

(No Model.)

2 Sheets—Sheet 1.

M. KINPORTS.

TOBACCO SCRAPPING AND GRANULATING MACHINE.

No. 371,200.

Patented Oct. 11, 1887.

Fig. 6.

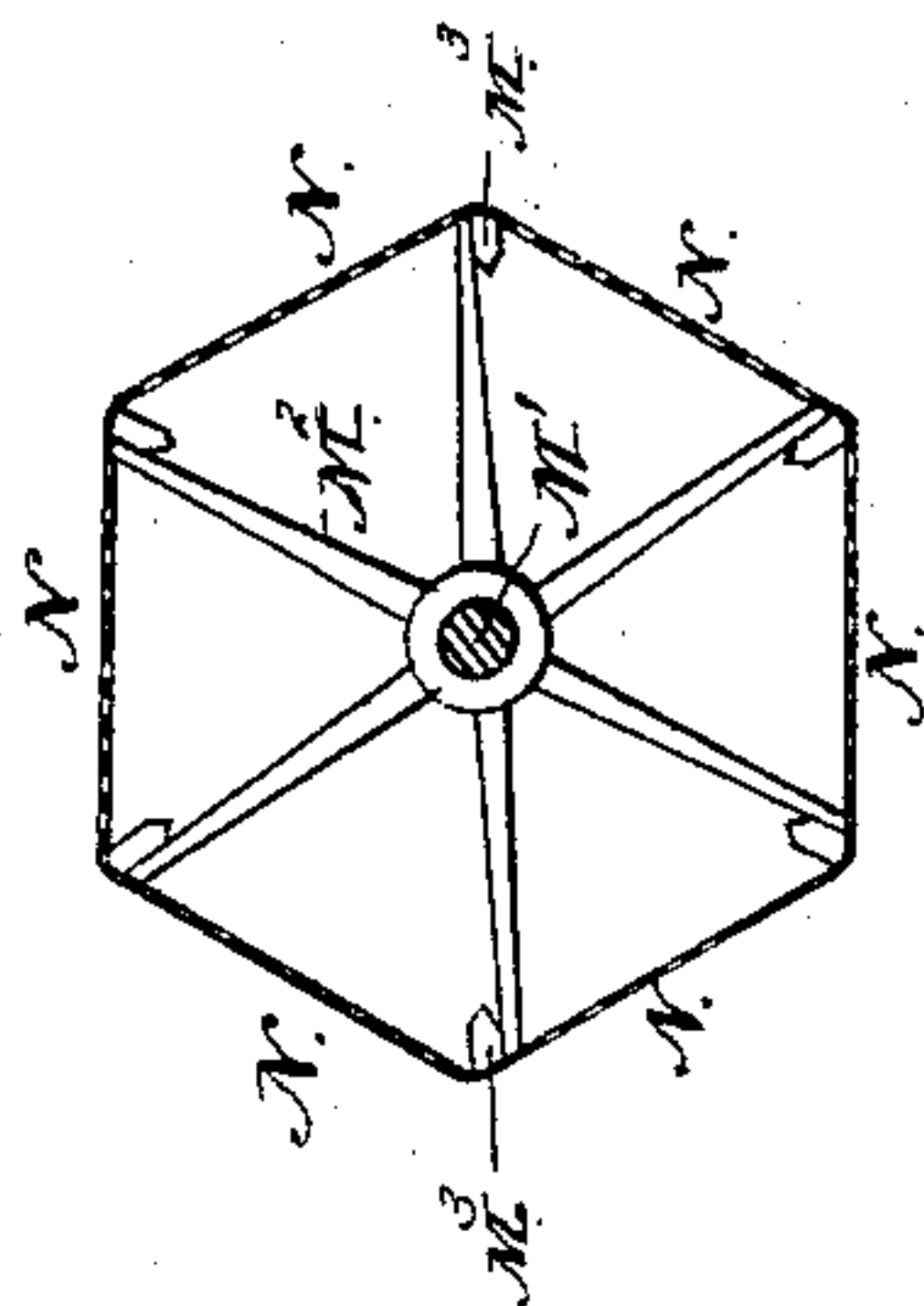
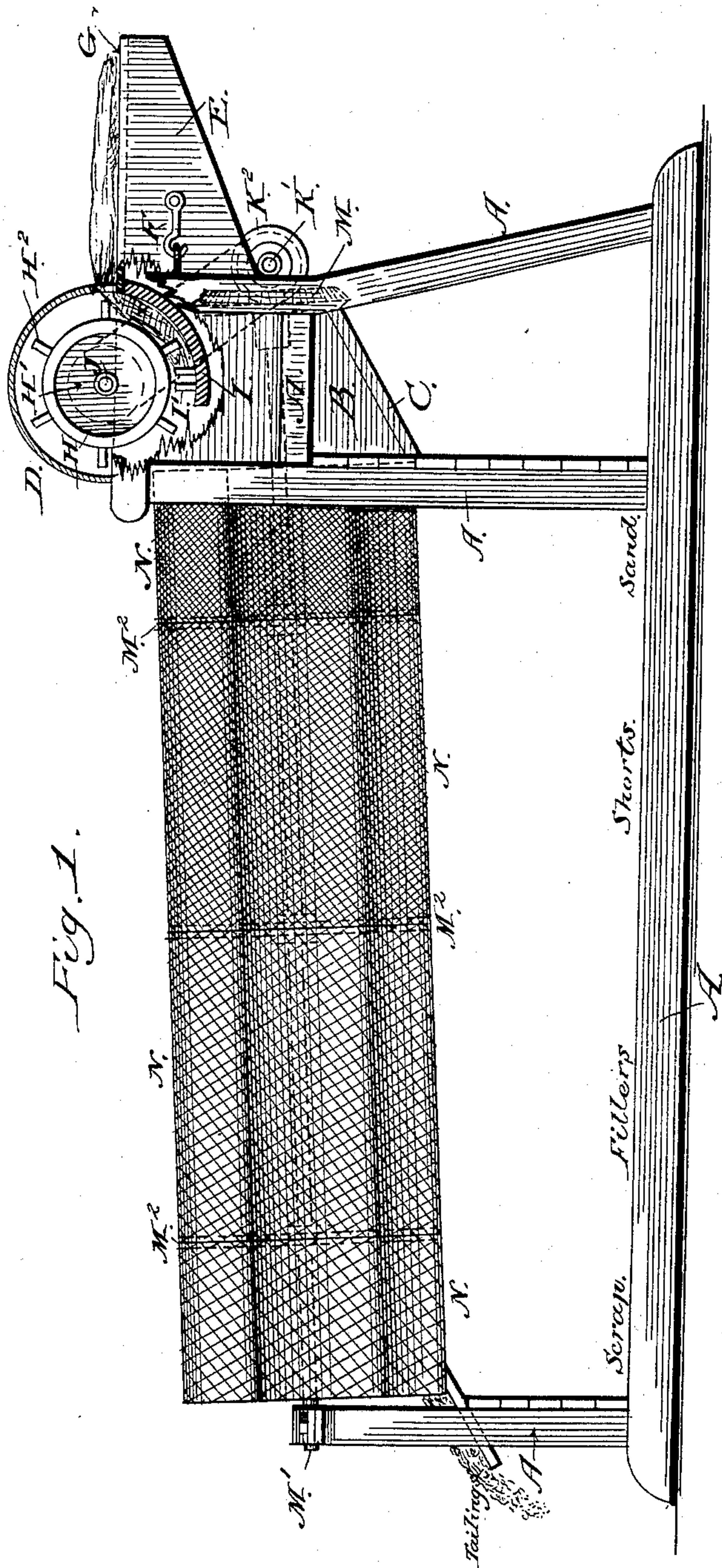


