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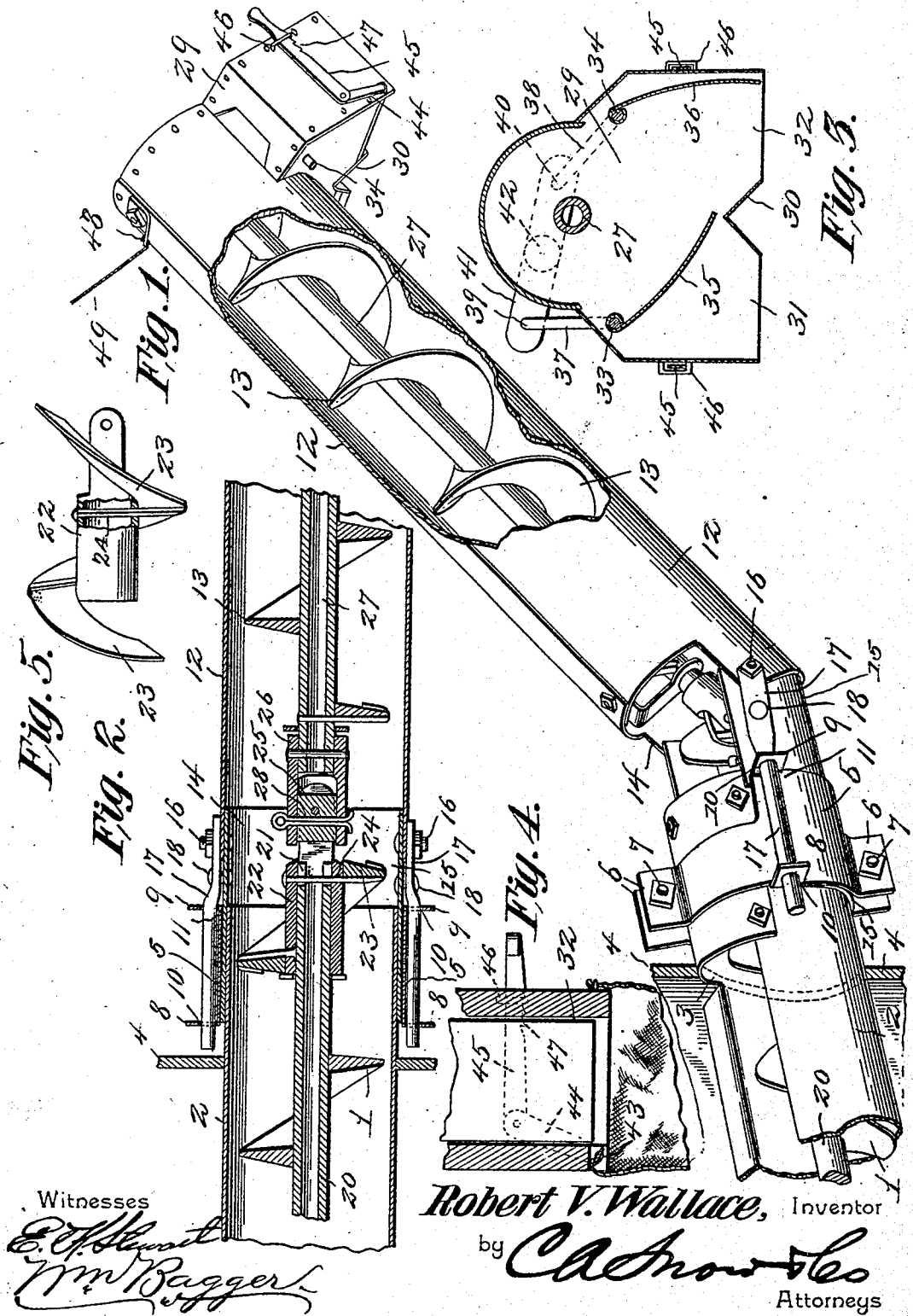
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R. V. WALLACE.

BAGGING ATTACHMENT FOR THRESHING MACHINES.

APPLICATION FILED AUG. 4, 1904.



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UNITED STATES PATENT OFFICE.

ROBERT V. WALLACE, OF ALKI, WASHINGTON.

BAGGING ATTACHMENT FOR THRESHING-MACHINES.

No. 796,477.

Specification of Letters Patent.

Patented Aug. 8, 1905.

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To all whom it may concern:

Be it known that I, ROBERT V. WALLACE, a citizen of the United States, residing at Alki, in the county of Whitman and State of Washington, have invented a new and useful Bagging Attachment for Threshing-Machines, of which the following is a specification.

