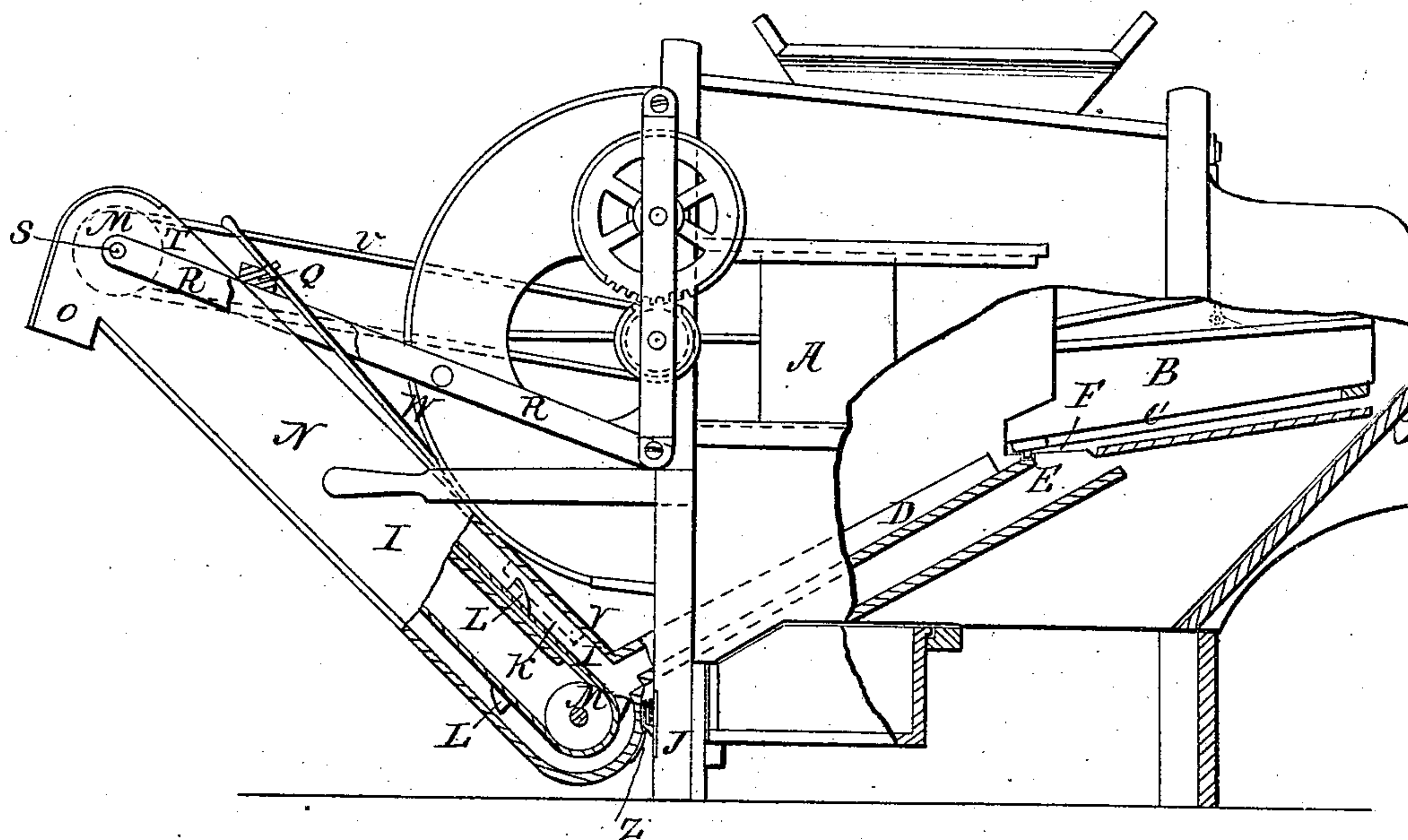


J. J. BRADNER.  
Grain Winnower.

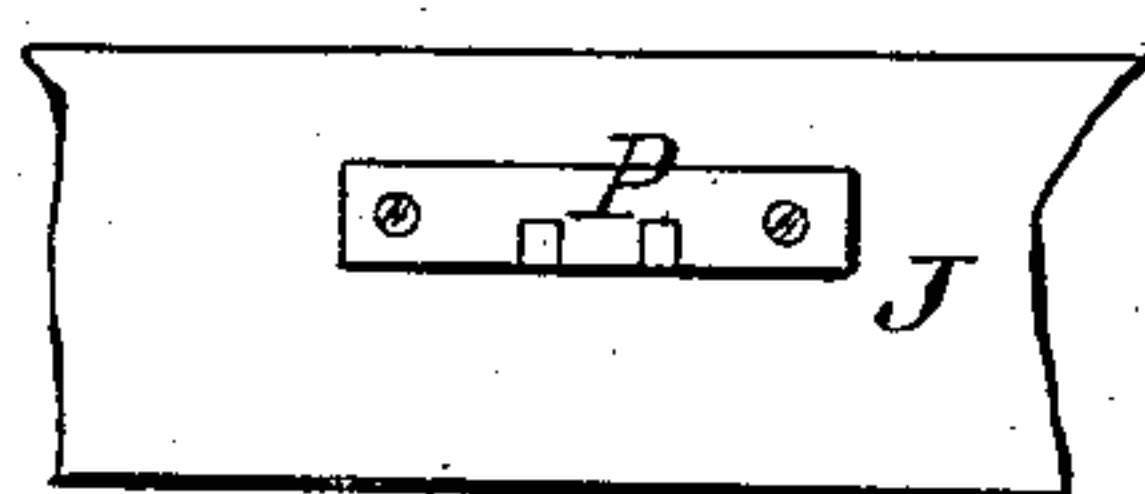
No. 67,260.

Patented July 30, 1867.

