J. M. CHRITTON.

Harvester.

No. 169,088. Patented Oct. 26, 1875.

Fig. 1.

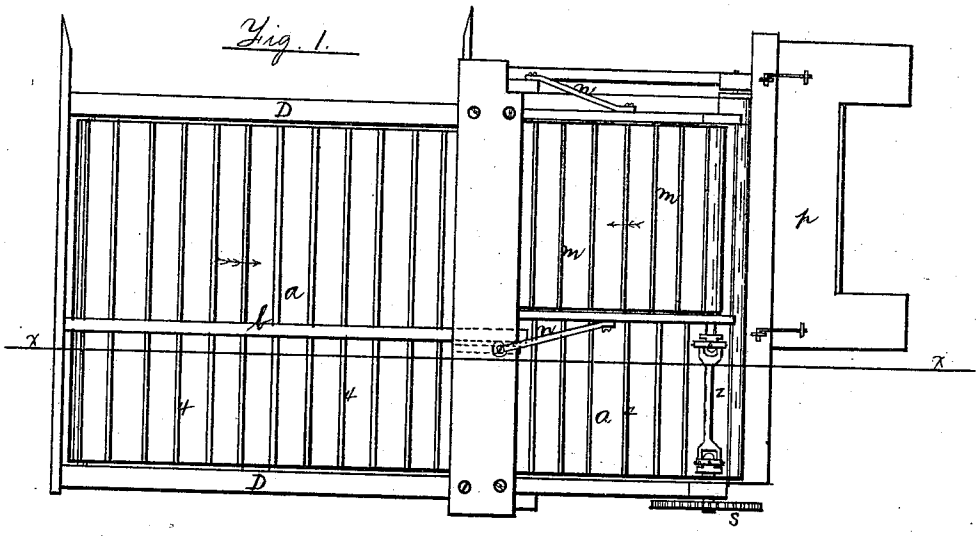


Fig. 2.

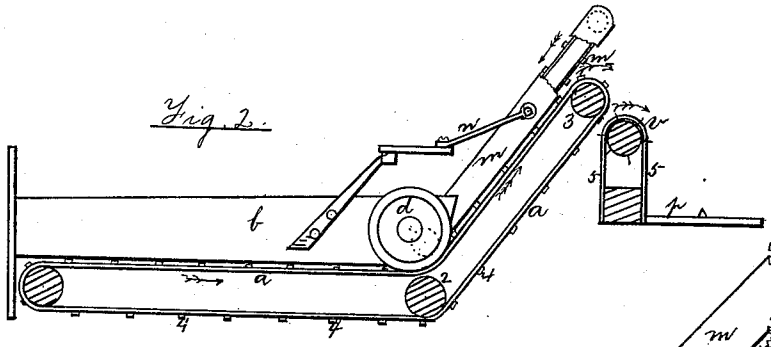
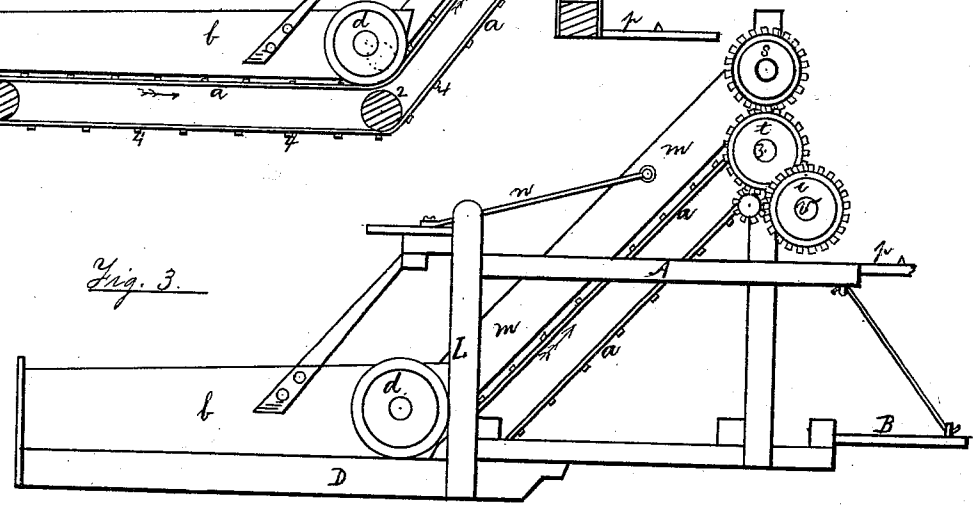