This invention relates to grain-bagging attachments for threshing-machines; and it has for its object to elevate the grain that is delivered at the discharge end of the usual spiral-conveyer spout to a point where it may be delivered into bags, the discharge end of the bagging attachment being provided with a double delivery-spout and with a valve or cut-off whereby the grain may be delivered into a bag attached to one side of the spout, while it is cut off from the other spout, thus enabling the full bag to be removed and replaced by an empty one.

To carry the invention into operation, I avail myself of a tubular casing adapted to be connected with the discharge end of the conveyer-casing in the threshing-machine and containing a spiral conveyer and means for coupling or connecting the same with the spiral conveyer of the threshing-machine.

The invention mainly consists in the improved coupling means for the spiral conveyer, as well as for the casings of the same.

It further consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications which may be resorted to within the scope of the invention and without departing from the spirit or sacrificing the advantages of the same.

In said drawings, Figure 1 is a perspective view, with parts of the casing broken away, of the improved bagging attachment, showing the same connected with the end of the grain-trough which projects through the side wall of a threshing-machine. Fig. 2 is a horizontal sectional view taken through the proximate ends of the grain-trough and the elevator-casing of the bagging attachment, showing the connecting means between the same.

Fig. 3 is a transverse sectional view taken through the discharge end of the bagging attachment. Fig. 4 is a sectional detail view taken longitudinally in a vertical plane through one side of the delivery end of the bagging attachment. Fig. 5 is a detail side view, partly in section, of the screw-coupling member.

Corresponding parts in the several figures are indicated by similar characters of reference.

In carrying out my invention I employ a spiral conveyer 1, such as is common to many forms of threshing-machines, mounted for operation in a trough or casing 2, the latter being open at the top for the reception of clean grain discharged thereinto from the separating mechanism of the threshing-machine. The discharge end of the trough 2 is cylindrical in shape, as shown at 3, and it is extended a sufficient distance beyond the side wall 4 of the threshing-machine. Upon the cylindrical portion 3 is mounted a clamping device which includes two approximately semicircular members 5 5, each provided at its upper and lower ends with lugs 6 6, connected by means, such as bolts 7, whereby they may be clamped and supported tightly upon the cylindrical extension 3 of the grain-trough 2. The curved portions of the clamping members 5 5 are provided at their rear and front edges with lugs 8 9, having perforations 10. As indicated in the drawings, the front lugs 9 may be formed upon bracket extending forwardly from the curved members 5 in order that the lugs 8 and 9 may properly spaced apart.

The casing of the improved bagging attachment consists of a cylindrical shell 12, in which the spiral feed-screw 13 is mounted for rotation. The casing 12 is provided near its lower end with a recess 14, to the walls of which recess is pivotally connected a coupling-section 15 by means of bolts 16, upon which are mounted arms 17, which are connected with the coupling-section by means of rivets 18 or equivalent connections, the said arms being thus rigidly connected with the coupling-section. These arms are extended through and supported in the perforated lugs 8 9 of the clamping members with which the coupling-section 15 and the casing 12 are thus connected, the latter in such a manner as to be capable of pivotal adjustment upon the bolts 16. The coupling-section is adapted to engage the trough 2, exterior of the latter, the said

coupling-section 15 being included by the clamping members 5 5.

The shaft 20 of the spiral conveyer 1 is provided at the end thereof with a notch 21. 22 designates the screw-coupling member, which consists of a short tubular section upon which one or more laps of a spiral feed-screw 23 is wound. The tube 22 is adapted to fit over the notched end of the shaft 20, and it has a permanently-disposed transverse pin 24, adapted to engage the notch 21, thereby connecting the coupling member with the shaft 20. The opposite end of the tube or sleeve 22 is connected by a universal joint or knuckle-joint 25, of ordinary construction, with a coupling-sleeve 26 upon the lower end of the shaft 27 of the feed-screw 13 within the casing 12.

By the construction described it will be seen that when the shaft 20 of the spiral conveyer 1 is in motion it will transmit rotary motion to the shaft 27 of the spiral conveyer 13, which latter is capable of being elevated at its free end to a position at a considerable angle to the conveyer 1, thereby serving to elevate the grain which is discharged from the trough 2 into the conveyer-casing 12, as will be readily understood. Any suitable means, such as cotter-pins 28, extending through suitable perforations in the arms 17, may be employed for the purpose of connecting the parts securely together for operation. The discharge end of the casing 12 is open on its under side, and it is expanded to form a housing 29, which is divided by a central inverted-V-shaped partition 30 into two separate discharge-spouts 31 and 32. The housing is provided with bearings for a pair of rock-shafts 33 34, each carrying a valve 35 36 and each provided with cranks 37 38, extending through the rear wall of the housing and having wrist-pins 39 40, connected by a cross-piece 41, having a handle whereby it may be readily manipulated to alternately operate the valves, the position of which is such that when one of the

discharge-spouts is open to the passage of the grain from the casing 12 the other of said valves will be closed. Each of the spouts is preferably provided with bag-holding means including eccentric shafts 43, having cranks 44, provided with connecting-rods 45, extending through guide-loops 46 upon the sides of the housing, said connecting-rods being provided with teeth or nuts 47, adapted to engage the guide-loops 46 for the purpose of retaining the parts in adjusted position. Be it understood that I do not limit myself to any particular form of the bag-holding means. The casing 12 is provided at its upper outer end with a loop 48, enabling it to be connected, by means of a guy-rope, part of which is indicated at 49, with any suitable fixed point, thus sustaining the free end of the casing 12 at any desired elevation.

