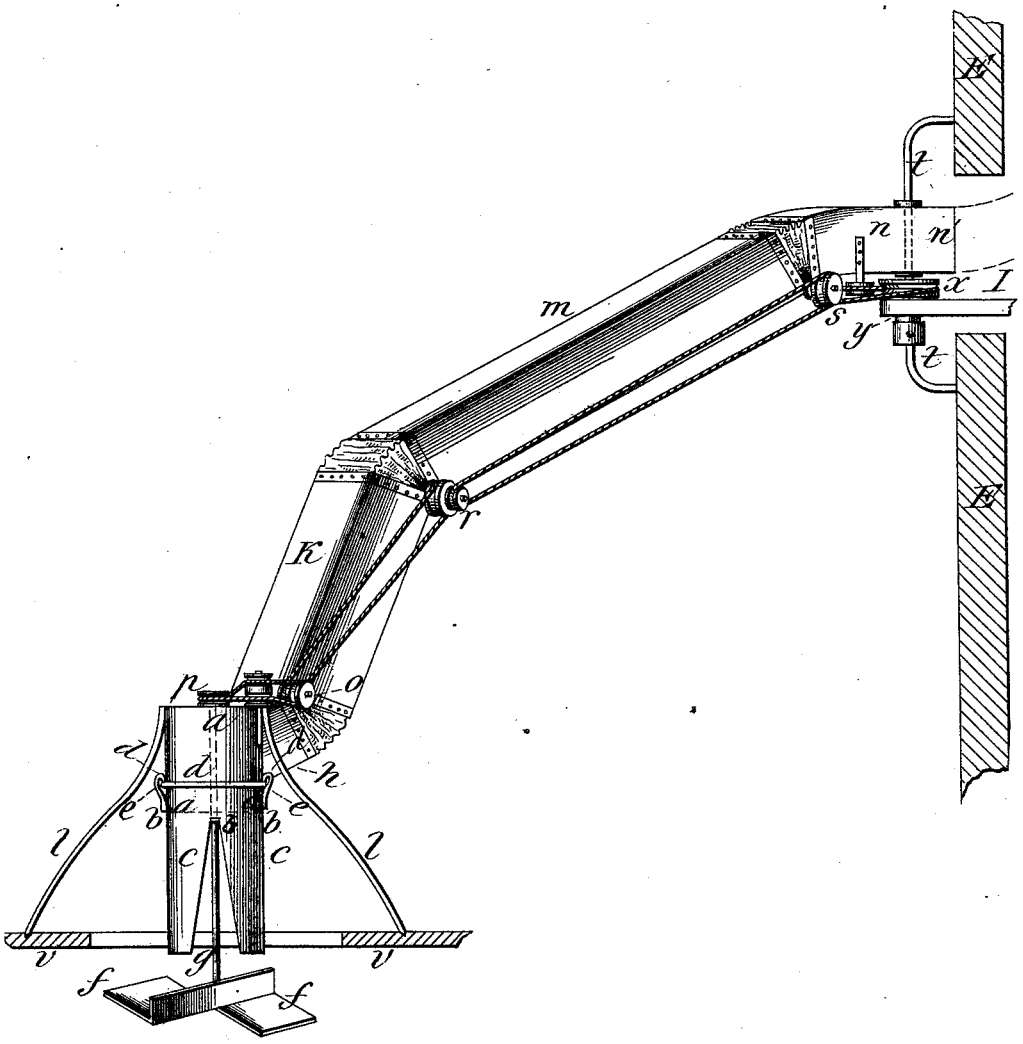
# H. FASCHER & A. A. SINGER.

## Grain Distributing Machine.

**No. 204,308.** **Patented May 28, 1878.**

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# UNITED STATES PATENT OFFICE.

HERMANN FASCHER AND ADOLPH A. SINGER, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN GRAIN-DISTRIBUTING MACHINES.

Specification forming part of Letters Patent No. **204,308**, dated May 28, 1878; application filed February 14, 1878.

*To all whom it may concern:*

Be it known that we, HERMANN FASCHER and ADOLPH A. SINGER, both of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Grain-Distributing Machines, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

The object of our invention is to distribute or spread grain of any kind within any vessel, ship, or other means of transportation, while being loaded, to a practically even and level surface throughout the whole space allotted for that purpose by mechanical means, thus dispensing entirely with the expensive and dangerous business of trimming the grain by manual labor.

