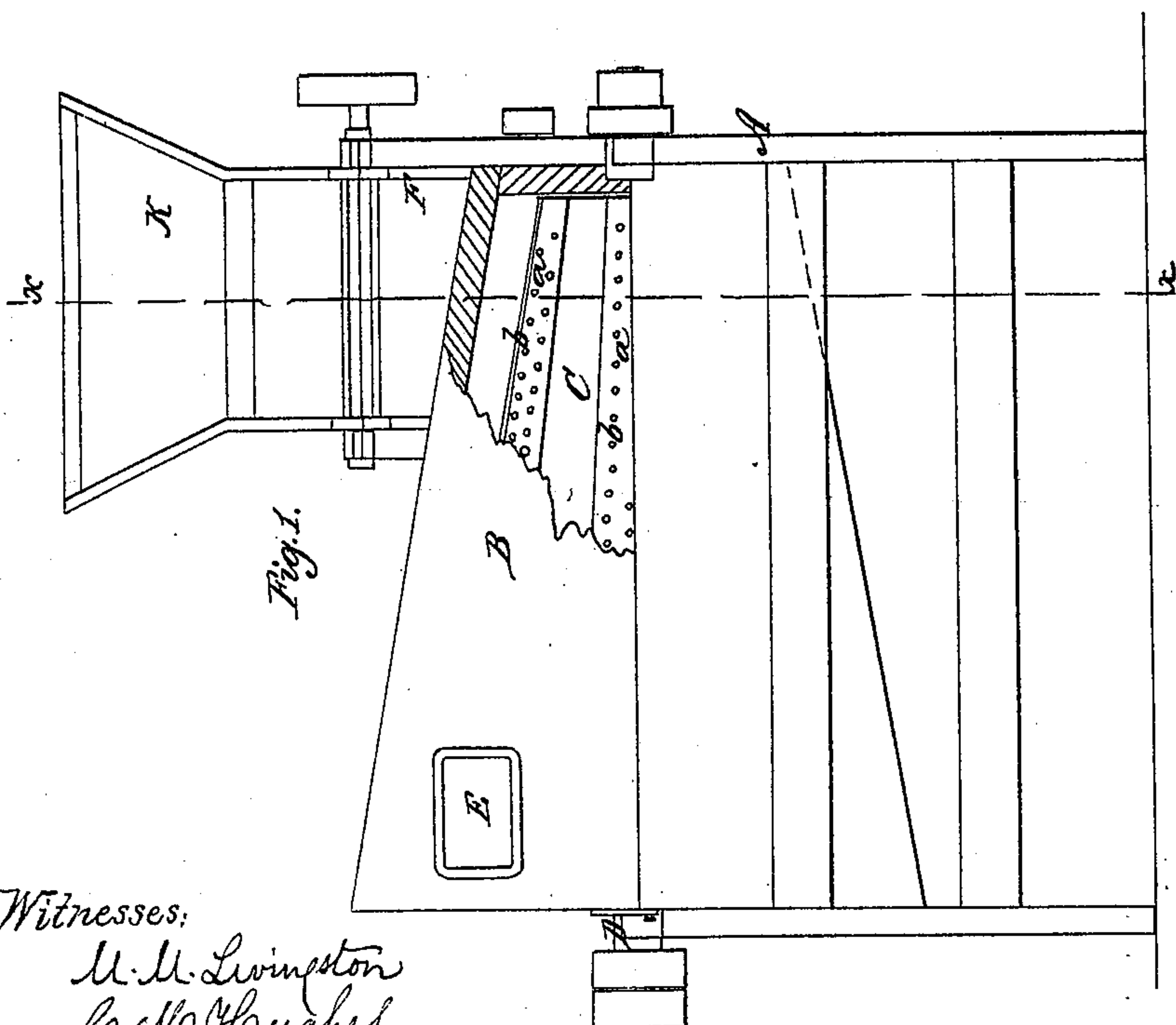