Fig. 1.



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Fig. 2.

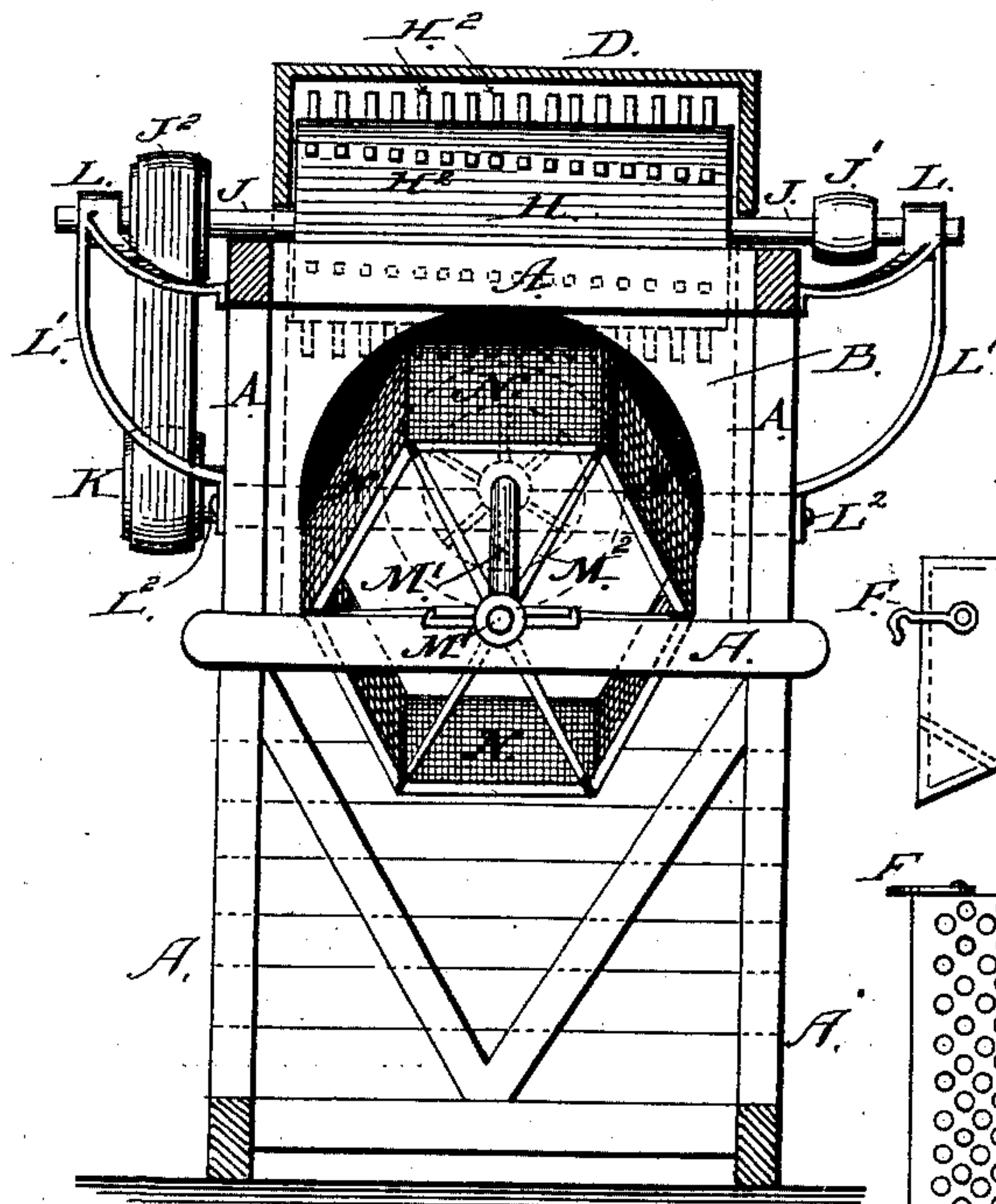


Fig. 4.

