

A. J. HODGES.
Harvester-Droppers.

No. 145,419.

Patented Dec. 9, 1873.

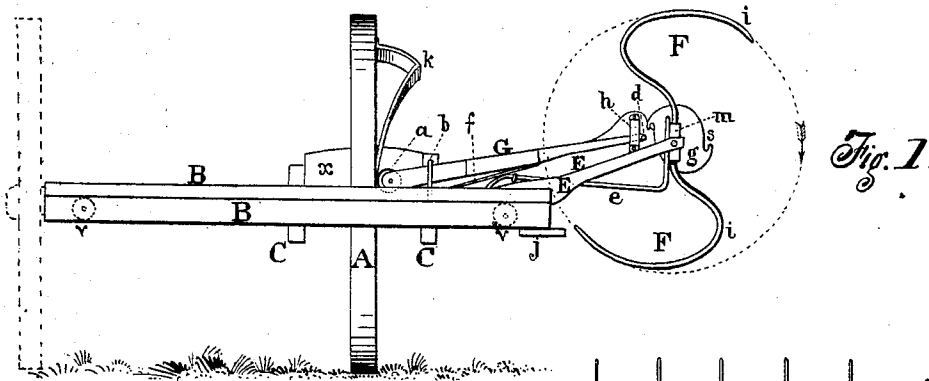


Fig. 1.

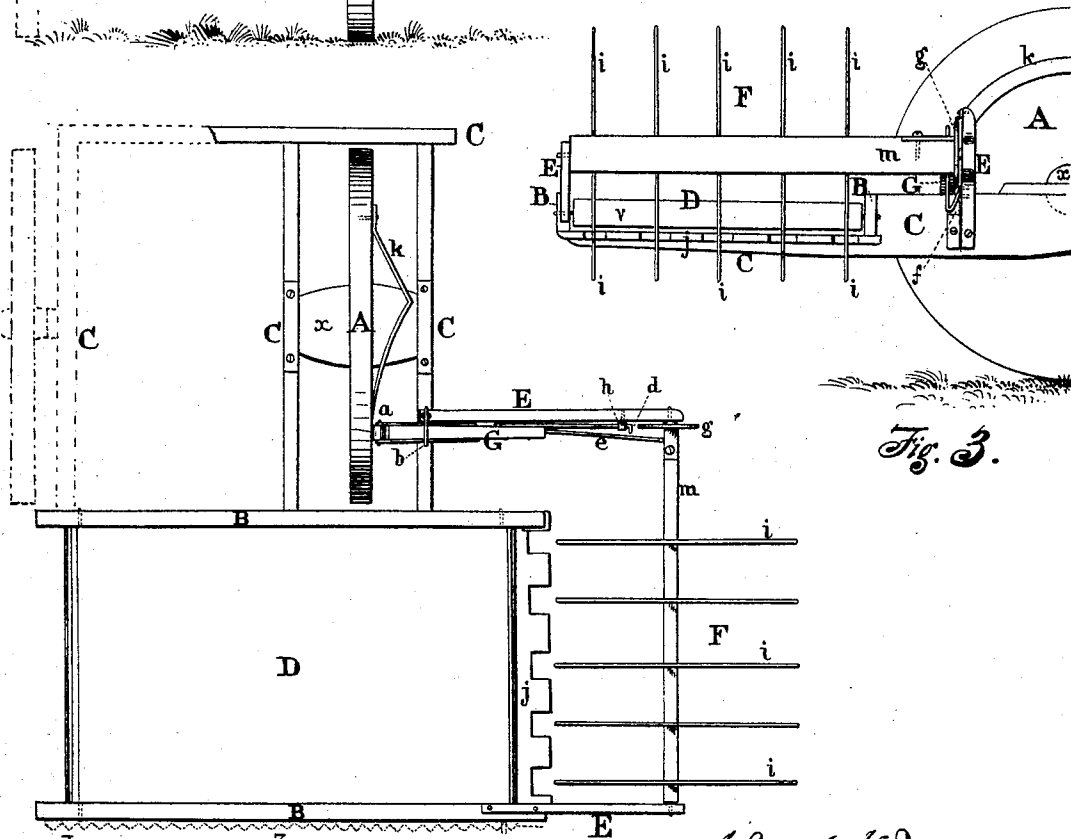


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

ANDREW J. HODGES, OF PEORIA, ILLINOIS.

IMPROVEMENT IN HARVESTER-DROPPERS.

Specification forming part of Letters Patent No. 145,419, dated December 9, 1873; application filed August 27, 1873.

