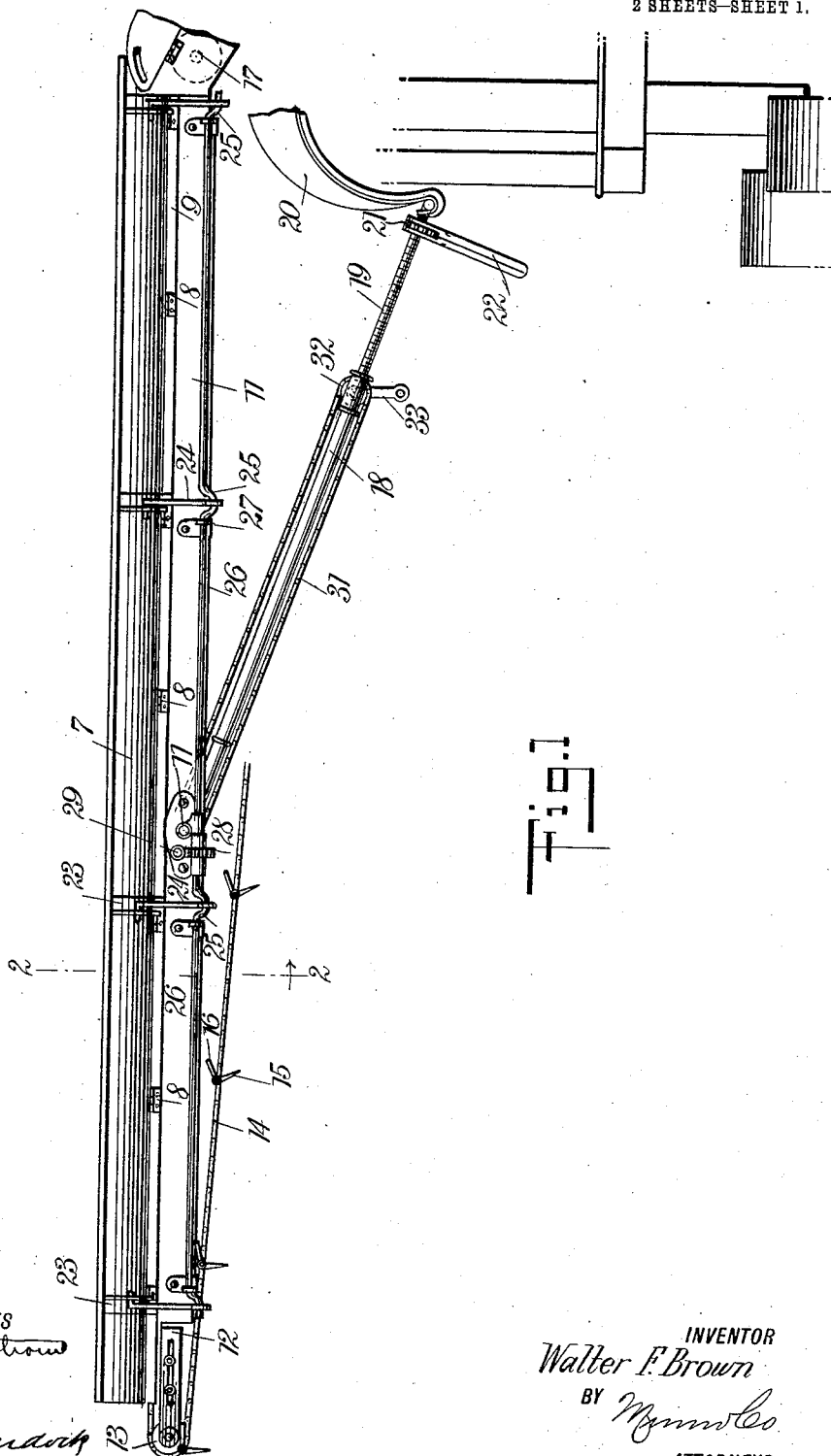


1,056,734.

W. F. BROWN.
WING CARRIER.
APPLICATION FILED JULY 7, 1911.

Patented Mar. 18, 1913.