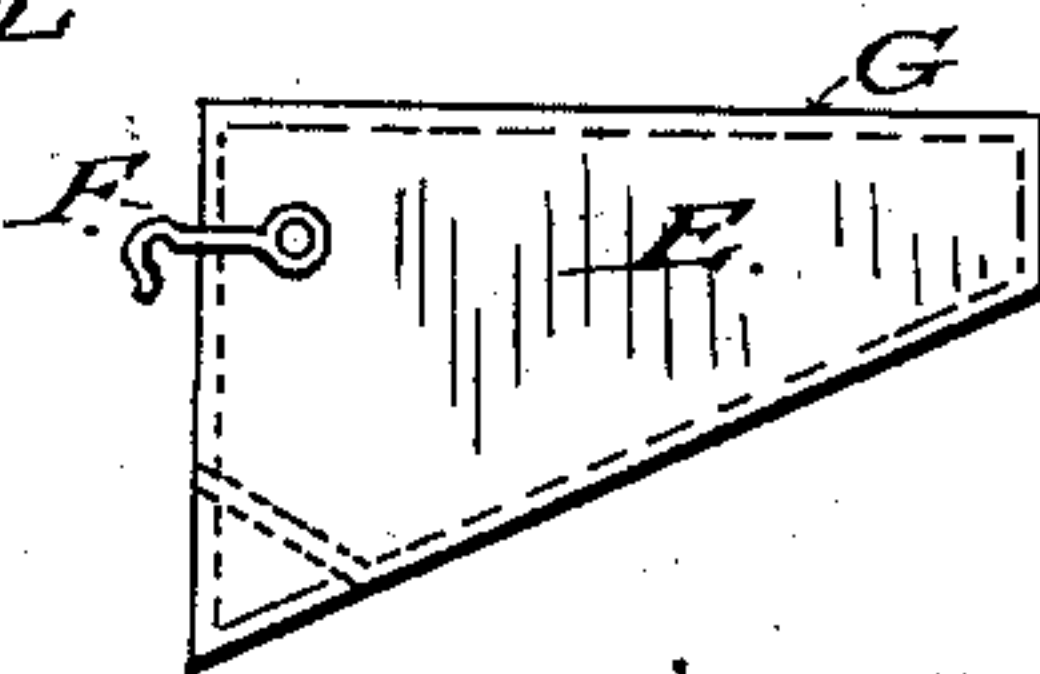


Fig. 5.

