

(No Model.)

D. RANKIN.
STRAW STACKER.

No. 256,595.

Patented Apr. 18, 1882.

Fig. 1

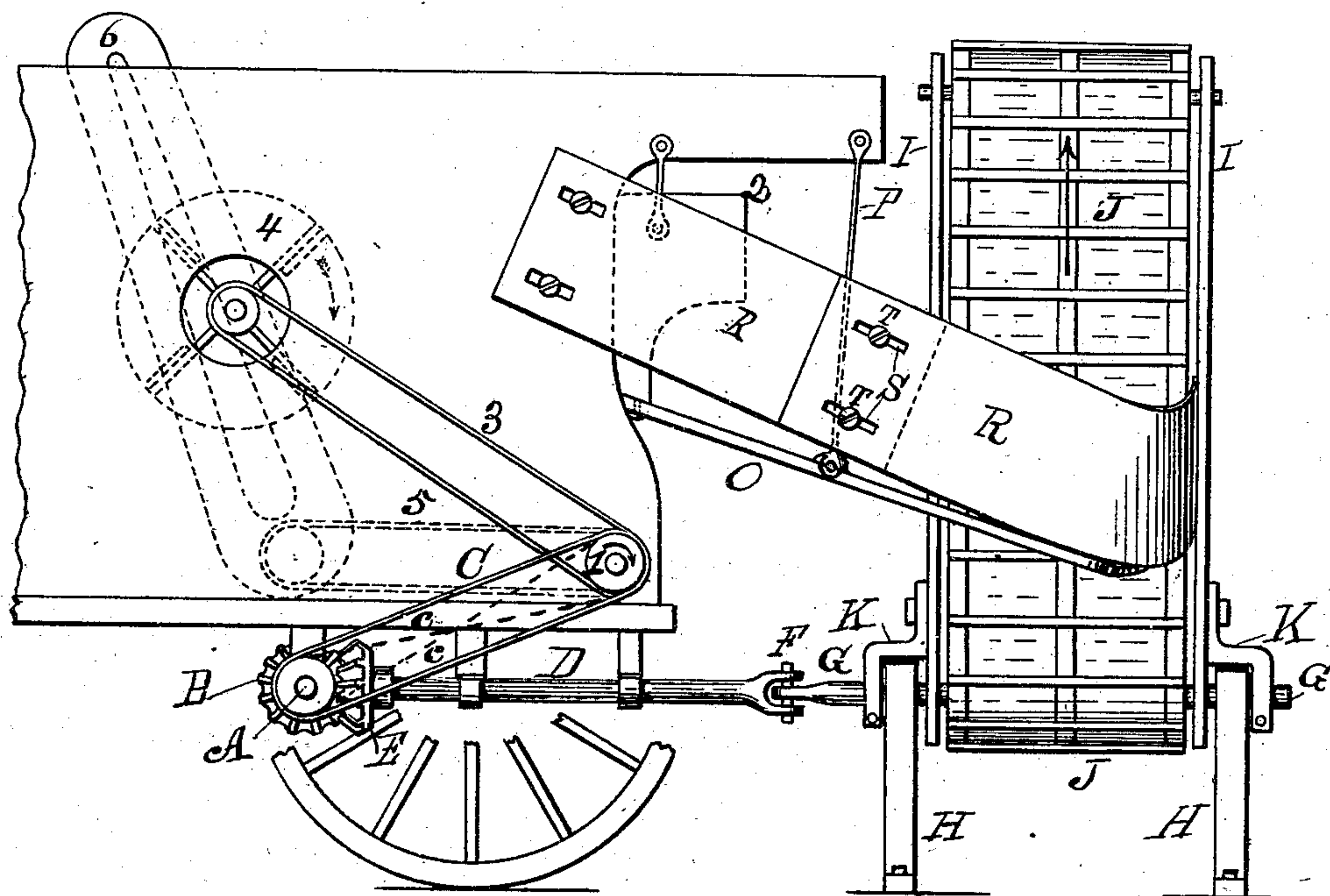
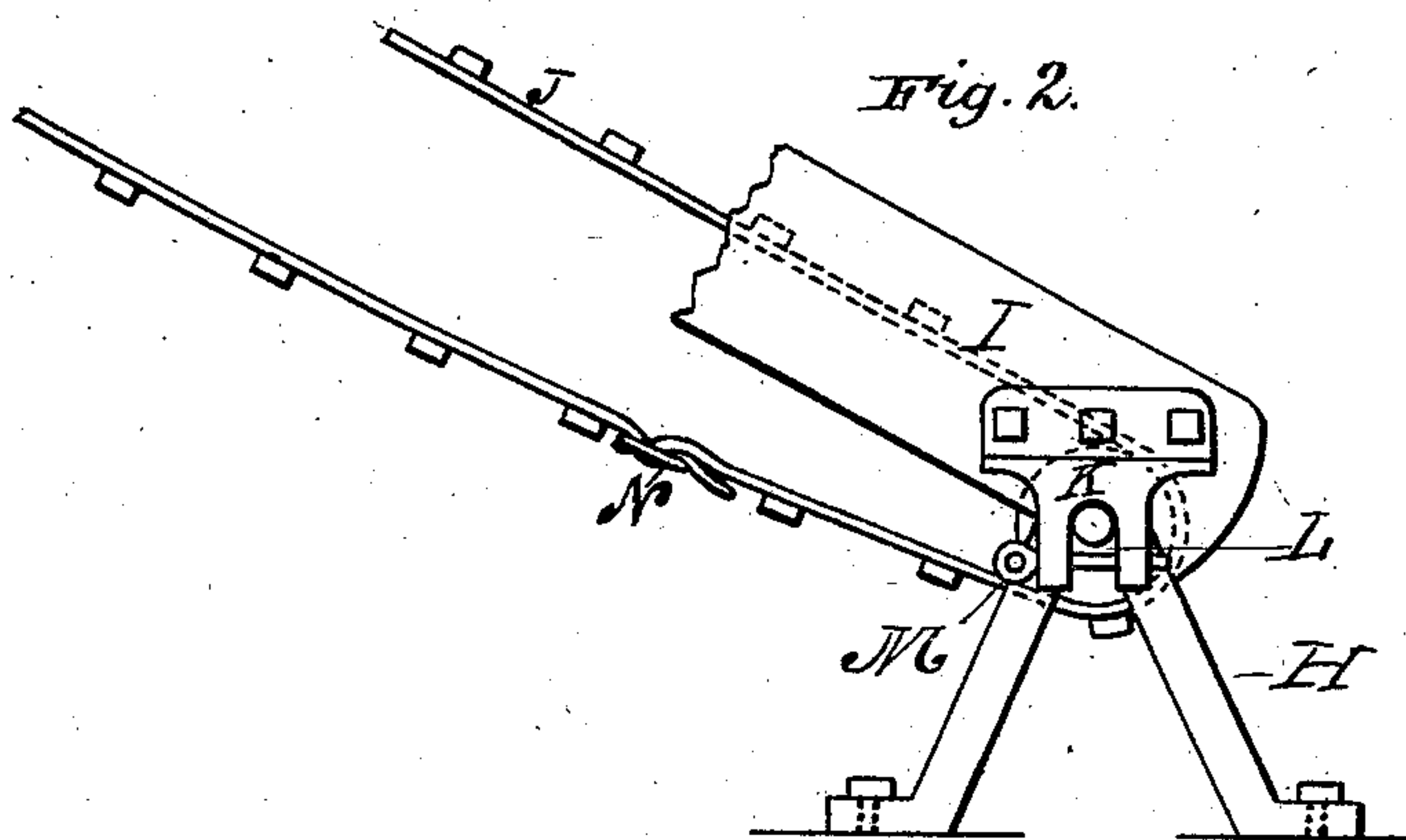


