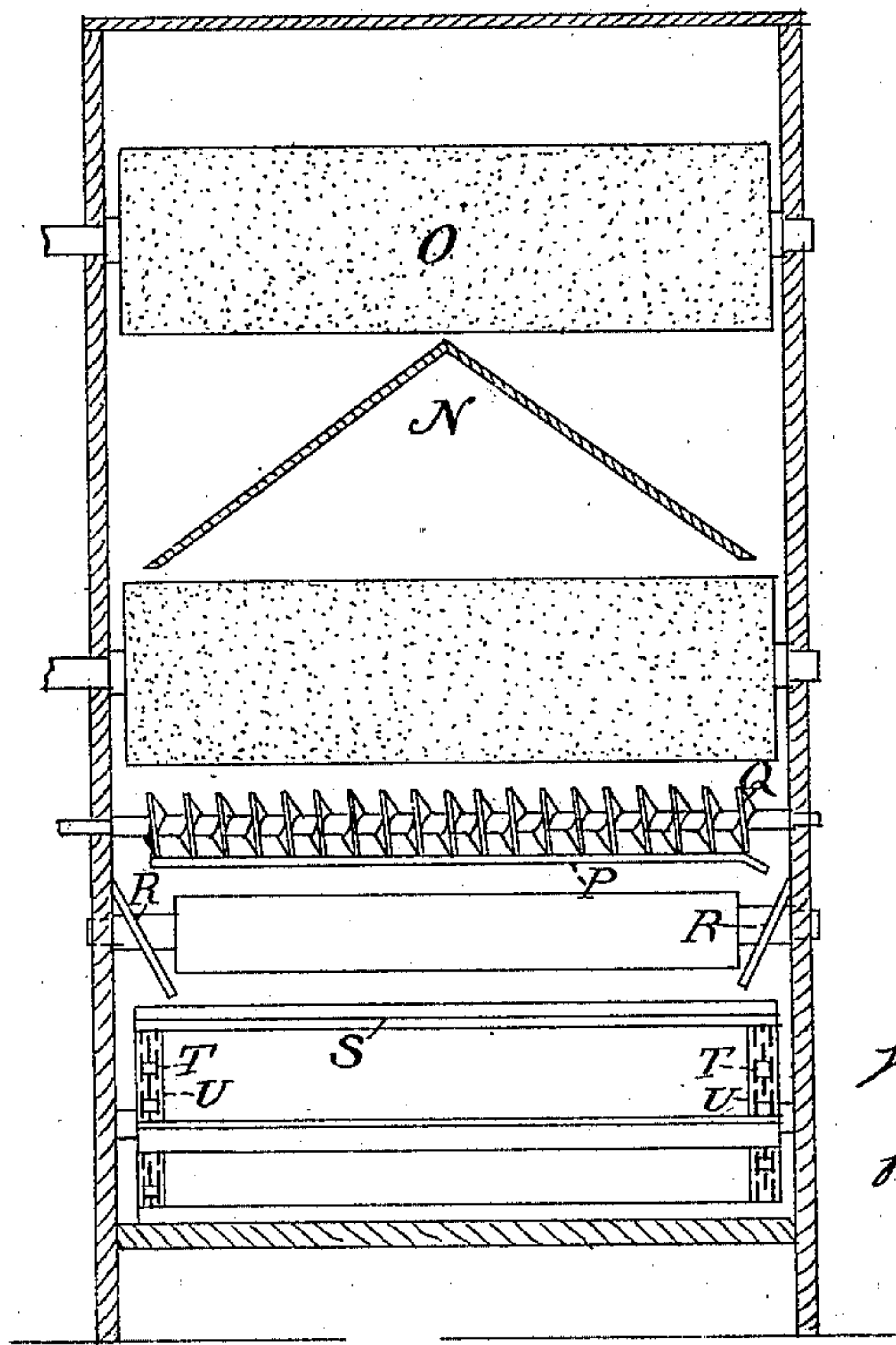
