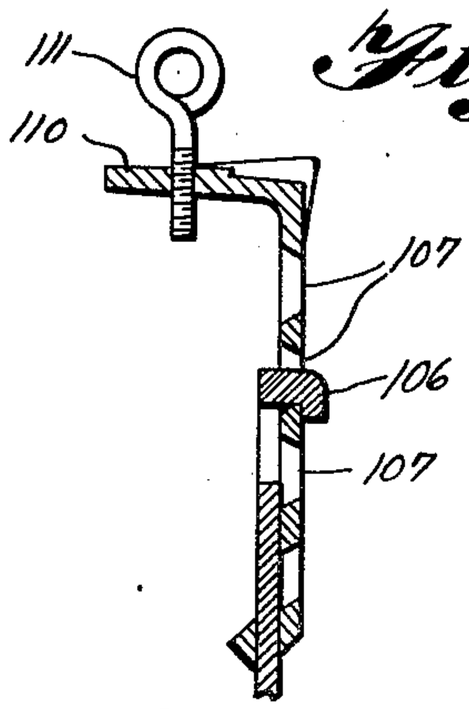

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Fig. 2.

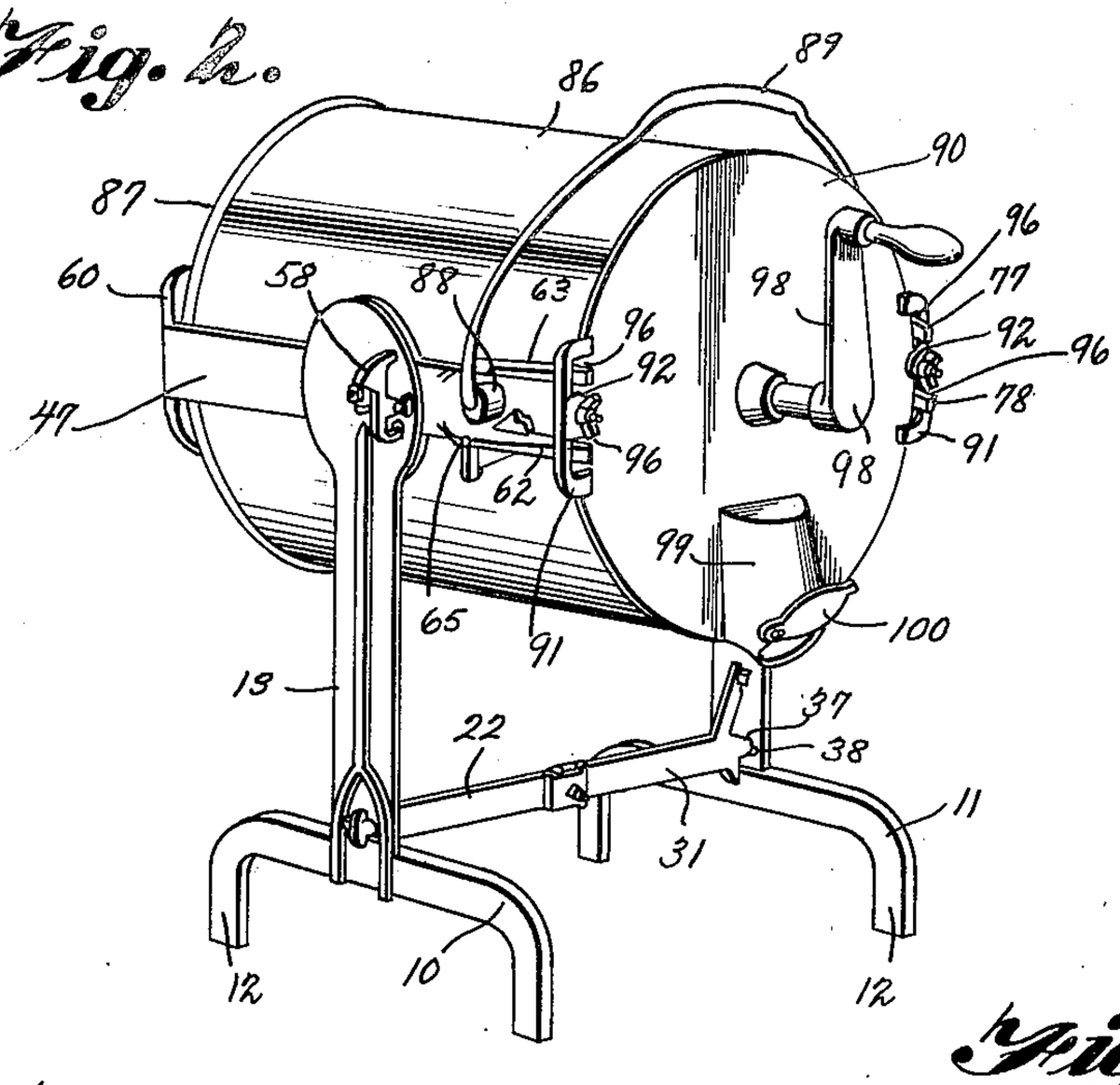

Fig. 3.

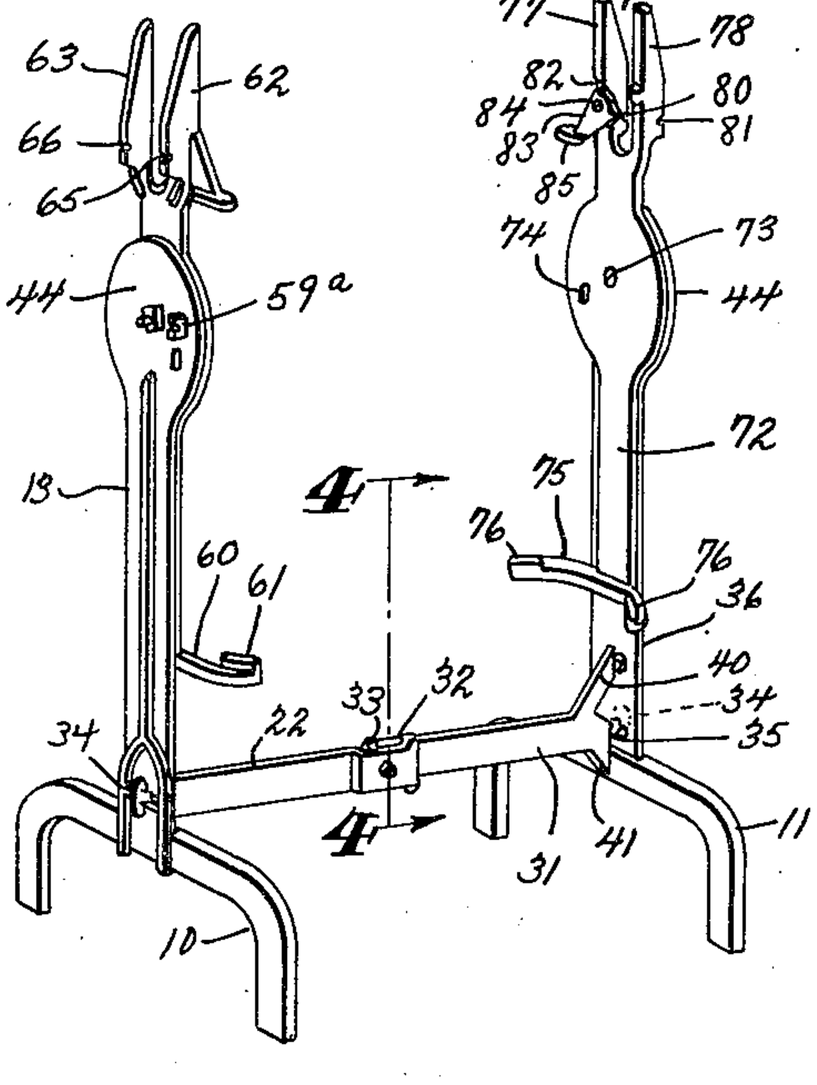

Fig. 4.

