P. EVANS.
Grinding-Mills.

No. 143,816. Patented Oct. 21, 1873.

Fig. 1

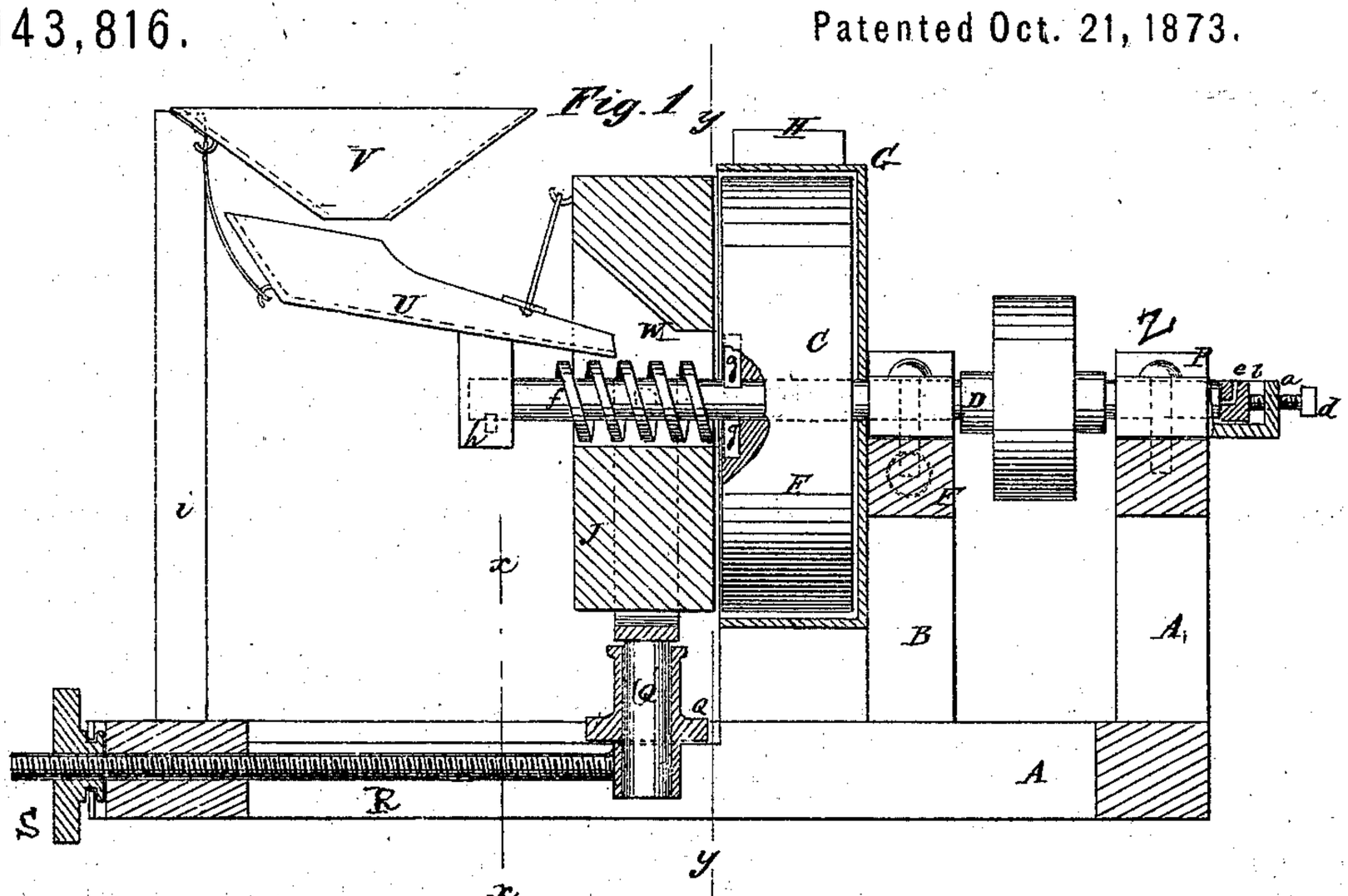