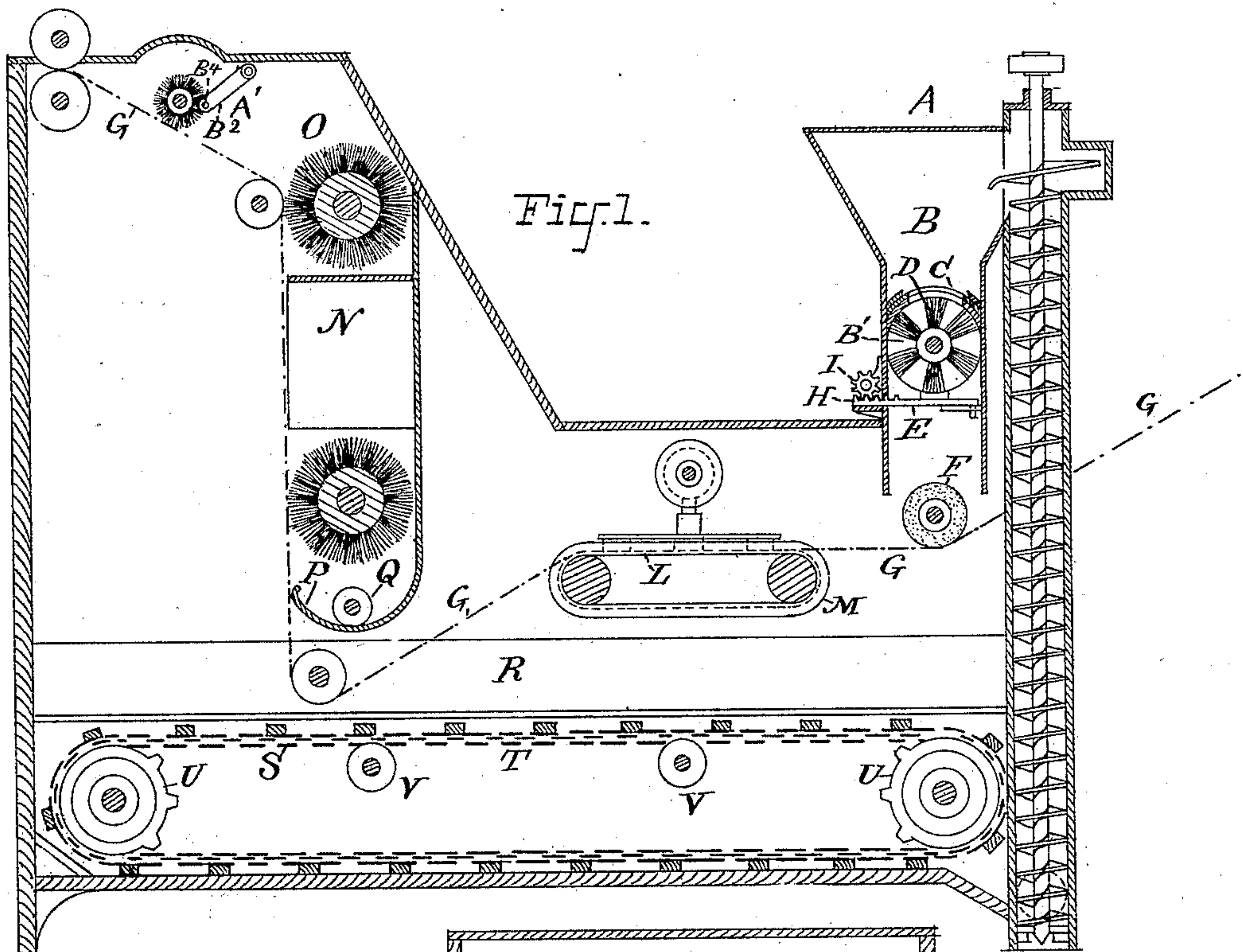


