G. R. HOCKENHULL.

GRAIN-ELEVATOR AND BAG-FILLER.

No. 193,248. Patented July 17, 1877.

Fig 1

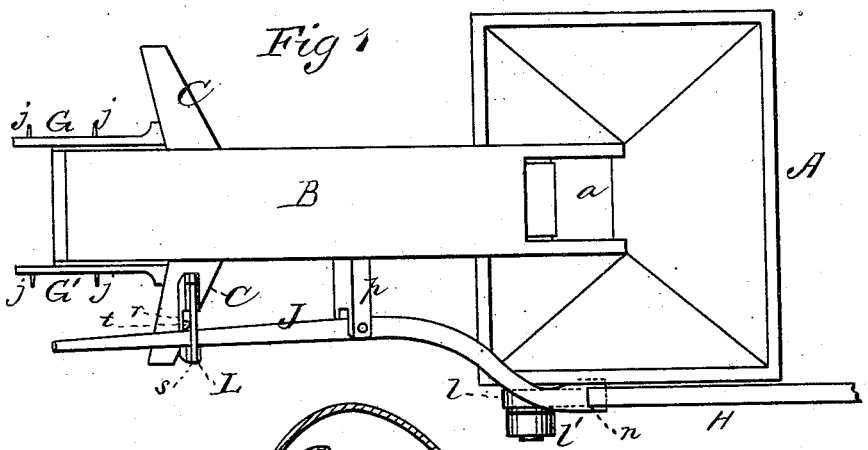


Fig 2

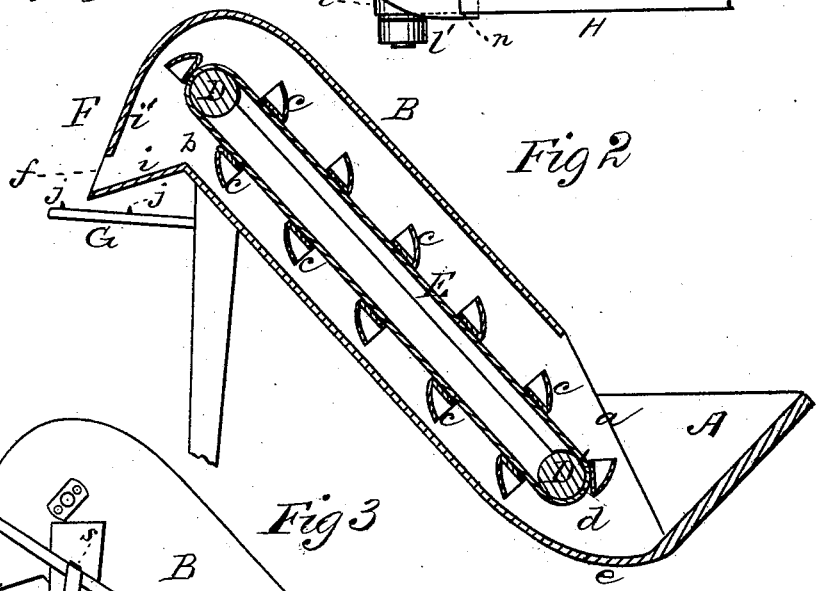
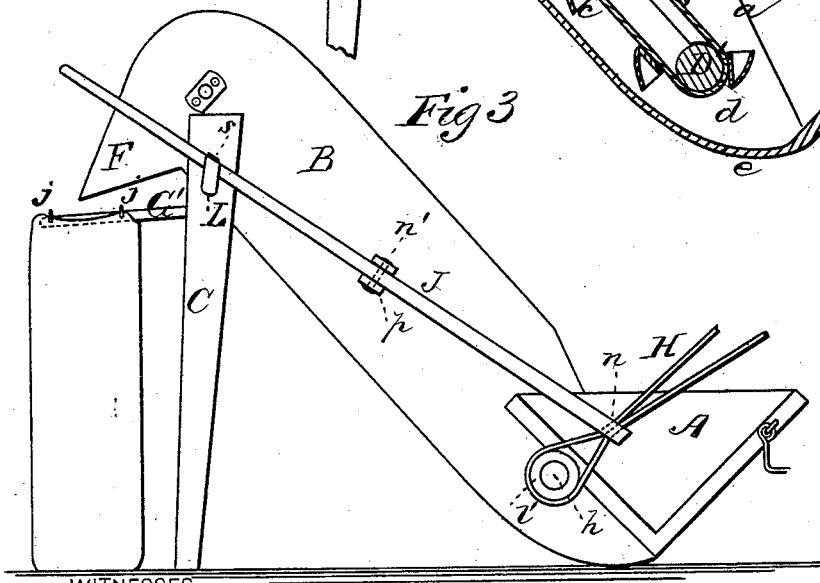


Fig 3



WITNESSES

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GEORGE R. HOCKENHULL, OF BERLIN, WISCONSIN.

IMPROVEMENT IN GRAIN-ELEVATOR AND BAG-FILLER.

Specification forming part of Letters Patent No. **193,248**, dated July 17, 1877; application filed April 21, 1877.

