

Henry Turner's Imp^d Feeding Apparatus for Flock Macks.

Fig: 8

PATENTED

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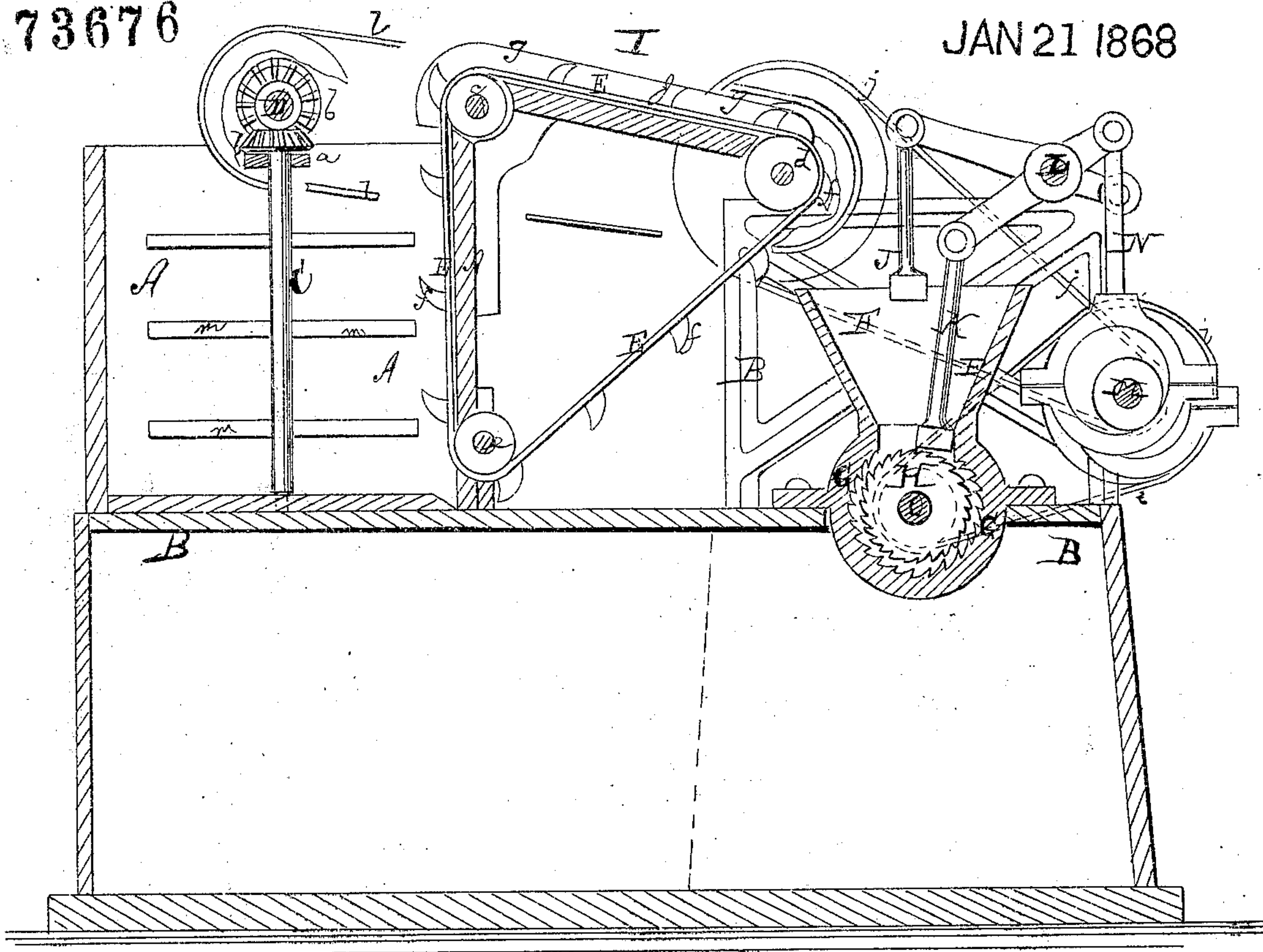
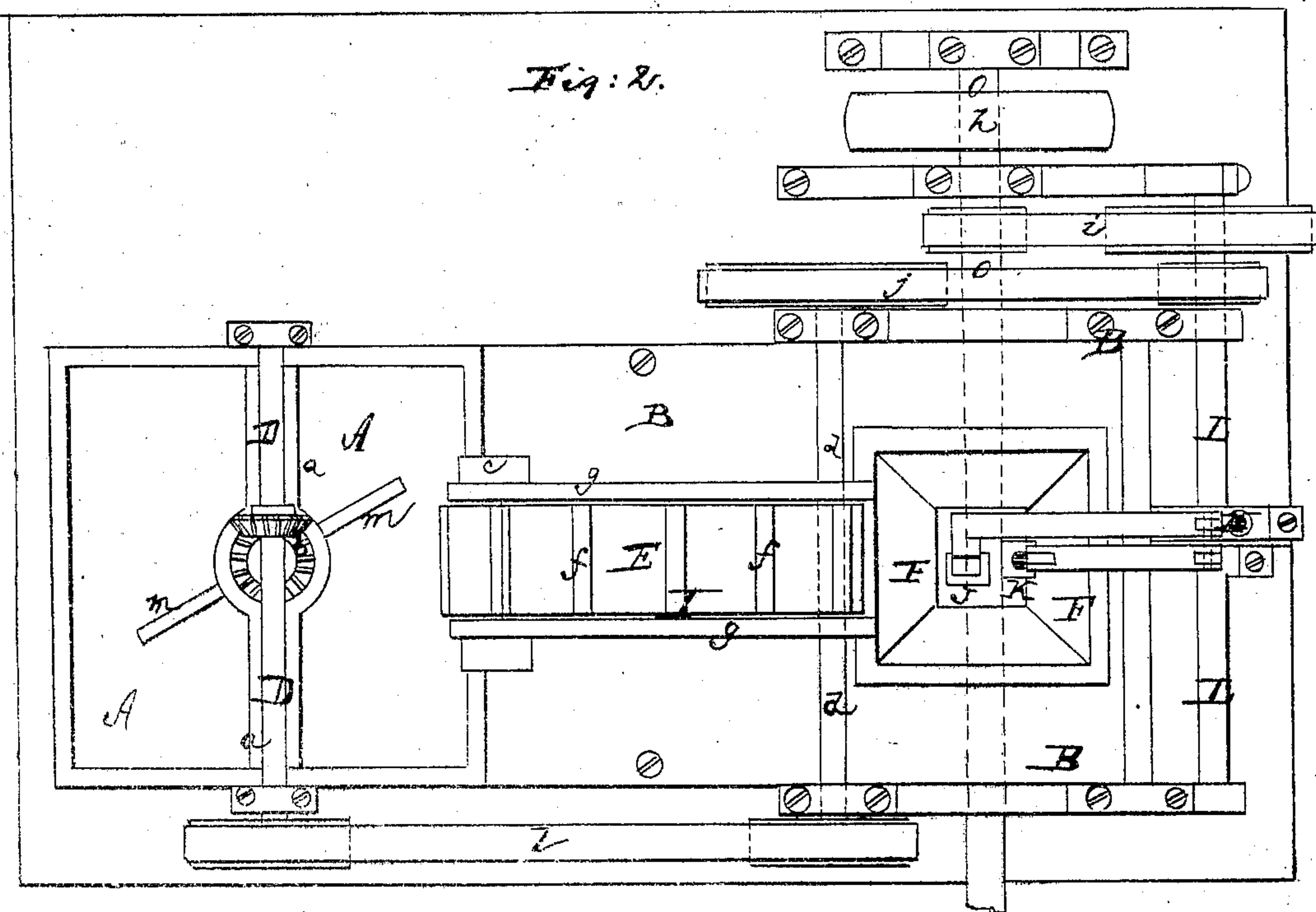


Fig: 2.