To all whom it may concern:

Be it known that I, ANDREW J. HODGES, of the city of Peoria, in the county of Peoria and in the State of Illinois, have invented a Rotary Grain-Dropper for Harvesters, Grain-Binders, &c.; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a side elevation of the dropper as attached to a harvesting-machine; Fig. 2, a plan of the same; Fig. 3, a longitudinal elevation of same.

This invention relates to the receiving of cut grain, &c., from a harvester platform, or draper, or other machine delivering cut grain in certain quantities to form a gavel or sheaf preparatory to binding it, &c., by means of a revolving dropper provided with two or more rows or sets of teeth in a line, a set to receive and discharge, alternately. The rods which receive the grain are set in a line upon a shaft or axle, (rotated at short intervals by attached oscillating arms or similar means,) which dropper, at every half-revolution, presents a set of rods to receive the grain, while the other set is elevated, (after discharging its grain,) ready to receive grain at the next motion.

One of the forms in which I construct this rotary dropper is as follows, reference being had to the drawings, in which A represents one of the supporting-wheels of a harvester, having cam *k* on or affixed to its outer surface; B B, the draper frame or platform; *z*, the sickle; C C, &c., the harvester-frame; D, the draper or conveyer for grain, &c.; E E, lateral arms supporting the ends of the dropper F, one secured in front to the discharging end of the of the draper or conveyer D, the other arm to the rear of said frame or to the frame C of the harvester; F, the revolving dropper, composed of a flat bar or axle, *m*, pivoted at each end horizontally in one of the arms E E, and terminating at the end opposite the face of the wheel A in a cam-shaped plate, *g*, whose rim at two opposite points upon it has a recess, *s*, for the entry of the dog *d* at the point of the oscillating bar G. The bar or axle *m* carries several radiating curved rods, *i i i*, &c., in two

sets, each set disposed in a row on opposite edges of the bar *m*, each rod or set of rods representing in profile a hand-sickle with the "handle" part set in the bar or axle *m*, the outer curve of the sickle lying in the circle described by their revolution. The point of each set points in the opposite direction, so that these, when in their lowest positions, are at and below the corner of the platform or draper D. G is an oscillating bar, whose inner end terminates in a small friction wheel or roller, *a*, at the face of wheel A, and cam *k*, near which this end of the bar is held loosely in a staple, *b*, on the frame C, its other end being retained in a staple, *h*, on the adjoining arm E, supporting the dropper F, which confined end terminates in a dog or horizontal pin, *d*, near and opposite to and a little above a horizontal line passing through the center of the plate *g* on the axle *m*. A spring, *f*, or other elastic retainer, keeps the bar G and its roller *a* back against the wheel A when not impelled outward by the cam *k*, and a spring, *e*, having a vertical terminal end resting against the surface of the bar or axle *m*, keeps the latter and its rods *i i i*, &c., in their stopping positions, as shown in Fig. 1, when not operated upon by the arm G.

The operation of this invention is as follows: The drawings show the dropper F in its normal position, or that one in which it rests between the action upon it of the oscillating arm G, and is also the position in which it receives grain, which it does in sufficient quantities to form a gavel of the requisite size for binding into sheaves, after which, on the still advancing progress of the harvester and wheel A, the cam *k* of the latter projects the arm G, or rather its dog *h*, into one of the recesses *s* of the plate *g* at the end of the axle *m*, at which time the lower rods *i i i*, &c., charged with a gavel of grain, takes the place of the upper rods, letting fall the said gavel when attaining said position ready for binding into a sheaf. Each motion of the arm G causes half a revolution of the dropper F, but leaving one of the sets of rods always in a position to receive grain, the bar G each time returning to its starting-point on the face of the wheel A, drawn there by the spring *f*, when the apex of the cam passes forward from the said bar G.

In place of the spring *f*, a spiral spring or similar form, or a weighted or gravitating lever, and other simple devices, will be equally effective. So, too, the bar *G*, may be substituted by cog-wheel gearing in any known way which will confer, separately, two half-rotations upon the dropper *F*, or by a crank or series of cranks, or cranks and levers operated by the wheel *A* or adjoining motors; or the axle *m* may terminate in a screw, along which the end of a lever may be forced back and forth, or the cogs of a spur or bevel wheel. The forks *i i* may be substituted by a wire

cradle or screen, built of wood or iron framework, and ribs to receive the grain.

What I claim as my invention is—

The combination of bar *G*, having a hook or dog, *d*, the plate *g*, spring *e*, dropper *F i i i*, and cam *k*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing harvester grain-dropper I have hereunto set my hand this 19th day of August, 1873.

Witnesses: ANDREW J. HODGES.

JAMES THURLOW,
J. M. MORSE.