

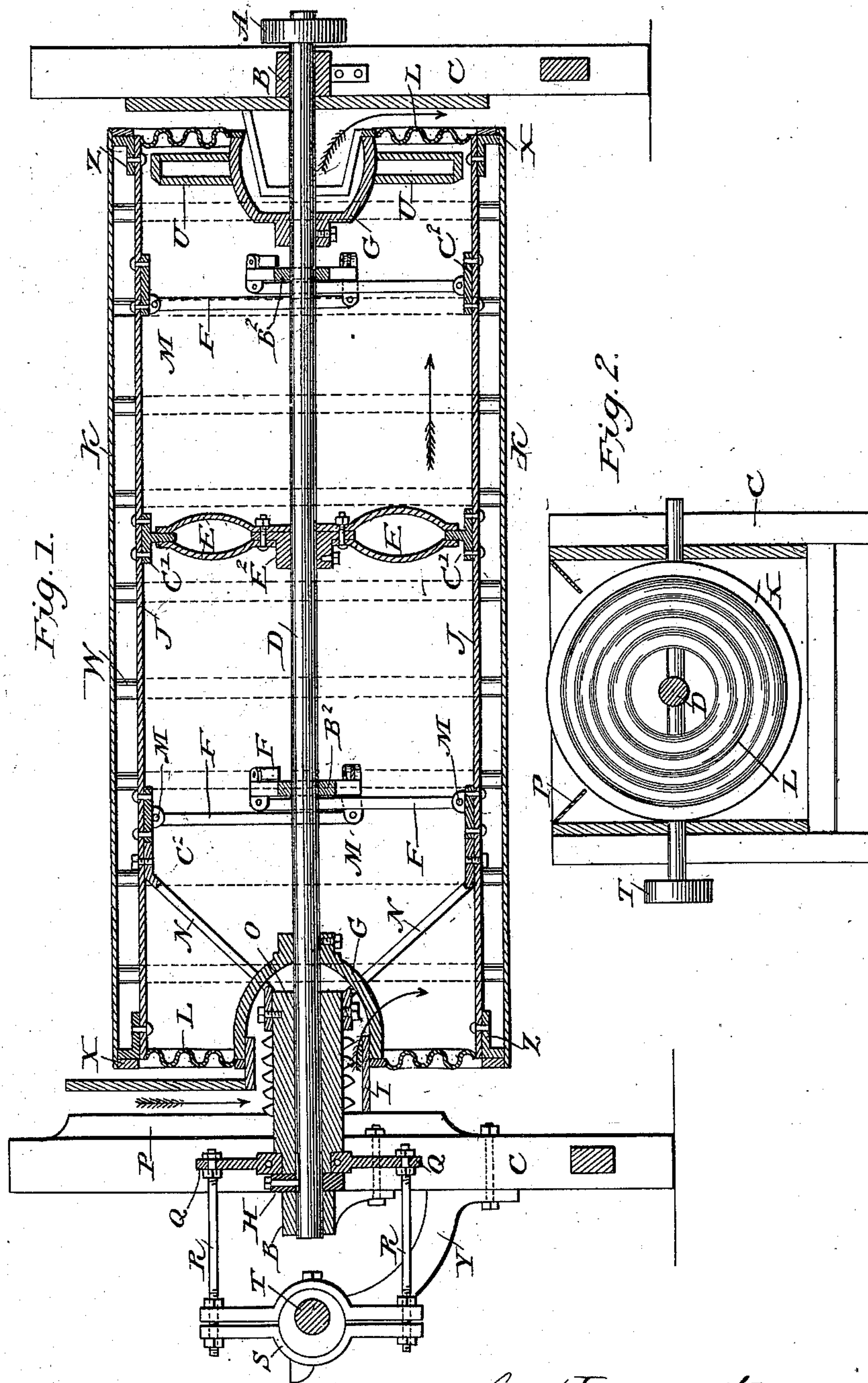
(No Model.)

2 Sheets—Sheet 1.

C. BOLENBAUGH, E. B. WAGNER & H. P. CROCKETT.
FLOUR DRESSING REEL.

No. 560,835.

Patented May 26, 1896.



Witnesses.

H. J. Livergood.
Chas H Smith.

Inventors.

Cyrus Bolenbaugh.
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Fig. 3.

