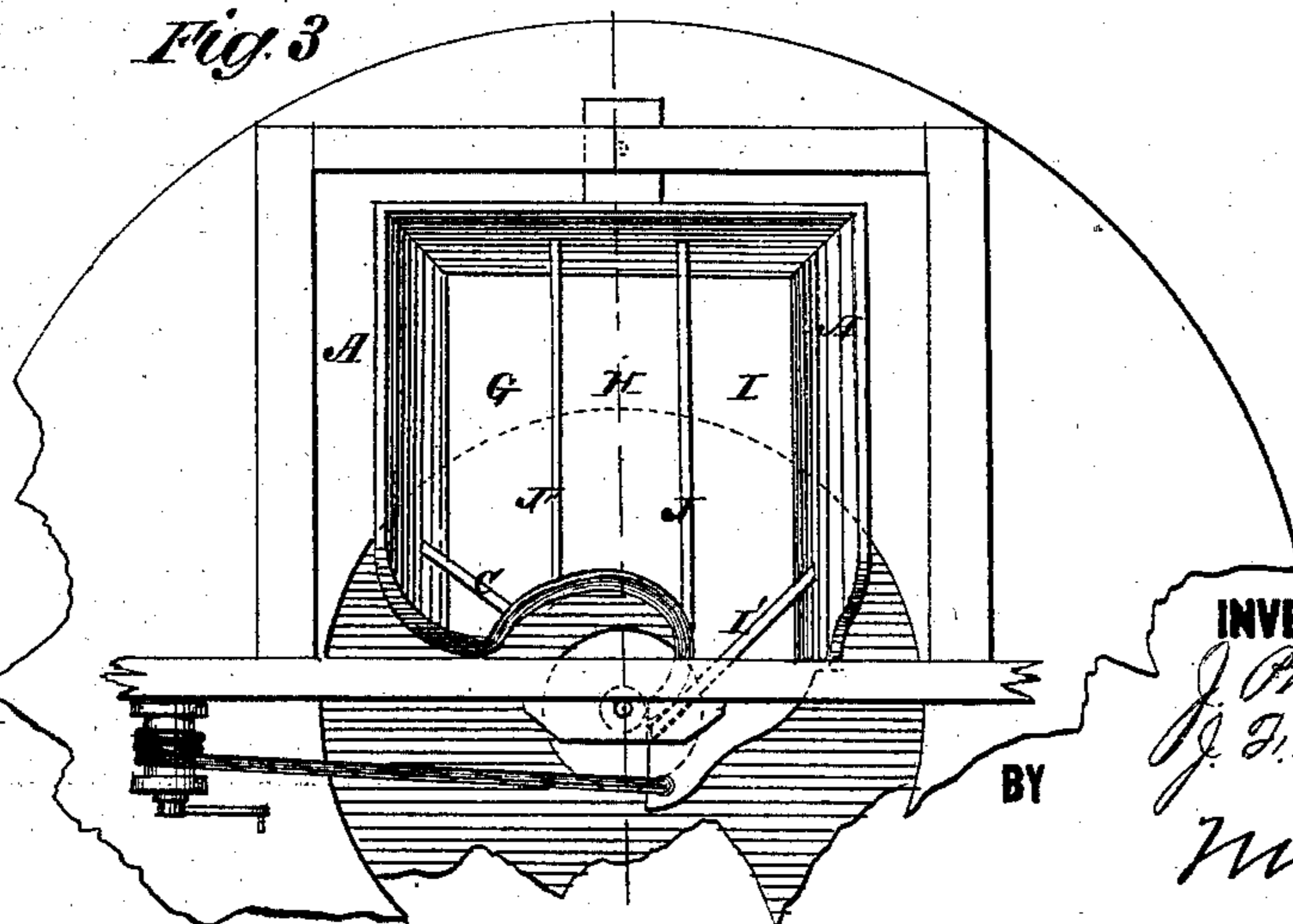
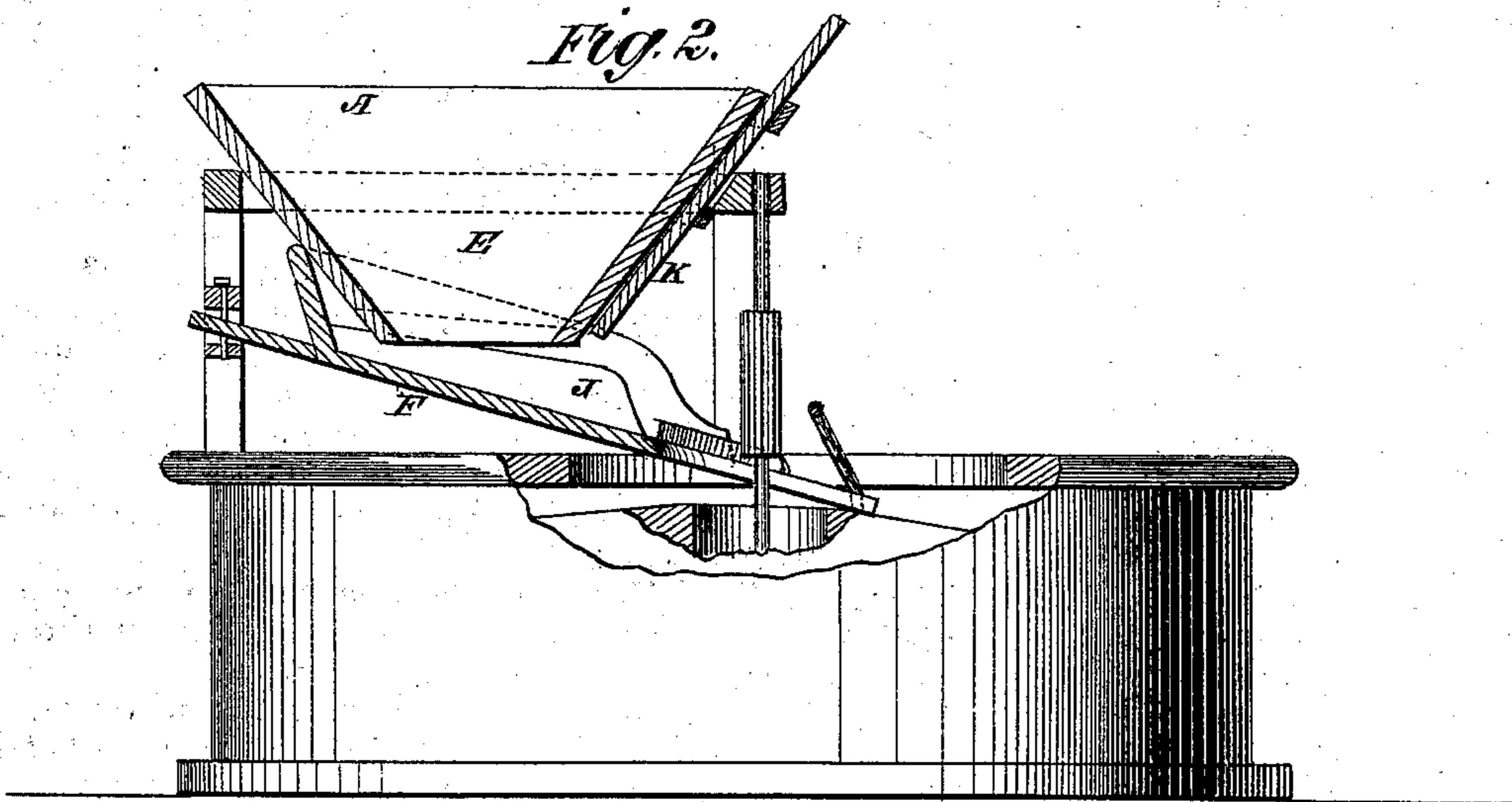