2 SHEETS—SHEET 1.



WITNESSES

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E. A. Murdock

INVENTOR

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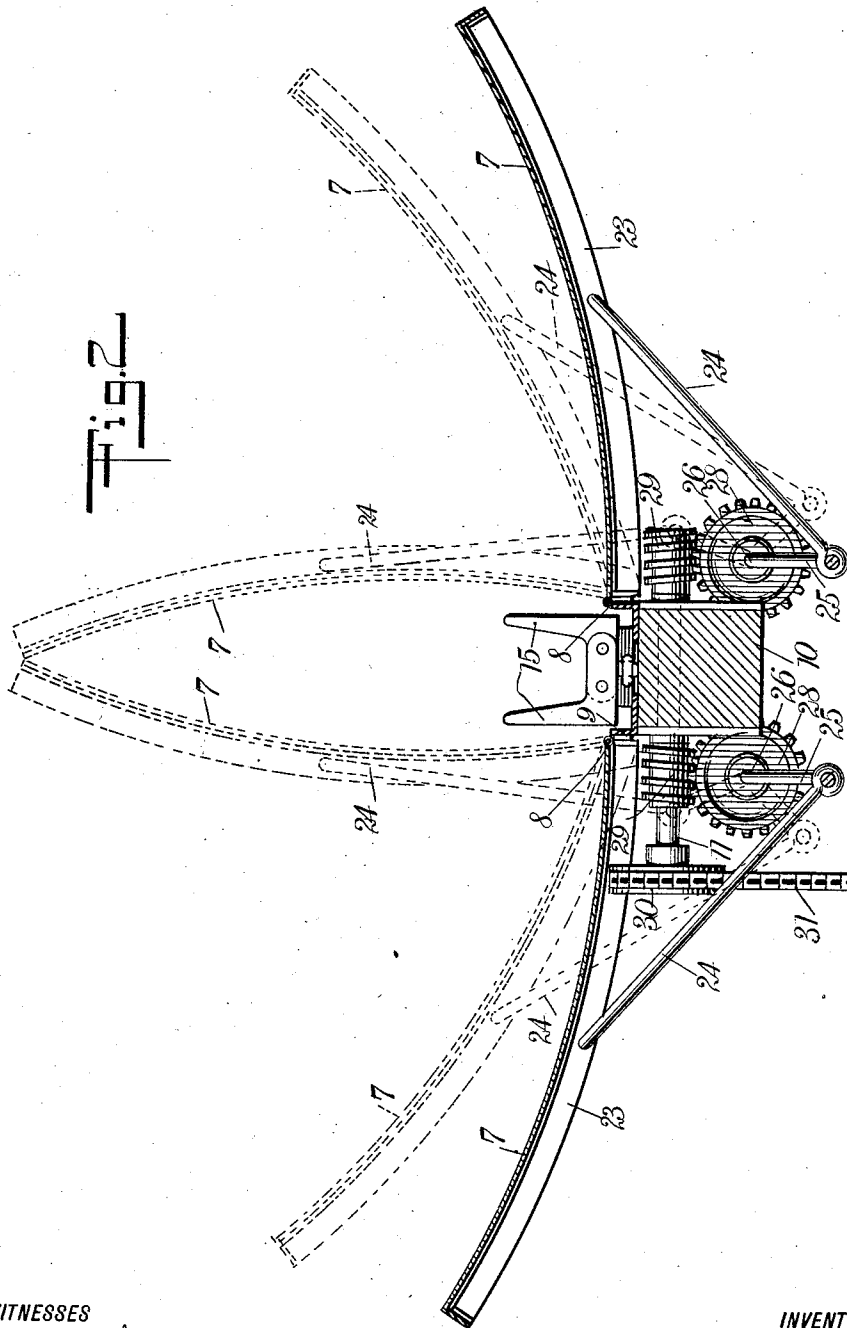


Fig. 2

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UNITED STATES PATENT OFFICE.

WALTER F. BROWN, OF PEORIA, ILLINOIS.

WING-CARRIER.

1,056,734.

Specification of Letters Patent.

Patented Mar. 18, 1913.

Original application filed February 25, 1911, Serial No. 610,736. Divided and this application filed July 7, 1911. Serial No. 637,356.

To all whom it may concern:

Be it known that I, WALTER F. BROWN, a citizen of the United States, and a resident of Peoria, in the county of Peoria and State of Illinois, have invented a new and Improved Wing-Carrier, of which the following is a full, clear, and exact description.

The present invention relates to improvements in wing carriers, and its uses in conjunction with supporting and regulating devices disclosed in an application for patent filed by me February 25, 1911, bearing No. 610,736, for wing carriers, to which patent cross reference is here made, the present application constituting a divisional application to the one above noted. The carriers of the character named employ troughs and conveyer means mounted therein and moved lengthwise thereof for impelling the material deposited in the said trough to the delivery end thereof. The present disclosure is limited to a construction wherein the sides of the trough are disposed at various angles to contract or expand the carrier; and to means for raising and lowering the delivery end of the trough.

One embodiment of the present invention is disclosed in the structure illustrated in the accompanying drawings, in which like characters of reference denote corresponding parts in both views, and in which

Figure 1 is a side elevation of a carrier trough constructed and arranged in accordance with the present invention; and Fig. 2 is a detail view, on an enlarged scale and in cross section taken on the line 2—2 in Fig. 1, showing in dotted lines the various positions to which the sides of the trough may be moved.

