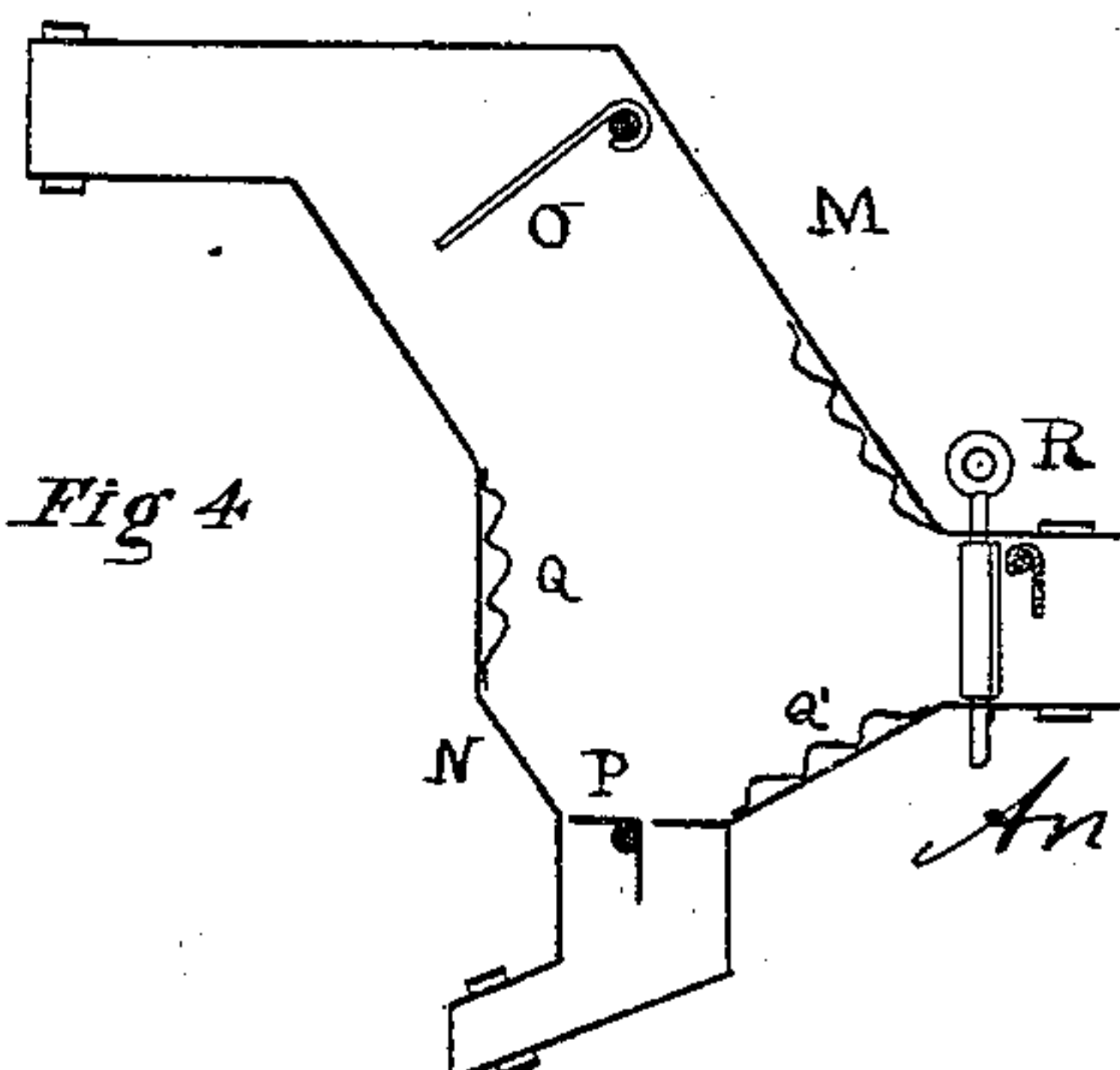