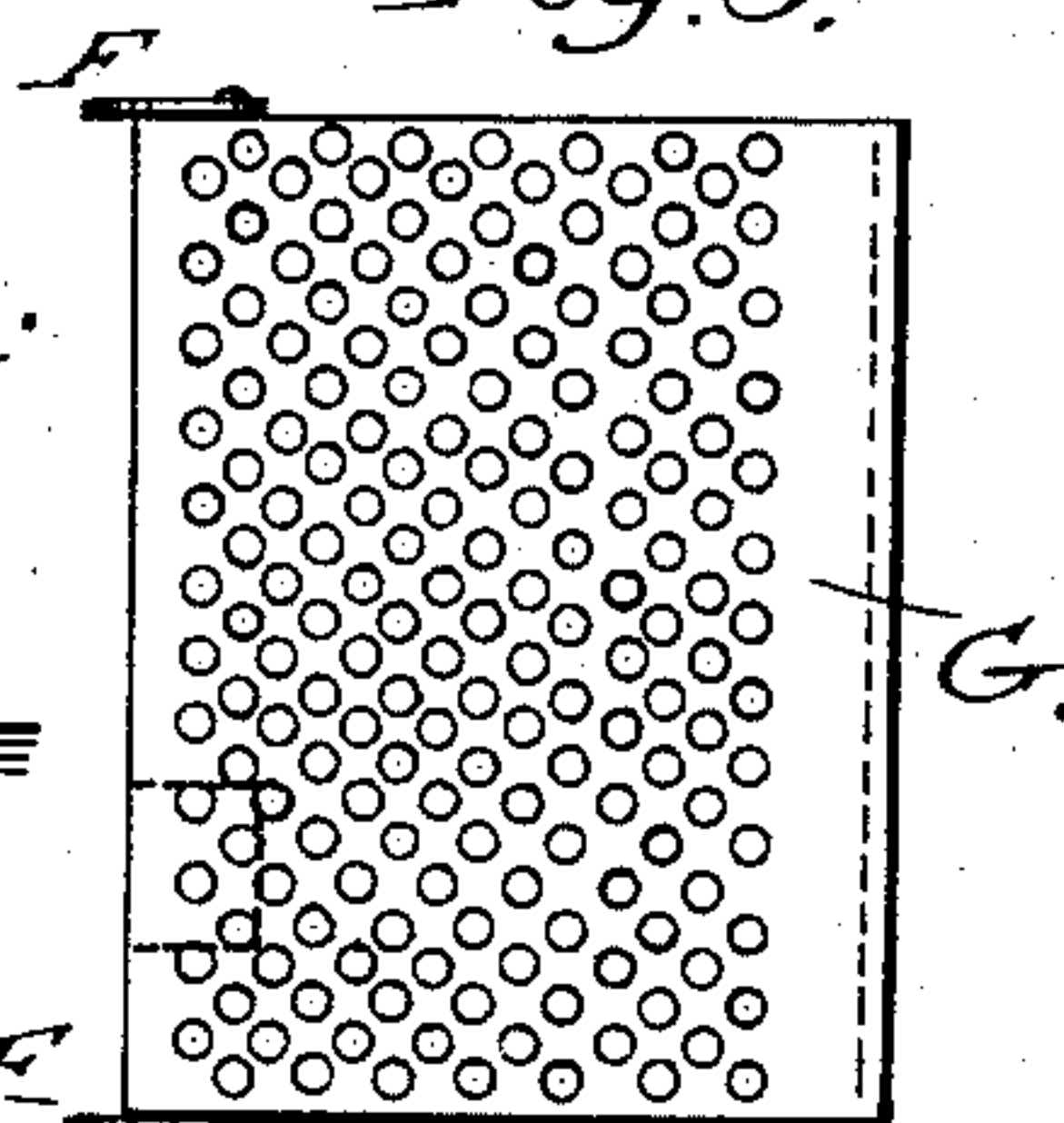
