

I. B. LEWIS.

Improvement in Flour Bolts.

No. 125,819.

Patented April 16, 1872.

Fig. 1

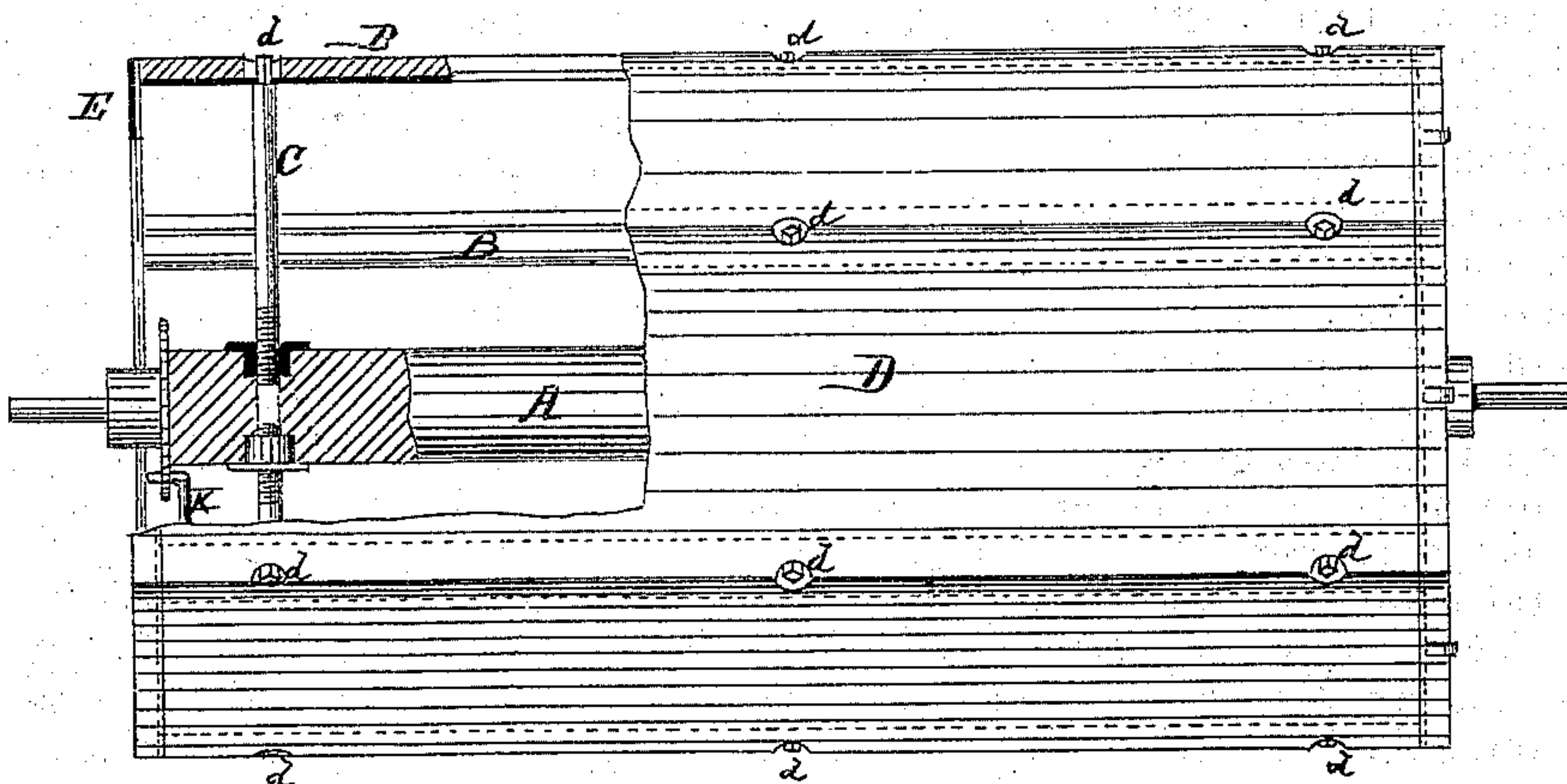


Fig. 2

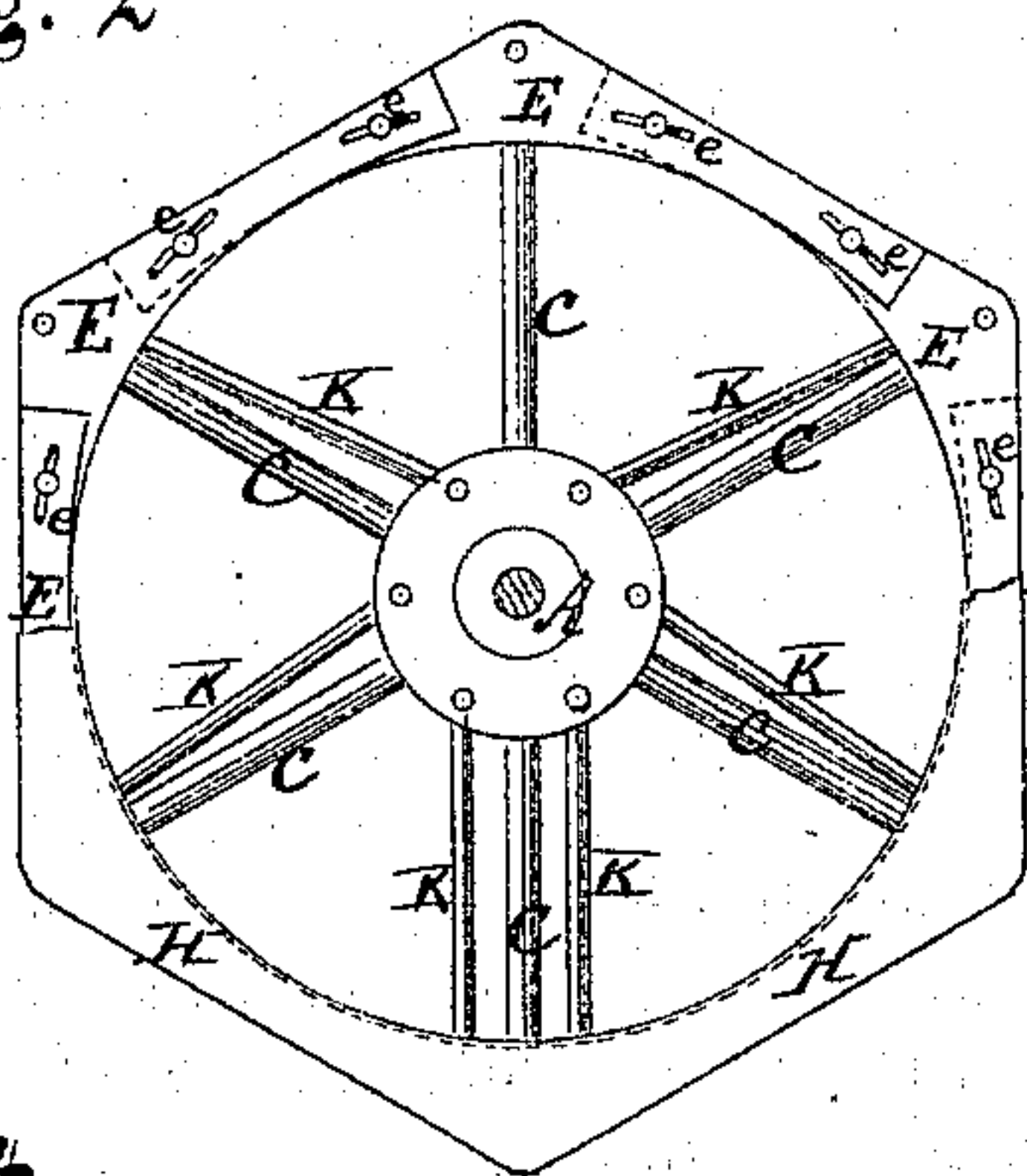


Fig. 3

