J. S. FOWLER.

Harvester.

No. 167,519. Patented Sept. 7, 1875.

Fig. 1

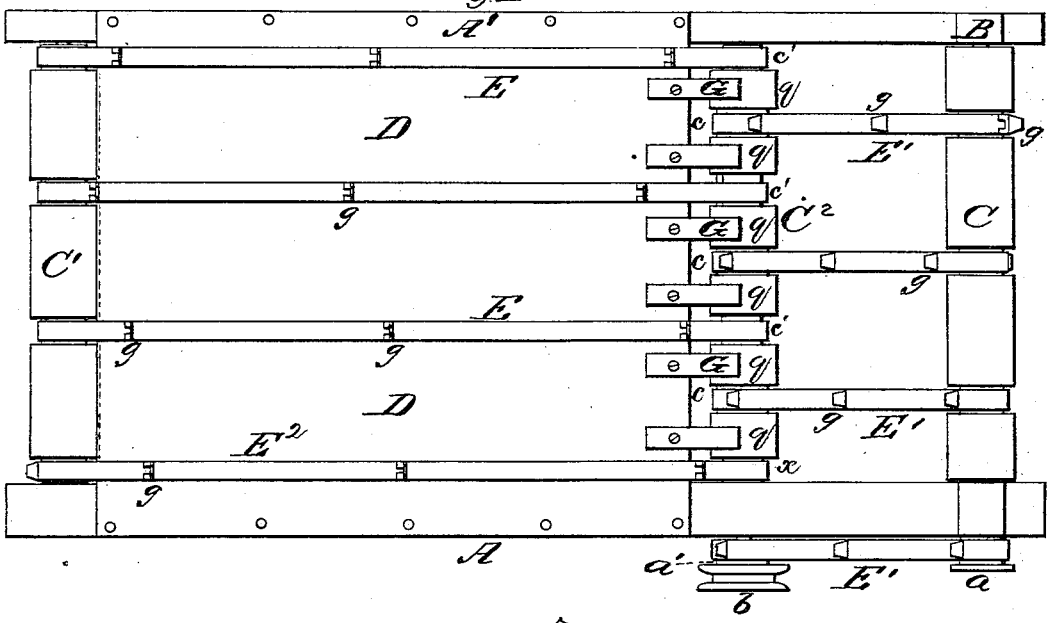


Fig. 3

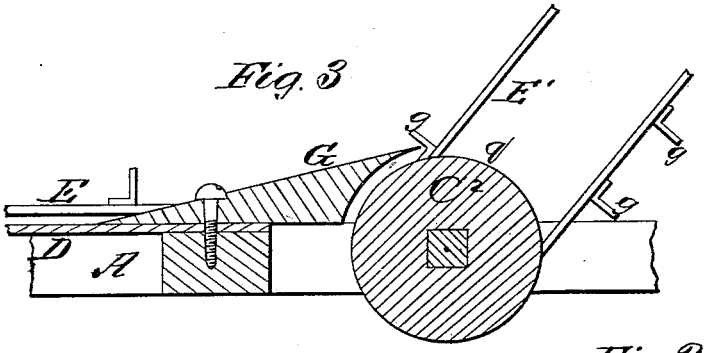
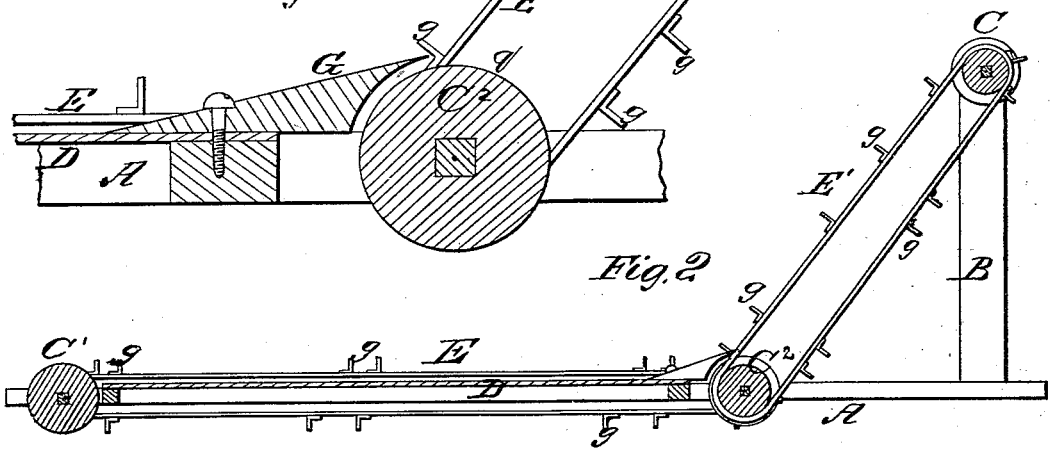


Fig. 2



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES S. FOWLER, OF DAVENPORT, IOWA.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **167,519**, dated September 7, 1875; application filed June 19, 1875.