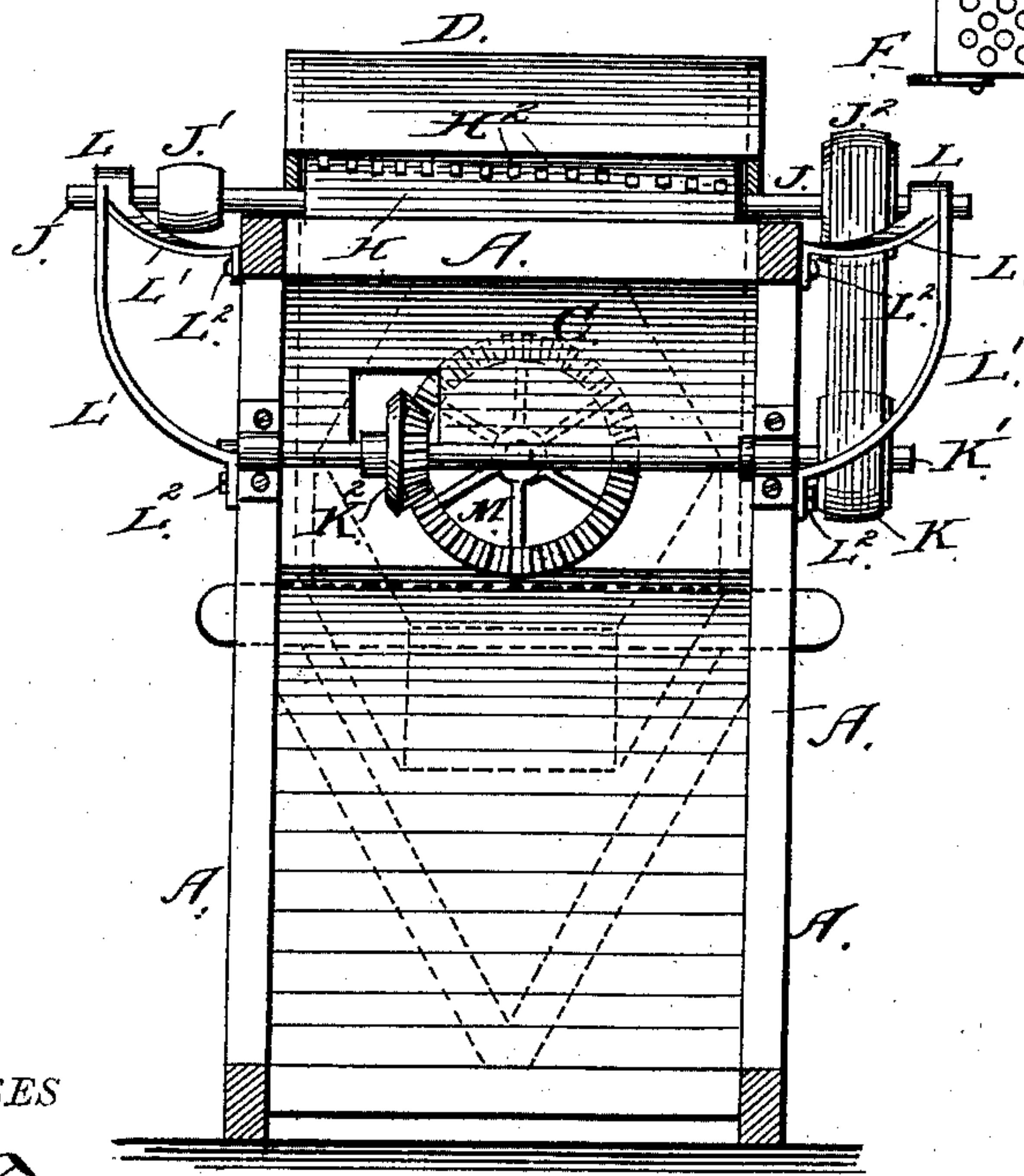


