

(No Model.)

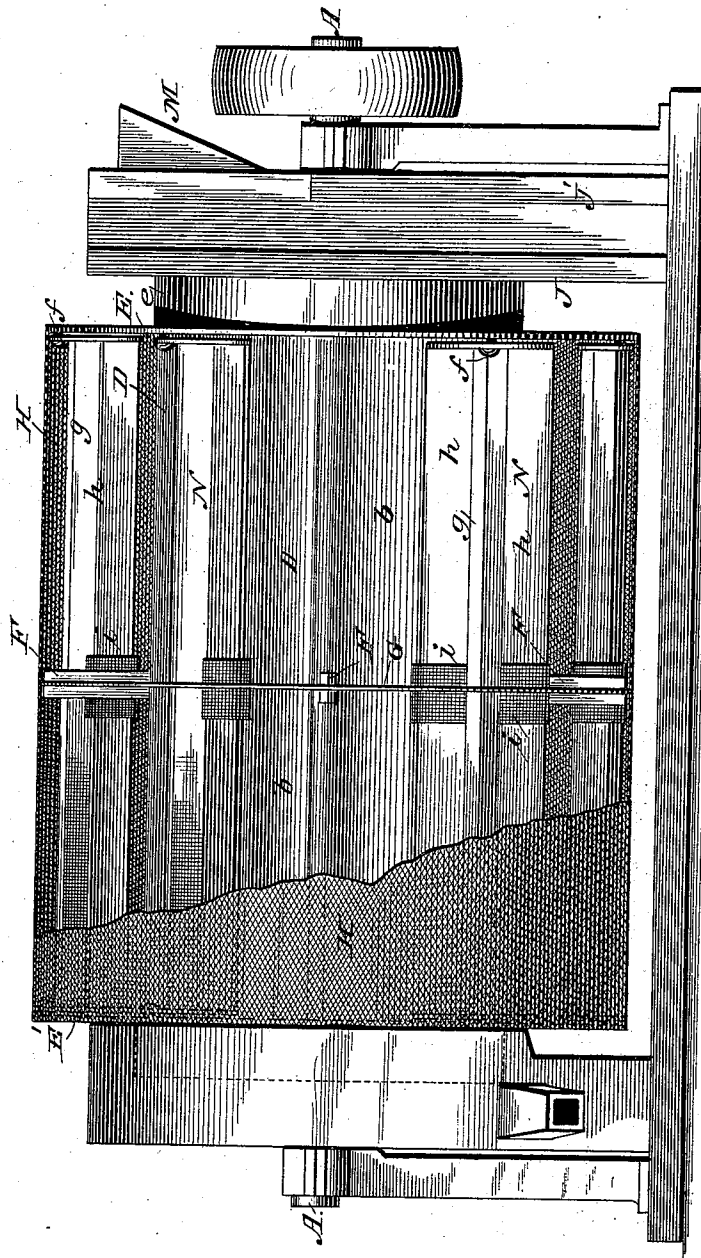
J. M. COOK.
FLOUR BOLT.

3 Sheets—Sheet 1.

No. 376,943.

Patented Jan. 24, 1888.

Fig. 1



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(No Model.)

3 Sheets—Sheet 2.

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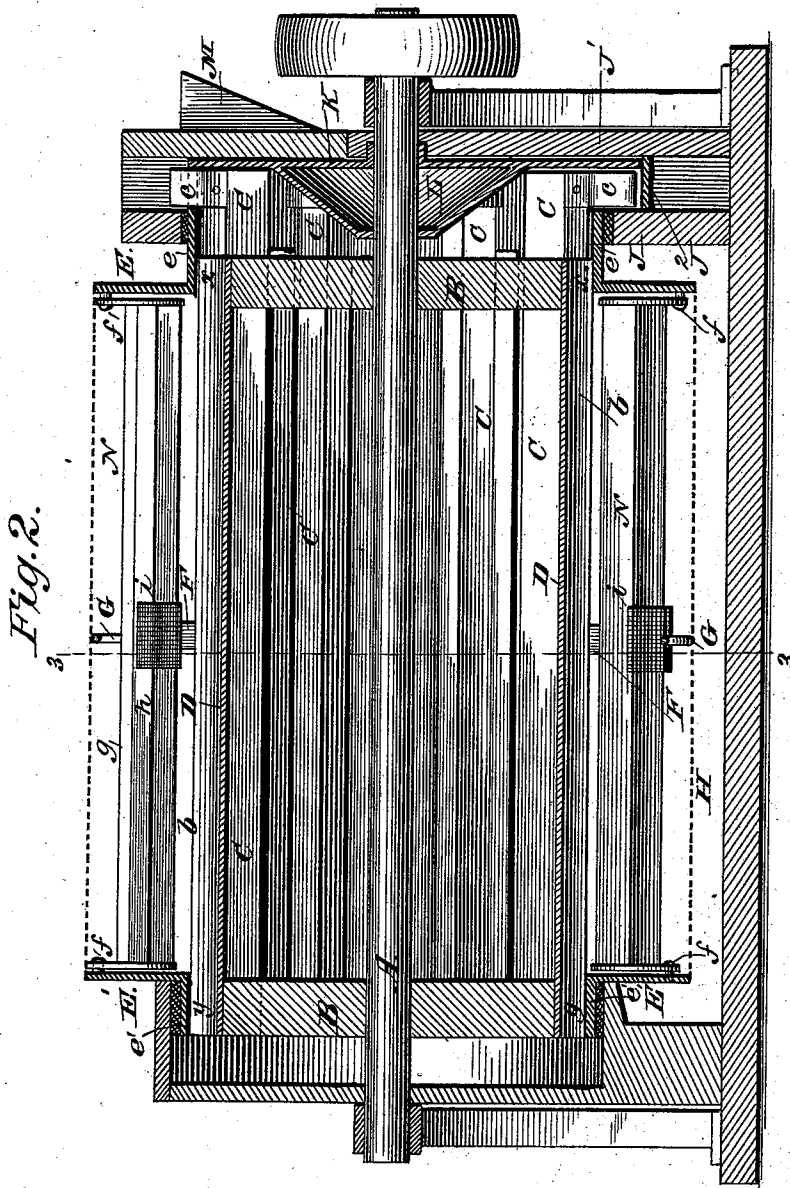