2 Sheets—Sheet 1.

Patented May 15, 1883.



INVENTOR:
Henry R. Silliman
Per J. A. Hurdall

(No Model.)

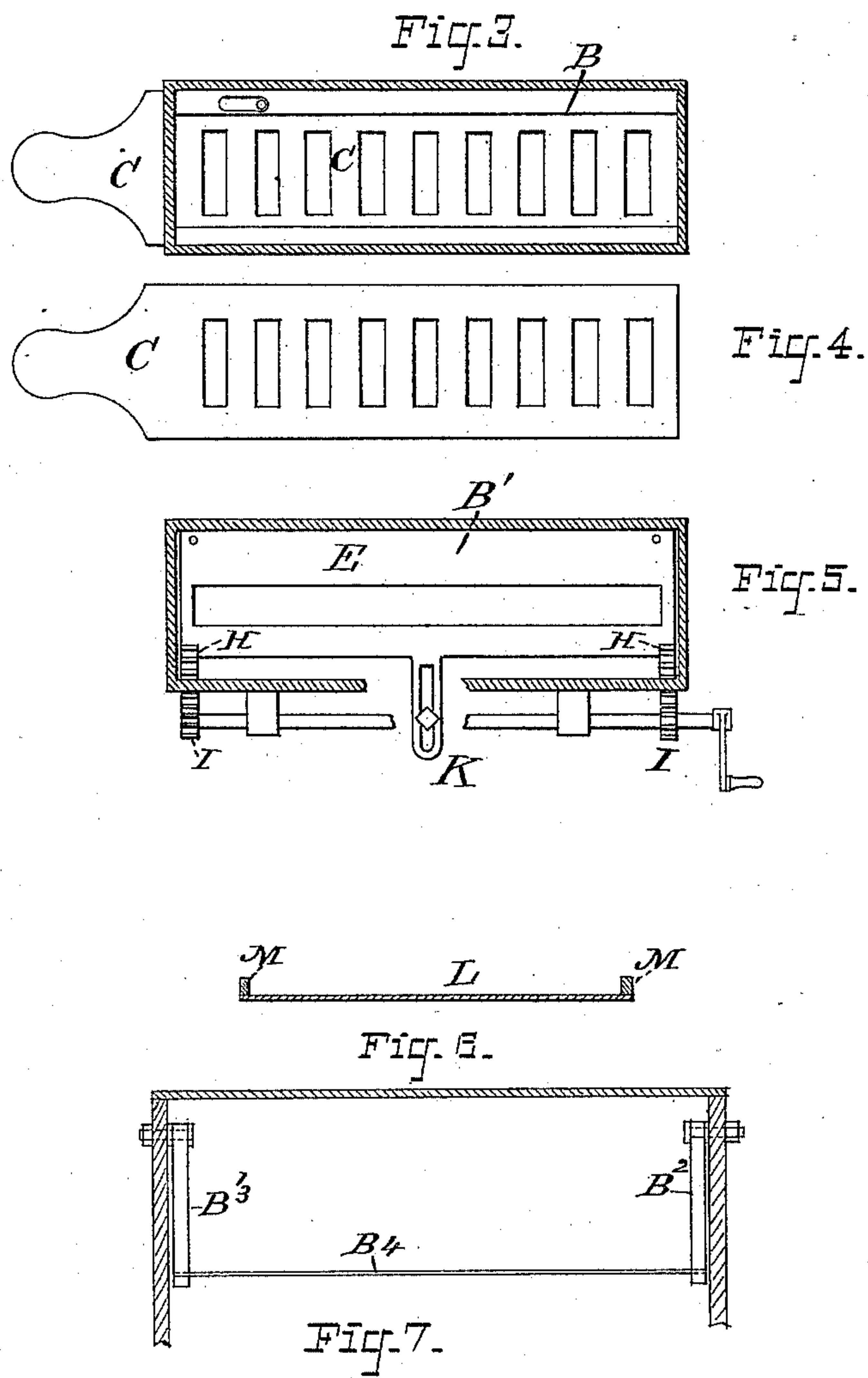
2 Sheets—Sheet 2.

H. R. SILLMAN.

BRONZING MACHINE.

No. 277,621.

Patented May 15, 1883.



ATTEST:

C. G. Perkins
J. M. Mudd

INVENTOR:

Henry R. Sillman
Per J. Mudd atty

UNITED STATES PATENT OFFICE.

