

No. 875,432.

PATENTED DEC. 31, 1907.

O. HETLESAETER.
SHOVEL BUCKET.

APPLICATION FILED SEPT. 15, 1905.

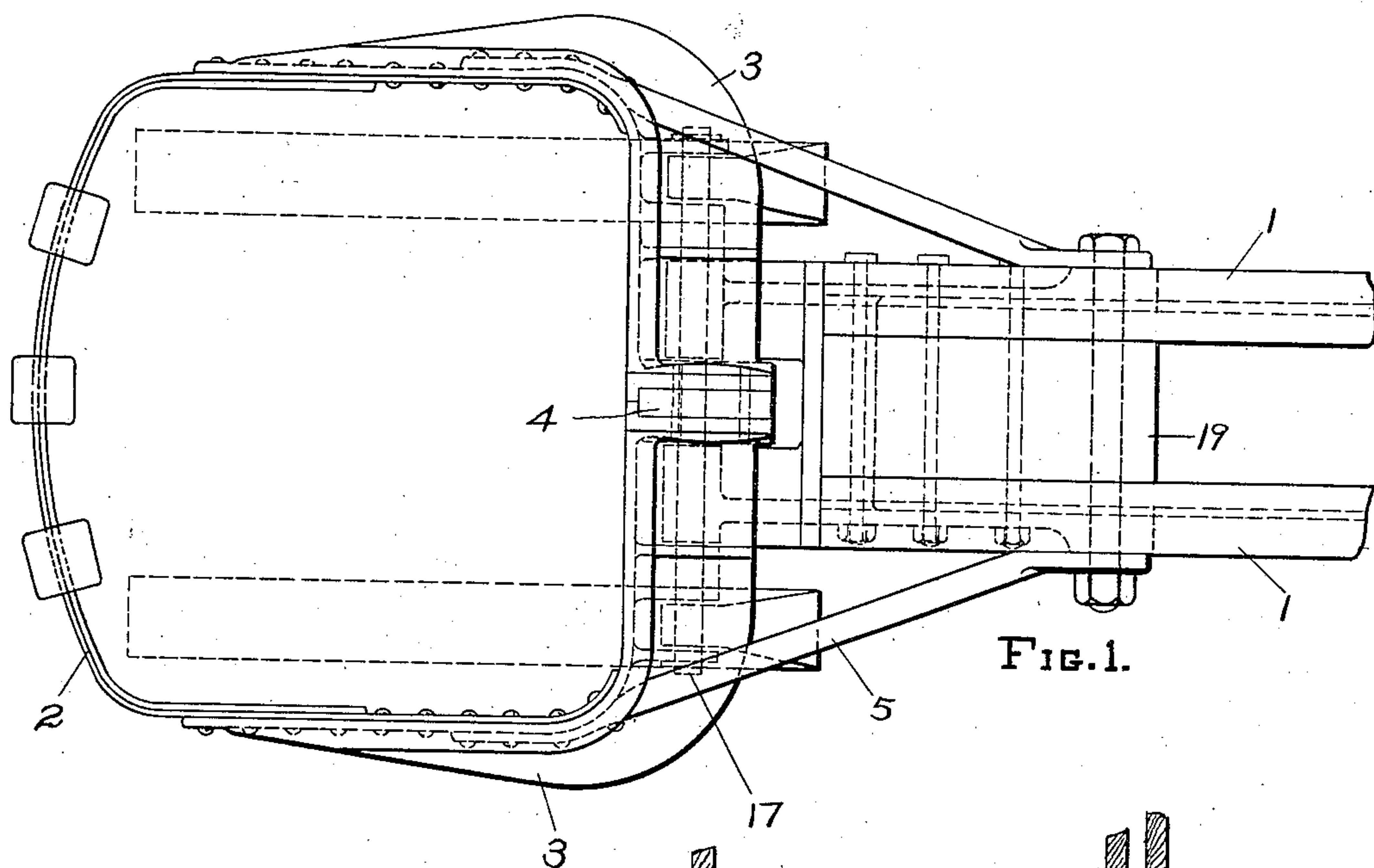


FIG. 1.

