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RECEPTACLE TIPPER

Filed June 23, 1927

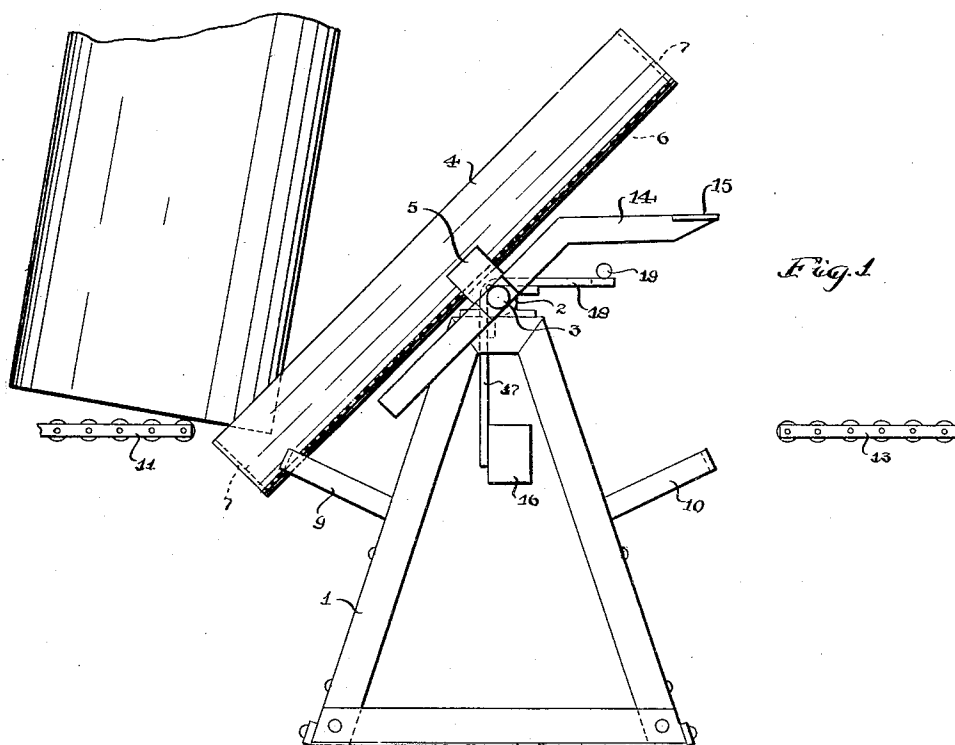


Fig. 1

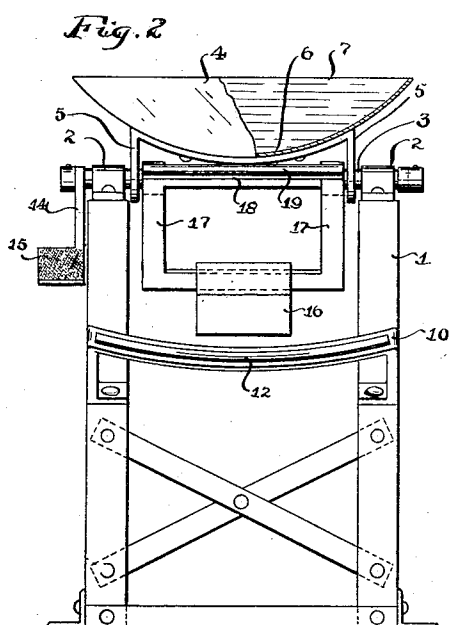


Fig. 2

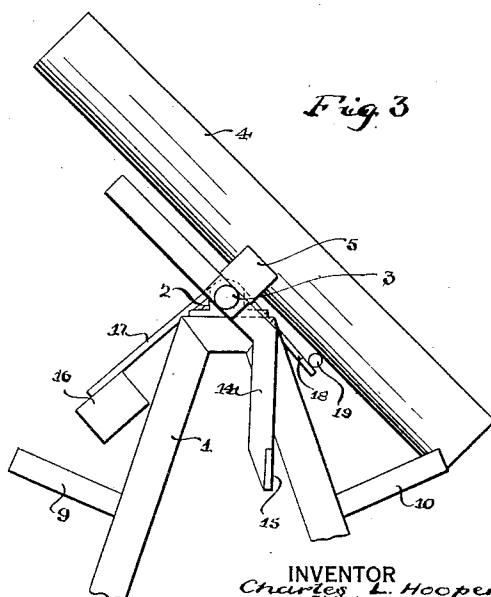


Fig. 3

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RECEPTACLE TIPPER

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The present invention relates to receptacle
tippers and more particularly to devices
which will reverse the end position of cylin-
drical barrels, drums or other receptacles.

An object of this invention is to provide a
strong and durable construction which may
be used effectively for tipping receptacles.

To this and other ends, the invention con-
sists of certain parts and combinations of
parts all of which will be hereinafter de-
scribed: the novel features being pointed
out in the appended claims.

In the drawings:

Fig. 1 is a side view of a tipper constructed
in accordance with this invention showing
the tipping element in receiving position;

Fig. 2 is an end view showing the tipping
element in horizontal position; and

Fig. 3 is a fragmentary view showing the
tipping element in discharging position.

