(No Model.)

B. S. CONSTANT.

GRAIN FEEDER AND CONVEYER.

No. 588,815. Patented Aug. 24, 1897.

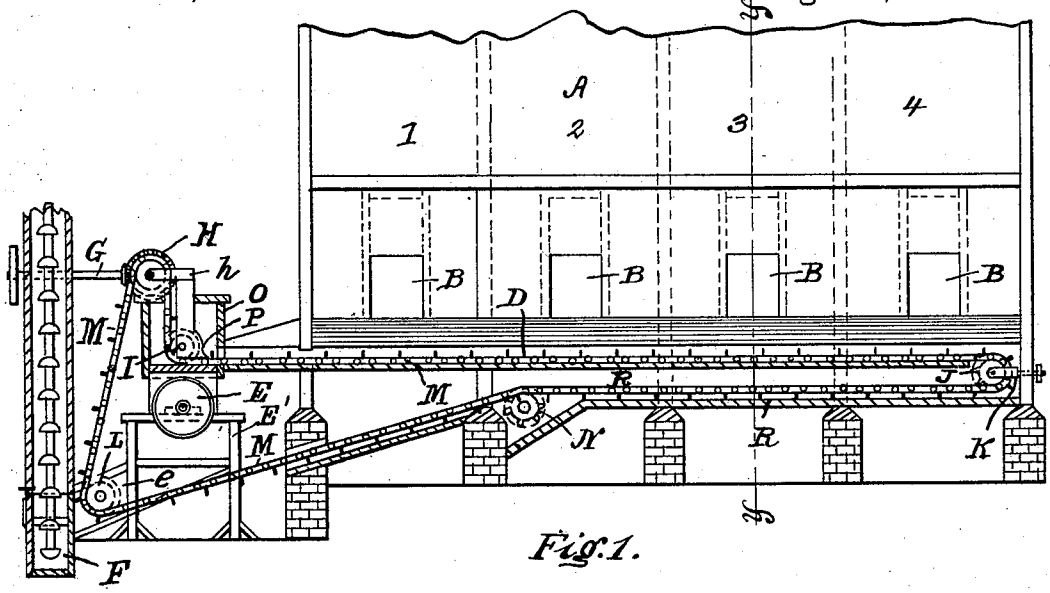


Fig. 1.

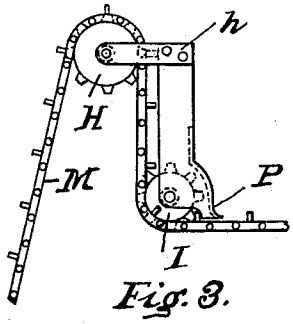


Fig. 3.

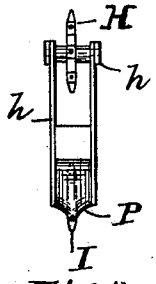


Fig. 4.

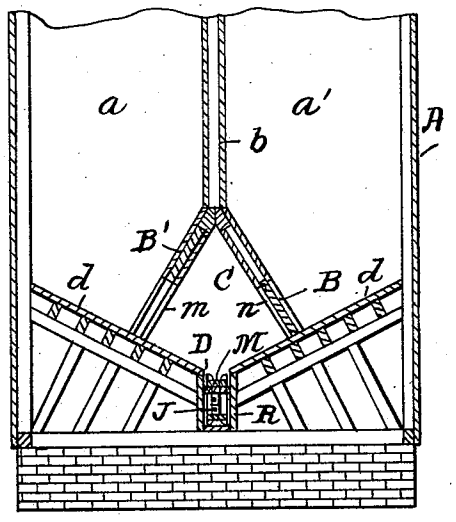


Fig. 2.

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UNITED STATES PATENT OFFICE.

BOSTON S. CONSTANT, OF BLOOMINGTON, ILLINOIS.

GRAIN FEEDER AND CONVEYER.

SPECIFICATION forming part of Letters Patent No. 588,815, dated August 24, 1897.

Application filed August 19, 1896. Serial No. 603,170. (No model.)

To all whom it may concern:

Be it known that I, BOSTON S. CONSTANT, a citizen of the United States, residing at Bloomington, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Grain Feeders and Conveyers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to the details of the construction and to the general arrangement of conveying and feeding mechanism for elevators; and it consists of certain combinations of devices and elements whereby the various parts may be constructed at a factory and advantageously assembled and connected with elevators both in equipping new and old plants, as will be more fully described hereinafter.