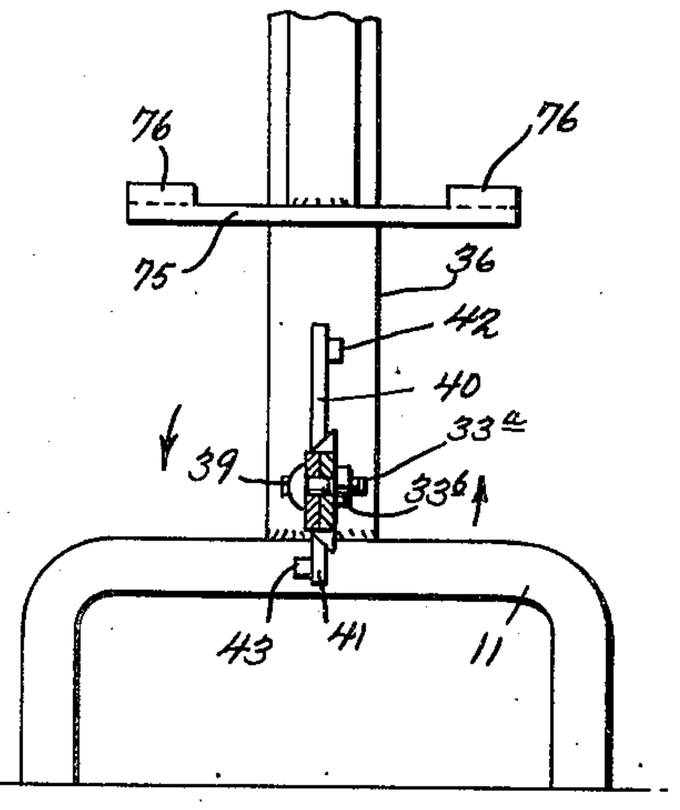

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Fig. 5.