Fig. 2



Witnesses:

E. B. Stocking
Witness

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UNITED STATES PATENT OFFICE.

DAVID RANKIN, OF BOSTON, PENNSYLVANIA.

STRAW-STACKER.

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Application filed February 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, DAVID RANKIN, a citizen of the United States of America, residing at Boston, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Straw-Stackers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 represents a straw carrier or stacker connected to a thrashing-machine in accordance with my invention, and Fig. 2 is a detail.

My invention relates to certain means whereby a straw carrier or stacker is adapted to receive and deliver from any ordinary thrashing-machine the straw, chaff, and like substances, the said means being such as to permit the carrier to deliver at either side of the machine and at different points on either side, as may be desired; and my invention consists in certain devices and combinations of devices hereinafter more fully described, and specifically set forth in the claims.

At the left of Fig. 1 is shown in side elevation that portion of an ordinary thrasher which is sufficient for a clear understanding of my invention. In this figure, 1 is the usual stacker-shaft, extending across the machine under the shoe or riddle 2. The shaft 1 usually operates an ordinary straw-carrier—such as shown at the right of the figure—which is, when so operated, extended at a right angle to the shaft—that is, in line with the body of the machine—and as the shaft rotates in the direction indicated by the arrow the carrier receives the straw, &c., from the shoe and delivers it at a point in line with the machine.