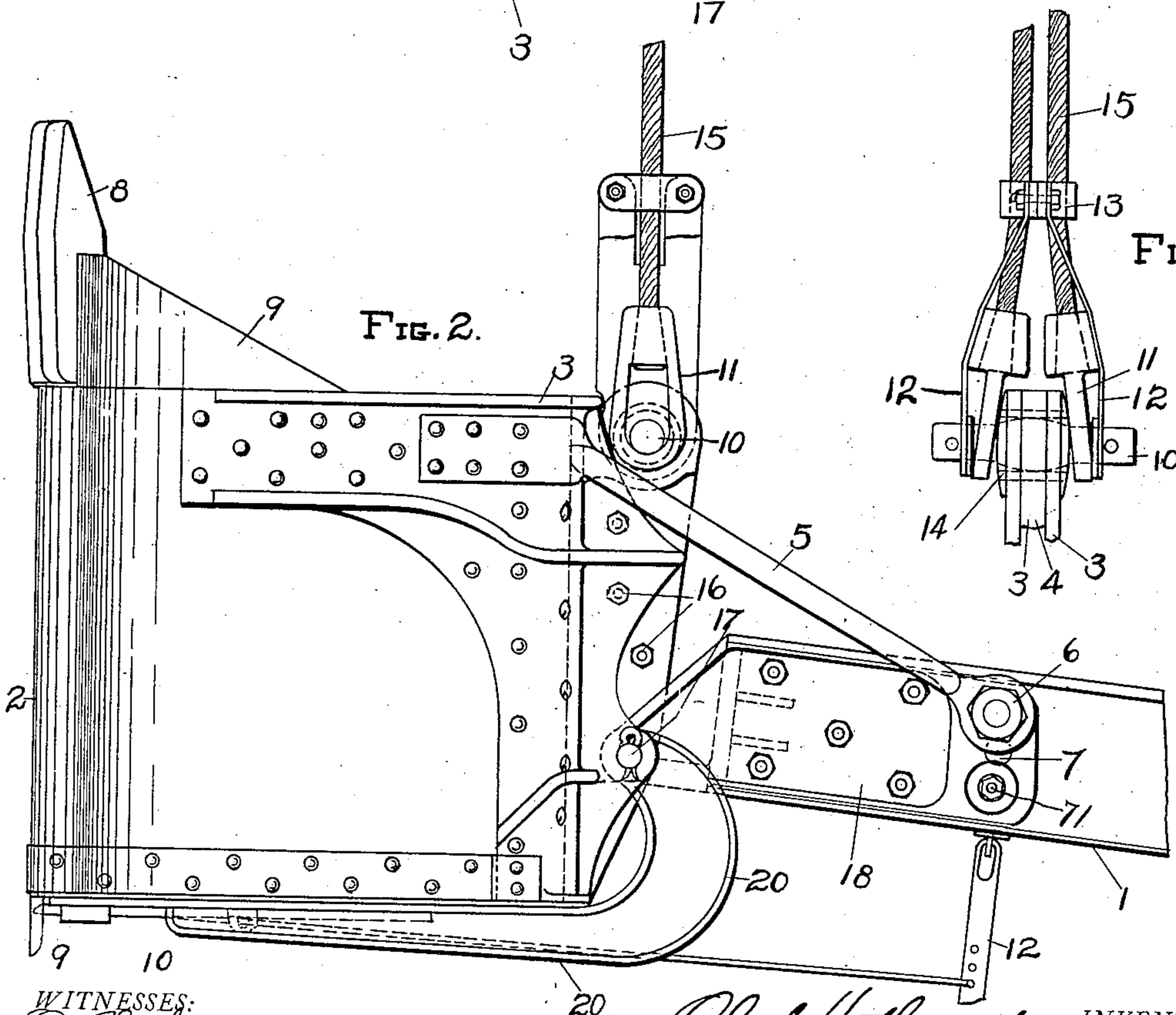


FIG. 3

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OLAF HETLESAETER, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO ALLIS-CHALMERS COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF NEW JERSEY.

SHOVEL-BUCKET.

No. 875,432.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed September 15, 1905. Serial No. 278,564.

To all whom it may concern:

Be it known that I, OLAF HETLESAETER, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Shovel-Buckets, of which the following is a specification.

This invention relates to certain improvements in a digging member and the connections or mountings therefor. As shown in this case, the improvements are embodied in a dipper or bucket, and embrace the back and side reinforcing means, the hoisting connections attached thereto, the angular adjusting features for the bucket, and the drop-door pivot pin mounting.