Fig. 2.

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(No Model.)

3 Sheets—Sheet 3.

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Fig. 3.

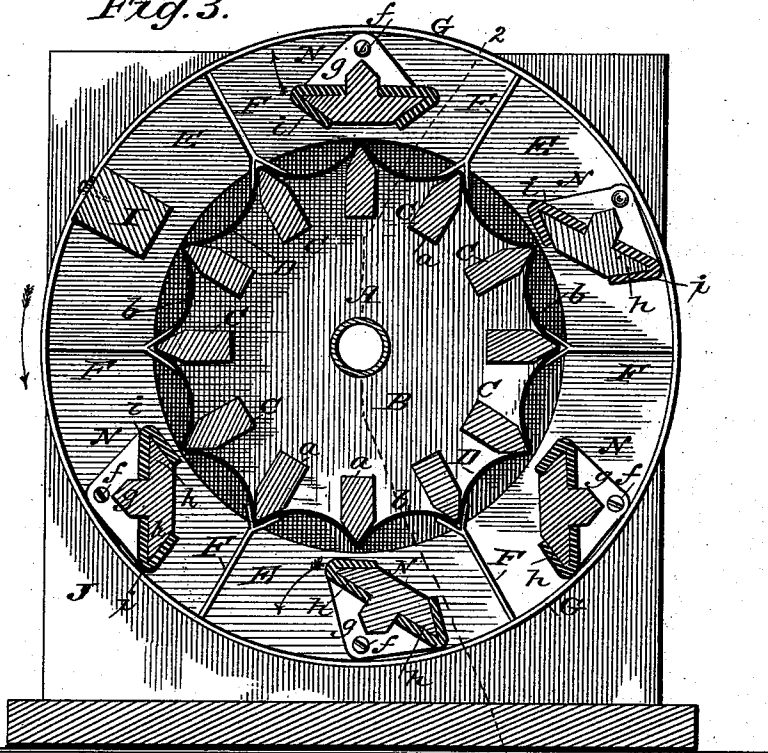


Fig. 4.

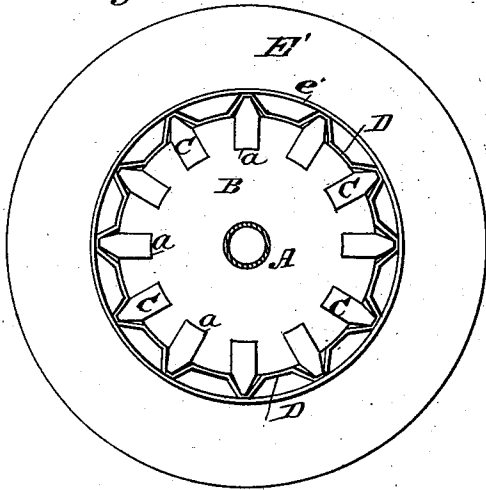
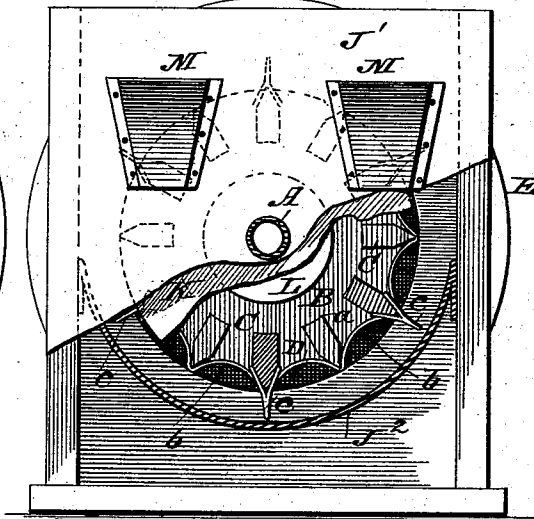


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN MARTIN COOK, OF BALTIMORE, MARYLAND.

FLOUR-BOLT.

