(No Model.) 4 Sheets—Sheet 1.

W. N. STROUD & R. H. COREY.

DISCHARGE MECHANISM FOR HARVESTERS.

No. 484,923. Patented Oct. 25, 1892.

Fig. 1.

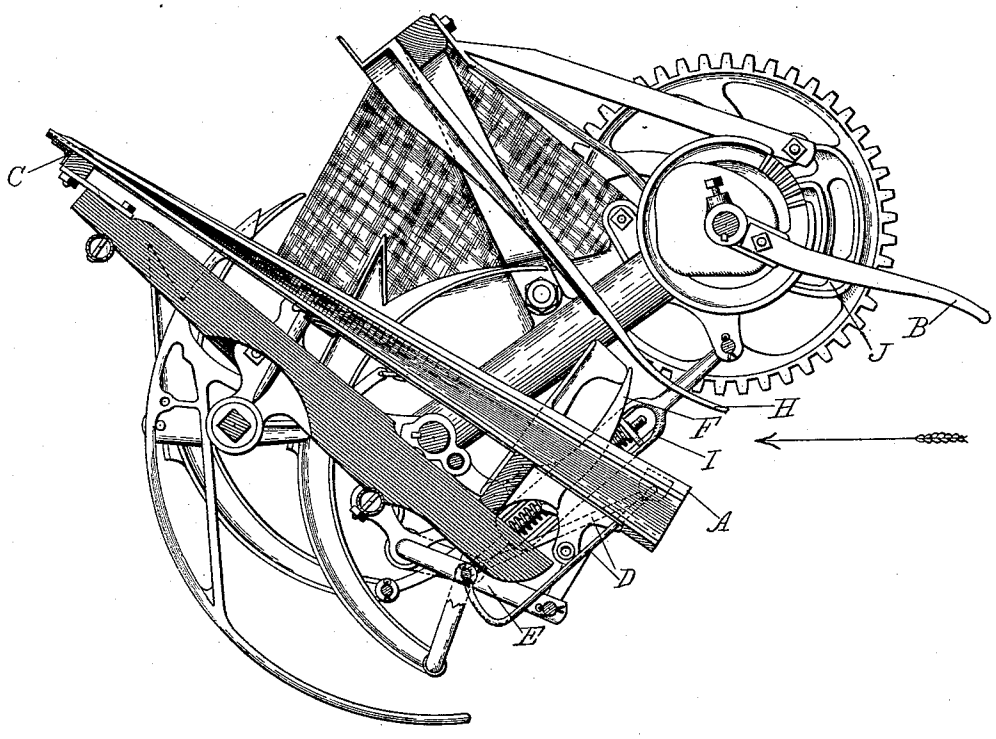

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Fig. 2.

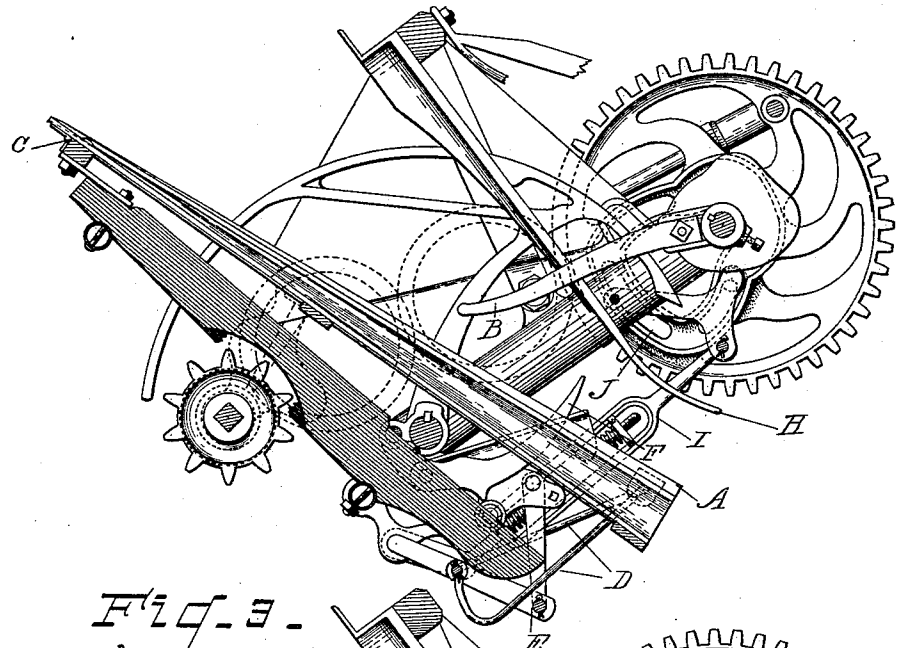

Fig. 3.