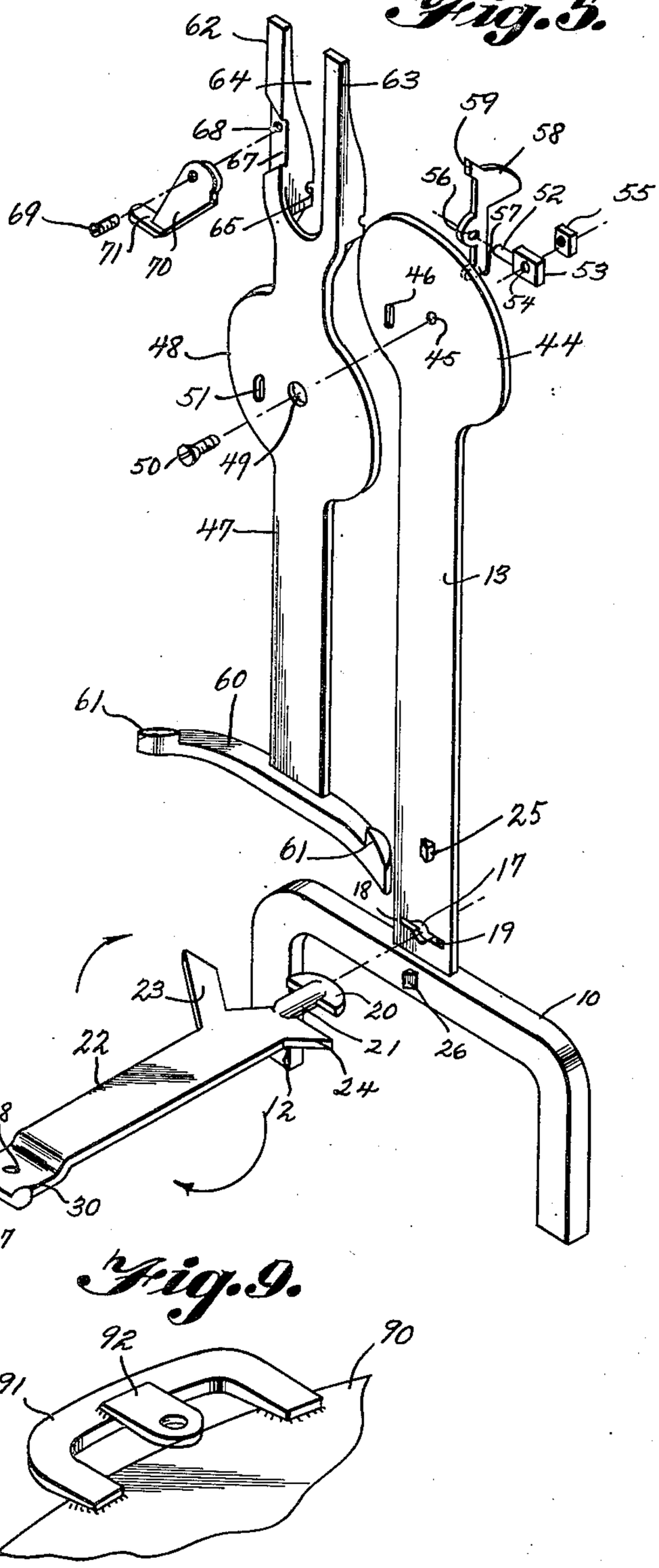


Fig. 6.

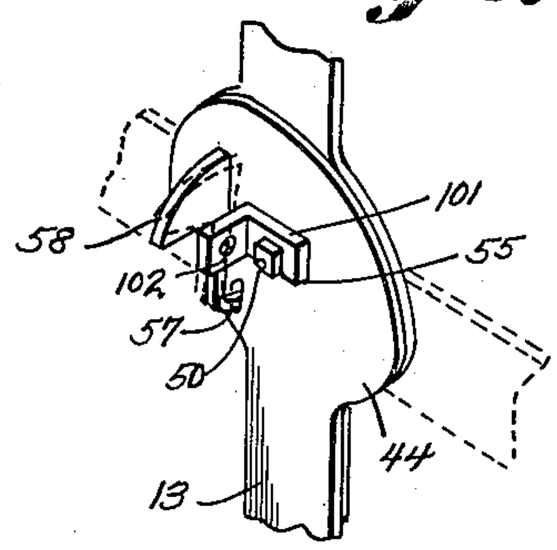


Fig. 8.

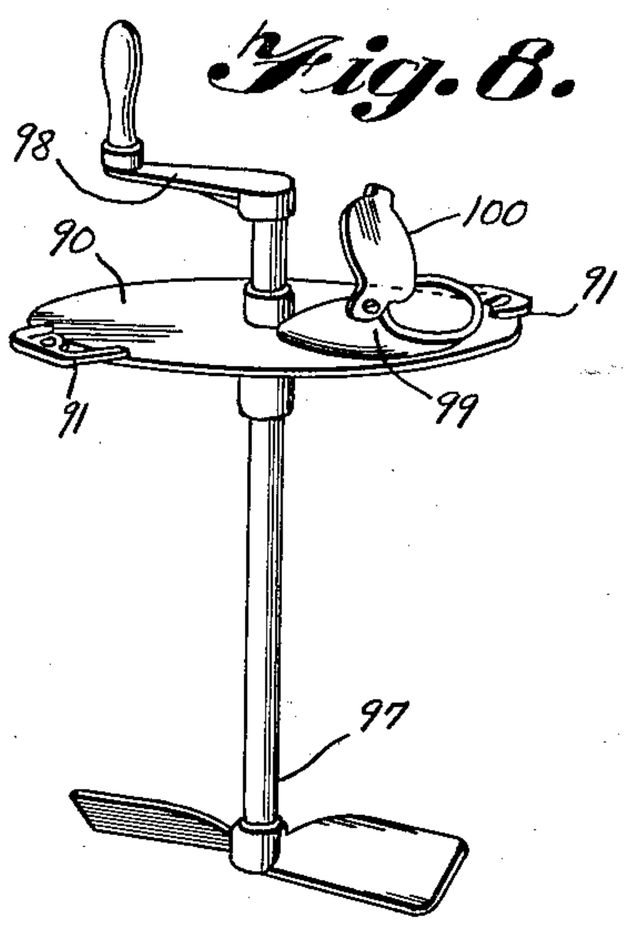
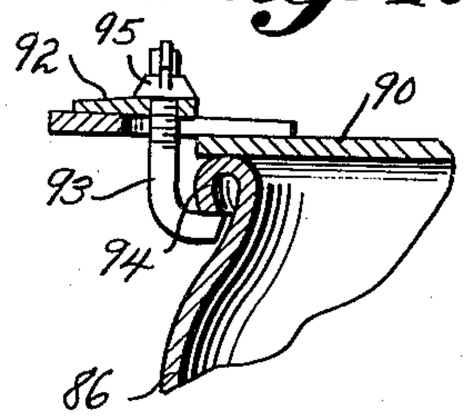


Fig. 9.