Witnesses.

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HENRY TURNER, OF NEW YORK, N. Y.

Letters Patent No. 73,676; dated January 21, 1868.

IMPROVEMENT IN FEEDING-APPARATUS FOR FLOCKING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HENRY TURNER, of the city, county, and State of New York, have invented a new and improved Feeding-Apparatus for Flock-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of my improved flock-machine.

Figure 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a device for automatically feeding the fibrous material from which flock is to be made, from a box or other suitable receptacle, to the grinding or tearing-cylinder, and consists in arranging agitators in the aforesaid box or receptacle, by which the material is constantly stirred and fed to an endless apron, which is provided with cups for carrying the said material to the hopper on the tearing-cylinder. Plungers are provided on a crank-shaft, which is arranged above the hopper, by which the material is received from the apron, and delivered to the cylinder, and by which it is prevented from becoming clogged in the hopper.

The machine will operate without any assistance from attendants, all that is necessary being to keep the box filled, and to set the machine in motion. It can be used for making flock from wool or rags of any material.

A represents a box, which is or may be partly open on top, and closed on the sides and bottom. It is secured upon a frame, B, of suitable shape and material, but of sufficient strength for supporting and holding the tearing-cylinder and the feeding-apparatus, and all the machinery, shafts, &c., which are required to set the machine in motion.

The box A may be square, round, or of any other suitable shape. In its centre is arranged a vertical shaft, C, which has its bearings in the bottom of the box, and in a piece, *a*, laid across the top of the box.

To the shaft C is secured a number of projecting arms, *m m*, which, when rotary motion is imparted to the said shaft, sweep across and through the box A, and stir the material that may be held therein. The shaft C receives motion from a horizontal shaft, D, by means of bevel-gear wheels, *b*, as shown.

E is an endless apron, laid over three horizontal shafts or rollers, *c*, *d*, and *e*, so as to form a triangle, of which one vertical side is in the box A, as is clearly shown in fig. 1.

Cups, *ff*, are secured to the face of the apron, by which the material is taken from the box A and carried to the hopper F. The latter is arranged above the tearing-cylinder G, in which a revolving toothed core, H, is arranged, as is clearly shown in the drawing.

The cups on the apron elevate the material in the box, and carry it through an almost horizontal trough, I, which is formed by stationary side boards, *g g*, and the apron, the latter being the bottom. The end of this trough is above the hopper, and the material is thus dropped into the hopper as the apron turns over the axle *d* to return to the axle *e*, as is clearly shown in fig. 1.

J and K are two plungers, which are suspended from cranks that project from a rock-shaft, L, as is clearly shown. The plunger J, which is nearest to the apron, is shorter than the plunger K, and moves down while the other is raised. The plunger J is the receiving-plunger, which prepares the material in the hopper for the delivering-plunger K, by which it is pressed into the cylinder.

Motion is imparted to the rock-shaft L from a horizontal shaft, M, by means of connecting-rods, N N, which work on eccentric disks on M, and are suspended from cranks on L, as shown.

The shaft *o*, on which the core H is mounted, is the main driving-shaft of the machine, and receives motion by a belt passing over a pulley, *h*, or otherwise.

By a belt, *i*, motion is transmitted from *o* to the shaft M, from which it is transmitted, by a belt, *j*, to the axle *d*. The latter is connected with the shaft D by a belt, *l*, and thus motion is imparted to the whole mechanism.

The agitators in the box A can be arranged on a horizontal and inclined shaft, as well as on the vertical shaft. The operation will remain the same.

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

1. The automatic feeding-apparatus for flocking-machines, consisting of the box A, provided with stirrers or agitators *m*, in combination with the apron E, when the same is provided with cups, *ff*, and in combination with the plungers J and K and hopper F, all made and operating substantially as herein shown and described.

2. The plungers J and K, when made of different lengths, and when attached to cranks that project from the rock-shaft at different angles, substantially as and for the purpose herein shown and described.

HENRY TURNER.

Witnesses:

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