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES M. CHRITTON, OF MARENGO, IOWA, ASSIGNOR TO HIMSELF AND JOHN S. SWANEY.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **169,088**, dated October 26, 1875; application filed January 15, 1875.

To all whom it may concern:

Be it known that I, JAMES M. CHRITTON, of Marengo, State of Iowa, have invented certain Improvements in Grain-Harvesters, of which the following is a specification:

The nature of my invention consists in the construction of the elevating portions of the harvester, hereinafter described and specified in the claim, the construction and operation of which invention I will proceed to explain, reference being had to the annexed drawings, and letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a plan view on the top; Fig. 2, a longitudinal sectional view on the line *x*, and Fig. 3 a rear elevation.

In the drawings, A D L represent the main frame of the device, constructed in a suitable manner to carry the cutter-bar and endless aprons *a* and *m*. The endless-apron carrier *a* is provided with slats 4, extending entirely across the apron, and at short intervals apart, for the purpose of carrying the straw and grain forward. This endless carrier extends from the grain end of the platform entirely across the same, and up at an angle of about forty-five degrees to the upper part of the frame, where it discharges on the binders' table *p*. It will be seen that only one endless apron is used in that place where it is usual to use two independent aprons—one on the platform and one in the elevator. By this mode of construction every head and kernel of grain must be carried up and discharged on the binders' table. This endless apron and elevator *a* turns on the rollers 1, 2, and 3, to which motion is imparted by the gearing *s t o i*, Fig. 3, which are, in turn, propelled from the driver-shaft, which is not necessary to show here. *m* is an auxiliary endless apron, having its position immediately over the elevating portion of the endless apron *a*, as shown in the figures. This endless apron performs the service of assisting in elevating the straw, which must pass up between the elevator *a* and the said endless apron *m*. Motion is imparted to the endless apron *m* by means of the shaft *z* and its universal joints, (shown in Fig. 1,) to admit of the apron *m* being elevated and depressed according to the amount of straw that may pass under it. The elevator *m* and its frame hang loosely over the apron *a*, steadied by the braces *n*, as shown in the figures. In order to hold the endless apron carrier *a* down at the center, at the lower end of the elevator, over the roller 2, I use the roller or wheel *d*, which is placed near to the middle of the platform, as shown in Fig. 1, the slats 4 being of sufficient strength so they will not bend down at the center so much as to elevate either end too high, so as to interfere with work. *b* is a backboard, to which the wheel *d* is journaled, and serves at once to assist in holding the endless apron *a* down in place, and to prevent the straw from falling any farther back on the apron, there being room enough left in front of it on the platform to receive all the straw. *v* is a roller provided with teeth, which pass up through the guard 5 through slits cut in it. This roller *v* turns in an opposite direction to the carrier-apron *a*, so the teeth will prevent the straw from being carried back under the apron *a*, and assist in depositing it on the binders' table, and receives its motion from the cog-wheel *i*, Fig. 3.

It will be seen that by constructing a harvester in the manner described almost every particle of the grain that falls on the platform is saved; also, no inconvenience is experienced from the wind blowing off the straw while it is being elevated up to the binders' table; also, the construction is so simple that the expense of its construction is very materially lessened, while the draft is materially lessened by there being so few parts and so little friction.

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

The combination of the endless apron *a*, auxiliary apron *m*, wheel *d*, backboard *b*, braces *n*, universal-jointed shaft *z*, toothed roller *v*, and main frame A D L, constructed, operating, and arranged as and for the purposes set forth.

JAMES M. CHRITTON.

Attest:

C. S. LAKE,

J. A. W. RUMPLE.