SPECIFICATION forming part of Letters Patent No. 376,943, dated January 24, 1888.

Application filed April 2, 1887. Serial No. 233,454. (No model.)

To all whom it may concern:

Be it known that I, JOHN MARTIN COOK, of Baltimore city, and State of Maryland, have invented a new and useful Improvement in Flour-Bolts, of which the following is a specification.

The object of my invention is to provide an improved flour-bolt that shall be capable of being run with equal facility in either direction, thus adapting it to right and left hand applications of it in the mill, and which shall cause the stock to be delivered upon the cloth on both sides of the axis over an extended area, whereby a greater efficiency is obtained. A further object is to provide a set of knockers for jarring the cloth and dislodging the adhering stock in a simple and practical manner.

With these objects in view my invention consists in the peculiar combination of parts, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation with a portion of the cloth removed. Fig. 2 is a longitudinal section through the broken line 2 2 of Fig. 3. Fig. 3 is a vertical cross-section through line 3 3 of Fig. 2. Fig. 4 is an end view of one of the heads of the cylinder; and Fig. 5 is an elevation from the feed end, partly in section.

In the drawings, A represents the central shaft, to which is rigidly fixed two heads, B B. These heads are provided around their peripheries with notches *a*, (see Fig. 4,) in which are seated the longitudinal bars C, extending (see Fig. 2) parallel with the shaft from one head to the other. The outer edges of these bars are sharpened to a wedge shape, and over them is bent a jacket of sheet metal, D, Figs. 1 and 3, which is bent down between the bars C, so as to form parallel longitudinal flutes or troughs *b*, the sides of each of which troughs have the same inclination on both sides. Surrounding this fluted body of the cylinder, near each end, is a ring-shaped flange, E and E', Fig. 2, and midway between them are a series of radial arms, F, Figs. 1 and 3, projecting from the fluted cylinder and carrying a ring, G. Upon this ring G and the end flanges, E E', is wrapped the bolting-cloth H, whose ends are securely tacked to a longitudi-

nal wooden bar, I, Fig. 3, extending from one flange to the other.

Outside of the flange E' is a collar, e', Figs. 2 and 4, which lies flat upon the tops of the ridges between the flutes, and outside of the flange E is a collar, e, which also lies flat on the tops of the ridges between the flutes. Beneath this collar e and into the open ends of the troughs or flutes at *x* the stock is fed to the bolt, and through the same-sized openings *y* at the opposite end the tailings are discharged.

For feeding the stock to the bolt a box-casing formed of inner wall, J, outer wall, J', and a concave bottom, J², Figs. 2 and 5, is arranged about the collar e, which latter protrudes through wall J and turns therein in a wool-packed joint. Some of the longitudinal bars C are also extended into this casing, and are provided with radial stirrers *c*, a head, K, and a cone, L, which latter are also fixed to the central shaft. M M are spouts through which the stock is fed to either side of the machine, and which stock is delivered into the casing and passes into the space between the heads K and B, and is thrown by the cone to the end *x* of the troughs beneath the collar e, and is delivered thence into the bolting-cloth.

Between the flanges E E' is hinged at *f* a series of swinging bars, N, arranged parallel with the axis between the cloth and fluted cylinders. These bars are made with central rib, *g*, and side wings, *h h*, Fig. 3, and have leather cushions *i*, Figs. 1 and 3, which strike against the central ring, G, and act as knockers to jar the cloth and dislodge the adhering stock. These swinging bars act, also, as carriers and lift a portion of the stock up over the axial line and throw it in two discharges against the cloth on the opposite side. A peculiarity of these combined knockers and carriers is that they act equally well and in the same manner when the machine is revolved in either direction, thus making the machine either a right or left machine without any changes.

Having thus described my invention, what I claim as new is—

1. In a flour-bolt, the combination of a central body formed of a jacket, D, and heads B B, an outer covering of cloth, with means for

distending it, and longitudinal bars arranged between the socket and cloth and hung upon axes parallel with the main axis, the said bars having their opposite sides constructed alike to operate both as carriers and knockers when revolving in either direction, substantially as shown and described.

2. The combination, with the central shaft, of the heads B B, notched and provided with longitudinal bars C, the fluted jacket D, bent around these bars, the bolting-cloth, a frame distending the cloth around the fluted jacket, and longitudinally-pivoted knockers and carriers, substantially as shown and described.

3. The flour-bolt consisting of the bolting-cloth and frame distending the same, a fluted central body with head B and extended bars C, provided with stirrers *c*, the collar *e*, head K, and cone L, combined with the box-casing

J J' J², substantially as and for the purpose so described.

4. In a flour-bolt, the combination of a central fluted body, the sides of the flutes being of equal inclination, an outer covering of cloth, a cloth-distending frame, and longitudinally-pivoted bars hung between the fluted body and the cloth and adapted to swing and act as knockers and carriers when the cylinder is revolved in either direction, substantially as shown, and for the purpose described.

The above specification of my invention signed by me in the presence of two subscribing witnesses.

JOHN MARTIN COOK.

Witnesses:

EDWD. W. BYRN,
 SOLON C. KEMON.