Fig. 2

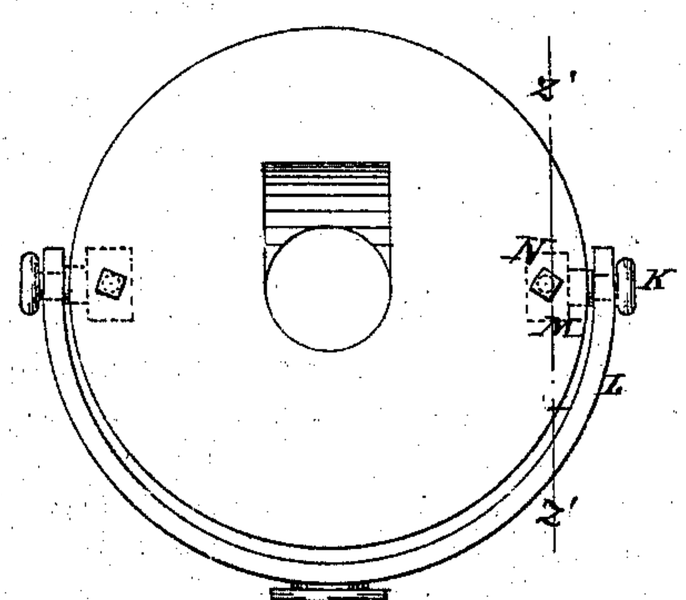
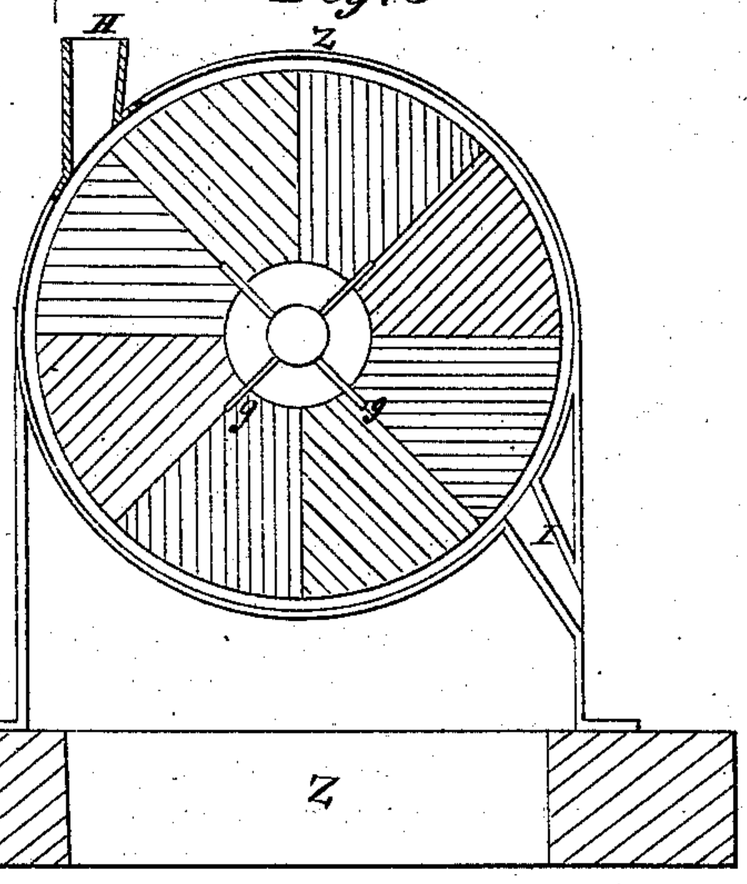