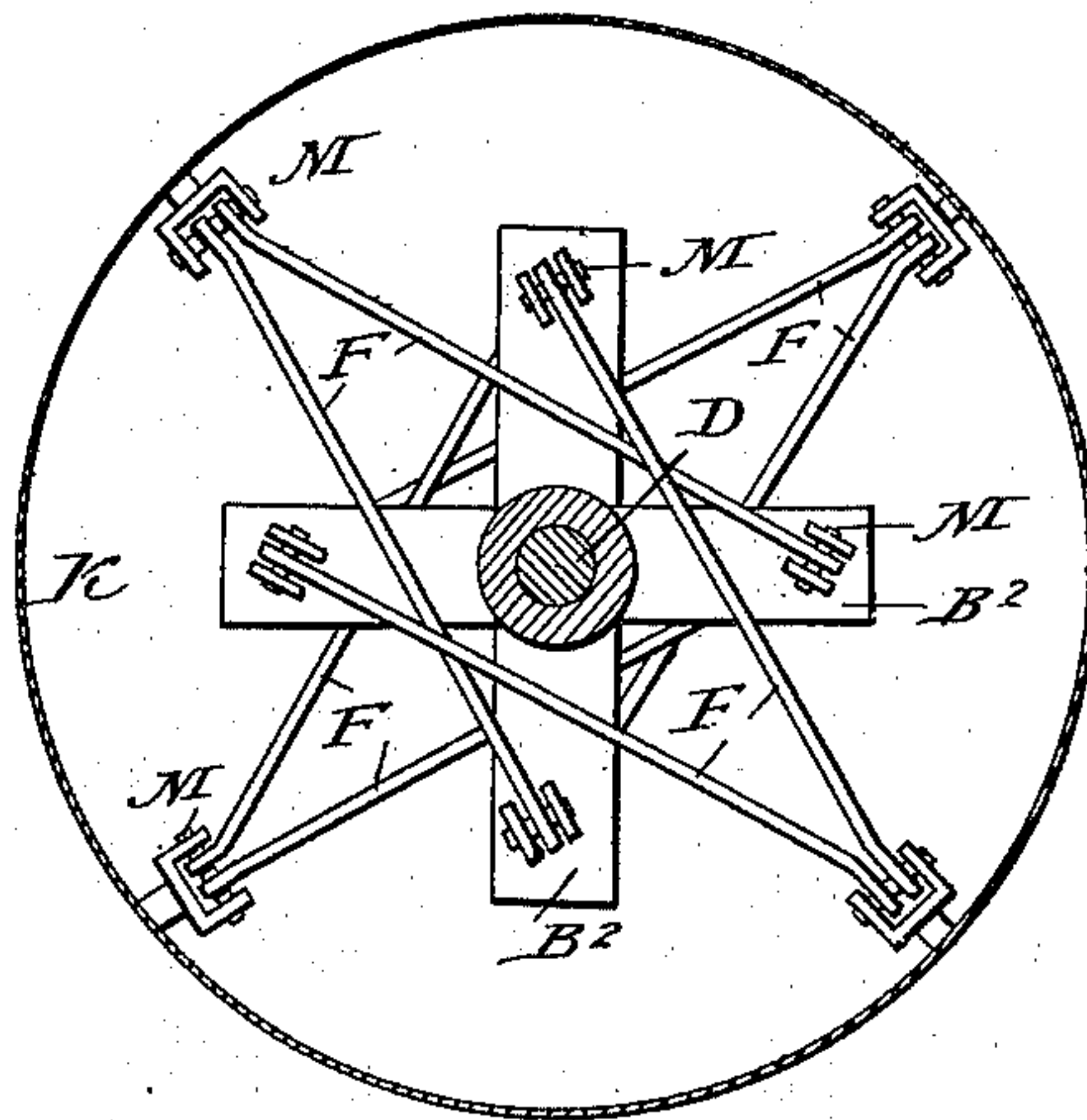
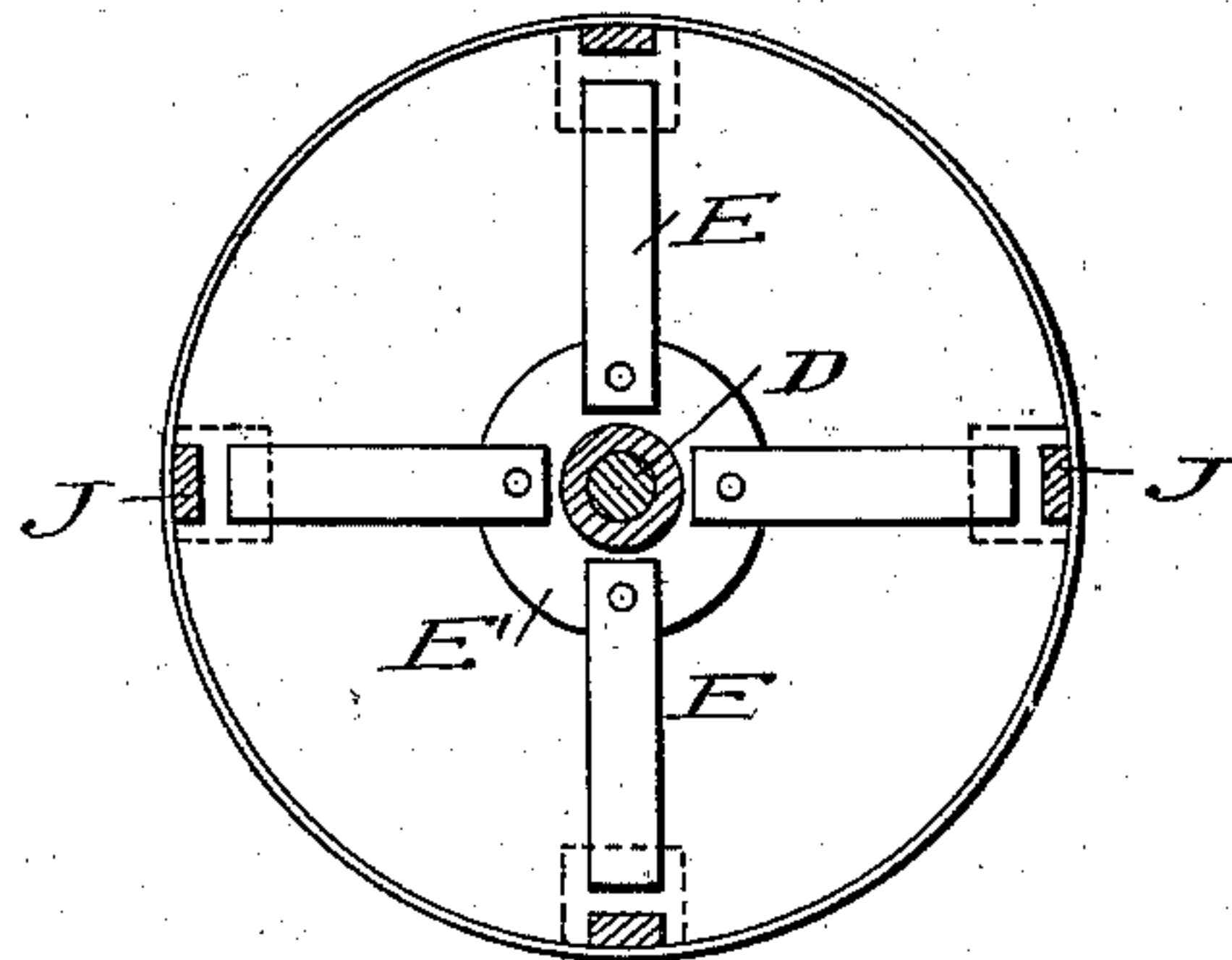


