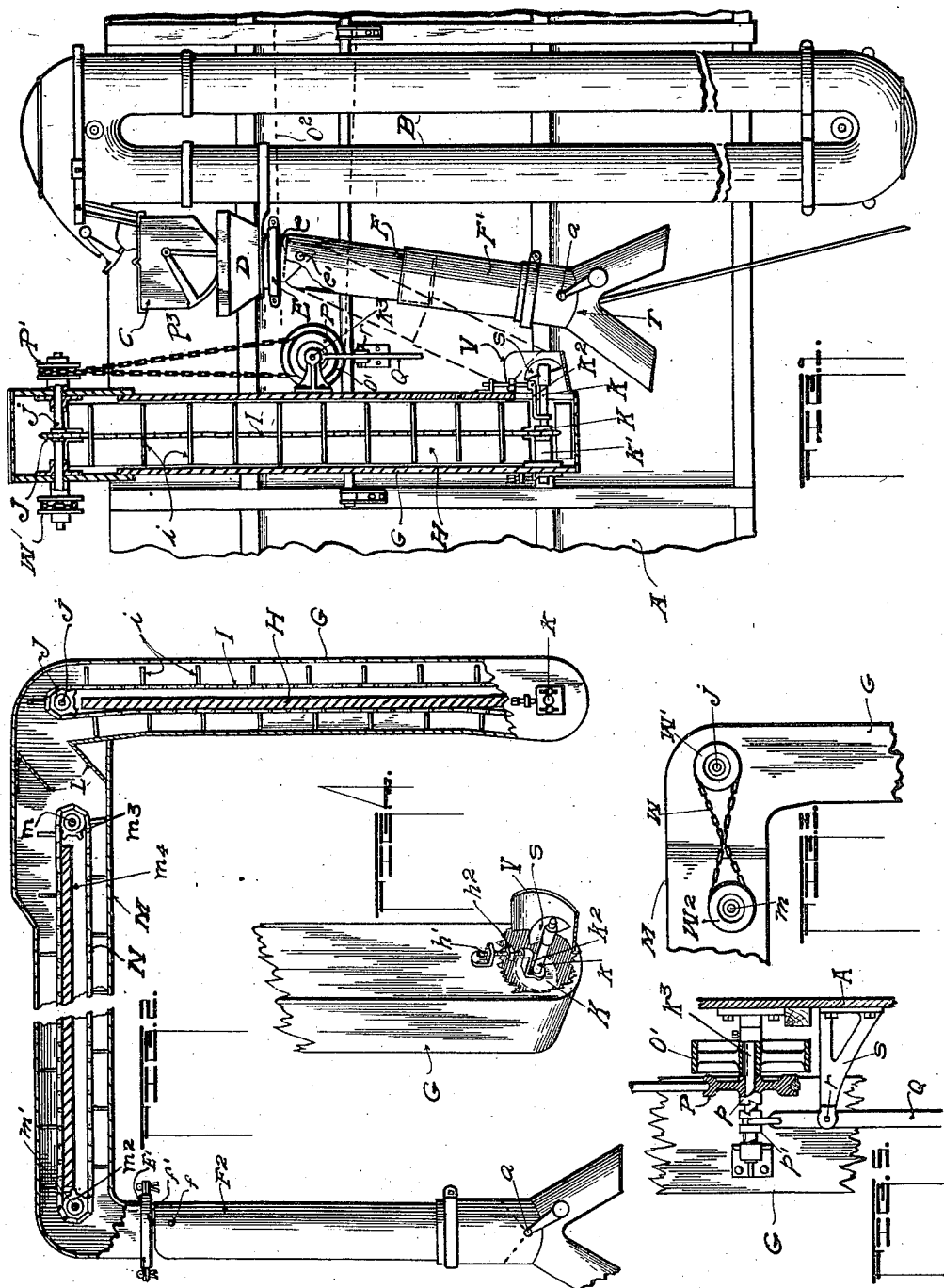


C. L. GARDNER.
GRAIN BAGGER.
APPLICATION FILED OCT. 1, 1909.

1,011,047.

Patented Dec. 5, 1911.



WITNESSES

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CHARLES L. GARDNER, OF PEORIA, ILLINOIS, ASSIGNOR TO GARDNER GRAIN WEIGHER CO., OF OTTAWA, ILLINOIS, A CORPORATION OF ILLINOIS.

GRAIN-BAGGER.

1,011,047.

Specification of Letters Patent.

Patented Dec. 5, 1911.

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To all whom it may concern:

Be it known that I, CHARLES L. GARDNER, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Grain-Baggers, of which the following is a specification.

My invention relates to certain new and useful improvements in grain baggers.

In connection with threshing of grain, in addition to the commonly used devices, it is necessary, in order to make an equipment entirely modern, to provide a bagger, and heretofore, so far as actually used appliances are concerned, unless a cross conveyer be used, the bagging has been done upon one side of the machine.