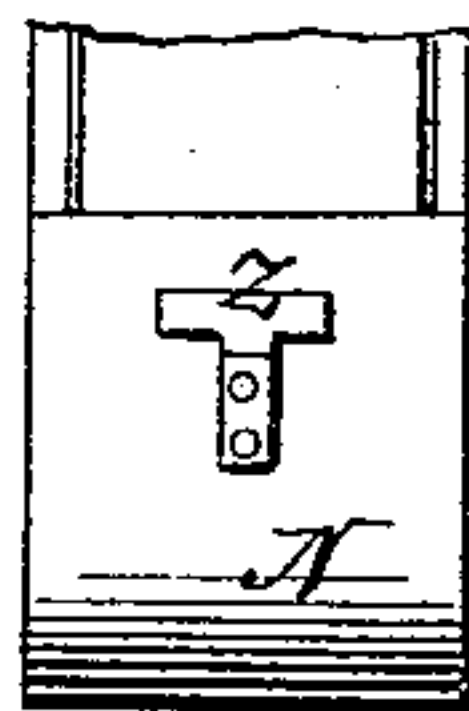
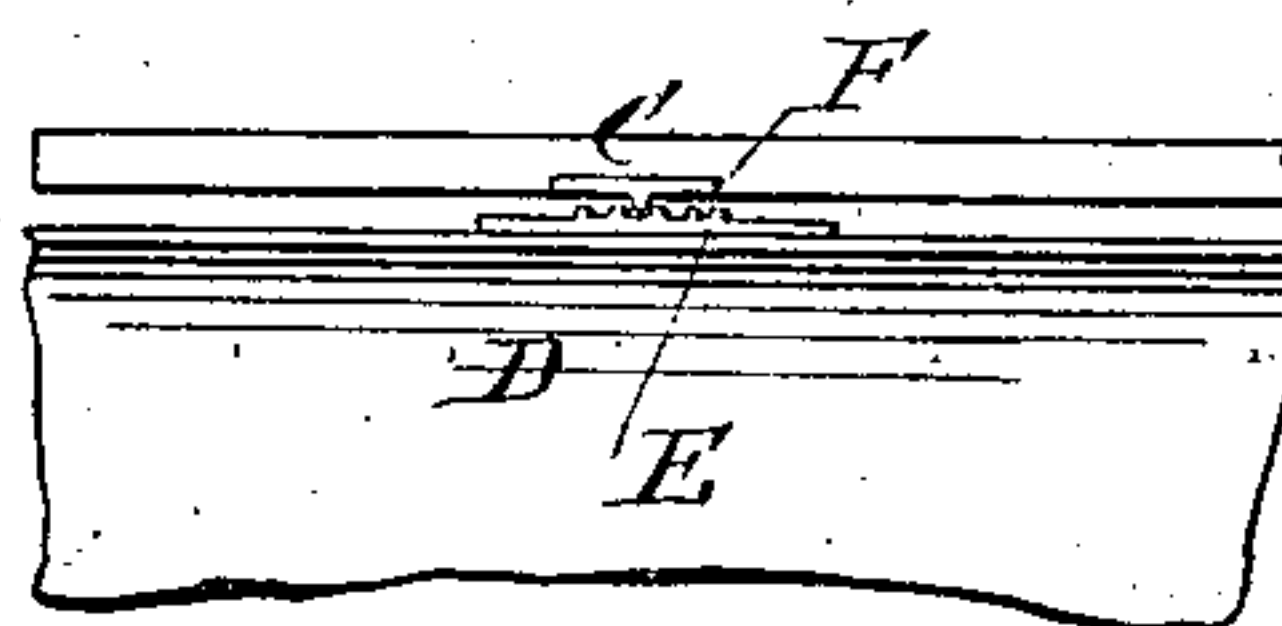
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



*Fig: 4.*

Witnesses.  
Theo. Tuschel,  
J. A. Service.