From the foregoing description, taken in connection with the drawings hereto annexed,

the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains. The grain discharged from the conveyer-trough of the threshing-machine passes directly into the casing 12, where it is elevated by the spiral-conveyer to the point of discharge, where it will be directed by the valves 35 36 into one or the other of the spouts 31 32, with which bags have previously been connected to receive the grain. When one bag has been filled, the position of the valves is shifted, so as to direct the grain into the bag previously attached to the other spout. While this bag is being filled the full bag is removed and tied and an empty one substituted, so that the operation may proceed indefinitely.

Having thus described the invention, what is claimed is—

1. In a grain-bagging attachment for threshing-machines, a conveyer-trough having an extended cylindrical end, clamping means upon said cylindrical extension, including suitably-connected parts having laterally-extending lugs and a conveyer-casing having arms for engagement with said perforated lugs.

2. In a device of the class described, a conveyer-trough having an extended cylindrical end, a conveyer-casing having pivoted arms, and perforated lugs connected with the extended cylindrical end of the conveyer-trough for connection with said pivoted arms.

3. In a device of the class described, a conveyer-trough having an extended end, clamping means upon said extended end having laterally-extending perforated lugs, and a conveyer-casing having arms pivotally connected therewith and adapted for engagement with said lugs.

4. In a device of the class described, a conveyer-trough having an extended end, laterally-extending perforated lugs connected with said extended end, a conveyer-casing, a coupling-section connected pivotally with the conveyer-casing, and arms connected rigidly with the coupling-section and having pivotal connection with the members whereby said coupling-section is pivotally connected with the conveyer-casing, said arms having extended ends for engagement with the perforated lugs.

5. In a device of the class described, a conveyer-trough having an extended end, clamping members secured upon the latter and having laterally-extending, perforated lugs, a conveyer-casing, a coupling-section pivotally connected with said casing, arms rigidly connected with said coupling-section and adapted to engage the perforated lugs of the clamping members upon the extended end of the conveyer-trough, spiral conveyers within the latter and the conveyer-casing, and an intermediate spiral-conveyer section having suitable connection with the adjacent ends of the said spiral conveyers.

6. In a device of the class described, a pair

of spiral conveyers, casings for said conveyers, means for adjustably connecting said casings at various angles to each other, an intermediate coupling-section pivotally connected with one of the casings and extended into the other casing, and an intermediate spiral-conveyer section universally jointed with the adjacent end of one of the spiral conveyers and connected with the other conveyer to be operated therewith.

7. In a device of the class described, a plurality of spiral conveyers, casings for said conveyers, means for connecting said casings at various angles to each other, and spiral flanged connecting means universally jointed with the proximate end of one of the spiral conveyers and connected with the other conveyer to be operated therewith.

8. In a device of the class described, a plurality of spiral conveyers, casings for the same, connecting means for said casings including an intermediate coupling-section recessed at its corners and interiorly engaging said casings and means for pivotally connecting said intermediate coupling-section with one casing and for rigidly connecting the same with an adjacent casing, and connecting means for the spiral conveyers including a spirally-flanged member universally jointed with the approximate end of one of the conveyers and connected with the other conveyer to be operated therewith.

9. In a device of the class described, a cas-

ing, a spiral conveyer within said casing, an expanded housing at the discharge end of said casing, an inverted-V-shaped partition in said housing forming two separate spouts, valves within the housing whereby the material discharged may be directed to one of the spouts only, means for operating said valves, and bag-holding means connected with each spout.

10. In a grain - bagging attachment for threshing-machines, a conveyer-casing forming a continuation of and connected adjustably with the spiral-conveyer trough of a threshing-machine, spiral conveyers within said casing and the trough of the threshing-machine, means for coupling together said spiral conveyers, including a spirally-flanged section suitably jointed with the proximate ends of the conveyers, an adjustable coupling-section connected pivotally with the conveyer-casing and engaging the discharge end of the conveyer-trough of the machine, a bifurcated housing at the discharge end of the conveyer-casing, valves within said housing to direct the material discharged to one or the other of the spouts of said housing, and bag-holding means connected with each of said spouts.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ROBERT V. WALLACE.

Witnesses:

JOHN C. MARTIN,
T. E. DAMRELL.