In order to apply a cross conveyer, which is universally mounted upon the deck of the machine, it is necessary that the elevator shall extend a sufficient distance above the top of the separator to accommodate the interposition of a weigher between the elevator spout and the conveyer hopper so that when a space necessary to provide for the height of the cross conveyer and its hopper and that of the weigher is added, the elevator is extended a considerable distance above the deck of the threshing machine. In some localities, this is objectionable, particularly where threshing is done within inclosed warehouses or barns, as in such cases it is sometimes found impossible to drive within the warehouse without first detaching the elevator, weigher and the cross conveyer.

It is my object to overcome this difficulty by dispensing with the commonly used cross conveyer and to shorten the elevator so that it will extend but a short distance, if at all, above the deck of the separator.

My invention comprises certain auxiliary elements or parts in combination with a cross conveyer and means of connection therewith, of an adjustable spout communicating with the grain receiving hopper disposed to receive the deposit of grain from a grain weigher.

That my invention may be more fully understood, reference is had to the accompanying drawings in which—

Figure 1 is an elevation showing a portion of the device, a part being broken away to

show the interior construction of an elevator part; Fig. 2 is an elevation of the device with parts broken away and illustrates the manner of mounting the parts to cause the grain to be elevated and conveyed across the top of the separator to the bagging devices on the opposite side from that upon which the grain is discharged from the separator; Fig. 3, is a detail view of a conveyer. Fig. 4 is a perspective view of the lower end of the cross conveyer and of a chute leading thereinto, with parts broken away to illustrate detail parts. Fig. 5, is a detail view of driving parts of a conveyer. Fig. 6, is a detailed view of a deflector throat.

In the drawings, A represents the side of a grain separator.

B is an elevator comprising a pair of tubes and is a form of elevator commonly in use.

C is a grain weigher hopper and D is a stationary hopper secured to one of the elevator tubes B.

E is a swivel joint adapted to be connected with the bottom portion of hopper D, and adapted to have a turnable relation therewith.

e is a deflector throat attached to swivel joint E.

e' is a pin or stud on throat e, there being a corresponding pin or stud upon the opposite side of the throat in the same relative position.

F F' are relatively slidable tubular sections forming a spout that is hung by suitable means upon pin e' upon throat e to enable it to be readily swung into different positions.

G is an elevator case or housing provided with a vertically disposed dividing partition H.

I refers to a sprocket chain to which are attached a series of flights as i.

J is a sprocket wheel fixed upon the cross shaft j which is journaled in the upper end of the conveyer section G in suitable boxings.

K is a sprocket wheel journaled upon shaft k which is journaled at one end in stud k' and at an intermediate point of its length upon the arm k², said arm being suitably supported in connection with the elevator section G.

M is a cross conveyer housing, a portion of the receiving end thereof being built up somewhat higher than its discharge end.

N is a conveyer belt adapted to be carried therein.

m m' are cross shafts suitably supported in the walls of conveyer section M.

m^2 m^3 are sprocket wheels secured to said shafts adapted to carry the conveyer belt N.

m^4 is a horizontally disposed dividing partition within conveyer housing M.

L are deflector plates suitably secured in the receiving end of conveyer housing M and adapted to direct the flow of grain delivered from the conveyer section G into section M.

F² is a tubular spout pivoted as at f to the deflector throat f' which said throat is secured to the swivel joint E' suitably supported to turn upon the outlet portion of the conveyer housing M.

O' is a belt wheel fixed upon shaft k^3 , which said shaft is suitably supported in connection with the conveyer housing G and the side of the separator.

P is a chain wheel normally loose upon said shaft and is provided with the clutch part p .

p' is a shiftable clutch part supported upon said shaft adapted to engage the clutch part p upon chain wheel P.

Q is a lever, the upper end thereof engaging said shiftable clutch part p' and pivoted as at r to bracket S, said bracket being secured to the separator.

T is a furcated chute adapted to have a swivel connection with the lower spout section F' or with the lower end of spout F², it being designed that a single chute as T may be used by detachment in connection with either of said spouts. Said furcated chute is provided with a valve a therein to properly direct the flow of grain to one branch or the other thereof. The spout comprising parts F and F' is adapted to swing to the position shown in dotted lines in Fig. 1 after the furcated chute portion T has been detached and for the purpose of delivering grain into the lower end of elevator section G. For the purpose of this delivery of grain to the lower portion of said section G, a short chute as V is provided forming a rest for the lower end of the section spout F F'.

s is a flight secured to the outer end of shaft k which serves to assist in the proper delivery of grain into the lower end of elevator section G. Belt wheel O' is adapted to be driven from some driven part of the thresher. P³ is a chain connecting sprocket wheel P and the chain wheel P' fixed on shaft j and likewise there is a chain W connecting chain wheels W' on shaft j and W² on shaft m . Shaft k in the booth of elevator housing G is designed to be adjustably supported

and for that purpose the screw h is swiveled in connection with the arm h^2 and engages the threaded opening in the stud h' which is secured to the elevator housing and is provided with the nut h^2 fixed thereon so that by turning the nut h^2 in the proper direction the end of the shaft will be raised or lowered.