An important advantage of the hoisting connection is the reduced expense to replace in case one of the cables should break, as that one only need be replaced.

The equalizing bar is a valuable feature, for through the particular connections shown, excessive wear on the cables near the connection is obviated and thereby their life lengthened.

In the drawings,—Figure 1 is a top plan view of the bucket, certain parts being removed; Fig. 2 is a side elevation thereof; and Fig. 3 is a view showing the hoisting rope connection to the equalizer bar.

The support or handle 1 has mounted at its end the dipper or shovel having shell 2. This dipper, which serves as a receptacle and also as a digging member, has its back and side portions near the front well reinforced by the members 3 which extend well down toward the lips where the greatest strain occurs. Between these two members is inserted a connecting bar 4 which extends the full length of the dipper back. By this construction, not only an exceptionally strong structure is produced, but I am able by very little alteration to vary the capacity of the dipper by changing the thickness of this interposed draw bar 4. This is a quite advantageous feature because it obviates the necessity of a different set of patterns for each capacity of dipper.

Rigidly attached to the dipper are the braces 5 which permit of the adjustment of the dipper angularly of the support or handle 1 by means of the bolt 6 and holes 7 in the handle 1. By this form of adjustment the

braces are of constant length, are not weakened by a joint nor by holes therein, the plates on the support serving to reinforce this member where the holes 7 are placed, and fewer parts are required than have heretofore been necessary. As shown in Fig. 2 there are three holes 7 in the support 1. These holes 7 are in the arc of a circle described about pin 17. When the braces 5 are connected to the support at one of the outer of these three holes 7, an additional bolt 71 is placed through the remaining outer hole for holding the plates at the sides of the support 1 more securely in place. When the middle one of these holes is used for attachment of the braces 5, the additional bolt 71 is unnecessary and would not be used. The dipper has the teeth 8 and lip 9 which may be of the usual or any preferred form.

Through the reinforcing elements 3 and the bar 4 is inserted the equalizing bar 10 which has mounted thereon the shackle eyes 11 held in position by keeper plates 12 which are mounted on the keeper plate clamps 13. Surrounding the bar 10 is a bushing 14 serving as a bearing therefor. Mounted in the shackle eyes 11 and held in the clamp 13 is a pair of flexible members or hoisting cables 15.

To hold the reinforcing elements 3 and bar 4 in position, are a series of bolts 16. Through this ribbed portion of the back of the dipper, and also through lateral lugs thereon, is a pivot pin 17. On the end of the support or handle is a steel casting 18 having pivot bearing surrounding the pin 17. Between the spaced ends of the handle 1 is a dead-wood 19 for which may be substituted a reinforcing plate. The rear of the bucket has a drop-door 20, controlled by usual latch device. This drop-door is also hinged on the pin 17.

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

1. The combination of a digging member having a pair of back reinforcing elements and a connecting bar.

2. The combination of a receptacle having a pair of back and side reinforcing elements and an interposed connecting bar.

3. The combination of a digging member having a pair of reinforcing elements and a connecting bar interposed therebetween,

said bar extending the full length of said member.

4. The combination of a digging member having a hinged side, a support for said member, and a pivot pin for the hinged side mounted in the support.

5. The combination of a digging member having a hinged side, a support for said member, and a pivot pin through the support, hinged side and member.

6. The combination of a digging member, a support therefor, and adjustable braces rigid with the member and connected to the support.

7. The combination of a digging member, a support therefor, and adjusting means comprising a brace rigid with the member.

8. The combination of a digging member, a brace, and a support having holes whereby the member may be adjusted angularly with relation to the support.

9. The combination of an adjustable

driven member, and a pair of flexible simultaneously operating means connected thereto.

10. The combination of a digging member, a pair of flexible simultaneously operating means, and an equalizing bar interposed between said means and member.

11. The combination of a swingably mounted driven member having a pair of reinforcing elements, an equalizing bar through said elements, and flexible operating means connected to the equalizing bar.

12. The combination of a digging member having a bar at its back, an equalizer bar through said first named bar, and flexible operating means connected to the equalizing bar.

In testimony whereof I affix my signature in presence of two witnesses.

OLAF HETLESAETER.

Witnesses:

JOHN DAY, Jr.,
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