

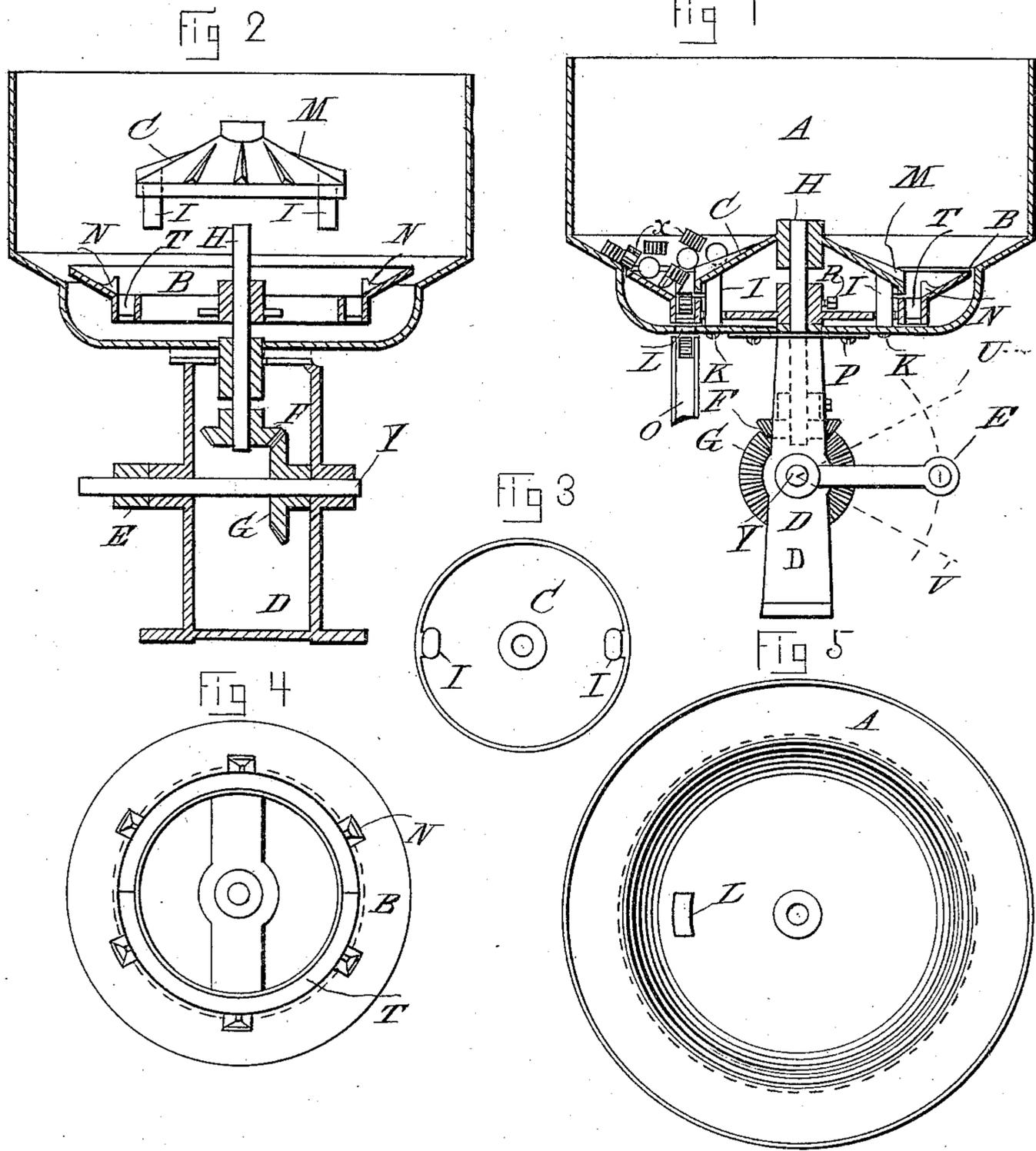
(No Model.)

J. H. MORRISON.

FEEDER FOR BRAID ROLLS AND SMALL SPOOLS.

No. 408,187.

Patented July 30, 1889.



Witnesses—
James Francis Harley
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UNITED STATES PATENT OFFICE.

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FEEDER FOR BRAID-ROLLS AND SMALL SPOOLS.