A belt, 3, connecting the fan 4 to shaft 1, serves to rotate the fan in the direction indicated by the dotted arrow, and a belt, 5, connected to the opposite end of shaft 1, operates the elevator 6, as clearly indicated in dotted lines. It will be observed that in this usual arrangement and construction the shaft 1 must rotate in the direction indicated only.

The arrangement of the stacker, as shown at the right of Fig. 1, is for delivering to the left, and when delivering to the right its movement must be reversed. Hence the means of reversal must be beyond the original stacker-shaft in point of operation, because, as before shown, this shaft must rotate only in one direction.

To adapt the stacker to operate at different angles on either side of the machine, I secure beneath the machine, in any suitable manner, a secondary transverse shaft, A, and locate centrally thereon a bevel-gear, B, and operate said shaft by a belt, C, connected to the original stacker-shaft 1, when by simply crossing the belt C, as shown in dotted lines c, I am able to reverse the rotation of shaft A without changing the direction of the movement of the before-mentioned parts of the machine.

To suitable cross-beams secured to the sills of the machine are attached bearings for a longitudinal shaft, D, provided at its end with a bevel-gear, E, which meshes with the gear B. The shaft D terminates in one member of a universal coupling, F, the other member of which is connected to or forms a part of what in my arrangement is the stacker-shaft proper, as shown at G, and which is supported in line with the machine, or at desired angles to said line, by steps H H, which are provided with suitable bearings for said shaft, and are removably secured by bolts or otherwise to the ground or floor of the barn.

To the sides I of the carrier J are secured brackets K, adapted to rest upon the tops of the steps H, and provided with depending recessed lugs L, perforated to receive the pins M, which serve to retain the brackets in position. The carrier-straps are provided with buckles N, as usual.

To the bottom of the shoe 2 is rigidly secured one end of a sheet-iron or other metal bridge-plate, O, which is also suspended from the frame of the machine by rods P, (one only being shown.) This bridge-plate extends the entire width of the shoe, and serves to conduct the straw, &c., from the machine to the carrier.

To the side of the machine is secured by bolts or screws and adjustably one end of a vertical curved sectional deflector or guide, R, of

sheet-iron or other metal, the outer section of which is slotted at S S, and thus adjustably secured to the inner section by screws or bolts T T.

The operation is as follows: The stacker-shaft rotating in the direction shown causes the carrier J to operate in the direction indicated by the arrow thereon. The straw, chaff, &c., delivered by the shoe falls upon the bridge O, which partakes of the motion of the shoe, and guides the same to the carrier, the lighter portions and those more forcibly discharged and likely to be thrown beyond the carrier strike against the curved guide R and are deflected upon the carrier, and the whole is carried to desired points at the left of the machine. In order to deliver to desired points at the right of the machine, the carrier-straps are unbuckled, the pins M removed from the brackets K, and the carrier is lifted bodily from the steps and replaced thereon after having been turned to the direction opposite to that in which it pointed before, the pins returned to their places, the straps buckled, and belt C crossed, as shown at c c. The guide or deflector is attached to the opposite side of the machine, and its outer section detached from its inner section, turned over so as to bring the curved end in the right direction, and again secured by the screws T T. Thus directly-opposite points of delivery are reached. When it is desired to deliver at different points on one side of the machine no parts are disconnected, except the steps H H, which are unfastened from the floor or ground, and after the desired direction of the carrier is accomplished are again fastened, the universal joint F permitting a sufficient deviation from a straight line for

this purpose, and also serving an essential purpose in permitting the usual longitudinal vibration of the machine when in operation without disarranging the stacker-shaft G or steps H H, as would otherwise occur if the shafts D and G were rigid or continuous.

Having described my invention and its operation, what I claim as new, and desire to secure by Letters Patent, is—

1. In a thrashing-machine, the combination, with the usual stacker-shaft, 1, of the transverse shaft A, longitudinal shaft D, and stacker-shaft G, carrier-belt J, and means, substantially as shown and described, for rotating said shaft and carrier-belt in either of two opposite directions at will, as and for the purpose set forth.

2. The combination of the shafts 1, A, D, and G, belt C, gears B E, coupling F, carrier J, brackets K, and steps H, substantially as shown and described.

3. In a thrashing-machine, the combination of the shoe 2, the rigidly-attached suspended bridge-plate O, the adjustably secured sectional curved guide R, and the carrier or stacker J, substantially as shown and described.

4. The guide R, comprising two sections, the one secured adjustably to the other and curved at its outer end, in combination with a thrashing-machine and stacker, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID RANKIN.

Witnesses:

JAMES S. KERR,
JOHN J. WALKER.