

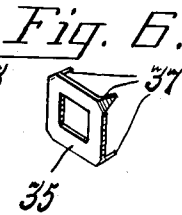
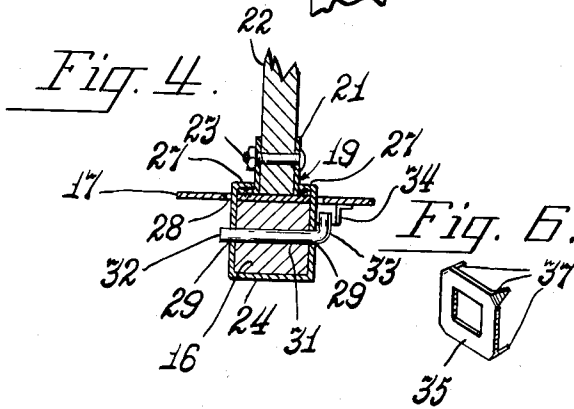
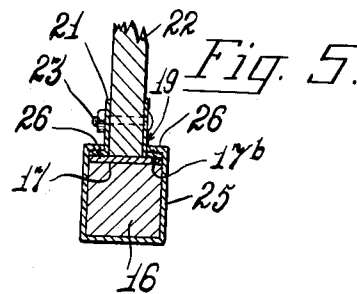
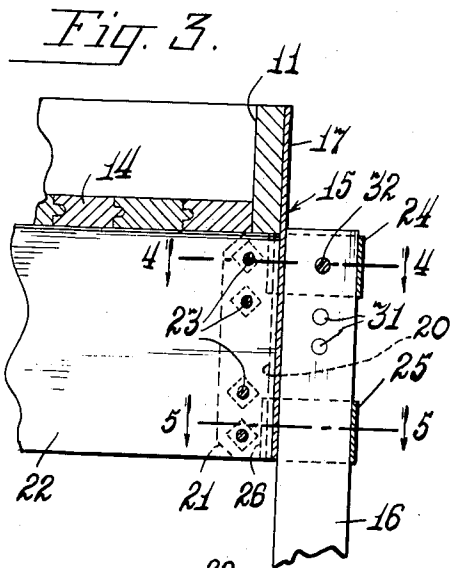
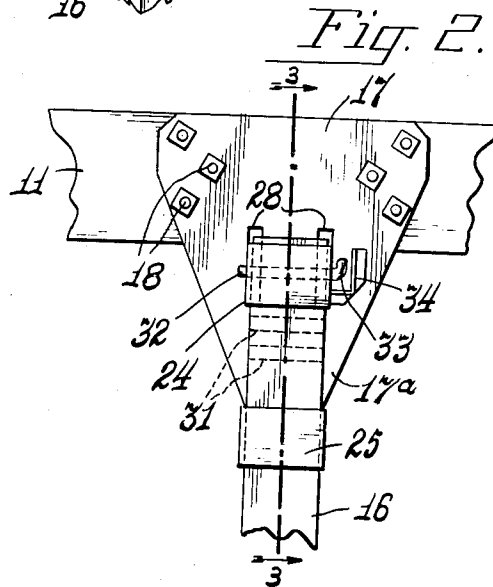
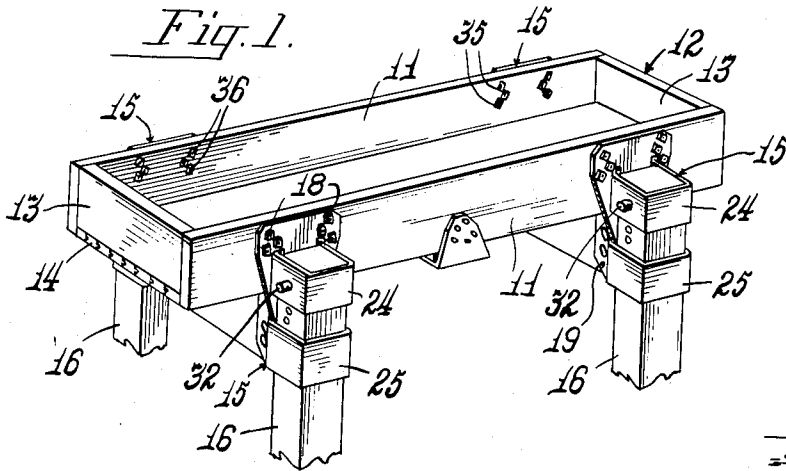
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MOUNTING BRACKET FOR FEED BIN SUPPORT

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MOUNTING BRACKET FOR FEED BIN SUPPORT

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8 Claims. (Cl. 119—61)

The invention relates to improvements in feed bin supports, and is particularly concerned with the novel construction of a one-piece leg mounting bracket having means to support a floor brace or stringer.

Brackets embodying the features of the present invention are particularly designed to afford rigid supports for the legs of a bin or trough used in the feeding of livestock. Heretofore, bins, constructed with legs of a predetermined length for use by certain classes of livestock, have been utterly worthless when an attempt has been made to use them for the feeding of other classes of livestock. This is because of the prevailing practice of securing the legs in such manner that they cannot be adjusted to increase or decrease the height of the bin, or, if made adjustable, they are very difficult to adjust, particularly after having been in service for some time. The present invention, therefore, has for one of its objects, the provision of novel leg brackets so constructed as to permit the legs of a bin or the like to be adjusted in length easily and quickly.

