

UNITED STATES PATENT OFFICE.

SILAS B. KENWORTHY AND JACOB R. VANMETER, OF VAN METRE, IOWA;
SAID KENWORTHY ASSIGNOR TO SAID VANMETER.

IMPROVEMENT IN FEED-REGULATORS FOR MILLS.

Specification forming part of Letters Patent No. 161,885, dated April 13, 1875; application filed
February 15, 1875.

To all whom it may concern:

Be it known that we, SILAS B. KENWORTHY and JACOB R. VANMETER, of Van Metre, in the county of Dallas and State of Iowa, have invented a Flour-Feeding Apparatus, of which the following is a specification:

The object of our invention is to provide a means of preventing flour from packing and clogging during conveyance, and to feed it automatically and uniformly through a valve.

It consists in a covered opening or valve in the base of the conduit or vessel from which the flour passes, and two rotating fingers or scrapers to stir and direct the flour through the valve, all as hereinafter fully set forth.

Our drawing is a perspective view, illustrating the construction and operation of our feeding-apparatus.

A represents a hopper, vessel, or tubular conduit, from which or through which the flour is to be conveyed. The broken lines indicate a bend in the tube, to form a rest for the flour and prevent its direct pressure upon the closed base and its valve. B is a frame to support the tube or vessel A and the feeding-mechanism. C is a cover on the top of the frame B, and forms the base or bottom of the tube A. *a* is a slot in the base A, running from the center toward the circumference. *b* is a cover, rigidly fixed over the slot or valve *a* in such a manner as to allow one of the feeding-fingers to pass underneath. *d d* is a vertical shaft, supported by suitable bearings attached to the frame B, and extends up through the center of the base C. No. 1 is a

short curved finger or scraper, rigidly attached to the top of the shaft *d* in such a manner that it will rotate and stir and push the flour from the central portion of the base C and carry it to the valve *a*, through which it will drop. This short scraper extends about half-way from the center to the circumference, and passes underneath the valve-cover *b*. No. 2 is a curved finger or scraper fixed on the top of No. 1, and passes over the valve-cover *b* and extends to the circumference of the base C, and stirs, loosens, and directs the flour toward the valve or slot *a*. *g* is a slide fixed in a suitable groove or bearings, to open or close the slot or valve *a*, and to regulate the passage of the flour. *h* is a belt-pulley, rigidly fixed on the shaft *d*. By passing a belt over the pulley and connecting it with the driving-mechanism of a mill or other suitable machinery the shaft *d*, carrying the scrapers Nos. 1 and 2, will rotate and operate the scrapers to cause them to feed the flour through the slot *a*, to be received in a suitable receptacle or conveyed away, as may be desired.

We claim as our invention—

The fingers or scrapers Nos. 1 and 2 on the rotating shaft *d*, the bottom or base C, having a slot, *a*, slot-cover *b*, and valve *g*, when combined and operated substantially as and for the purposes shown and described.

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Witnesses:

O. W. KENWORTHY.
LEANDER THORNTON.