Fig. 3.



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MARTIN KINPORTS, OF EPHRATA, PENNSYLVANIA.

TOBACCO SCRAPPING AND GRANULATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 371,200, dated October 11, 1887.

Application filed February 5, 1887. Serial No. 226,651. (No model.)

To all whom it may concern:

Be it known that I, MARTIN KINPORTS, a citizen of the United States, residing at Ephrata, county of Lancaster, State of Pennsylvania, have invented a new and useful Improvement in Tobacco Scrapping and Granulating Machines, of which the following is a specification.

This invention relates more particularly to machines for the above purposes provided with not only the means for disintegrating the tobacco, but also with means for the sorting of the products of such disintegration.

This invention consists in the novel construction and combination of the parts, hereinafter fully described and claimed.

The object of the improvement is to furnish to manufacturers a machine that will operate without clogging, will not require much power to operate, and which will deliver the scrap assorted and cleaned ready for use.

Referring to the drawings accompanying this specification and forming a part of the same, in which corresponding letters of reference designate corresponding parts throughout, Figure 1 represents in side elevation, partly in section, the general appearance of my invention. Fig. 2 is a rear end elevation of the same, a portion of the cylinder-cap being removed to show the appearance and arrangement of the disintegrating-teeth secured in the same. Fig. 3 represents a front elevation of the same; Fig. 4, a side elevation of the feeding-table; Fig. 5, a plan of the same, showing the perforations in the top of the same, whereby a portion of the sand usually mixed in with the leaf is deposited in the receptacle below said top, and is thereby kept out of the machine. Fig. 6 is a representation of one of the reel-arms, showing the connection therewith of the longitudinal nailing and agitating rods.

A represents a frame suitable for the machine, and B a boxing in a portion of the same.

C is a chute leading to the bolting reel.

D is a cap for the cylinder.

E is a feeding-table, secured to the frame by hooks F, tightly boxed at the ends and base, and covered upon its top with a wire screen or perforated plate, G, as shown.

H represents the cylinder, which may be

constructed entirely of wood, or with metal heads H' and wood lagging, as shown. There are six or more series of metallic teeth, H², each about one-half inch square and about one and one-half inch in length, inserted in holes of the proper size to insure a good tight fit, and are placed upon a line drawn transversely upon the cylinder, said line being one inch (more or less) out of parallel with the axial line of the shaft.