To all whom it may concern:

Be it known that I, JAMES S. FOWLER, of Davenport, in the county of Scott and State of Iowa, have invented a new and valuable Improvement in Conveyer and Elevator for Harvester; 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 1 of the drawing is a representation of a plan view of my conveyer and elevator for harvesters. Fig. 2 is a longitudinal sectional view; and Fig. 3 is a sectional detail view of the same.

This invention has for its object the improvement of that class of harvesters wherein endless horizontal conveyer-belts and inclined endless elevator-belts, actuated by a spool-spindle at the angle formed by the two, are used for carrying the cut grain from the harvester-platform to the binders' stand.

The invention consists in such a spool-pulley extending transversely across the platform, having pulley-wheels alternately for the elevator and conveyer belts, those used for the former being of greater size or diameter than those of the latter, whereby the spool-pulley, when actuated by a suitable motor, will cause the elevator-belts to be run at a greater speed than the carrier or conveyer belts, thereby rapidly clearing the conveyer-platform of grain, and preventing jamming and crowding thereof at the angle of the platforms.

In the annexed drawings, A designates the front and A′ the rear beam of a horizontal frame, on which is secured a close platform, D, for receiving the grain as it is cut. B B designate two posts erected perpendicularly on one end of the frame A, and affording bearings for the ends of a pulley-roller, C, which roller is annularly grooved at proper intervals apart, to receive the upper portions of endless belts E^1. The upper portion of the belt, at the front end of the roller C, runs on a pulley, *a*. The lower portions of these belts run on a pulley-roller, C^2, which has its bearings in the front and rear beams of the frame, and which is annularly grooved to receive the said belts, and also endless belts E. These grooves are designed as pulley-wheels for the elevator and conveyer belts, those for the former being designated by the letter *c*, and those for the latter being designated by the letters *c′* and *x*. The diameter of the former pulleys is greater than the latter, as is also the diameter of the front conveyer-pulley *x* than those of the same series in rear of it, for purposes which will be hereinafter made apparent. Belts E are carried across the platform D and around grooved portions of a roller, C^1, at the grain end of the platform. All the belts are provided with lips or studs *g*, which take hold of and move the grain along with them. In practice, motion will be given to the carriers and elevators by means of an endless driving-belt passed around a pulley, *b*, on the front end of the roller C^2, and around a pulley, which receives rotation from the transporting-wheels through the medium of suitable gearing—not shown in the annexed drawing.

As the grain is liable to be wound around the pulley-roller C^2, and to clog the machine at this point, I obviate this objection by the employment of guides or bridges G, which are secured to the inner end of the platform D, and which overhang enlargements *q* on the spool-pulley C^2, between the grooves appropriated alternately to the elevator and conveyer belts, a suitable distance above, and without touching this roller or its enlargements, as clearly shown in Fig. 3. The upper surfaces of these bridges are inclined toward the elevating-belts, and the upper ends of these bridges are above the enlargements *q* of the roller C^2, so that the studs or spurs *g* of the belts E will leave the grain on the bridges at the points where the studs or spurs *g*, on the belts E^1, take the grain from the bridges.

By this means the upper surface of the said bridges being above not only the pulley-wheels, but also the enlargements of the spool-pulley C^2, the grain cannot be brought within reach thereof, and consequently will not be drawn down, and wound around the roller C^2.

It will be seen from the above explanation that when the spool-pulley C^2 is actuated it will communicate motion to the elevator and carrier belts, and the pulley-wheels C of the

former being of greater diameter than those c' x of the latter such actuation will cause the endless elevator-belts to be run at greater speed than the carrier-belts, thus rapidly clearing the platform of cut grain to make room for that subsequently deposited thereon.

It will also be evident that the front belt E^2 of the conveyer, being applied to a pulley-wheel of greater diameter than those in rear of it, will be run at greater speed than the others of the same series, conveying the butts of the grain along the platform to the elevator at the same speed as the heads, and effectually preventing rolling back thereof.

What I claim as new, and desire to secure by Letters Patent, is—

In a harvester, the spool-pulley C^2, having pulleys c for the elevator-belts E^1, and pulleys c' for the conveyor-belts E, the diameter of the former being greater than that of the latter, for the purpose of running the elevator-belts at greater speed than the carrier-belts, as specified.

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

JAMES S. FOWLER.

Witnesses:
W. H. GABBERT,
FRANK GABBERT.