Another object of the invention is to provide a novel one-piece leg bracket which may be attached securely to the bin, and which embodies novel means to facilitate rigid mounting of legs adjustably.

Another object is to provide a bracket of a character referred to which incorporates novel means to prevent inadvertent release of a leg after it has been adjusted and secured.

Another object is to provide a novel one-piece leg bracket with integral means to which may be secured a stringer or brace for the floor of the bin on which the bracket is mounted.

Another object is to provide novel leg brackets with novel means to receive a stringer extended between two opposed brackets to prevent their spreading.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel features of construction, arrangement and combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

For the purpose of facilitating an understanding of my invention, I have illustrated in the accompanying drawings a preferred embodiment thereof, from an inspection of which, when considered in connection with the following description, my invention, its mode of construction, assembly and operation, and many of its advantages should be readily understood and appreciated.

Referring to the drawings in which the same characters of references are employed to indicate corresponding or similar parts throughout the several figures of the drawings:

Fig. 1 is a perspective view of a bin embodying the features of the present invention.

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Fig. 2 is an enlarged side elevational view of one of the leg brackets on the bin shown in Fig. 1.

Fig. 3 is a vertical center sectional view of the bracket, taken substantially on line 3—3 of Fig. 2.

Fig. 4 is a horizontal sectional view taken on line 4—4 of Fig. 3.

Fig. 5 is a horizontal sectional view taken on line 5—5 of Fig. 3.

Fig. 6 is a perspective view of a washer used in the mounting of the brackets on the bin.

Referring particularly to Fig. 1 of the accompanying drawing, the brackets embodying the features of the present invention are shown, for purposes of illustration, mounted upon the side walls 11 of a bin or trough 12. The trough 12 includes connecting end walls 13 and a floor or bottom 14 which preferably is fabricated from tongued and grooved parts as is perhaps best illustrated in Fig. 3. Inasmuch as the brackets 15 are alike, the following description will be limited to a recitation of the structure and mounting of but one of said brackets, it being understood that said description applies equally to all of the brackets illustrated.

The bracket 15, which constitutes means for providing an adjustable mounting for a leg 16 of the bin 12, preferably is fabricated from sheet metal stock and includes a substantially triangular-shaped plate 17. The base portion of the plate 17 is suitably apertured (not shown) to receive therethrough mounting carriage bolts 18 when said plate is laid flat against the outside face of the side wall 11 and the bolts extended therethrough. Although six (6) bolts are illustrated and are preferred so as to insure a rigid mounting for the plate 17, it is obvious that a greater or lesser number of bolts may be employed without detracting from the present invention.

The apex portion 17^a of the triangular-shaped plate 17 extends downwardly for some distance beyond the lower edge of side wall 11 and upon reference to Figs. 3 and 4, it will be observed that the inwardly disposed face of the depending plate portion has firmly secured thereto, as by welding 17^b, a pair of spaced angle bars generally indicated at 19. Each of the bars 19 has one flange 20 secured to the plate 17, and its other flange 21 extends substantially perpendicular thereto. The angle bars also are preferably of a length to extend from the lowermost edge of the plate 17 upwardly into substantial contact with the bottom of the bin floor 14. These angle bars serve to reinforce the depending portion of the plate 17 and thereby increase its resistance to bending.

The bars 19 also constitute means for supporting a brace or stringer 22 which is located beneath the bin floor 14 and extends transversely thereof from one of the brackets 15 to a transversely aligned bracket. The ends of the stringer or brace 22 are fitted between the corresponding pair of spaced flanges 21 of the angle bars 19, and they are secured in such position as by means of bolts 23. Obviously, the stringer or brace 22 not only provides a transverse reinforcement for the bin floor 14, but it also affords means for tying together transversely opposed brackets 15 so as to prevent their spreading while in use.

The outwardly disposed face of the plate 17 carries a pair of vertical aligned sockets 24 and 25 adapted to receive therein the upper end of the leg 16. As illustrated, the leg 16 is substantially square in cross-section and, accordingly, the sockets 24 and 25 are of similar cross-section. These sockets preferably are fabricated from strap stock and the socket 25 has its free end portions 26 disposed on the back face of the plate 17. These portions preferably are welded or otherwise permanently attached to the plate 17. As shown they are overlapped upon the attached flanges of the angle bars 19 and welded thereto.

The other socket 24 is fabricated from sheet stock in

the same manner as the socket 25. However, in order to locate the inwardly turned end portions 27 of said socket on the rear face of the plate 17 for purposes of anchoring the same thereto, the plate 17 has a pair of slots 28 therein through which said end portions of the socket 24 project. It should be quite evident that both sockets 24 and 25 are permanently attached to the plate 17, and that because of their being spaced apart vertically great rigidity is afforded to the leg 16 mounted therein.