My object is to provide an economical conveyer and feeder which may be cheaply constructed and by simply varying the length of the endless conveyer to suit any required size of bin or elevator render it adaptable to any of the various demands for such appliance. With this end in view my apparatus is of few parts, readily applied by unskilled workmen, and may be transported in compact packages ready for setting up in place.

Referring to the drawings, Figure 1 represents a side view of my device in connection with so much of an elevator-bin as will illustrate its application. Fig. 2 is a cross-sectional view of bin on the line *y y* of Fig. 1. Figs. 3 and 4 are detail views of the deflector and sprocket-wheels.

In the drawings, A designates a grain storehouse or bin having a longitudinal partition *b*, divided at the lower part, forming two partitions *m* and *n*, resting upon a floor *d d*, which slopes from each side of the main structure toward the center in V shape. The partitions thus form two compartments *a* and *a'*, which are divided into any desired number of smaller bins or compartments 1 2 3 4 by transverse partitions. The partitions *m* and *n* being constructed with their bases separated provide a hallway C, and sliding doors or gates B B' being arranged in the partitions provide a passage or gateway from each of the smaller bins to the hallway, so that grain from any compartment may be drawn off by gravity, by raising its gate, into the hallway, retaining the contents of the other bins separately. Gate B in Fig. 2 is represented as down and closed, while B' is open. They may be operated by any suitable arrangement of connecting ropes or rods and levers.

At the center of the hallway, running its entire length, is a channel D, depressed below the floor and open at its top, in which the drag or endless conveyer M runs, carrying the grain away from the bins and feeding it into any desired receptacle or to a corn-sheller, (represented by E.) The endless conveyer returns, preferably, below the floor, running around a sprocket-wheel J at the farther end of the channel. This sprocket-wheel is mounted in a forked hanger K, which is adjustably attached to suitable timbers, so that by means of any suitable screws or lever arrangement it is used as a slack-adjuster for the chain.

I construct the operative parts in the factory, providing a suitable frame O *h*, mounting thereon a shaft having a sprocket-wheel H for driving the conveyer and a suitable bevel gear-wheel. This frame may be set up independently or connected to the frame E' of the sheller E. I provide a detached shaft G, having at one end a bevel gear-wheel suited to engage and drive the gear-wheel on the mounted shaft. The shaft G is driven by any desired connection with the motive power of the plant. It is supplied with journal-boxes to be anchored to any suitable support at hand.

To the frame O *h* is attached a sprocket-wheel *i*, provided with a deflector P, suitably attached, to deflect the grain from the sprocket-wheel *i* and prevent clogging it. A sprocket-wheel L is provided and suitably mounted at one side of the sheller, over which the chain runs in its return. I also mount a wheel H to support the chain M where it enters the return-channel R. The grain after passing through the sheller is conducted down through a chute *e* into a sink F, from which it is taken by a suitable elevator.

It will be understood that the various parts can be cheaply manufactured, are portable, and easily erected and connected wherever required, and have a great advantage over such appliances as are specially designed for each particular structure and over those of more elaborate and cumbersome design, both of which require skilled mechanics to erect them.

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

1. The combination of the bin having the sloping floor and the open channel at the center thereof, and the central partition having the parallel sloping partitions connecting therewith and resting upon said floor, the transverse partitions dividing said bin into smaller compartments, and slidable doors arranged in each of said parallel partitions to communicate with a hallway between said parallel partitions above said channel of the frame carrying the driving sprocket-wheel suitably mounted; the sprocket-wheel mounted below said driving-wheel; the deflector mounted on said frame; the end wheel supported below said frame adjacent to the ground; the slack-adjusting sprocket-wheel supported at the rear end of said channel; the idler sprocket-wheel supported in the return-channel, and the drag or endless conveyer running over said sprocket-wheels, substantially as and for the purposes shown and described.

2. In a grain elevator and conveyer, in combination with a bin provided with sloping floors and sprocket-chain running in a channel, of the frame *h;* the frame O, the frame E′, the sprocket-wheel H, the shaft G provided with a bevel-gear and operating said sprocket H, the sprocket-wheel *i*, the chain M operating said sprockets, the deflector P situated in front of said wheel *i*, the sprocket-wheel L and a suitable corn-sheller all arranged and operating substantially as shown and described.

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

BOSTON S. CONSTANT.

Witnesses:
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