The drawing represents a side view of the machine, in connection with a pliable spout, which admits of the lowering of the vessel while the same is being loaded. It also shows the manner in which the whole arrangement may be fastened to the elevator-building.

*a a a* is a drum, to the upper part of which a short spout, *h*, is attached, which, in turn, is connected with the elevator-spout. *b b b* is another drum, which fits closely, like a jacket, around the drum *a a a*, to the lower part of which a double spout, *c c*, is attached, either by hooks *e e* fastened to the jacket *b b b* and a ring, *d d*, fastened to the drum *a a a*, or by any other suitable means. The jacket *b b b* is attached to the drum *a a a* in such a manner as to admit of its being turned around the latter, in order to determine the exact location toward which the grain is to be thrown. Both drum *a a a* and jacket *b b b* have one common center, through which runs the shaft *g*, to the lower end of which is attached, either permanently or adjustably, as desired, a fan, which, while in rapid rotary motion, will throw any grain or similar substance which issues from the spouts *c c* in any desired direction by either changing its speed or by turning the jacket *b b b* to any desired distance.

To the upper end of the shaft *g g* a pulley, *p*, is rigidly fastened, by means of which motion is imparted to the fan *f f*.

*l l* are legs, by which the whole machine and the lower part of the spout are supported.

Now, it is a well-known fact that a vessel floating on the water while being loaded sinks gradually as the load increases. Of course, if power were transmitted from the elevator to the machine by a single belt running along a single joint of spouting, the machine, which merely rests on the vessel, would gradually be pulled out of position, and thus fail to do its duty.

To obviate this difficulty, a spout has been adapted consisting of three joints, *k m n*, or more if necessary, which are held together by strong hinges, the pins of which serve as shafts or axles for the thereto-attached transmitting-pulleys. The open spaces between the joints may be covered with leather or other suitable material.

A shaft, *t t*, runs at right angles through the last joint, *n*, and is fastened permanently above and below, in a vertical position, to the wall of the elevator-building. Between the lower end of the shaft *t t* and the spout-joint *n* a double-pulley, *x y*, is attached movably.

It will thus be clearly seen that if motion is transmitted from pulley to pulley, starting at *x* or *y* and ending at *p*, the whole arrangement may be raised or lowered vertically or turned right or left horizontally around the axis *t t* without in the least affecting the motion of the distributing-fan *f f*.

Now, before starting, the machine must be set over the hatchway of the vessel to be loaded, so that the fan is from six to eight inches below deck. Then connection must be made with the bin and spout *n*, which may be done by a pliable leather joint, having a sheet-metal mouth-piece to fit the opening of the spout *n*, or by any other suitable means. Then power or motion must be imparted to the double pulley *x y* from within the elevator, as by belt I, or any other suitable means; and if suitable belt-connections are made from joint to joint, as before described, rapid rotary motion will be imparted to the fan after which the machine is ready for use; for if any grain or similar substance is sent through the spout into the drum, the double spout *c c* will divide the same and drop half of the whole on two opposite sides of the shaft *g g*, thus enabling the fan to throw the substance to both sides of the vessel at the same time; and as will be found if the speed and spout

*c c* are regulated and adjusted properly, the substance will be thrown to a practically even and level surface throughout the whole length of the vessel at all times, so that if a vessel is desired to be loaded only to half of its capacity, it will even then require no further trimming.

While out of use the whole device may be turned around the axis *t t* and set against the side of the elevator-building, where it will always be ready for use.

We claim as our invention and desire to secure by Letters Patent—

1. A revolving fan for the purpose of distributing grain or similar substance within any vessel, ship, car, or other means of transportation to a practically even and level surface throughout the whole space allotted for that purpose.

2. A pliable jointed grain-spout consisting of three or more joints, *k m n*, all arranged and constructed to operate substantially as and for the purpose above set forth.

3. The combination, in a grain-distributer, of drum *a a a*, movable jacket *b b b*, spout *c c*, shaft *g g*, fan *f f*, pulley *p*, and legs *l l*, all arranged and constructed to operate substantially as above set forth.

4. The connection of a grain-distributer with a pliable jointed spout, along which the power is transmitted from joint to joint, the whole constructed to operate substantially as above set forth.

5. The connection of a grain-spout with axle or shaft *t t*, all constructed to operate substantially as and for the purpose above set forth.

6. The connection of a grain-spout and pulleys *o r s*, all constructed to operate substantially as and for the purpose above set forth.

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Witnesses:
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