Fig. 4.



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UNITED STATES PATENT OFFICE.

CYRUS BOLENBAUGH, EZRA BUR WAGNER, AND HENRY PLANTAGENET CROCKETT, OF JACKSON, MICHIGAN; SAID BOLENBAUGH AND WAGNER ASSIGNORS OF ONE-SIXTH TO SAID CROCKETT.

FLOUR-DRESSING REEL.

SPECIFICATION forming part of Letters Patent No. 560,835, dated May 26, 1896.

Application filed November 7, 1895. Serial No. 568,158. (No model.)

To all whom it may concern:

Be it known that we, CYRUS BOLENBAUGH, EZRA BUR WAGNER, and HENRY PLANTAGENET CROCKETT, of Jackson, in the county of Jackson and State of Michigan, have invented a new and Improved Flour-Bolting Reel, of which the following is a full, clear, and exact description.

The object of our invention is to provide a new and improved flour-bolting reel which is simple in construction, durable, and practical in operation, and arranged to very effectually separate and grade the material passing through the reel.

Our invention relates to improvements in flour bolting and dressing reels in which rotating and reciprocating motion is imparted to the reel at the same time, working in conjunction with certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the description and claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional view of our improved reel, showing the corrugated reel-heads, the links attached to the spiders on reel-shaft and to the ribs, also the steel springs secured to the flange on shaft and resting against a bracket secured to the ribs, a part of the framework of the reel. Fig. 2 is a vertical end view of the reel, showing the corrugated reel-heads and the eccentric-shaft and feed-spout. Fig. 3 is a plan top view of the links, showing the spiders secured to the shaft and the brackets secured to the ribs. Fig. 4 is an end view of the steel springs, secured to the flange on the shaft at one end and resting against the bracket at the outer ends, secured to the ribs of the reel.

