

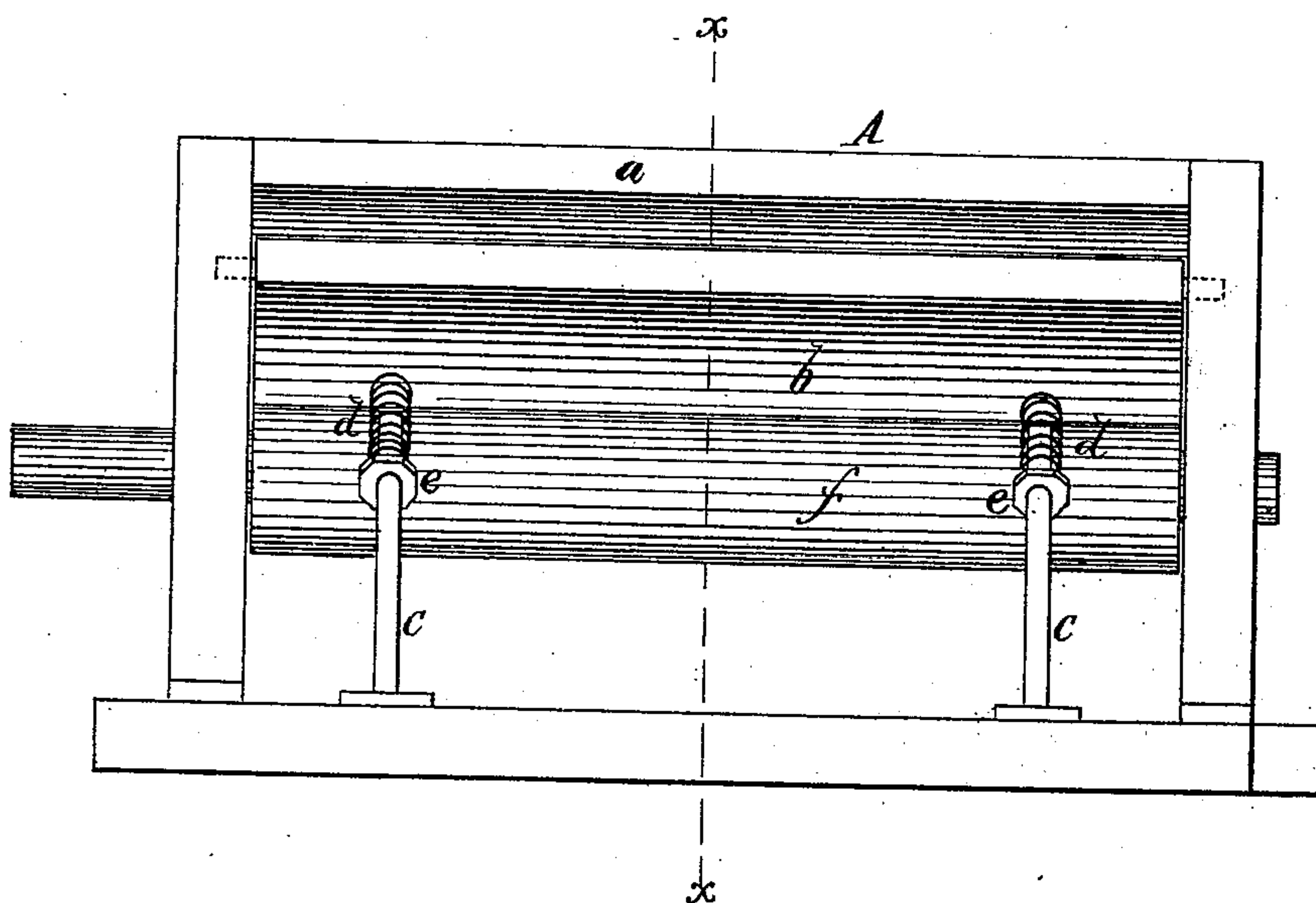
(No Model.)