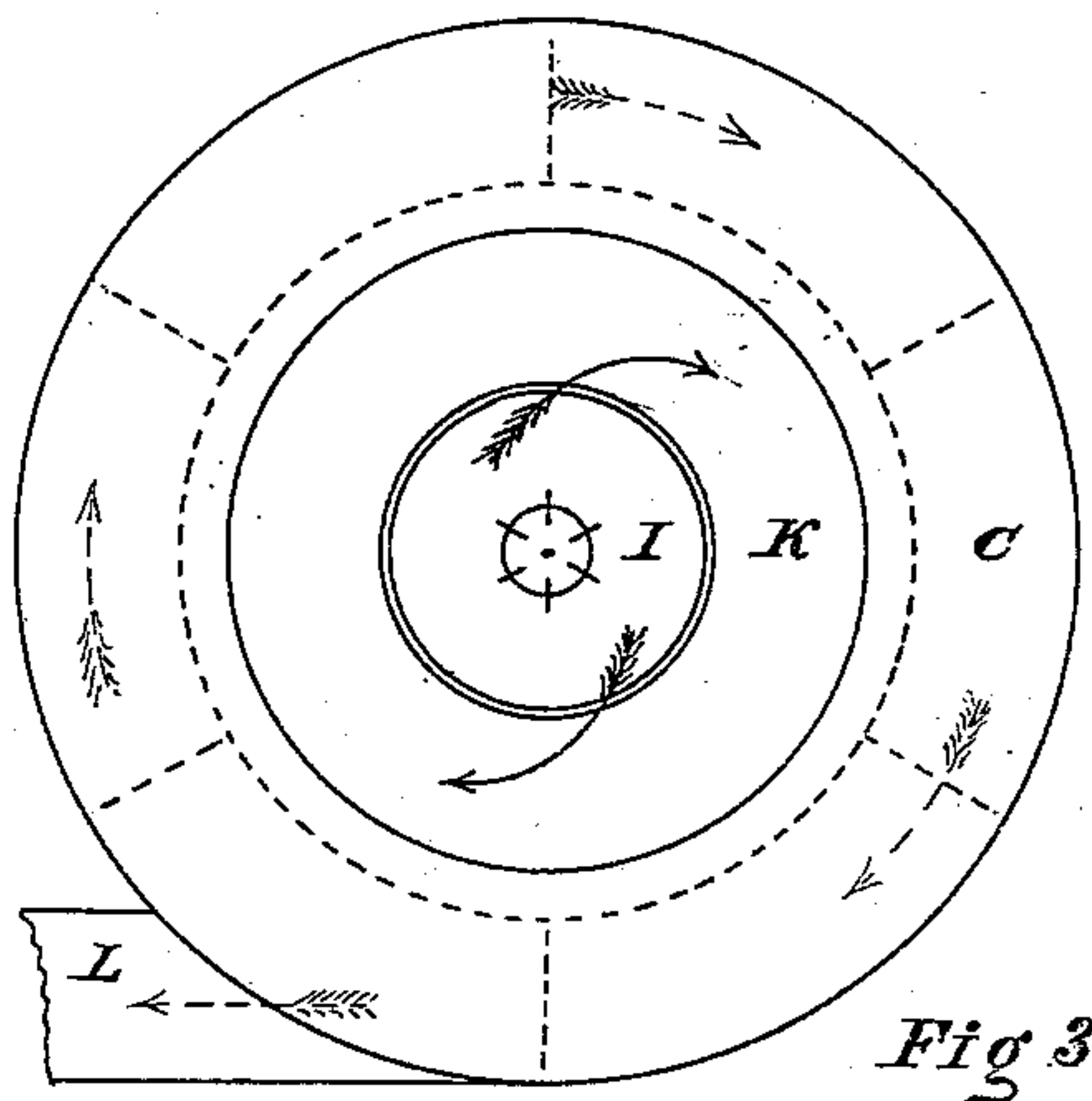