Fig. 3



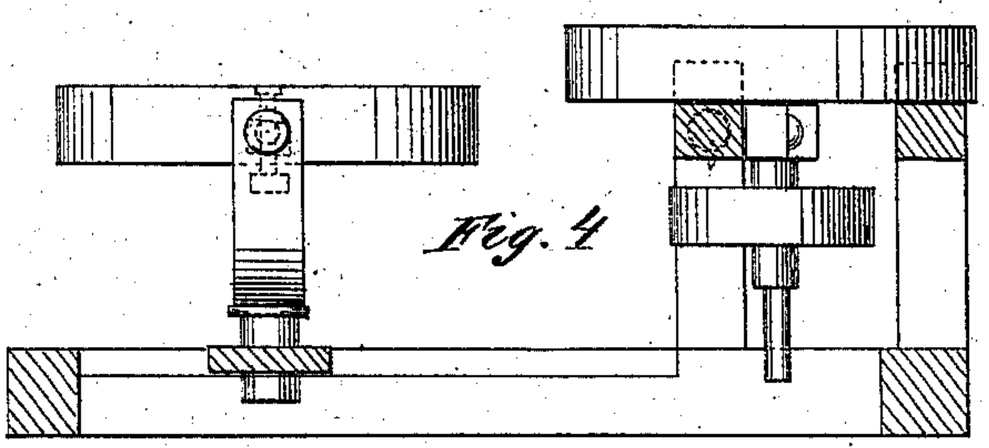
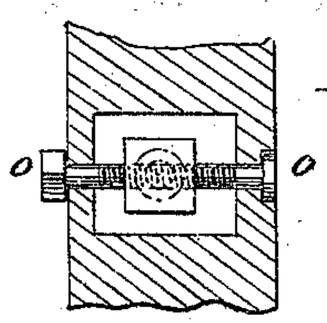


Fig. 4

Fig. 5



Witnesses:

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UNITED STATES PATENT OFFICE.

PRICE EVANS, OF NEW YORK, N. Y.

IMPROVEMENT IN GRINDING-MILLS.

Specification forming part of Letters Patent No. **143,816**, dated October 21, 1873; application filed August 4, 1873.

To all whom it may concern:

Be it known that I, PRICE EVANS, of the city, county, and State of New York, have invented a new and Improved Grinding-Mill, of which the following is a specification:

The object of my invention is to construct a mill for grinding grain and the like which can be cheaply made, and operated by a simple arrangement of driving machinery.

The invention will be first fully described, and then clearly pointed out in the claim.

Figure 1 is a longitudinal sectional elevation of my improved grinding-mill, taken on the line *z z* of Fig. 3. Fig. 2 is a section on the line *x x* of Fig. 1. Fig. 3 is a sectional elevation on the line *y y* of Fig. 1. Fig. 4 is a side elevation of the mill when the stones are adjusted for dressing, and Fig. 5 is a section of Fig. 2 on the line *z' z'* of Fig. 2.

Similar letters of reference indicate corresponding parts.

A represents a rectangular bed-frame or platform of any suitable kind, on which is an upright frame near one end, consisting of two "bents," B C, as the simplest form, on the bridge-trees of which is a horizontal shaft, D, carrying the running stone E, which overhangs the bridge-tree F, and runs in a case, G, in the upper part of which is a spout, H, for the escape of hot air, and in the lower part is a spout, I, for the escape of the meal. In front of the runner E is the stationary stone J, standing face to face with it. Said stone J is pivoted at its horizontal axis by trunnions K, supported in the arms of the crotched standard L, and said trunnions are connected to blocks M in the slots N of the stone, and provided with adjusting-screws O, by which they can be shifted forward and back to balance the stone. The crotched standard is capable of turning horizontally on the vertical axis Q', which, together with the trunnions K, constitutes a universal joint, on which the bed-stone accommodates itself to the runner. The standard L is arranged on a base, Q, which is arranged on the frame A so as to slide toward and from the runner, and is provided with the adjusting-screw R and hand-nut S for setting the stone to regulate the grinding; also, to move the stone backward away from the runner, so that it can be turned face upward, as in Fig. 4, for dressing it. U is the feed-shoe under the hopper V. It delivers the grain into the eye of the stationary stone, in which there is a projection, *f*, of the shaft, with a coarse spiral screw-thread or worm, which conveys the grain to the runner, where it is met by the radiating distributing-plates *g* on the runner, which work it along between the stones and distribute it equally. The shoe is agitated by a tappet, *h*, on the shaft.

It will be seen that the construction is very simple and cheap, and that these mills can be geared by a direct belt from the driving-shaft on the pulley upon the shaft D in the most simple manner.

One essential advantage of this arrangement over the common mills is, that the spindle or shaft of the runner has not to support the weight of the stone on its end or step, but only the necessary pressure for grinding.

The hopper-supports *i* are made removable, so as to be taken out of the way when the stones are to be dressed.

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

A fixed stone, J, combined with a standard, L, as described, the former turning vertically in and horizontally with the latter.

PRICE EVANS.

Witnesses:

T. B. MOSHER,

C. SEDGWICK.