Fig. 7.



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TILT STAND

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Application January 4, 1949, Serial No. 69,207

6 Claims. (Cl. 248—133)

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The present invention relates to improvements in tilt stands and has for an object the provision of a stand of this type for containers of liquid, such as paint buckets, oil drums and the like.

Another object of the present invention is to provide an improved structure which is adjustable so that the tilt stand will accommodate cans, buckets and drums of various heights.

A further object of the present invention resides in the provision of means for adjusting the tilt stand to compensate for variations in the diameters of the containers.

A still further object of the present invention is to provide an improved structure in which are incorporated four separate means for retaining the container in the tilt stand.

The present invention contemplates the provision of an improved device of this kind which has an automatic locking means for holding the stand and the container in upright or non-tilting position.

The present invention aims to provide an improved tilt stand which can be quickly and easily assembled and dissembled and shipped in knocked down condition.

With the foregoing and other objects in view, the invention will be hereinafter more fully described and more particularly pointed out in the appended claims.

In the drawings, in which the same parts are denoted by the same reference numerals throughout the several views,

Figure 1 is a perspective view of an improved tilt stand constructed in accordance with the present invention and showing a paint can thereon in upright position,

Figure 2 is a view similar to Figure 1 but showing the paint can in tilted or pouring position,

Figure 3 is a view similar to Figure 1 with the paint can removed,

Figure 4 is a vertical sectional view taken on the line 4—4 of Figure 3,

Figure 5 is an exploded perspective view of one side of the improved tilt stand,

Figure 6 is a fragmentary perspective view of a modified form of locking dog for locking the stand and the container in upright position,

Figure 7 is a vertical sectional view taken on the line 7—7 of Figure 1,

Figure 8 is a perspective view of the paint can cover and the paint stirrer,

Figure 9 is an enlarged fragmentary perspective view of the paint can cover showing the support for one of the fastening members,

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Figure 10 is a fragmentary perspective view of a modified form of swinging bracket,

Figure 11 is a perspective view of the upper portion of the modified bracket shown in Figure 10, and

Figure 12 is a vertical sectional view taken on the line 12—12 of Figure 10.

Referring more particularly to the drawings and especially to Figures 1 to 9, inclusive, 10 and 11 indicate supporting members which are of substantially inverted U-shape and have feet 12 for providing a firm purchase on a floor, bench, or the like. The supporting member 10 has mounted thereon an upstanding arm 13 which may be cast integral with the supporting member 10. The lower face of the arm 13 abuts the upper surface of the member 10 and the arm 13 has a vertically extending reinforcing rib 14 which branches out into two branches 15 and 16 for engaging the outer side face of the member 10.

The arm 13 has in its lower end portion an enlarged medially disposed round opening 17 with which communicate laterally extending slots 18 and 19 for the passage therethrough of a head 20 and a round neck 21 of a T-shaped portion of an adjustable connecting bar 22. Adjacent the neck 21, a brace 23 extends upwardly from the bar 22 at an angle of the order of forty-five degrees and has the face of its outer free end beveled for engagement with the inner face of the arm 13. A brace 24 depends from the bar 22 adjacent the neck 21 and abuts the inner face of the member 10.

The arm 13 has an abutment 25 which the brace 23 engages and the supporting member 10 has an abutment 26 which the brace 24 engages. The abutments 25 and 26 are disposed on opposite sides of the bar 22 and have the faces which engage the braces 23 and 24 beveled in opposite directions so that they will act as stops to prevent the rotation of the bar 22 with respect to the supporting member 10 and the arm 13. The outer face of the arm 13 immediately above the slot 18 is beveled in the same direction as the abutment 25 and the outer face of the arm 13 immediately below the slot 19 is beveled in the same direction as the abutment 26 so that if the bar 22 tends to turn in that direction the head 20 will not be able to ride up the beveled surfaces and the bar will be held against rotation in that direction. The end portion of the bar 22 opposite to the head 20 is laterally offset with respect to the major portion of the bar to provide a substantially flat rectangularly

shaped portion 27 having a centrally disposed elongated slot 28.