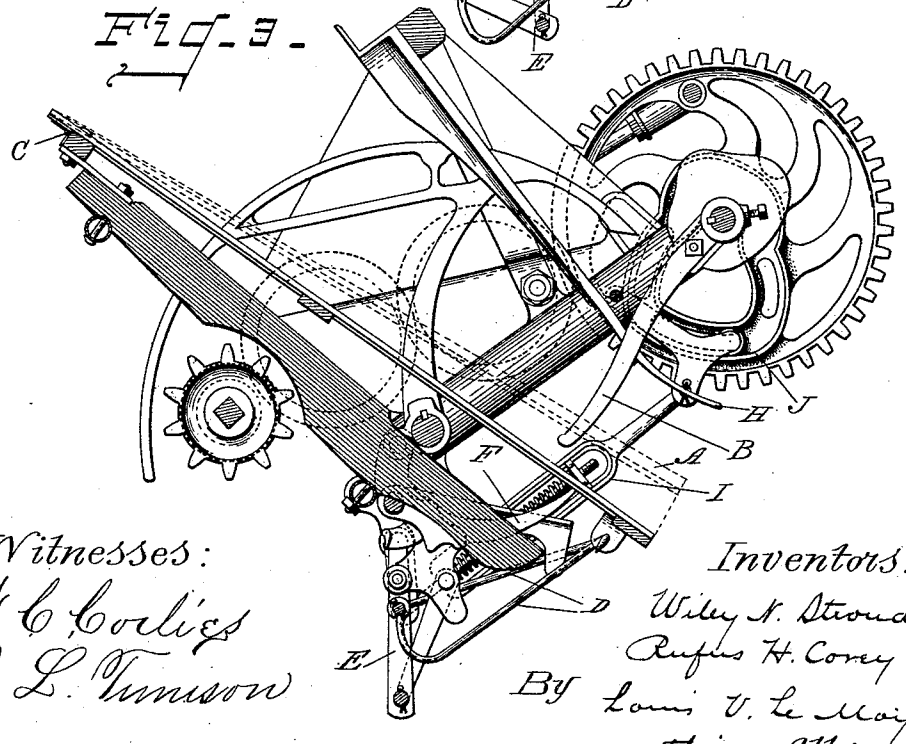

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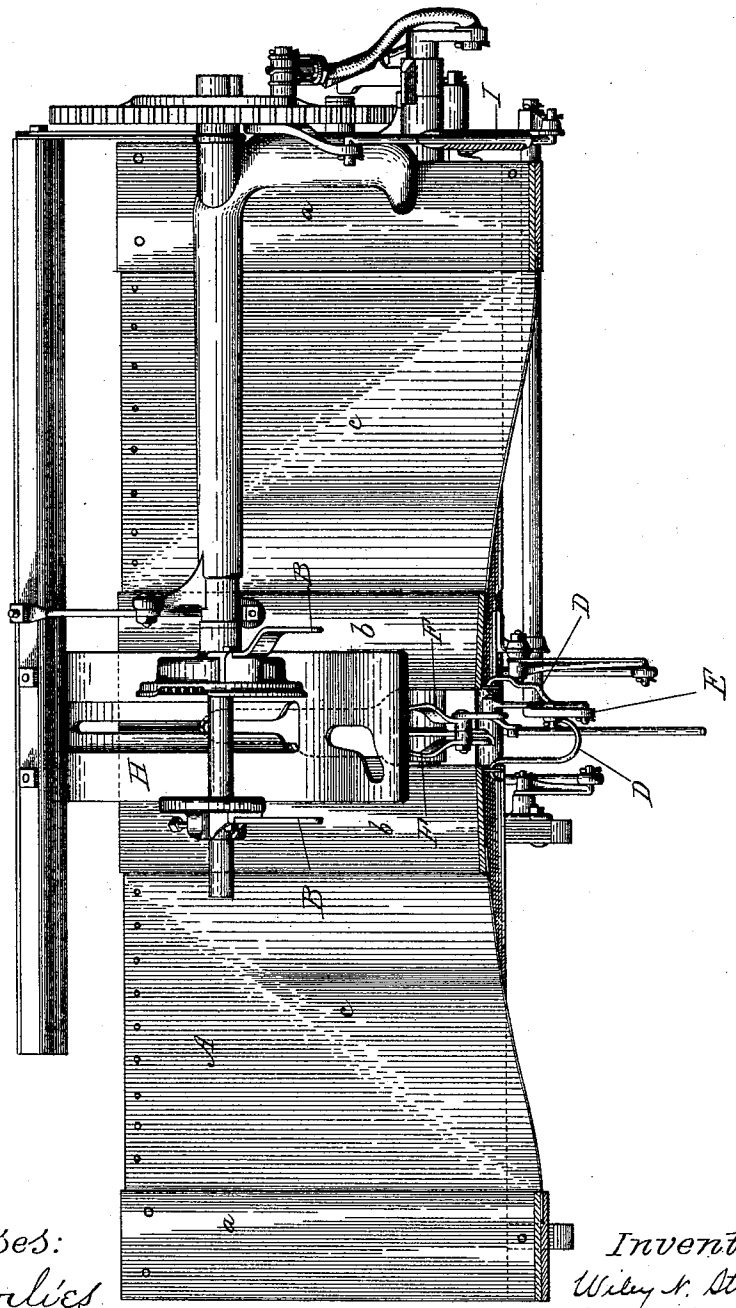
Fig. 4.