J. T. COOK.  
Feeding Hopper for Middlings, &c.

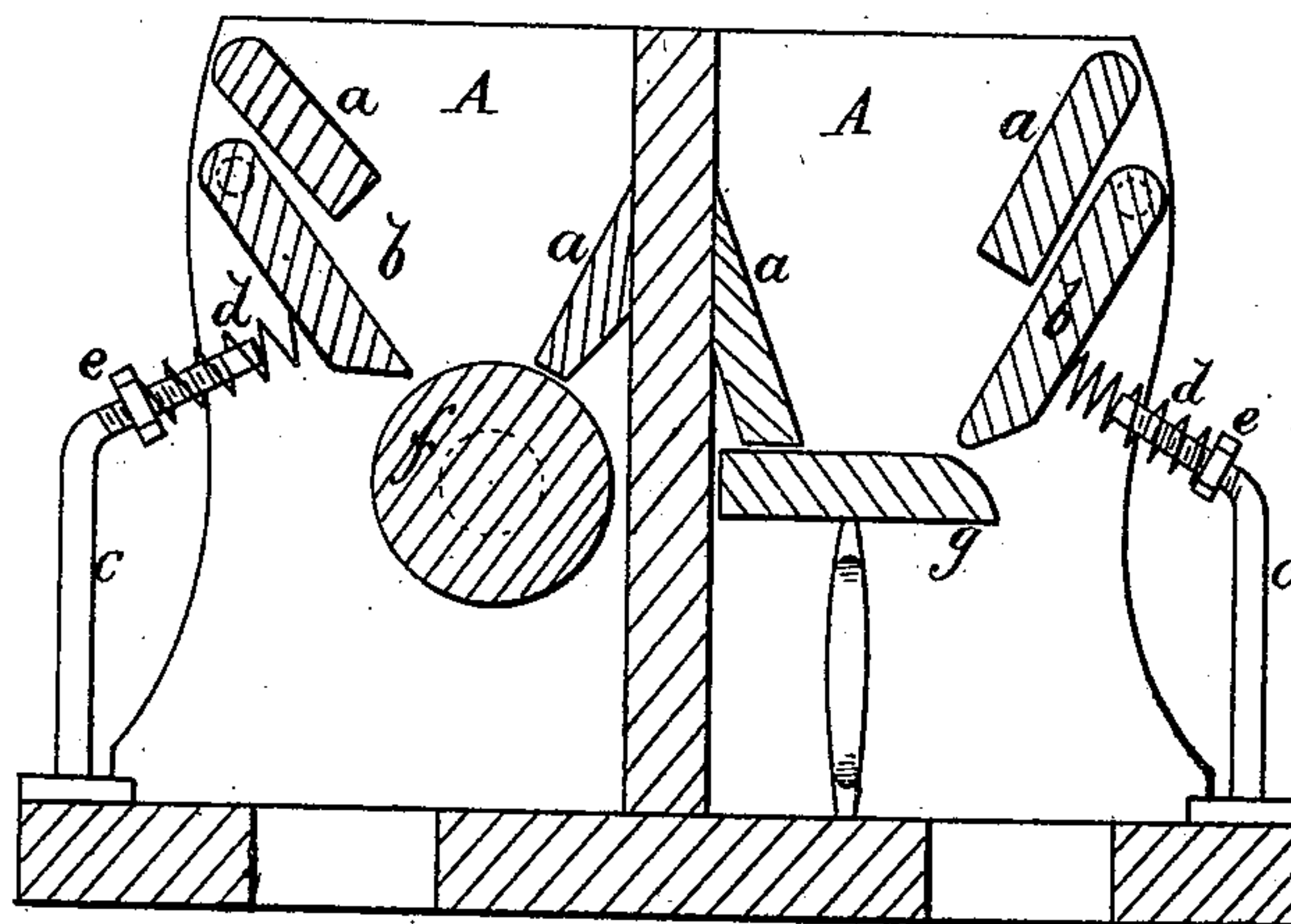
No. 231,010.

Patented Aug. 10, 1880.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

*Henry N. Miller*  
*C. Sedgwick*

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# UNITED STATES PATENT OFFICE.

JOHN T. COOK, OF JORDAN, MINNESOTA.

## FEEDING-HOPPER FOR MIDLINGS, &c.

SPECIFICATION forming part of Letters Patent No. 231,010, dated August 10, 1880.

Application filed March 30, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN T. COOK, of Jordan, in the county of Scott and State of Minnesota, have invented a new and useful Improvement in Feeding-Hoppers for Middlings, Grain, &c., of which the following is a specification.

My invention relates to an improvement in hoppers in which grain or middlings, &c., are placed to be fed to crushing-rolls, purifiers, or other milling machinery.

One side of the hopper is hinged and movable; and the invention consists in the combination, with such hinged part, of certain devices, hereinafter described, which allow it to yield to the pressure of the grain or middlings and swing outward, but restrict its movement within certain limits, so that the grain shall not discharge too rapidly.

In the accompanying drawings, Figure 1 is a side elevation of a hopper fitted with my improvement in connection with a feed-roller. Fig. 2 is a vertical transverse section of a hopper, showing a rolling feed at one side and a vibrating feed at the other side.

Similar letters of reference indicate corresponding parts.

A is the hopper, having inclined sides *a a*. *b* is the hinged feed-board. The board *b* is hinged beneath the aperture at the lower edge of one side, *a*, and extends the full length of the hopper.

Upon the base of the hopper, near each end of the board *b*, is a post, *c*, having an inclined arm that carries a spiral spring, *d*, which bears upon the board and tends to press the same upward or in a direction to close the aperture. The arm of post *c* is fitted with a nut, *e*, for

sustaining the spring *d* and adjusting the pressure.

The board *b* is above either a feed-roller, as shown at *f*, or a vibrating feed-board, as at *g*. This roller or board spreads the material evenly and carries it out from beneath the lower edge of board *b*. To facilitate the delivery the lower edge of the feed-board is beveled, as shown.

In operation the weight of material in the hopper tends to press the board *b* outward and widen the escape-aperture between the lower end of *b* and the opposite side, *a*. This tendency is counteracted more or less by the springs, *d*, according to their adjustment.

In case of accident, or if from any cause the material is supplied to the hopper in a large volume with increased pressure, the outward movement of board *b* is checked by the end of the post *c*, which acts as a stop to prevent the board moving beyond a certain point.

I disclaim the invention of a hopper provided with a hinged yielding side supported by spring-pressure.

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

In combination with a moving feeding device and the hinged side *b* of the hopper, the bent post *c*, which serves as a stop, the spring *d*, encircling the upper end of the post and supporting side *b* with yielding pressure, and the nut *e*, for adjusting the tension and pressure of the spring, all as shown and described.

JOHN THOMAS COOK.

Witnesses:

JAMES W. FOSS,  
RUFUS P. WELLS.