The outer free end corners of the portion 27 have inwardly extending lugs 29 and 30. An adjustable connecting bar 31 similar in construction to the connecting bar 22 has a laterally offset portion 32 having at the corners of its free end lugs 33. The portion 32 of the bar 31 has an elongated slot which is in registry with the slot 28 of the bar 22 when the bars are in assembled relation. A machine screw 33a extends through the aligned slots in the bars 22 and 31 and receives a nut 33b for holding the bars in assembled relation. The opposite end of the bar 31 has a T-shaped portion comprising a head 34 and a neck 35 similar in construction to the head 20 and neck 21 of the bar 22.

An arm 36 similar in construction to the arm 13 is mounted in a similar manner upon the supporting member 11. The lower end portion of the arm 36 has a centrally disposed round opening 37 with which communicate laterally extending slots 38 and 39 which receive the head 34 and the neck 35 of the bar 31. An upwardly extending brace 40 similar to the brace 23 is provided on the bar 31 and engages the inner face of the arm 36. The bar 31 has a depending brace 41 similar to the brace 24 which engages the inner face of the supporting member 11.

Abutments 42 and 43 similar to the abutments 25 and 26, respectively, are mounted upon the arm 36 and the supporting member, respectively, for engagement by the opposite side faces of the braces 40 and 41. The outer face of the arm 36 immediately above and below the slots 38 and 39 is beveled in the same directions as the abutments 42 and 43 to cooperate with the head 34 to prevent rotation of the bar 31 in that direction.

The upper ends of the arms 13 and 36 are in the form of enlarged circular disks 44, each of which has a centrally disposed hole 45 and a radially offset slot 46. A swinging bracket 47 has an intermediate enlarged disk portion 48 which corresponds in size and shape to the disk portion 44 of the arm 13. The disk 48 has a centrally disposed opening 49 which registers with the opening 45 in the disk portion 44 of the arm 13. A screw 50 is received by the aligned openings 44 and 49 of the arm 13 and the bracket 47 for pivotally supporting the bracket 47 from the arm 13.

The disk 48 has a radially offset slot 51 which at times is in alignment with the slot 46 of the disk 44. A pivot member is supported by the screw 50 and comprises a pivot pin 52 and a substantially rectangularly shaped portion 53 having an opening 54 therein for the reception of the screw 50. A nut 55 is received by the screw 50 and holds the bracket 47 to the arm 13 in assembled relation and also retains the pivot member in proper position upon the screw 50. A self locking safety latch has an opening 56 for the reception of the pivot pin 52.

The lower end of the latch is turned inwardly to provide a dog 57 for entering the slots 46 and 51 when they are in registry. The upper end of the safety latch has an outwardly extending weighted head 58 which is disposed on the side of the vertical axis of the latch opposite to that on which the dog 57 is disposed so that the latch will be normally moved to urge the dog 57 into the aligned slots 46 and 51. The latch has a stop 59 for engaging the outer face of the arm 13 to limit the movement of the latch when being swung to its unlocked position. A boss 59a having a semi-circular recess therein is mounted on the outer face of the arm 13 adjacent the slot 46. The recess receives the outer free end portion of the pivot pin 52 and the boss 59a engages the safety latch for retaining it upon the pivot pin 52.

The bracket 47 supports from its lower end an arcuate shoulder 60 which has at its opposite ends upstanding ears 61, the outer faces of which are arcuate shaped. The upper end portion of the bracket 47 is substantially U-shaped having legs 62 and 63 forming a slot 64 therebetween. The base of the legs 62 and 63 are relatively thick and have notches 65 and 66, respectively, therein. The legs taper upwardly from their thickened base portions. The leg 62 has a socket 67 on the intermediate portion of its inner face and the bottom of the socket has a screw threaded depression 68 for the reception of a screw 69 which pivotally supports a thumb latch 70 on the leg 62. The side walls of the socket 67 are cutaway to permit the pivotal movement of the thumb latch 70 which has a thumb or finger engaging portion 71.