The improved bolting-reel is provided with a main shaft D, slightly inclined, as shown in Fig. 1, and journaled at its ends in bearings B B and held on a suitably-constructed frame C. The shaft D is provided with pulley A, connected with suitable machinery for imparting a rotary motion to the said shaft. On the shaft D, between the reel-heads of the

frame C, are secured the spiders B². To these spiders are secured the inner ends of the links F F. The outer ends of said links F are secured at their outer ends to the brackets C², which are secured to the longitudinally-extending ribs J J, which forms a part of the reel-frame and supports the frame and at the same time allows the bolting-reel to have a lateral reciprocating motion.

M M are bolts or rivets passing through the brackets on the ends of the spiders B² and brackets C² and links F F, which all have holes in them to receive the bolts M, coupling the whole together and allowing the bolting-reel to have a free yielding motion.

E' is a hub secured to the shaft D, which has a flange projecting out. On this flange are secured by bolts the springs E E, radiating out from the center and pressing at their outer ends against an inwardly-projecting bracket C', secured to the ribs J J. By the use of these springs E they prevent the sudden stop and start in connection with the reciprocating motion of the reel.

G G are two spiders secured by means of set-screws to the shaft D. Secured to these spiders at the inner circle are the corrugated reel-heads L L, which are made of sheet metal, preferably of sheet-steel. At the outer periphery of the reel-heads L L they are secured to knee-brackets Z Z, which are secured to the ends of the ribs J J. On the outer circle, on the outside of the corrugated reel-heads L L, is secured a wood circle X at each end. To this circle the silk cloth K is fastened at the ends.

It will be seen that the spiders G G are firmly secured to the shaft D, and the reel-heads L secured to the framework of the reel proper, which has a lateral reciprocating motion. The reel-heads L are made of sheet-steel, and being corrugated allows them to have a yielding motion. By this means the stock the reel is operating on is handled in a smooth manner, and much more and better work is done by the reel.

O is a sleeve mounted to slide longitudinally on the shaft D. At the inner end are attached four braces N N. Only two are shown. These braces are attached at the

outer ends to the longitudinal ribs J by rivets or bolts. At the outer end of the sleeve O it is turned smaller in diameter. On this part is journaled the box Q. On the outside of
 5 this box is secured to the shaft D the collar H by set-screw.

R R are two bolts, which are secured at one end to the cross-box Q and at the other end to the eccentric-box S.

10 T is the eccentric-shaft, which has an eccentric secured to it, journaled in the boxes S. It is by this connection the reel proper receives its lateral reciprocating motion.

The reel receives its rotatory motion from
 15 a belt on the pulley A from any given power.

Y is a bracket-box bolted to the frame C, carrying the eccentric-shaft T.

P is a spout through which the stock enters to be operated on by the reel.

20 I is a receptacle in which the stock is received and conveyed out in the reel. The stock that does not pass through the silk cloth K passes along to the tail end of the reel. Here it is caught by the elevating-bucket V, which
 25 is secured to the spiders G, and raised nearly to a perpendicular position and then dumped into the receptacle V, and then discharged by its own gravity, as shown by the arrow.

W are studs placed on and secured to the
 30 ribs J by a rivet or bolts. Over these studs passes a hoop, (indicated by the cross dotted lines,) which adds to the strength of the reel. These hoops are wound with cloth to prevent the silk cloth from rusting. Over these hoops
 35 and the reel-heads is secured the silk cloth K, which makes the desired separation of the stock the reel is operating on.

Having thus fully described our invention, we claim as new and desire to secure by Let-
 40 ters Patent—

1. In a flour-dressing reel, the combination

of the shaft, D, the springs G G, rigidly secured thereon, the annular sheet-metal corrugated reel-heads, secured at their inner peripheries to said spiders, the knee-brackets 45 Z, Z, secured to the heads L, L, at their peripheries, the ribs, J, J, secured to said brackets, Z, Z, and connecting the reel-heads, and means substantially as described for giving to the reel-frame rotation and longitudinal 50 reciprocation.

2. The combination in a rotary and longitudinally-reciprocating flour-dressing reel, of the longitudinal shaft, D, the spiders B², secured to said shaft, the brackets C², secured 55 to the said ribs, J, J, of the reel, the links F, F, connecting said spiders to the brackets C², and extending from the brackets on one side of the reel to the spiders on the opposite side of the shaft from it, said links, F, permitting 60 the reel-frame to have a longitudinally-reciprocating motion while rotating, all substantially as shown, for the purpose specified.

3. The combination in a rotary and longitudinally-reciprocating flour-dressing reel, of 65 the shaft, D, the links F, connecting it with the reel, the spider E', secured to said shaft, the brackets, C', secured to said reel, the springs E, E, connecting the spiders and brackets, and acting in conjunction with the 70 annular corrugated sheet-metal reel-heads, L, L, for the purpose of preventing the sudden stop and start of the longitudinal reciprocation of the reel, substantially as and for the purpose specified.

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Witnesses:

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