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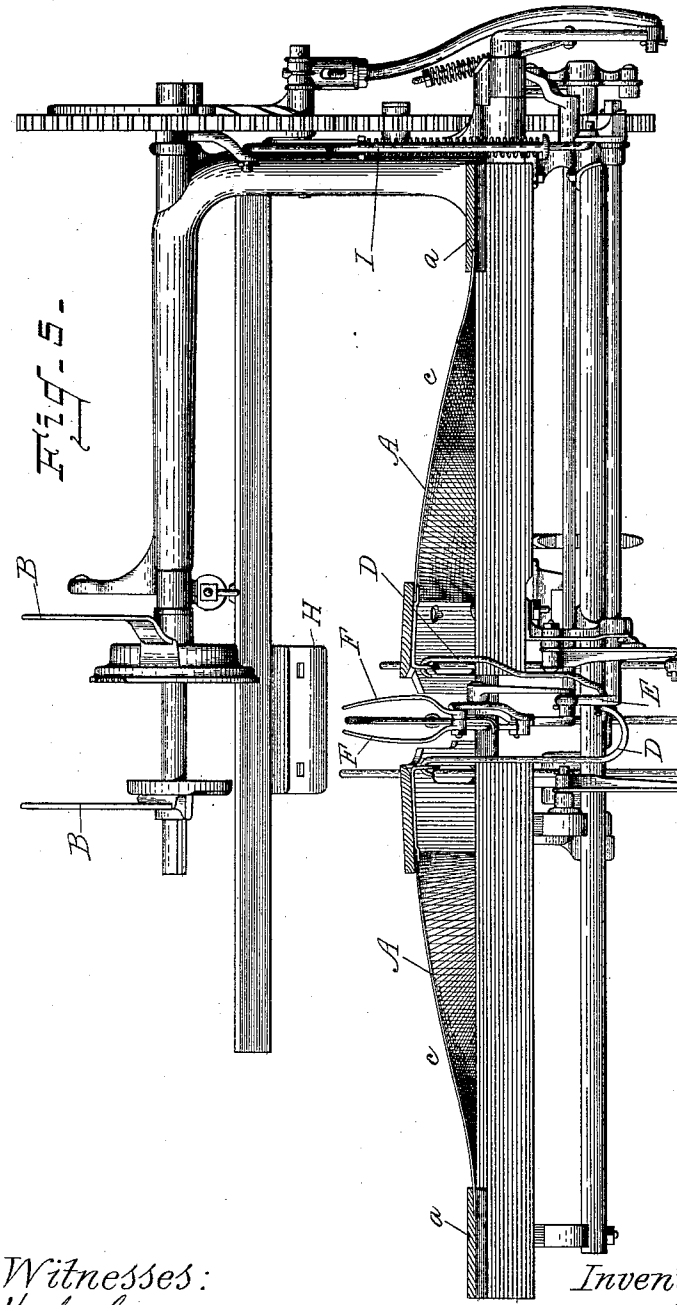

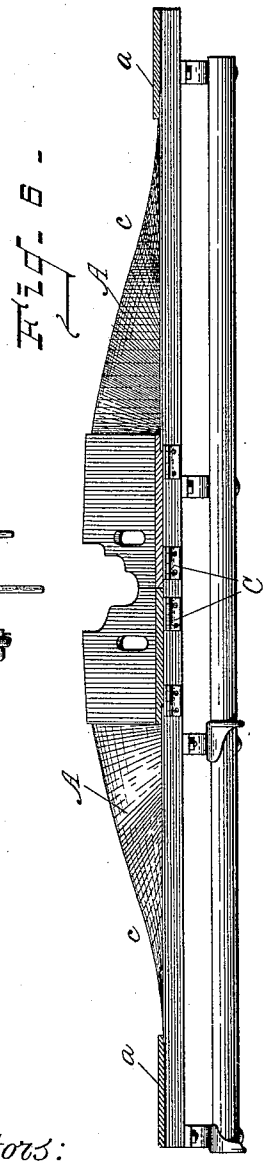

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UNITED STATES PATENT OFFICE.