SPECIFICATION forming part of Letters Patent No. 408,187, dated July 30, 1889.

Application filed May 15, 1888. Serial No. 274,007. (No model.)

To all whom it may concern:

Be it known that I, JOHN HENRY MORRISON, a citizen of the United States, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and useful Feeder for Braid-Rolls and Small Spools, of which the following is a specification.

My invention is allied to that branch of mechanism by which circular disks, of wood or other material, whose diameter is greater than the length, are automatically taken from a hopper or other receptacle and conveyed one by one through a suitable guide in a proper position for the action of a boring-machine, turner, or printer. The exceeding simplicity by which I accomplish this and the entire freedom from clogging and consequent marring and breaking of the articles acted upon, are fully illustrated in the accompanying drawings, of which—

Figure 1 is an end elevation, partly in section, showing the complete device in working order. Fig. 2 is a side elevation in section, with parts separated, thereby giving a clear idea of its construction. Fig. 3 is an inverted view of conical cap C, showing projections by which it is attached to hopper A by means of screws K K. Fig. 4 is a top view of piece B, (which I call the "agitator,") showing the concentric channel T, which is cut through one half the diameter, leaving the other half connected at bottom to flaring rim by a web of metal. Fig. 5 is a top view of hopper A, showing opening L for the passage of the articles to be fed.

Referring to Fig. 1, the construction of my device is as follows: A designates a hopper or reservoir secured to standard D by screws P, and having on its under side a hub, which passes through an opening in the top of the stand D, forming a bearing for shaft H; also having a rectangular hole L cut through the bottom in direct line with concentric channel T. On the inside of hopper A, and at the extreme bottom, is fitted the agitator B and the conical cap C. The agitator B just fills the space in the bottom of the hopper, and its flaring side corresponds with the flaring side of the hopper, or, preferably, slightly lower, thereby offering no impediment to the articles

sliding down into the channel. The agitator B is provided with one or more curved lugs, (six being shown on Fig. 4,) which serve to agitate and turn the blanks until they drop into the channel T. The agitator B is secured to shaft H by a set-screw R, and is vibrated back and forth by means of the bevel-gears F and G and arm E. The conical cap C is secured to hopper A by means of screws K K, the projections I I passing through an opening on each side of the arm on agitator B. (See Fig. 4.) The conical cap C is provided with lugs M, which serve as a further means of guiding the blanks into channel T. When the conical cap C is secured to hopper A, the shaft H must necessarily be loose in its top, and I prefer this way; but I have secured good results by taking out screws K K and setscrewing it to shaft H and allowing it to vibrate with agitator B. I have also secured fair results without lugs either on cap C or agitator B.

The action of my device, briefly described, is as follows: Referring to Fig. 1, the articles to be fed are poured into hopper A in bulk. (Some of which are shown at X.) The agitator B is then vibrated by means of shaft H, bevel-gears F and G, and arm E, which reciprocates in the dotted arc U V by means of a crank and connections, or it may be simply operated by hand. The vibration of agitator B causes a promiscuous stirring of the rolls X until they come into position and drop into concentric channel T, whose width is adapted to the length of the articles to be fed. They are then carried along by contact with the sides of the channel and friction of overlying blanks until they reach opening L, where they fall through into tube O, and from thence into the proper machine to receive them.

Having thus described my invention, I claim—

1. In combination, hopper A, having opening L, agitator B, having concentric channel T and lugs N, the conical cap C, having lugs M, and projections I I, all substantially as described.

2. The combination, in a braid-roll and small-spool feeder, of a stand D, bearing a hopper A, having an opening L, the agitator B, having a concentric channel T, and means for im-

parting a vibratory movement to said agitator, substantially as described, for the purpose specified.

3. In a braid-roll and small-spool feeder, in
5 combination, the hopper A, bearing on the inside a conical cap C, provided with means for fastening rigidly to bottom of said hopper, or to shaft H, substantially as described, the vertical shaft H, bearing agitator B and gear

F, the stand D, bearing shaft Y, gear G, arm 10 E, and operating mechanism, whereby blanks poured promiscuously into the hopper are delivered one by one through the exit, all substantially as described.

JOHN HENRY MORRISON.

Witnesses:

JAMES FRANCIS HANLEY,
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