HENRY R. SILLMAN, OF BROOKLYN, NEW YORK.

BRONZING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 277,621, dated May 15, 1883.

Application filed October 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY R. SILLMAN, a citizen of the United States, residing at the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Bronzing-Machines, of which the following is a specification.

My invention consists of a hopper extending across the frame of the machine. The said hopper is divided into two apartments, one above the other. The lower part consists of a hollow cylindrical casing having perforations or slotted openings on the top and bottom thereof, over which slides with corresponding openings operate in a manner to properly regulate the flow of the bronze-powder.

My invention also consists of a slotted slide provided with a rack-bar at each end, which engages with small gear-wheels mounted on a shaft running lengthwise therewith.

Figure 1 represents a sectional elevation. Fig. 2 represents a vertical section through X X. Fig. 3 represents a sectional plan of the upper chamber of the hopper, with the movable slide in the bottom thereof. Fig. 4 represents a plan of the movable slide. Fig. 5 represents a sectional plan of the lower chamber, showing the movable slide in the bottom thereof. Fig. 6 represents a cross-section of the flanged endless apron. Fig. 7 represents the brush-cleaner in detail.

In the drawings, A is the hopper, divided into two chambers, B and B'.

C is the movable slotted slide placed at the base of the upper chamber. The said slide is moved to and fro, in order to supply the brush D of the lower chamber, B', with bronze-powder, which falls from the chamber B. The brush D is constantly revolving, thereby carrying the bronze-powder around the opening of the slide E, under the base of the lower chamber, B', from which place it falls to the felt roller F, the function of which is to spread the bronze-powder evenly on the surface of the paper G. The slide E is provided with rack-bars H H, each of which engages with gear-wheels I I, mounted on the shaft J, which controls the movement of the said slide.

K is the slotted tongue, made integral with

the slide E, and is tightened to a corresponding projection of the lower chamber, B'.

L is the endless apron, provided with flanges M M on its edges, the presence of which prevents the bronze-powder from being pushed from the surface of the paper while moving across the said apron.

N is the double inclined chute placed beneath the upper duster, O. The said inclines guide the falling bronze-powder to the trough P, in which is placed a spiral conveyer, Q, for conveying the bronze-powder to the end of the said trough, from which point it falls to the inclines R R, thence to the bottom of the machine, from whence it is carried forward by the scrapers S, mounted on the chains T T of the sprocket-wheels U. The said chains are supported in the middle by a pair of rollers, V V, the object of which is to prevent the chain from sagging, thereby reducing the power, which otherwise would increase.

I do not confine myself to any particular means for operating the slide C, located on the base of the upper chamber, B. I am aware that it can be made so as to be operated automatically by steam or other power; or it can be operated by hand.

I am also aware that bronzing-machines have been provided with a movable slide beneath the feeding-brush, the said slide being adjusted by means of a screw. This construction is objectionable from the fact that it is not provided with means for preventing the full weight of the bronze from resting on the feeding-brush, which in practice frequently stalls the same, thus preventing the proper flow of the bronze-powder. Further objection to this construction, as stated above, is that of adjusting the slide by means of a screw, which does not move the slide quick enough while the machine is in motion, thus causing too much or not enough to flow. The objections, as herein stated, are obviated by my invention, as described hereinbefore.

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

1. In a bronzing-machine, a self-feeding hopper consisting of a hollow cylindrical casing

having perforations or slotted openings in the top and bottom thereof, and provided with slides to allow the bronze to be fed to the paper by means of a brush placed within the hollow of the said casing, substantially as shown and described.

2. In a bronzing-machine, the movable slide provided with rack-bars at each end thereof, which engages with and is controlled by a pair of gear-wheels, and the slotted tongue, with set-screw for tightening the said slide, in combination with a hollow cylindrical casing containing the feeding-brush of a bronzing-machine, substantially as shown and described.

3. The double inclined chute N, trough P, with spiral conveyer Q, and inclined planes R R', in combination with dusters OO of a bronzing-machine, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand.

HENRY R. SILLMAN.

Witnesses:

C. G. PERKINS,
A. E. FIRMIN.