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DISCHARGE MECHANISM FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 484,923, dated October 25, 1892.

Application filed April 6, 1891. Serial No. 387,805. (No model.)

To all whom it may concern:

Be it known that we, WILEY N. STROUD, residing at Waxahachie, county of Ellis, State of Texas, and RUFUS H. COREY, residing at Auburn, county of Cayuga, State of New York, citizens of the United States, have invented a new and useful Improvement in Discharge Mechanism for Harvesters, of which the following is a specification.

Our invention relates particularly to the binder-deck of harvesters; and it consists, broadly, of a flexible deck having its lateral edges fixed and its middle portion hinged at one edge and free at the other, and means for automatically lowering the latter when the bundle of grain is to be discharged in order that the discharge may be facilitated.

It further consists of details of construction and operation hereinafter more fully described, and particularly pointed out in the claims.

Figure 1 is an end view of the binder-deck of a harvester embodying our invention, showing the working parts of the binder in side elevation. Figs. 2 and 3 are similar views, showing the relative positions of the deck and discharge-arms and the binder mechanism just before and at the time of the discharge, respectively. Fig. 4 is a view of the deck, looking in the direction of the arrow, Fig. 1. Fig. 5 is an edge view of the deck, looking upward. Fig. 6 is an edge view of the deck, looking downward.

A represents the deck; B, the discharge-arms; C, the hinges upon which the deck swings; D, the rods or links by which the free edge of the deck is raised or lowered.

The binder mechanism is of the usual form, except that to the crank E, by which the compressor-fingers F are withdrawn when the bundle is to be discharged, is attached one end of the links D, the other end being attached to the free edge of the deck. The crank E is actuated by the spring-link I, the latter being actuated by the cam J. The discharge-arms B operate in the usual manner, revolving simultaneously with the cam J, and being so located upon the shaft that as the compressor-fingers are withdrawn the discharge-arms pass over the deck and the deck is lowered simultaneously by the links D, attached to the crank E, and the discharge of the grain thereby facilitated. The links D may, if preferred, be actuated by any other suitable mechanism entirely independent of the binder mechanism, provided its movement is properly timed to lower the deck at the time of discharge.

We prefer to construct the deck of three different parts—the middle portions *b b*, which are hinged, the end portions *a a*, which are securely attached to the frame of the machine and do not move, and the intermediate portions *c c*, connecting these two, made of some flexible material—such as sheet metal—which will bend when the middle portion is raised or lowered. This forms a more-substantial and less-cumbersome deck than one in which the entire deck swings on hinges, and it has the further advantage of giving, when raised, a narrow contracted space in the middle immediately under the breast-plate H and falling off at each side, where the large ends of the bundle come, and without having any joints or crevasses into which the grain may fall and obstruct the operation of the machine. The middle portion *b* of the deck is most conveniently constructed in two separate parts with a link D under each, raising and lowering them together; but, if preferred, they may be made in one and only a single link required.

We do not wish to limit ourselves to the exact construction of the deck shown or the means for raising and lowering it at the proper time, as the same may be slightly varied without departing from the spirit of our invention.

What we claim, and desire to secure by Letters Patent, is—

1. The herein-described discharge mechanism, consisting of the combination of the binder-deck having the movable middle portion, the fixed ends, the flexible intermediate portions, and means for automatically raising and lowering said middle portion, all substantially as shown and described.

2. The herein-described discharge mechanism for harvesters, consisting of the combination of the binder-deck A, having its middle

portion hinged at its upper edge and free at its lower edge, said deck having its ends fixed, and a flexible intermediate portion, the links D, crank E, spring-link I, cam J, and discharge-arms B, arranged to co-operate with one another to lower said deck as said discharge-arms pass over it, all substantially as shown and described.

3. The herein-described discharge mechanism, consisting of the combination of the binder-deck having the middle portion *b* hinged at its upper edge and free at its lower edge, and the end portions *a a*, attached to the frame of the machine, and the flexible intermediate portions *c c* joining them, and means for automatically raising and lowering the middle portion, all substantially as shown and described.

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RUFUS H. COREY.

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