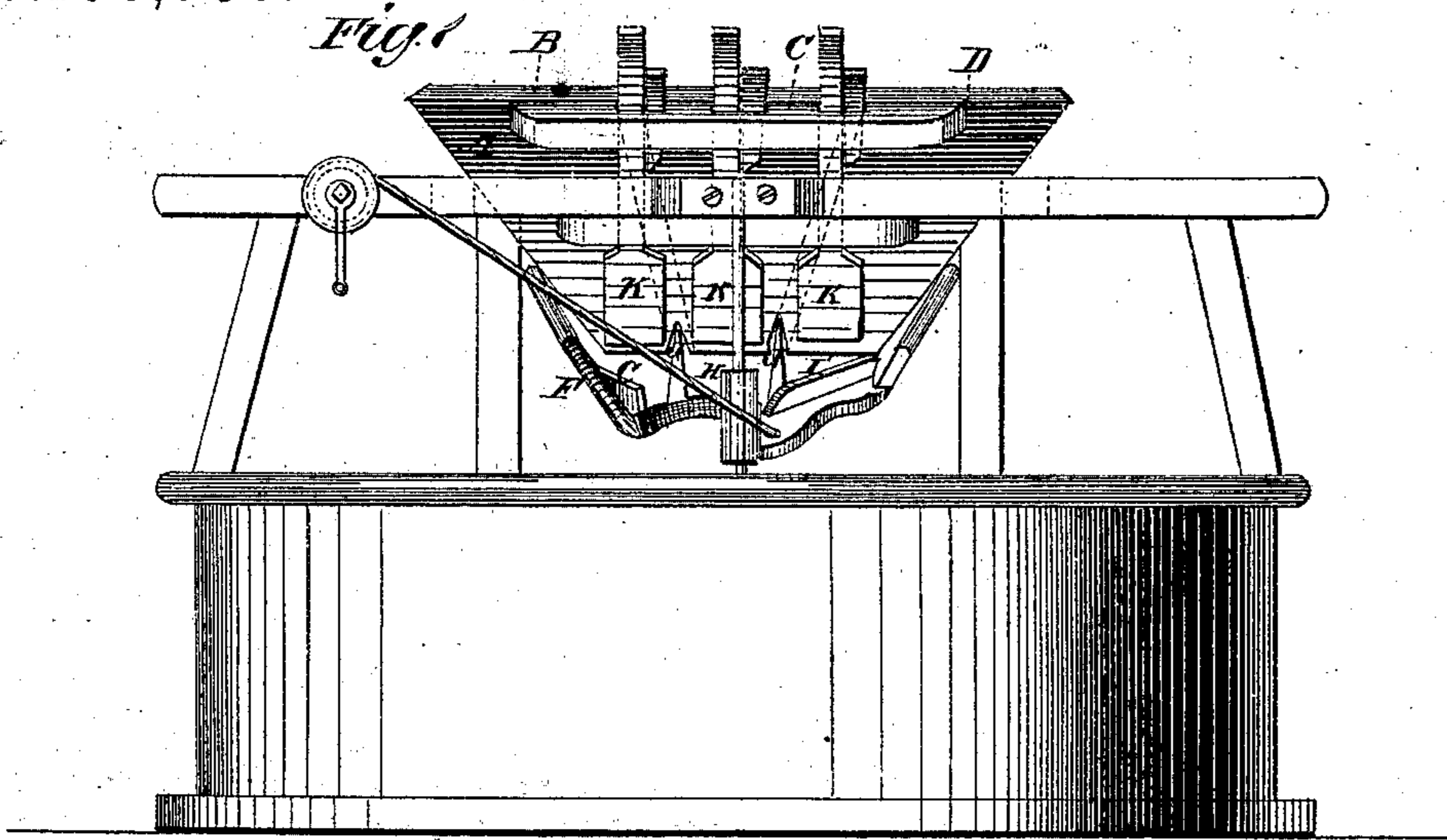


