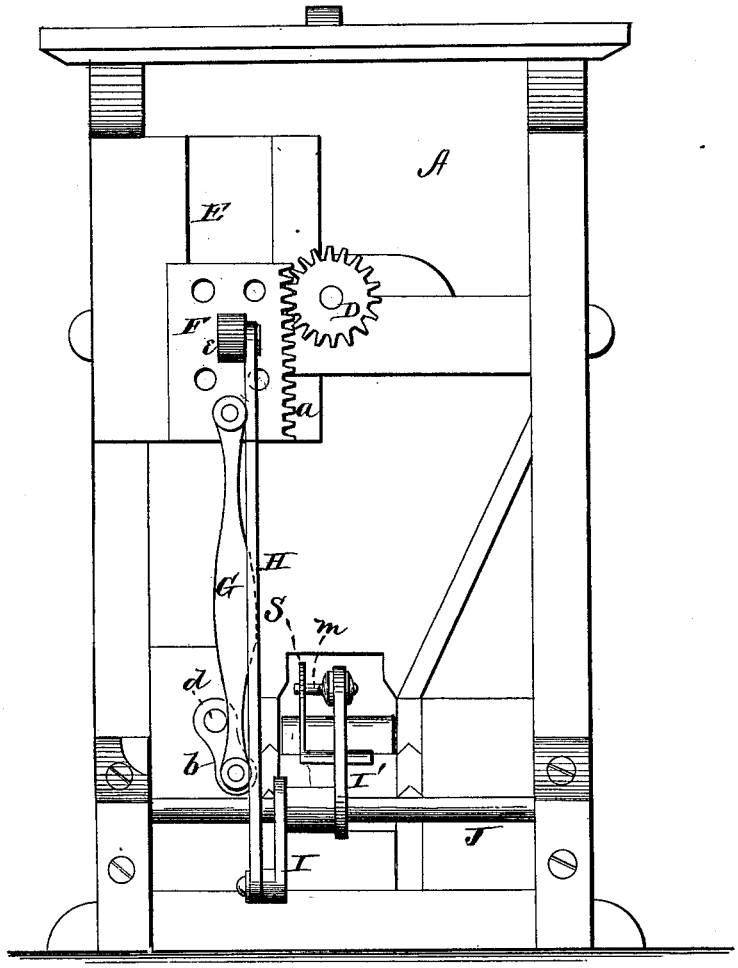
2 Sheets—Sheet 1.

F. KRUSE.

Flour and Grain Conveyers.

No. 208,613. **Patented Oct. 1, 1878.**

Fig. 1.



WITNESSES

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2 Sheets—Sheet 2.

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Flour and Grain Conveyers.

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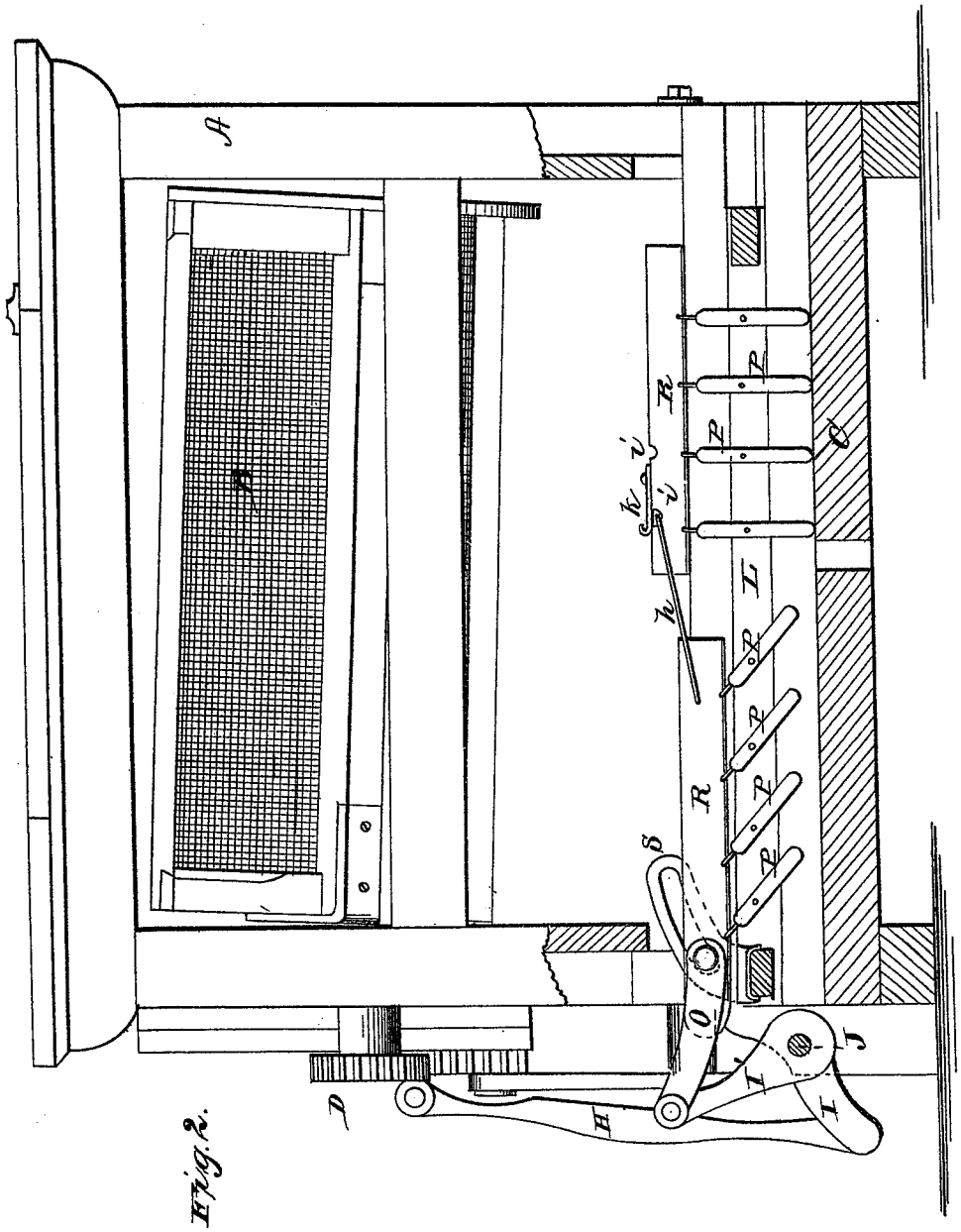

Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

FREDRICK KRUSE, OF COATSBURG, ILLINOIS.

IMPROVEMENT IN FLOUR AND GRAIN CONVEYERS.

Specification forming part of Letters Patent No. **208,613**, dated October 1, 1878; application filed March 12, 1878.

To all whom it may concern:

Be it known that I, FREDRICK KRUSE, of Coatsburg, in the county of Adams, and in the State of Illinois, have invented certain new and useful Improvements in Conveyers for Flour and Grain; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a conveyer for flour and grain, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is an end elevation of a flour-bolting machine embodying my invention. Fig. 2 is a longitudinal vertical section of the same.

A represents the frame of the machine with the oscillating bolt B, below which is the contracted hopper for carrying the flour down to the conveyer-box C.

One of the journals of the oscillating bolt B projects through the end of the frame, and is provided with a pinion, D, which meshes in a rack-bar, *a*, attached to or formed on a vertically-reciprocating slide, F. This slide moves in guides E on the frame A, and is, by a pitman, G, connected with a crank, *b*, upon the end of the continuously-rotating driving-shaft *d*. By these means the bolt B obtains an even, steady, and uniform oscillating motion.

From an ear, *e*, on the reciprocating slide F, a pivoted rod, H, connects with an arm, I, projecting from a rocking shaft, J. This shaft is provided with another arm, I′, as shown.

In the sides of the conveyer-box C are made suitable longitudinal grooves to receive a sliding frame, L. In this frame are pivoted two series of gates or paddles, P P, connected at their upper edges by bars R R—that is to say, the paddles of each series are connected by one bar R.

The two bars R R are connected by a bail, *h*, pivoted in one bar and laid in a notch, *i*, on the other bar, where it is held by a button, *k*. There are two of these notches *i*, so that the bail can be changed to make the two sets of paddles work in the same or in opposite directions, as may be desired.

One of the bars R is, by a pivoted rod, O, connected with the arm I′ of the rocking shaft J. A pin, *m*, projects from the rod O into a slotted plate, S, secured to the frame L.

As the slide F is moved up and down the shaft J obtains a rocking motion, and by this motion in one direction the paddles P are placed vertically, and as the pin *m* reaches the end of the slot in the plate S the entire frame L is moved lengthwise, causing the vertical paddles to move the flour in the conveyer-box. Then, when the shaft turns in the opposite direction, the paddles are at once turned on their pivots in a slanting position to pass over the flour, and then, by the movement of the frame, the paddles are moved back to the starting-point, when they are again turned upright and the operation repeated. In other words, the paddles have four motions—viz., forward, partially rotating, backward, and partially rotating again.

Where the flour is to be conveyed to the end of the box all the paddles work simultaneously in the same direction; but where it is to be conveyed to the center, as represented in Fig. 2, the rotating movements of the two series must be in opposite directions.

This conveyer is equally applicable for grain and middlings as for flour.

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

1. A grain or flour conveyer consisting of one or more series of paddles pivoted in a sliding frame and arranged to have the four motions, substantially as herein set forth.

2. The combination of the sliding frame L, one or more series of connected paddles, P, pivoted therein, the rocking shaft J, with arm I′, the rod O, with pin *m*, and slotted plate S, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of February, 1878.

FREDRICK KRUSE.

Witnesses:

N. L. VAN VALER,

STEPHEN WHITE.