A swinging bracket 72 which is similar in construction to the bracket 47 is mounted for swinging movement on the arm 36 by a screw 73. The arm 36 and the bracket 72 have aligned slots 74 which are similar in construction and purpose to the slots 46 and 51 of the arm 13 and the bracket 47, respectively. The bracket 72 supports from its lower end an arcuate shoulder 75 which has at its opposite ends upstanding ears 76, the outer faces of which are arcuate shaped. The upper end portion of the bracket 72 is substantially U-shaped having legs 77 and 78 forming a slot 79 therebetween.

The bases of the legs 77 and 78 are relatively thick and have notches 80 and 81, respectively, therein. The legs taper upwardly from their thickened base portions. The leg 77 has a socket 82 on the intermediate portion of its inner face. A thumb latch 83 is pivotally mounted in the socket 82 by a screw 84 and has a thumb or finger engaging portion 85.

In the use of the device as shown in Figures 1 and 2, the head 20 of the bar 22 is passed through the opening 17 and the slots 18 and 19 so that the round neck 21 is disposed within the opening 17. The bar 22 is then rotated through ninety degrees so that the head 20 will engage the outer face of the arm 13 to prevent withdrawal of the bar 22. The other bar 31 can be mounted upon the supporting member 11 in a similar manner. The portions 27 and 32 of the bars 22 and 31 are then interlocked and screwed together by the screw 33a and the nut 33b; the slots in the bars permitting of relative lengthwise adjustment of the bars and the arms 13 and 36 to compensate for any variation in the diameters of the containers. The lugs 29 and 30 of the bar 22 will engage the bar 31 and the lugs 33 of the bar 31 will engage the bar 22 to prevent relative rocking movement of the bars.

A paint can 86 is supported by the swinging brackets 47 and 72. The can 86 has a depending flange 87 which rests upon the upper faces of the shoulders 60 and 75 and the ears 61 and 76 engage the inner face of the flange 87 of the can 86. This will prevent lateral movement of the can on the swinging brackets. The can 86 has bosses 88 at opposite sides thereof which are received by the slots 64 and 79 of the brackets 47 and 72 and seat upon the closed part of the upper

U-shaped end portions of the brackets. The thumb latches 70 and 83 can be pressed into engagement with the bosses 88 to help to retain the can in proper position upon the brackets when the device is swung to the tilting position shown in Figure 2.

The retention of the can in proper position is also assisted by the reception of the bail 89 of the can by the notches 66 and 80 of the legs 63 and 77, respectively. The can 86 has a lid or cover 90 having diametrically opposed U-shaped handles 91 each of which supports an apertured plate 92. An L-shaped fastening member 93 extends through the aperture in each plate 92. The lower inwardly extending leg of the fastening element 93 engages beneath the flange 94 of the can 86 and the upper portion of the fastening element is threaded and receives a wing nut 95 for locking the cover 90 to the can 86.

The upper end portions of the legs 62, 63, 77 and 78 are received by spaces 96 which are formed by the plates 92 and the adjacent legs of the U-shaped handles 91. When the can 86 is in the upright position shown in Figure 1, the dog 57 of the safety latch extends through the aligned slots 46 and 51 to positively lock the bracket 47 with the arm 13 to prevent accidental tilting of the can 86. When it is desired to pour paint from the can 86 the safety latch is swung inwardly on its pivot pin 52 to disengage the dog 57 from the slot 51 of the swinging bracket 47.

The brackets 47 and 72 can now be swung to the position shown in Figure 2. The paint in the can 86 can be properly stirred by means of a stirrer 97 which is carried by the cover 90 and has an operating crank 98. The paint can be dispensed from the can 86 through a pouring spout 99 which is normally closed by a closure 100 which is pivotally mounted on the pouring spout 99. When the desired amount of paint has been poured, the brackets 47 and 72 can be swung downwardly to their upright position shown in Figure 1 at which time the slots 46 and 51 are in alignment and the dog 57 of the safety latch will be moved into the aligned slots by the weighted head 58.