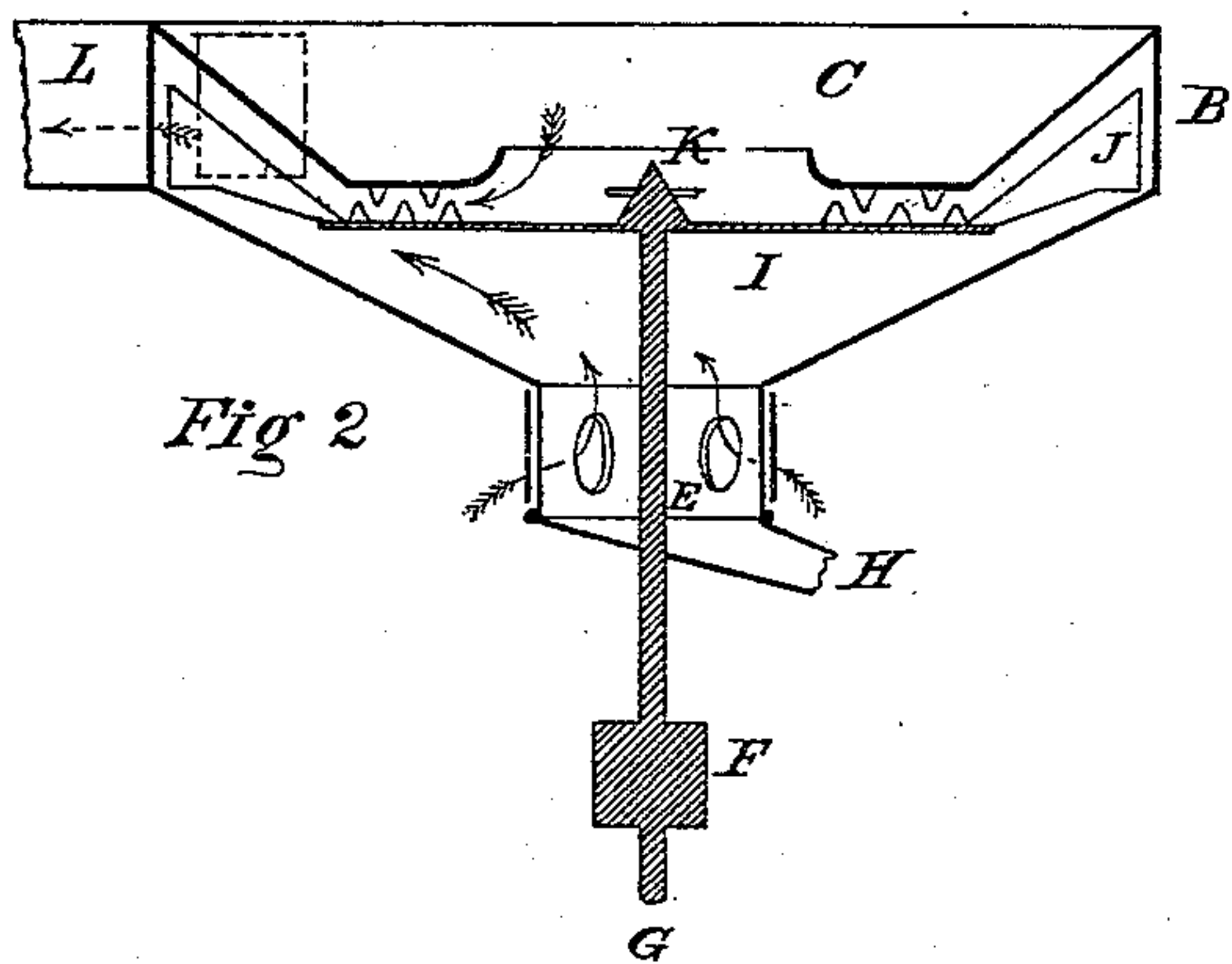