It has been stated hereinabove that the present bracket construction provides means whereby the legs of a bin or trough may be easily and quickly adjusted in length and firmly secured in such position of adjustment. This is accomplished by providing at least the bracket 24 with transversely aligned holes 29 with which is aligned one of a series of spaced holes 31 in the leg 16. A pin 32 may be thrust through the registering holes 29 and 31 to firmly anchor the leg to the bracket. By providing the legs with a series of longitudinally spaced apart holes 31 adjustment of the legs may be accomplished without necessitating the drilling of or otherwise producing additional holes each time it is desired to adjust the legs.

Referring now to Figs. 2 and 4, it will be noted that the pin 32 has a head 33 on one end, which head preferably is fashioned by bending the end portion of the pin perpendicular to its length. An L-shaped strap 34 is welded or otherwise secured to the outside face of the plate 17 in close proximity to the socket 24. This angle constitutes a pocket into which the turned end or head 33 of the pin 32 may be extended after the pin has been positioned in the holes 29 and 31 so as to prevent inadvertent withdrawal of said pin.

Fig. 6 is illustrative of a pronged washer 35 which it is intended to place under the head 36 of each carriage bolt 18. This washer is particularly suited for the purpose intended because bins and troughs customarily are made from a soft wood and, consequently, it is exceedingly difficult to prevent the head of the bolt 18 from turning in the wood when the nut is tightened thereon. The washer 35, having a square opening therein, provides means to prevent the bolts from turning readily inasmuch as each washer 35 has four widely spaced tangs 37 which embed themselves into the wood and resist turning of the washer which in turn holds the carriage bolt against rotation.

It is believed that my invention, its mode of construction and assembly, and many of its advantages should be readily understood from the foregoing without further description, and it should also be manifest that while a preferred embodiment of the invention has been shown and described for illustrative purposes, the structural details are nevertheless capable of wide variation within the purview of my invention as defined in the appended claims.

What I claim and desire to secure by Letters Patent of the United States is:

1. In a bin including a floor, side walls and legs depending therefrom, brackets for mounting said legs, each bracket comprising a substantially triangular plate having its base portion secured to the side wall and its apex portion depending therefrom, a pair of aligned sockets on one face of the plate to receive a leg, at least one of said sockets being apertured transversely, a pin extending through the apertures and through an aligned aperture in the leg, said pin having an end portion projecting substantially at right angles thereto, and a pocket on the plate to receive the end portion of the pin.

2. In a bin having legs depending therefrom, brackets for mounting said legs, each bracket comprising a substantially triangular plate having its base portion secured to the bin and its apex portion depending therefrom, a pair of flanges on one face of the depending portion of the

plate, said flanges being apart to receive the end of a stringer, a pair of aligned sockets on the other face of the plate to receive a leg, at least one of said sockets being apertured transversely, a pin extending through the apertures and through an aligned aperture in the leg, said pin having an end portion projecting substantially at right angles thereto and a pocket on the plate to receive the end portion of the pin.

3. A bracket comprising, in combination, a plate having apertures at one end to receive bolts for securing it to a support, a pair of angle members having one of their flanges secured to one face of the plate, each of said members extending inwardly from the other end of the plate and having their other flanges extending perpendicular to the plate, and at least one socket on the other side of said plate, said socket consisting of a piece of strap material having end portions extending around related plate edges and overlying the secured angle flanges.

4. A bracket comprising, in combination, a plate, perpendicular flanges on one face of the plate, and at least one socket on the other face of said plate, said socket consisting of a U-shaped strap having its end portions secured firmly to the opposite face of the plate.

5. In a bin including side walls and legs depending therefrom, brackets for mounting said legs, each bracket comprising a substantially triangular plate having its base portion secured to a side wall and having its apex portion depending therefrom, at least one socket on one face of the plate to receive a leg, said one socket being apertured transversely, a pin extending through the apertures and through an aligned aperture in the leg, said pin having an end portion projecting substantially at right angles thereto, and a bracket on the plate to receive the end portion of the pin.

6. A leg mounting comprising, a bracket including a plate adapted to be secured adjacent its upper end to an article to be supported, a pair of spaced aligned sockets on said plate to receive a leg, at least one of said sockets being apertured transversely, a pin extending through the apertures and through an aligned aperture in the leg, said pin having an offset end portion, and means on the plate to receive said offset end portion to prevent pin displacement.

7. A leg mounting comprising a bracket including a plate adapted to be secured adjacent its upper end to an article to be supported, at least one socket on said plate to receive a leg, said socket being apertured transversely, a pin extending through the apertures in the socket and through an aligned aperture in the leg, said pin having an offset end portion, and means on the plate to receive said offset end portion to prevent pin displacement.

8. In a bin having legs depending therefrom, brackets for mounting said legs, each bracket comprising a plate having an end portion secured to the bin and its other end portion depending therefrom, a pair of flanges on one face of the depending portion of the plate, said flanges being spaced apart to receive the end of a stringer, aligned sockets on the other face of the plate to receive a leg, at least one of said sockets being apertured transversely, a pin extending through the apertures and through an aligned aperture in the leg, said pin having an end portion projecting substantially at right angles thereto, and means on the plate to receive the end portion of the pin.

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