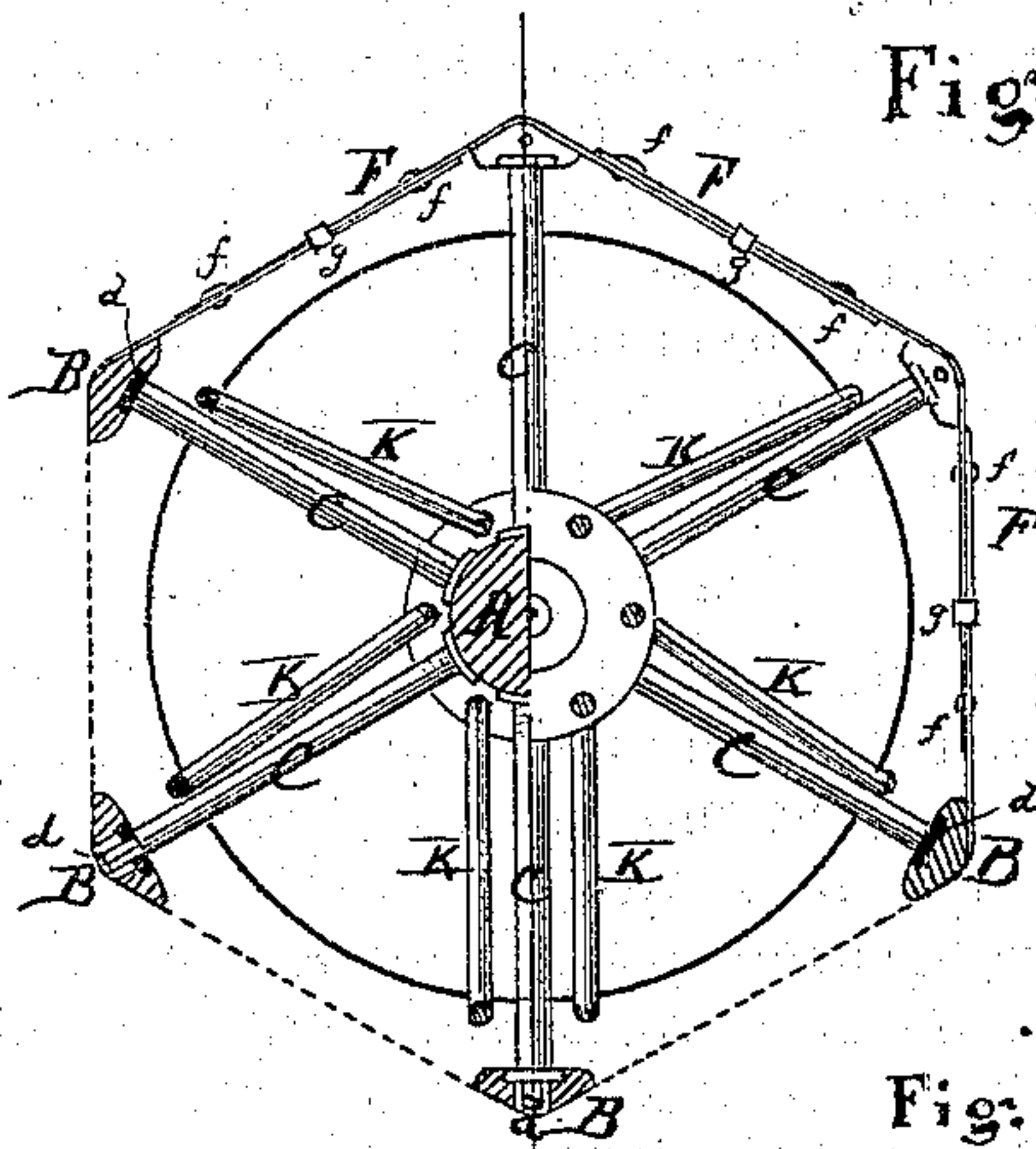


Fig. 4

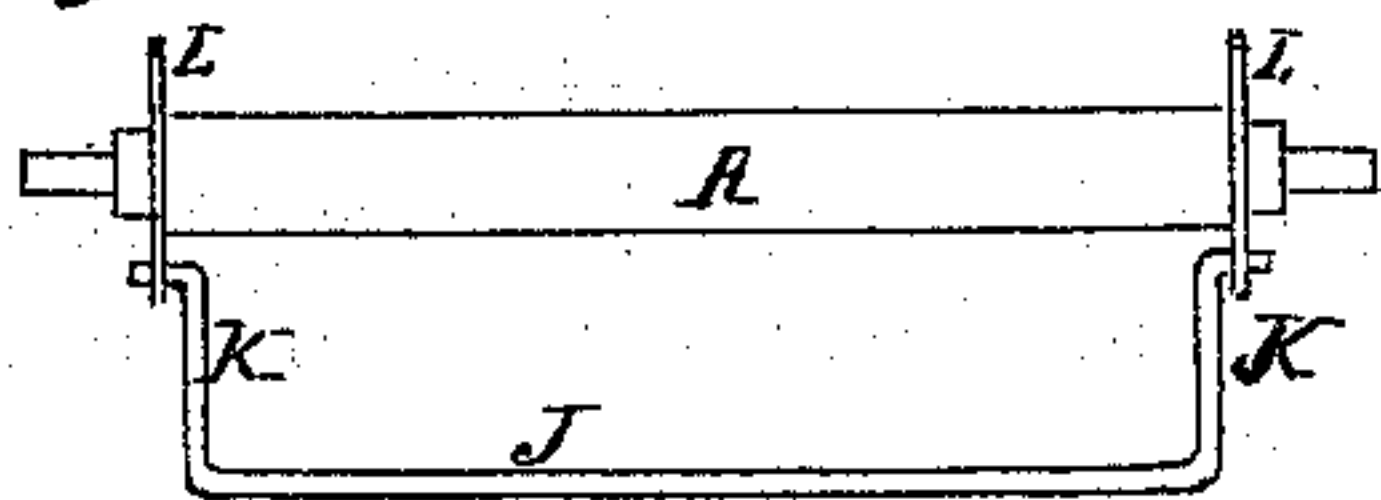
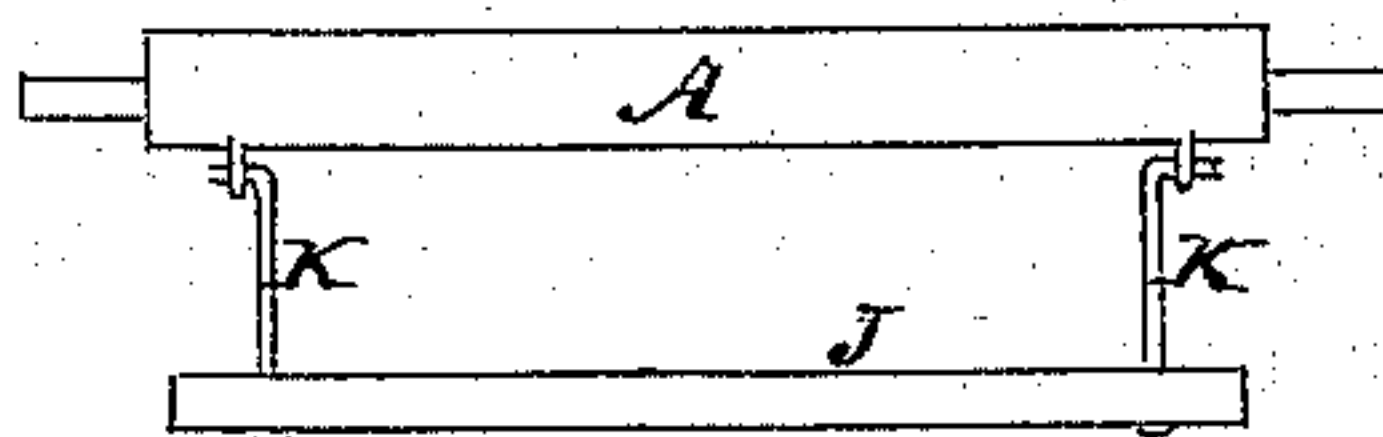


Fig. 5



Witnesses:

Julius Wilcox
Phelps

Inventor:

Ira B. Lewis
by *Thos. S. Spague*
Atty.