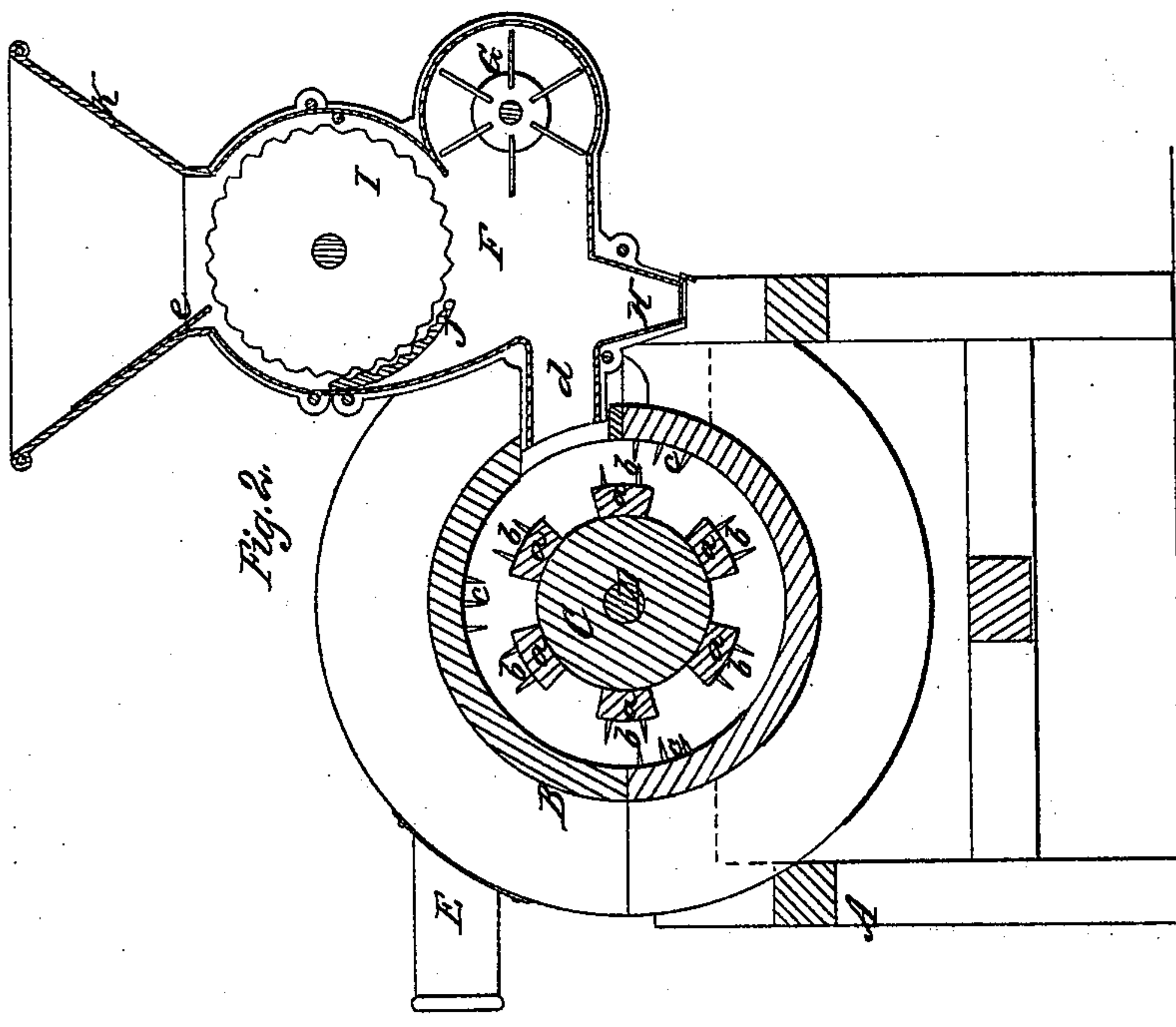