J. PHILLIPS & J. F. BRADFORD.

Feeders for Grinding-Mills.

No. 150,786.

Patented May 12, 1874.



WITNESSES:
F. McArdle
Chiquet

INVENTOR:
J. Phillips
J. F. Bradford
BY
Wm. L.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN PHILLIPS AND JOHN F. BRADFORD, OF SCRANTON, PENNSYLVANIA.

IMPROVEMENT IN FEEDERS FOR GRINDING-MILLS.

Specification forming part of Letters Patent No. **150,786**, dated May 12, 1874; application filed April 18, 1874.

To all whom it may concern:

Be it known that we, JOHN PHILLIPS and JOHN F. BRADFORD, of Scranton, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Feeder for Grinding-Mills, of which the following is a specification:

Our invention consists of a hopper of two or more compartments, and a feed-shoe, with a special compartment and regulating-gate for each compartment of the hopper, all so arranged that two or more different kinds of grain, meal, or other material may be fed separately from different compartments into the stones at the same time, the object being to mix different kinds of grain or other substances more regularly and with less labor than they can be in the ordinary way of first mixing them and then feeding them together; and they also feed more regularly in this way than when mixed first, because the shaking and jarring of the hopper and the motion of the flowing stream all tend to settle the smaller and heavier particles to the bottom, while the lighter and larger work to the top, so that different kinds of grain of different specific gravity feeding together will gradually increase or lessen the feed, and clog the mill, or cause it to run too light, either of which is very injurious to the mill, and requires constant care and attendance.

Figure 1 is a front elevation of a mill contrived according to our invention. Fig. 2 is a sectional elevation, and Fig. 3 is a plan view.

Similar letters of reference indicate corresponding parts.

A is the hopper, having three separate compartments, B, C, and D, divided by partitions E. F is the shoe, which has corresponding compartments G H I, divided by partitions J, but all discharging into the eye of the stone, and each one arranged to receive from one of the compartments of the hopper, and also having a special regulating-gate, K. Thus the different kinds of grain may be fed separately and mixed in the feeding, and by adjusting the regulating-gates they can be mixed in any required proportions without any special labor for mixing, whereby the labor of mixing them together by hand on a floor, as in the common way, is saved.

The apparatus may be used for feeding one kind only, as well as any other, either through one or all of the compartments.

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

The combination of the hopper and shoe of a grinding-mill, having two or more compartments, and a special regulating-gate for each compartment for feeding and mixing two or more kinds of grain, in the manner described.

JOHN PHILLIPS.
JOHN F. BRADFORD.

Witnesses:

I. T. KEENE,
CHAS. S. FOWLER.