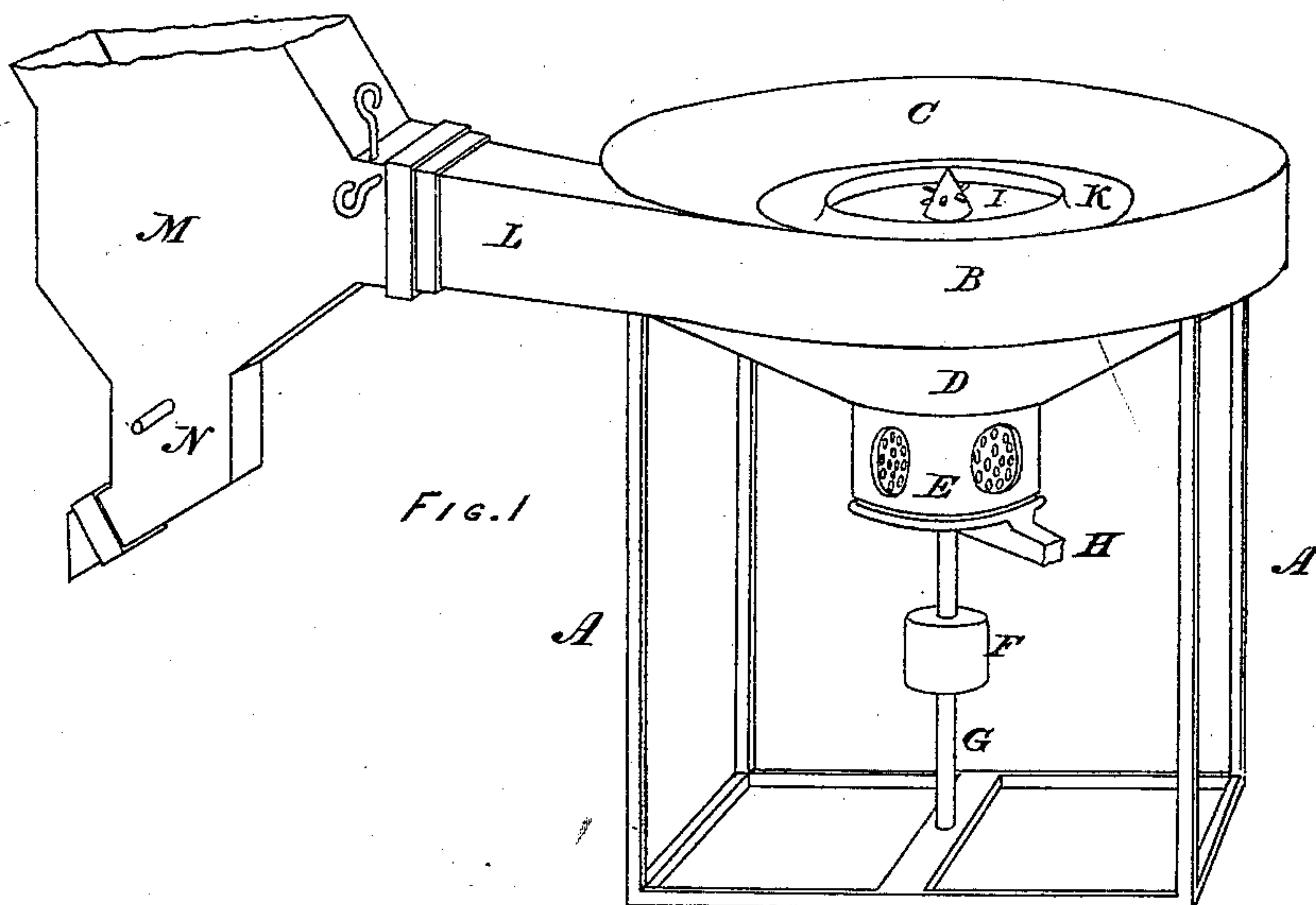