W. C. Geer
Flocking Machine.

N^o 25,895.

Patented Oct. 25, 1859.



Witnesses:

M. M. Livingston
C. M. Hughes.

11

Inventor
W. C. Geer.

UNITED STATES PATENT OFFICE.

W. C. GEER, OF ROCKVILLE, CONNECTICUT.

IMPROVEMENT IN MACHINES FOR CLEANING AND OPENING FLOCK.

Specification forming part of Letters Patent No. 25,895, dated October 25, 1859.

To all whom it may concern:

Be it known that I, W. C. GEER, of Rockville, in the county of Tolland and State of Connecticut, have invented a new and Improved Machine for Cleaning and Opening Flock; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention, a portion being bisected or broken away in order to show a certain part of the interior. Fig. 2 is a vertical section of the same, taken in the line $x x$, Fig. 1.

Similar letters of reference indicate corresponding parts in the figures.

The object of this invention is to obtain a machine whereby all foreign substances may be effectually separated from the flock and the latter opened or its particles distended or loosened, so that it will leave the machine in a light state suitable for use.

The invention consists in the employment or use of a metal-toothed cylinder and concave fan, and a cone provided with projecting toothed ledges and fitted within a corresponding-shaped shell, also provided with teeth, the whole being combined and arranged to operate substantially as herein described to effect the desired result.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a rectangular frame, in the upper part of which a conical shell B is placed. Within the shell B a cone C is fitted and allowed to rotate freely. The cone C is placed on a shaft D, the bearings of which are on the top of the frame A. The shell B, as well as the cone C, may be of wood, and the latter has a series of lugs or projections a on its periphery, which are provided with radial teeth b , the spaces on the cone between the lugs being smooth or not provided with teeth. The inner surface of the shell B is also provided with teeth c , in longitudinal rows at suitable distances apart. The shell B is provided with an eduction-pipe E near its larger end, and at its opposite or smaller

end the shell communicates by a passage d with a box F, which is supported by the frame A.

At the back part of the box F there is a rotary fan G, which is of the usual construction, and at the lower part of the box F there is a vertical discharge-passage H. In the upper part of the box F a cast-metal cylinder I is placed. This cylinder is allowed to rotate freely, and its periphery is toothed. Within the box F there is placed a concave J, which is also toothed and has its face side concentric, or nearly so, with the cylinder I. On the upper part of the box F a hopper K is placed.

The box F and hopper K may be of cast metal. The cone C and fan G may both be rotated by belts or gearing from the shaft of the cylinder I, to which shaft any convenient power may be applied.

The operation is as follows: The flock, previously cut or prepared in the usual or any proper way, is placed in the hopper K, and passes down between the cylinder I and concave J, the feed being regulated by a slide e . (Shown in Fig. 2.) The flock in passing between the cylinder and concave is subjected to a rubbing or tearing action, and all foreign substances—such as sticks, nails, scraps of iron, &c., which are frequently mixed with the flock—are detached from it or separated, while the action of the cylinder loosens or lightens up the flock, so that the fan G will blow the same through the passage d into the shell B, the foreign substances falling, on account of their superior gravity, through the discharge-passage H. As the flock enters the shell B it is opened by the teeth $b c$ of the cone and shell, the flock passing along to the larger end of the shell, partly by the action of the blast from the fan G, assisted by a blast generated by the lugs a and the cone form of the shell, the flock being discharged from E in a clean, loose, and light state.

I do not claim the employment or use of a toothed cone or cylinder revolving within a correspondingly-shaped toothed shell, for such device has been previously used for opening flock; but,

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

The employment or use of a revolving cone or cylinder C, provided with toothed lugs *a* and placed within a correspondingly-shaped toothed shell B, in combination with the

toothed cylinder I, concave J, and fan G, arranged for joint operation, substantially as and for the purpose set forth.

W. C. GEER.

Witnesses:

M. M. LIVINGSTON,
C. M. HUGHES.