To all whom it may concern:

Be it known that I, GEORGE R. HOCKENHULL, of Berlin, State of Wisconsin, have invented a new and valuable Improvement in Bag Holder and Filler; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 2 of the drawings is a representation of a vertical central section of this invention. Fig. 1 is a top view of the same; and Fig. 3 is a side view thereof.

This invention has relation to improvements in combined hopper, grain-elevator, and bag-holder; and it consists in a hopper for the reception of the grain as it falls out of the spout of a fanning-mill, having an inclined box, provided at its upper end, underneath, with a discharge-spout, and carrying within it the elevator-belt stretched over two pulleys, arranged the one at its lower and the other at its upper end, whereby motion communicated to the lower pulley will be transferred to the belt, and the grain will be scooped by the cups out of the hopper and carried to the said discharge-spout.

It also consists in combining, with an elevator for grain, two spaced horizontal arms extending beyond the spout, and provided with hooks to secure the bag thereto, and arranged at the four angles of a rectangle to hold the same open, which arms will yield under the weight of a bag and its contents, and allow a shorter bag than usual to bear upon the ground, thereby preventing it from being torn by the hooks.

It also consists in combining, with the driving-pulley shaft and a fixed and loose pulley applied thereon, a lever having a transverse slot in its end, through which the driving-belt extends, by means of which the bagger standing at the discharge end of the elevator is able to shift the belt from the fixed to the loose pulley, thereby arresting the movement of the elevating-belt as each bag is filled, without stopping the motive mechanism, as will be hereinafter more fully explained.

In the annexed drawings, the letter A designates a four-sided wooden or metallic hopper, the sides and ends of which incline inward toward each other to give it a flaring form, and to direct the grain accurately to the opening *a* of the elevator-box B. This latter is of usual form, and is rigidly secured in an upwardly-inclined position to the hopper, as shown in Fig. 3, being propped or sustained by legs C, that are secured to the upper end of the box, and whose lower ends rest upon the ground.

D D′ represent the pulleys of the elevating-belt, that are, respectively, journaled at the upper and at the lower ends of the said box. Pulley D is arranged above the throat *b* of a discharge-spout, F, and pulley D′ in the opening *a* of the box into the spout. The elevating-belt E passes around the pulleys aforesaid, and is provided with the usual scoops or cups *c*. These cups descend successively into a well, *d*, at the bottom of the box B, having a rounded bottom, *e*, the curvature of which the scooping-lip of the cup accurately follows, thereby gathering up the grain in a very perfect manner. When the cups *c* are carried around the pulley D, they are within the throat of the discharge-spout F, so that as the grain is emptied out of the cup it falls into the said spout. This spout is of wedge-form, as shown in Fig. 2, and its lower wall *i* forms an obtuse angle with the corresponding wall of the box, and as the said wall *i* extends downward below the elevator, all the grain carried up by the cups will be delivered into the said spout, and fall through the opening *f* formed in its upper wall *i′*.

G G′ designate two-spaced horizontal arms that are secured to the legs C, and extend outward beyond the spout F. These arms are made of spring metal preferably, and are provided with hooks *j*, arranged at the four angles of a rectangle, to which the open edge of the bag is secured. Two of these hooks are in front, and two in rear of the end of the spout; consequently, while the bag will be held properly open, there is no spilling of the grain. Arms G G′ are distant from the ground about the length of an ordinary grain-sack, so that its bottom rests upon the ground during the filling; but should the sack be shorter than common, the arms aforesaid will yield

until the bottom of the said sack rests upon the ground, thus preventing the hooks from tearing through its upper edge. Pulley D′ has its shaft *h* provided with a fixed pulley, *l*, and a loose pulley, *l′*, and motion is communicated to the elevating device by means of an endless belt, H, that passes around pulley *l* aforesaid, and a driving-pulley on the fan-shaft. Both branches of this belt pass through a slot, *n*, in the power end of a lever, J, that is fulcrumed at *n′* in an arm, *p*, projecting out from the box side, and extends to a point within reach of the operator at the bagger. By throwing this lever inward toward the box, the belt will be shifted from the fixed pulley to the movable one *l′*, and the operation of the elevator-belt will cease. The filled bag may then be removed from the hook and an empty one put on. By then reversing the said lever, the belt is returned to the fixed pulley, and the movement of the elevator again commences. The power end of this lever extends through a notched arm, L, near the spout. The notch *r* in this arm is closed by a strip-spring, *s*, and is provided with a central stud, *t*.

By raising the lever slightly the spring *s* will yield, and allow it to clear the stud aforesaid, and be shifted to the other end of said notch, that is made of sufficient length, and no longer, to allow the said lever to shift the said belt accurately from one pulley to the other.

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

1. In an elevator mechanism, the shaft *h*, having fixed pulley *l*, and movable pulley *l′*, and the endless belt H, combined with a vibrating lever, J, having slot *n* in its weight end, through which said belt is passed, substantially as specified.

2. The spring-arms G G′, having hook *j* secured to legs C, and engaging the hopper-spout F, in combination with the hopper A, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE R. HOCKENHULL.

Witnesses:
THOS. HARRIS,
JOHN CORBITT.