Figure 6 shows a modified form of the means for supporting the safety latch. In this form of the invention the safety latch is pivotally mounted on the bracket 101 which is in the form of an angle iron. One flange of which is secured to the screw 50 by means of the nut 55 and the other flange pivotally supports the safety latch by a machine screw 102.

In Figures 10, 11 and 12 is shown a modified form of a swinging bracket. In this modification the bracket is formed of a lower part 103 and an upper part 104. The lower part 103 is similar to the bracket 47 except that the legs 62 and 63 are eliminated and the following structure is substituted therefor. The lower part 103 has an arcuate guide 105 adjacent its upper end portion for engaging the outer periphery of the can 86. At its upper end portion the lower part 103 has a hook 106 which is adapted to be selectively received by one of a series of vertically disposed slots 107 provided in the upper part 104. The lower end portion of the upper part 104 has a stirrup 108 for slidably receiving the upper end portion of the lower part 103. The stirrup 108 cooperates with the hook 106 for locking the hook in the selected slot 107. The lower end portion of the upper part 104 is cutaway at 109 to permit the hook 106 to pass therethrough

in dissembling the parts 103 and 104. The upper end portion of the upper part 104 is bent inwardly to provide an overhanging flange 110 which threadedly receives a screw 111.

In the use of this form of the invention, the bottom of the container is supported by the shoulders 60 and 75 and the flange 110 is brought into engagement with the upper face of the cover of the container by placing the hook 106 in the proper slot 107. The screw 111 is then screwed inwardly to firmly engage the upper face of the container to positively lock it in the device. For purposes of pouring the liquid contents from the container the operation described in connection with the other form of the invention can be followed.

Containers of different heights can be positioned in the tilt stand by adjusting the height of the brackets 103 and 104 by selectively engaging the hook 106 in slots 107.

The tilt stand can be constructed in accordance with the present invention to accommodate containers of various sizes, including drums having a capacity of 30 gallons or more.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What I claim is:

1. For use with a paint can or the like having a bail and bail bosses on the side wall, a tilt stand comprising a frame, a support pivoted on the frame adapted to receive the can and having forked upper portions open at their upper ends to receive the bosses with the bail movable to the outside surfaces of the forked portions.

2. For use with a paint can or the like having a downwardly extending marginal bottom flange, a bail and bail bosses projecting from the side wall, a tilt stand comprising a frame, a support pivoted in the frame adapted to receive the can and having upstanding lugs positioned to fit within the can flange, said support also having forked upper portions with slots between the forks to slidingly receive the bosses with the bail swinging downwardly outside the forked portions, and latch means movably mounted on the support positioned to move across the slots above the bosses to retain the can on the support and to prevent the flange raising above the lugs.

3. For use with a paint can or the like, a tilt stand comprising a frame, a support pivoted to said frame and adapted to receive the can, a cover for the can having a spout and slotted extensions angularly displaced from the spout and positioned to receive the upper parts of said support to orient the spout angularly from the support for pouring when the support is tilted.

4. For use with a paint can or the like having bosses on the side wall, a tilt stand comprising a frame, a support pivoted on said frame adapted to receive the can and having forked upper portions adapted to receive the bosses of the can, and latches movably mounted on the support positioned to be moved across the forked portions above the can bosses.

5. For use with a paint can or the like having a bail and bail bosses on the side walls, a tilt stand comprising a frame, a support pivoted on the frame adapted to receive the can and having forked upper portions open at their upper ends to receive the bosses with the bail movable to the

outside surfaces of the forked portions, said forked portions having notches in the lower portions thereof, said forked portions also having inclined outer surfaces tapering at their upper portions to initially receive the bail in the turned down condition, said inclined outer surfaces inclining outwardly and downwardly to cause spreading of the bail as the same is swung downwardly over such inclined surfaces whereby the bail will snap into said notches.

6. For use with a paint can or the like, a tilt stand comprising a frame, a support pivoted in the frame adapted to receive the can, said support and frame having latch openings therein relatively placed to register in the upright position of the support, a latch between the frame

and support for holding the support in upright position, and means biasing the latch to a position to enter the openings when registered.

WILLIAM HARVEY DRAKE.

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