As shown in the drawings, the trough consists of two side sections 7. The sections are curved substantially as shown in the drawings, and are hinged at 8 to upstanding flanges 9. The flanges 9 are formed from angle irons which are bolted to a boom 10. The boom 10 is constructed of wood or other suitable material, and provides a bearing for a short shaft 11 and supports for the sliding plates 12 between the outer ends whereof are mounted the sprocket wheels 13 forming an idler for the chain 14 for the conveyer mechanism described in the above referred to application. The flanges 9, 9 form on the upper sides of the boom 10 a channel for

the guidance of the chain 14 and the hooks 15 upturned from the said chain, as seen best in Fig. 2 of the drawings. The tail plates 16 provided on the said hooks ride upon the horizontal extension of the angle irons forming the flanges 9, and maintain in lifted position the said hooks 15.

The boom 10 and trough side sections 7 connected therewith are suitably hinged at 17 and are supported at the outer end by means of a boom 18 and a screw 19. The screw 19 is pivotally mounted in a bracket 20 of any suitable construction, and is provided with a fixed ratchet wheel 21, with the teeth whereof a pawl carried on the lever 22 is engaged. When the lever 22 is manipulated to rotate the screw 19 the delivery end of the trough formed of the side sections 7 is raised or lowered, as the case may be.

To reinforce the trough structure the sides are provided with ribs 23. The ribs 23 are conveniently pierced to form rotary bearings for the hook ends of pitman rods 24. The rods 24 are pivotally connected with the bent crank portions 25 of shafts 26. The shafts 26 are rotatably mounted in brackets 27 secured to the boom 10. Fixedly mounted on the shafts 26, 26 are the worm wheels 28, 28. The wheels 28, 28 are engaged by the thread of the worms 29, 29, which worms are fixedly mounted on the shaft 11. At the outer end of the shaft 11 is fixedly mounted a sprocket wheel 30. By rotating the wheel 30, the shaft 11 and the oppositely pitched worms 29 thereon, there is imparted to the opposite shafts 26 a rotation which lifts in opposite directions the crank portions 25 and the pitman rods 24 connected therewith, disposing the side sections 7 in the positions shown in dotted lines in Fig. 2 of the drawings. The sprocket wheel 30 is rotated by means of the sprocket chain 31 which is mounted on the driving sprocket wheel 32. Rigidly connected with the driving sprocket wheel 32 is a crank handle 33 adapted for manual manipulation.

With troughs constructed and arranged as described the operation is as follows: The trough is adjusted to the angle of operation by manually manipulating the lever 22, which, rotating the screw 19, contracts or extends the combined length of the screw 19 and boom 18 to lift or depress the

boom 10 and the trough carried thereon. The trough being thus disposed in operative position the handle 33 is manipulated to rotate the shaft 11 and worms 29 mounted thereon. This manipulation ultimates in the relative arrangement of the side sections 7 to form a narrow and deep trough or a broad and shallow one, at the option of the operator.

10 Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In wing carriers adapted to be laterally extended from the side of a threshing machine, a carrier trough, comprising a framing boom; a plurality of sides hingedly connected to said boom; a plurality of crank shafts pivotally mounted on said boom; and connecting members for connecting said crank shafts and said sides.

2. In wing carriers adapted to be laterally extended from the side of a threshing machine, a carrier trough, comprising a framing boom; a plurality of sides hingedly connected to said boom; a plurality of crank shafts pivotally mounted on said boom; a plurality of worm wheels one mounted on each of said shafts; a shaft provided with oppositely pitched worms disposed to engage the teeth of said worm wheels and mounted on said boom; a hand crank conveniently disposed to the hand of the operator; and a flexible transmission mechanism connecting said shaft and said hand crank.

3. In wing carriers adapted to be laterally extended from the side of a threshing machine, a trough for said carriers having sides hingedly connected to fold the one upon the other; a plurality of reinforcing flanges disposed at intervals on said sides; a plurality of crank shafts pivotally mounted adjacent the hinged connection of said sides parallel thereto, said shafts having crank sections formed thereon to aline with

said flanges; a plurality of link rods pivotally connected with said flanges and said crank sections; and a rotating mechanism for simultaneously rotating said shafts to raise the said sides to a vertical position.

4. A carrier trough comprising a plurality of longitudinally extended sections connected along the length thereof by hinges, and means to hold said sections in relative position to form the trough including means operative to vary the spread of said sections.

5. A carrier trough comprising a plurality of longitudinally extended sections connected along the length thereof by hinges, supporting means pivotally connected to each outside section and means on said supporting means to vary the spread of said sections.

6. A carrier trough comprising a plurality of longitudinally extended sections connected along the length thereof by hinges, a rod pivotally connected with each outside wing to hold the same in proper relative position to form the trough, and means to shorten the effective length of said rods to move said sections on their hinges and vary the spread thereof.

7. A carrier for grain separators comprising a trough formed of a pair of longitudinally extended side members centrally hinged together, an endless conveyer moving upwardly in the center of the trough, and means to hold the sections in proper relative position, part of said holding means being operative to vary the spread of the sections relative to said conveyer.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER F. BROWN.

Witnesses:

C. M. TITUS,
LOGAN COLLYER.