A concave, I, the inner face of which is concentric with the periphery of the cylinder, is placed about one and three-fourths inch away from the same, and is suitably secured in the frame A, its lower edge terminating a little beyond a plumb-line dropped from the center of the cylinder, and has a double series of teeth, I', spaced transversely across the machine, the second series being parallel with and immediately behind the first series, and are so placed as to stand central to the space between the teeth H² of the cylinder. Upon the revolution of the cylinder said teeth H² will advance toward and pass between the teeth I' with a successive shearing cut, making the operation of scrapping or granulating and the tax upon the power very easy.

The cylinder is strongly secured to the shaft J by key or set-screw, and mounted upon the shaft outside of the frame at one end is a pulley, J', by which the machine is put in motion from any suitable power. At the opposite side of the machine a pulley, J², serves, by belt or its equivalent, to give motion to a pulley, K, and shaft K', mounted transverse to the frame at the front end of the same. The shaft J is supported in bearings L, outside of the pulleys J' J², having arms L' secured to the machine by feet and bolts L². This outside support serves to counteract the pull of the belts and the force exerted by the disintegrating-cylinder.

A bevel-pinion, K², suitably secured upon the shaft K', intermeshes with a bevel-wheel, M, mounted upon a shaft, M', said shaft being suitably supported at the front and rear ends of the machine, and has secured thereon three arms, M², spaced so as to have about twenty-four inches between the middle and end arms and about twelve inches from the end arms to the ends of the reel-rods M³. The latter are

constructed of about two inches width and one inch thickness, are secured to the reel-arms, and have their inner edges equally beveled to an angle of about forty-five degrees. The reel
 5 is given a pitch toward the rear of about four inches, and its front end passes just inside of the boxing. Wire screening, N, is nailed to the rods M³, of about twenty mesh per inch square of surface at the space next to the boxing, of
 10 about one-fourth of an inch mesh at the second space, of about three-eighths of an inch mesh at the third spacing, and of about five-eighths of an inch mesh per inch square of surface of the fourth spacing.

15 Partitions may be set across or drawers may be placed beneath the reel under the respective divisions, into which in the order of succession from the reel will fall sand, shorts, fillers, and scrap, tailings being delivered out-
 20 side of the machine-frame at the end of the reel, which are subsequently passed through the machine for the second time.

The operation of the device is as follows: The leaf is placed in bunches upon the feed-
 25 ing-table, and the machine being set in motion the leaf is fed into the machine, where it is intercepted by the teeth H² of the cylinder H and carried down between the same and the concave I, and, meeting and contacting with
 30 the teeth I' of the same, is shredded, scrapped, or granulated. It then drops upon the chute C, leading into the bolting-reel, where it is divested of its remaining sand (the greater portion of which had previously been parted
 35 with in passing over the feeding-table into the machine) in the first screen portion, delivering shorts through the second portion, fillers through the third portion, and scrap through the fourth portion of the bolting-reel screen-

wire covering. The tailings, requiring a sub- 40
 sequent operation, pass out of the reel beyond the frame of the machine.

The hooks F are pivoted to the sides of the table E and connect to staples projecting rear-
 45 wardly from the frame A, as shown in Fig. 1; or the said hooks may extend beyond the sides of the table, as shown in Figs. 4 and 5, for connection to staples projecting from the sides of the frame A, as either arrangement will hold
 50 the table equally well.

What I claim is—

1. In a tobacco-granulating machine, the combination of a supporting-frame, the rotary screen N, journaled in the frame, the boxing B at one end of the frame, the concave I, 55
 having teeth I' supported in the said boxing, the revoluble cylinder H, having teeth H² journaled above the said concave, the removable perforated table provided with sides E and hooks F, for attachment to the frame be- 60
 hind the concave, the chute C, and intermediate driving mechanism connecting the cylinder and screen shafts, substantially as and for the purpose set forth.

2. In a tobacco-granulating machine, the 65
 combination of a supporting frame, the boxing B at one end of the frame, the concave I, having teeth I' supported in the said boxing, the revoluble cylinder H, having teeth H² ar- 70
 ranged in rows at an angle to the axis of the cylinder, and the removable perforated table provided with sides E and hooks F, for attachment to the frame behind the concave, substantially as and for the purpose set forth.

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Witnesses:

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 H. D. SPANGLER.