UNITED STATES PATENT OFFICE.

IRA B. LEWIS, OF BELVIDERE, ILLINOIS.

IMPROVEMENT IN FLOUR-BOLTS.

Specification forming part of Letters Patent No. 125,819, dated April 16, 1872; antedated April 6, 1872.

SPECIFICATION.

To whom it may concern:

Be it known that I, IRA B. LEWIS, of Belvidere, in the county of Boone and State of Illinois, have invented certain Improvements in Flour-Bolts; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which, together with the letters and figures marked thereon, forms part of this specification, and in which—

Figure 1 is a side elevation of a flour-bolt constructed after my invention, part of the exterior being broken away, and a portion of the central shaft and frame being shown in section. Fig. 2 is an end view of the same, with the bolting-cloth removed from the upper portion, exhibiting the expansible frame. Fig. 3 is also an end view of a modified structure, partly in section. Figs. 4 and 5, upon a smaller scale, are views of the two ways of hanging the beaters or knockers to the shaft.

Like letters of reference made use of in the several figures indicate like parts.

To enable those skilled in the art to make and use my invention, I will proceed to describe the same with particularity, making use, in so doing, of the aforesaid drawing.

General Description.

The central shaft A of the bolting-reel is constructed, in the usual manner, with a bearing, *a*, at each end, so that the whole may be suspended in a proper frame-work and be properly geared to work by power. Longitudinal strips or bars B are supported at equal distances from and upon several sides of the shaft by radial arms C. These radial arms penetrate the body of the shaft with a screw-thread, and project, also, through the bars B with a squared extremity or nut, *d*, squared to afford hold for a wrench. The bolting-web or cloth D is stretched outside of the bars B, surrounding the entire reel. Holes are, however, cut through it, so that access may be had to the bolt-heads *d*. Extending from bar to bar across the end of the reel, at each end thereof, is the series of overlapping plates E, bolted to each other by the bolts *e* set in slots in the plates, so that there may be a proper amount of play to allow of the expansion of the reel, as presently described.

Instead of the plates shown at Fig. 2 of the

drawing, straps may be used of metal, as shown at Fig. 3, the flat metal straps F overlapping each other between the bars and held together by rivets or bolts *f*, through slots in the metal, and further strengthened and secured by bands *g*, encircling the double or lapped portion.

The web is brought down to partially inclose the ends, as at H, to retain the meal or flour from escaping elsewhere than through the meshes of the bolt. Alternating with the bars C are beaters, consisting of longitudinal strips or bars J pivoted to the shaft of the reel by radial arms K. These arms K are attached to the shaft by means of a head-plate, L, at each end, as is shown clearly at Fig. 4 of the drawing, or by means of staples, as shown at Fig. 5, in which latter case the head-plates are dispensed with. As the reel or bolt is turned by the proper machinery, these beaters are carried around with it until they reach the top and pass the perpendicular, when they fall by their own gravity, and with a sudden motion, so that a shock is felt upon the web of the bolt, which acts to clear the mesh in the usual manner of all knockers, as they are termed. By means of the screw-arm C the web may be tightened at any time upon the reel, from the outside, by applying a wrench to the heads of the said arms, which appear through the outer surface of the cloth. In changing a web or applying one, it is only necessary to cut the cloth to fit and sew it together before placing it upon the reel, after which it is slipped on and stretched by means of the screw-arms until it has attained the desired tension.

Claims.

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

1. The overlapping slotted plates E or straps F, in connection with the expansible arms C and bars B.

2. The arrangement and construction of the swinging beaters J K, shaft A, arms C, bars B, and cloth or web D, substantially as specified.

IRA B. LEWIS.

Attest:

ROBERT PARKHILL,
A. H. WHEELER.