Inventor  
John J. Bradner

# United States Patent Office.

JOHN J. BRADNER, OF PINE CREEK, NEW YORK.

*Letters Patent No. 67,260, dated July 30, 1867.*

## FANNING-MILL.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN J. BRADNER, of Pine Creek, in the county of Schuyler, and State of New York, have invented new and useful improvements in "Fanning-Mills for Grain;" and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention consists, first, in hanging the screen of the mill, which screens the grain just previous to its discharge therefrom, in such a manner that, in combination with the lateral or side motion given to the same, its lower end will be raised and lowered with a hopping movement, whereby the screen is prevented from becoming "blocked" or clogged with the grain passing over it; by hanging the screen as above described, the clogging of the conductor for the grain from the screens of the mill is also obviated, as it causes a sufficient jar or spring to be given to it, to always cause the grain to move downward; and, second, in the attachment to the fanning-mill, at the end where its conductor or spout discharges the grain therefrom, of an elevator, in the form of an endless carrying-belt or apron, which attachment, in its connection to the mill and its construction of parts, is extremely novel and simple, and most effective and practical in operation; the elevator being provided for the charging of bags or sacks with the grain as it comes from the mill. In the accompanying plate of drawings, my improvements in fanning-mills for grain are illustrated—

Figure 1 being an elevation or view of one side of the mill broken out in parts where it is shown in vertical section, and

Figures 2, 3, and 4, detail views of portions of the mill to be hereinafter more particularly referred to.

Similar letters of reference indicate like parts.

A, in the drawings, represents a fanning-mill for grain, which, except so far as the present invention extends, may be of any of the ordinary constructions and forms, therefore needing no detail description herein. B being the frame carrying the screens for screening the grain, of which screens C is the lower, over which the grain passes to the conductor or spout D for discharging the grain from the mill. The frame B carrying the screens has a swaying lateral or side motion given to it, as in the common fanning-mills. The conductor B is fixed in position within the mill, and over its upper end the screen C slides, as it is carried from side to side by the movement of its frame B. E, a toothed or serrated rack secured to upper end of conductor D; and F, a stud or spur on under side of screen C, at a suitable point to move over the toothed rack E as the screen is carried from side to side, as above described, whereby a jarring or shaking or hopping motion is given to the screen, sufficient to obviate all possibility of the grain upon it becoming clogged or blocked in its passage to the conductor. This hopping motion to the screen C, resting upon the conductor D, also serves to impart a springing or shaking motion to the conductor, and consequently acts to prevent that also from becoming clogged by the grain. I, the elevator attachment to the fanning-mill, which is secured to that end J of the same where the spout or conductor D discharges the grain from the mill. This elevator attachment consists of an endless travelling-belt or apron, K, provided with cross-buckets L at various points of its length. This belt K is hung, at each end, upon rollers M, at two ends of a casing or boxing, N, of suitable shape to receive and allow the belt to work; one end of this casing being provided with or terminating in a mouth-piece, O, of suitable shape to allow a bag or sack to be hung to it, so that the grain, as it discharges therefrom, can pass into such bag or sack. The casing N, at its lower end, is hung by a hook to and upon a two-pronged staple, P, fixed to the outside of the fan-mill, at a point suitable for bringing the end of the carrying-belt at such end of the casing in proper position for the grain, as it falls from the conductor or spout D, to enter the said casing and be therein carried up by the buckets of the belt as they, in regular order and succession, pass around. For sustaining or supporting the upper end of the elevator attachment I, it is secured to a cross-beam, Q, that, at each end, is supported upon the inclined side arms or beams R secured to the sides of the casing to the fan-mill, and projecting therefrom; the outer ends of such side arms carrying the horizontal spindle or shaft S, on which is secured the upper roller for the endless apron. T, a pulley on one end of shaft S, by which such shaft, through a belt, U, is connected with the driving mechanism of the mill. V, a slide arranged on casing to endless apron in proper position for being slid upon the same, to open and close the passage from the conductor of the mill to the elevator attachment; this slide being provided with a handle or stem, W, for convenience in operating it.



From the description of the manner in which the elevator is attached to the mill, it is plain to be seen that to remove or detach it therefrom, it is only necessary to unfasten the side bars, by which its cross-piece is supported, when, unhooking its hook from its staple, the attachment is released. And furthermore, the mode of attachment is simple and practical, and is such as to relieve the shaft S, for working the endless apron, of all strain upon it, the weight of the elevator attachment being sustained by the side bars.

What I claim as new, and desire to secure by Letters Patent, is—

The toothed rack E and the stud F, or their respective equivalents, attached to the conductor and screen of a fanning-mill, substantially as and for the purpose described.

JOHN J. BRADNER.

Witnesses:

WM. F. McNAMARA,

ALEX. F. ROBERTS.