In the operation of the machine, with the chute comprising parts F F' and T arranged in the relation therein shown for the purpose of bagging grain, it is designed that the elevating and conveying parts adapted to convey grain upon the opposite side of the machine from that shown in Fig. 1 shall be out of operation, and to accomplish the necessary disconnection to leave said elevating and conveying parts idle, the lever Q is moved to shift clutch p' out of engagement with the clutch part p on the chain wheel P and when so disconnected the grain delivered from elevator B through weigher C and hopper D will by gravity descend through the spout comprising parts F F' and furcated chute T into the bags or receptacles and the valve a may be turned from one side to the other to accommodate the closing of one branch of the chute when one bag has been filled and to cause the grain to be delivered into the opposite branch.

When it is designed that grain shall be delivered to the opposite side of the machine from that shown in Fig. 1 the furcated chute T is designed to be detached from sections F' of the spout and to be attached to the lower end of spout F² on the opposite side of the machine shown in Fig. 4. The spout comprising parts F F' is then moved into the position shown in dotted lines in Fig. 1 with the lower end of section F' inserted within the short chute V, and for the purpose of facilitating this connection the sections F F' of the spout are telescoped. When the spout has been adjusted to communicate with the lower portion of elevator housing G, clutch p' is thrown into engagement with clutch p , which will cause chain wheel P to be turned to drive through its chain connection with chain wheel P' the shaft j which will cause the elevator mechanism within the elevator housing G to be operated. Likewise the chain connection between chain wheels w' and w^2 will cause the conveyer mechanism within the cross conveyer housing M to be operated. As the grain is deposited into the lower end of the elevator housing, the flight s serves to prevent clogging of the opening into the elevator and as the grain is elevated within the elevator housing G it is deposited within the cross conveyer housing M and through and by means of deflector plates is directed to the lower portion of the conveyer housing and from thence is passed into spout F² and thence through the respective branches

of chute T into the waiting bags or receptacles.

What I claim and desire to secure by Letters Patent is:—

5 1. In a device of the class described, the combination with grain elevating means delivering from a thresher at a point below the top of the thresher body, and with cross conveying means adapted to deliver grain
10 to the opposite side of the thresher from that upon which it is delivered from the elevating means, of a spout communicating with the discharge opening from the elevating means and discharging by gravity into
15 the cross conveying means at a point below its receiving ends.

2. In a device of the class described, in combination, a hopper located below the top of the thresher body adapted to receive the
20 discharge of grain from thresher elevating means, a cross conveyer adapted to convey grain to the opposite side of the machine from that upon which the hopper is located and means communicating with the hopper
25 and with the cross conveyer at a point below the discharge opening from the hopper.

3. In a device of the class described, in combination, a hopper located at a point below the top of the thresher body and in
30 position to receive the discharge of grain from elevating means connected to deliver grain from the thresher, a cross conveyer adapted to deliver grain to the opposite side of the machine from that on which the hopper is located, and a pivoted spout communicating at its upper end with the hopper
35 and its lower end with the cross conveyer, adapted to be swung into position to communicate with the cross conveyer or to be swung out of such communicating position with the conveyer so that it may deliver grain upon the same side of the machine upon which the hopper is located.

4. In a device of the class described, the
45 combination of an elevator, a cross conveyer comprising vertically and horizontally disposed parts, and a gravity spout suitably

supported to receive the discharge of grain from the elevator and to deliver it to the boot of the vertically disposed portion of
50 the cross conveyer at a point below the receiving end of said spout.

5. In a device of the class described, the combination of an elevator for a threshing machine, a cross conveyer comprising vertically and horizontally disposed parts, a deflector in the receiving end of the horizontally disposed portion of the cross conveyer, and a gravity spout suitably supported to receive the discharge of grain
60 from the elevator and to deliver it to the cross conveyer at a point below the receiving end of said spout.

6. In a device of the class described, the combination of an elevator for a threshing
65 machine, a cross conveyer comprising vertically and horizontally disposed parts, a deflector in the receiving end of the horizontally disposed portion of the cross conveyer, a gravity spout suitably supported to receive the discharge of grain from the elevator and to deliver it to the cross conveyer at a point below the receiving end of said spout, and suitably driven agitating means disposed at the juncture of the delivery end
70 of the spout and the receiving end of the cross conveyer.

7. In a device of the class described, the combination with grain elevating and cross conveying means associated with a threshing machine, of a spout pivotally supported in connection with the grain elevating means in position to receive the discharge therefrom and adapted to deliver grain to sacks or other waiting receptacles, or to be swung
85 into position to discharge into the cross conveying means.

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

CHARLES L. GARDNER.

Witnesses:

W. V. TEFFT,

MARY E. COMEGYS.