Referring to the illustrated embodiment of
the invention, 1 indicates a supporting frame
which may be of any suitable construction.
This supporting frame may have bearings 2
at its top portion in which a rock shaft 3
turns. The rock shaft has the tipping mem-
ber or element 4 secured thereto through the
medium of a saddle having depending arms 5.

The tipping element, in this instance, has
a concave upper surface 6 at the opposite
ends of which two abutments 7 are provided
thus adapting the tipper to receive cylindri-
cal or other round receptacles 8 between the
two abutments 7 on the concave surface 6.

Supported on the frame 1 are two curved
abutments 9 and 10. These abutments are
arranged below the rock shaft 3 or pivotal
axis of the tipping member 4, so that when
the tipping member engages the abutment 9
it lies in a plane at an angle to the horizontal
with its lower end below the axis or rock
shaft 3, whereas, when the tipper 4 engages
the other abutment 10, it lies with its opposite
end below the shaft 3, as shown in Fig. 3.

The abutments 9 and 10 may be provided
with cushions 12 made of rubber or other
suitable material which will absorb the shock
due to the contact of the tipper with the
abutments 9 and 10. It is preferred that the
shaft 3 be situated nearer one end of the tip-

per than the other so that the latter may have
a tendency to lie in the lowermost position in
order that it may effectively receive a recep-
tacle 8 from a feeding conveyor 11 as shown
in Fig. 1.

With the end in view of moving a tipping
element 4 so that it will engage the abut-
ment 10 in order to reverse the end of the
receptacle 8 to permit said receptacle to be
moved onto the discharge conveyor 13 with
its other end uppermost, a lever or arm 14 is
extended from the shaft 3 and secured there-
to and is provided with a foot piece or treadle
15 which when depressed swings the upper
element 4 on its axis of turning. The height
of this treadle, when in its uppermost posi-
tion, in such that an operative, when stand-
ing on the discharge conveyor may readily
reach the treadle 15 with his foot.

With the end in view of insuring the re-
turn of the tipping element to its receiving
position illustrated in Fig. 1, there may be
employed a means in which energy is stored
when the treadle 15 is depressed to react on
the tipping element to return it to its receiv-
ing position. This means, in this instance,
comprises a weight 16 suspended by a frame
17 from the rock shaft on which the frame
17 turns. This frame, in this instance, has a
laterally extended portion 18 with a resilient
cushion or buffer 19 thereon for cooperating
with the underside of the tipping element 4
to one side of the turning axis of the latter.
This arm 18 provides a lost motion connec-
tion between the weight 15 and the tipping
element 4, so that the tipping element may
be moved independently of the weight after
the weight has reached the position shown
in Fig. 1.

The operation of the invention may be un-
derstood from the foregoing description but
it may be summarized as follows. Assume
that a container 8 on the receiving conveyor
is moved from the latter onto the tipping ele-
ment 4, the treadle 15 is depressed until the
upper end of the tipping element 4 moves
downwardly into engagement with the stop
or abutment 10. After the tipping element
moves a slight distance it engages the cushion
19 and then shifts the weight 16 until the

latter assumes the position shown in Fig. 3. The drum or container will now be upended or tipped over so that it may be pushed onto the discharge conveyor 13 with the end thereof in engagement with the conveyor 13 opposite the end which engages the conveyor 11. When the barrel is pushed onto the conveyor 13 and the treadle 15 released, the energy which has been stored in the weight 16 will tend to move the tipping element in the opposite direction until the weight reaches the position shown in Fig. 1 when the tipping element will proceed independently of the weight to the abutment 9 due to the fact that the receiving end of the tipping element is heavier than the discharge end.

What we claim as our invention and desire to secure by Letters Patent is:

1. A receptacle tipping machine comprising a pivotally mounted tipping member having two spaced abutments for cooperating with the opposite ends of a receptacle, a treadle portion located to one side of the axis of turning of the tipping member and moving with the latter, and means for automatically moving the tipping member in the opposite direction, said means comprising a pivotally mounted weight having a lost motion connection with the tipping member, said connection being constructed to lift the weight when the tipping member is turned by the treadle and to permit the tipping member to move independently of the weight during the final part of the movement of the tipping member toward the receiving position and the first part of the movement of the tipping member toward discharge position.

2. The combination with two conveyors spaced apart, of a tipping member pivotally mounted between its ends above the surface of the said conveyors and over the space between the conveyors, said tipping member having abutments at opposite ends for engaging with opposite ends of a receptacle placed on the tipping member, the ends of the tipping member being adapted to swing below the upper surface of the conveyors so that a receptacle may be tilted onto one abutment from one conveyor and after the tipping member has swung to its other position it may be tilted off the other abutment on to the other conveyor.

3. The combination with two conveyors spaced apart, of a tipping member pivotally mounted between its ends above the surface of the said conveyors and over the space between the conveyors, said tipping member having abutments at opposite ends for engaging with opposite ends of a receptacle placed on the tipping member, the ends of the tipping member being adapted to swing below the upper surface of the conveyors so that a receptacle may be tilted onto one abutment from one conveyor and after the tipping member has swung to its other position the re-

ceptacle may be tilted off the other abutment on to the other conveyor, means giving the tipping member a normal tendency to occupy one position with one end below the conveying surface of one conveyor, and means under the control of an operative for moving the tipping member so that its other end occupies a position below the conveying surface of the other conveyor.

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