A. WEMPLE.

Improvement in Thrashing-Machines.

No. 126,117.

Patented April 23, 1872.



Witnesses.

A. W. Bond
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ANDREW WEMPLE, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN THRASHING-MACHINES.

Specification forming part of Letters Patent No. 126,117, dated April 23, 1872.

SPECIFICATION.

I, ANDREW WEMPLE, of the city of Chicago, in the county of Cook and State of Illinois, have invented a certain new, useful, and Improved Thrashing-Machine, of which the following is full description, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a vertical section without the frame; Fig. 3, a plan view; and Fig. 4, a vertical section of the discharging-spout.

The nature of my invention consists in providing a thrashing-machine with plain or flat thrashing disks or plates; in combining such thrashing-disk with fans and surrounding case, so that the grain shall be thrashed, separated, and cleaned within the thrashing-case; and in a peculiar construction of the case surrounding the thrashing apparatus and separator.

In the drawing, A represents any suitable supporting-frame; B, the band; C the upper and D the lower heads of the case surrounding the thrashing devices; E, the cylinder below for regulating the ventilation or draught of the fans; F, pulley at which the power is applied; G, main shaft; H, spout for discharging any grain that may fall into the cylinder E; I, revolving thrashing plate or disk; J, fans attached thereto; K, stationary thrashing-plate; L, discharge-spout; M, enlarged section of the discharge-spout; N, receptacle for clean grain; O, slide for adjusting the discharge through the spout M; P, slide or weighted valve for discharging the grain; Q, corrugated plates in the separator; R, valves or deflecting-plates.

The frame A may be made of any suitable material and in any desired form that will give it sufficient strength to perform the required service. The case B C D I usually make of sheet-iron. It may, however, be made of wood, if desired. By depressing the center of the head C, as shown, it forms a mouth for feeding the grain when the machine is placed upright; and it also forms a peculiar chamber, which, with the forms of fans, produces an increasing effect on the outside of the chamber or at the rim B, which prevents the clogging of the fans or chamber by the straw, &c., and facilitates the discharge through the spout L. The fans J are attached directly to the revolv-

ing plate I, and increase in width toward their outer ends, as shown. The thrashing-plates I and K are made of iron or other suitable material, and are provided with thrashing-teeth, as shown at Fig. 2. The stationary plate K has an opening in the center, through which the grain is fed into the machine. The suction of the atmosphere at this point, together with the centrifugal effect of the rapid rotation of the plate I, draws the straw through the passage into the surrounding case, from which it is all discharged through the tube L.

The fan suction is regulated, to some extent, by the holes in the cylinder E, which said cylinder is made double, the outer rim sliding upon the inner, so that the openings in the cylinder may be partially or wholly closed. The air passing in from below tends to keep the straw above the fans G so as to prevent clogging. The amount of air passing through the machine is also further regulated by means of the slide or valve O in the spout M, which is adjusted in operation so as to prevent the blowing over of the grain. When properly adjusted the grain is deposited in the enlarged part N, from which it is discharged into sacks or otherwise, as may be desired, so that, by the direct application of the fans to the revolving thrashing-plate, I am enabled to draw in the grain by suction, thrash and discharge it, separate and clean the grain by one fan. I also dispense with a very large amount of expensive gearing and machinery heretofore applied to thrashing-machines.

I have applied a spout, H, to the cylinder E; but this spout may be dispensed with, as in practice I have found that it is very seldom that any grain falls in said cylinder E. I have also applied a cone to the center of the revolving cylinder or disk I to facilitate feeding. The machine, however, will work well without the addition of any such cone.

It is evident that this machine can be built of various sizes and dimensions. For ordinary purposes a machine made about three and one-half feet high with a case six feet in diameter and ten inches in depth will be sufficient at the band B. The machine gives the best results when the thrashing-plates are located horizontally, as shown. It will, however, work well in any other position, and can be made to do so by very slight changes in adjusting the

spout. In the form shown the power is applied at the pulley F by means of a belt or any suitable gearing connected with a horse-power or other motor.

The separating-chamber M N, in addition to the valve O for regulating the draught, is provided with a valve or valves, R, by which the draught is partially regulated; but the principal object of this valve is to so deflect the current of air passing into the chamber M N that it will form a horizontal eddy or current in the separating-chamber to facilitate the falling of the grain below the influences of the current. The interior of this separating-chamber M N is provided with corrugated plates Q to prevent the grain from following up its side, as shown at Fig. 4. The separation can be effected without these plates; but I prefer to attach them, or some of them, more particularly Q'.

The adjustment of the spout for thrashing different grains—as wheat or oats—is effected by the valve O.

What I claim as new is as follows:

1. The combination of the plate I and fans J with the plate K and curb B C D, substantially as and for the purposes specified.

2. The plate I, when provided with thrashing-teeth upon its inner face and with fans attached to its periphery, substantially as specified.

3. The triangular fans J, when connected with the thrashing-plate I at the point so as to prevent the straw from catching on the fans, substantially as described.

4. The combination of the curb and thrashing-plates with the spout L provided with a separating-chamber, M N, substantially as described.

5. The separating-chamber M N, in combination with the valve O, discharge-valve P, deflecting-valve or plate R, spout L, and thrashing devices C and I, substantially as specified.

ANDREW WEMPLE.

Witnesses:

L. L. BOND,
O. W. BOND.