

No. 806,502.

PATENTED DEC. 5, 1905.

O. F. RUTSCHMAN.
MACHINE FOR PLOTTING SOAP, &c.
APPLICATION FILED NOV. 19, 1904.

fig. 1.

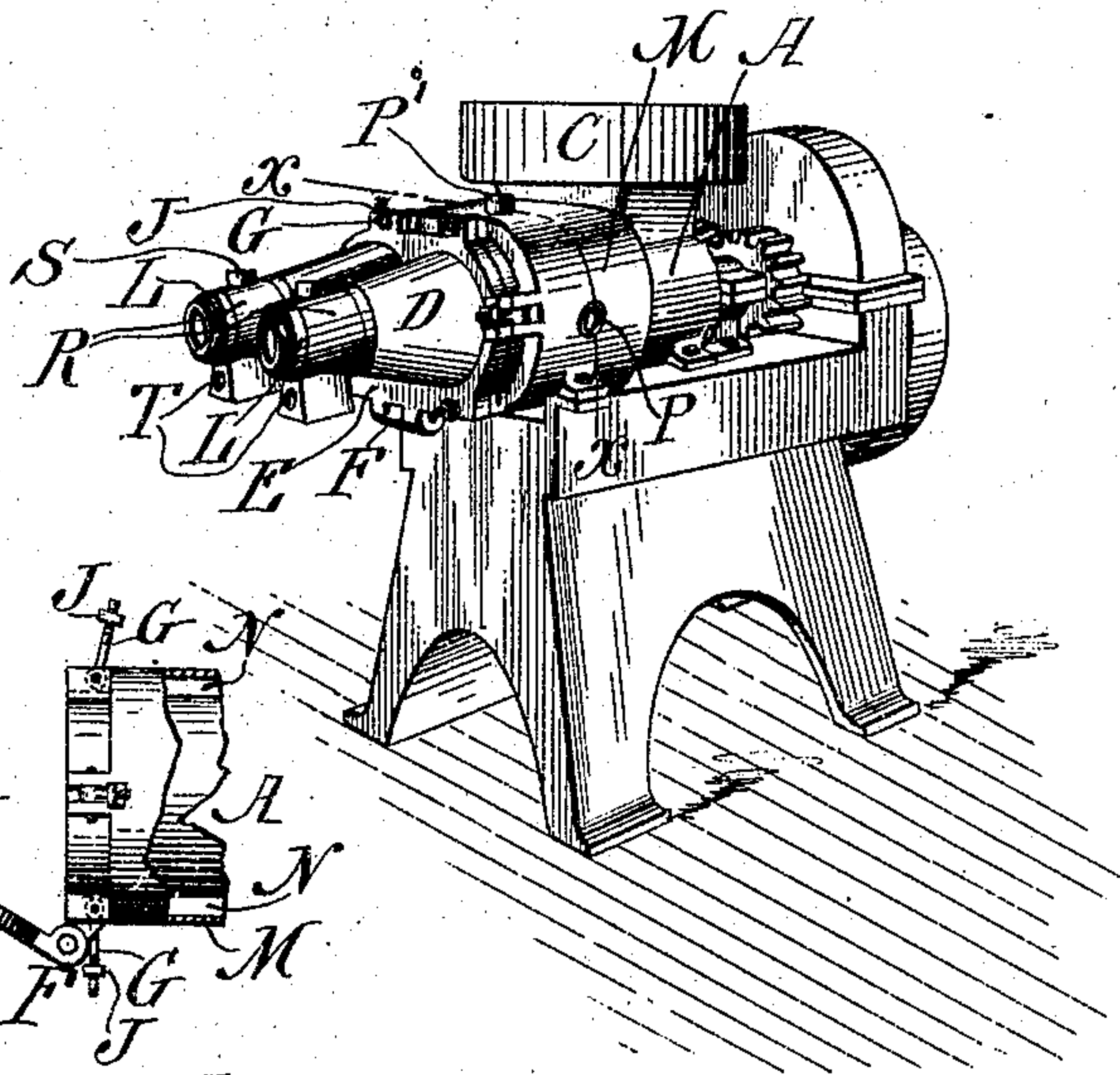


fig. 5.

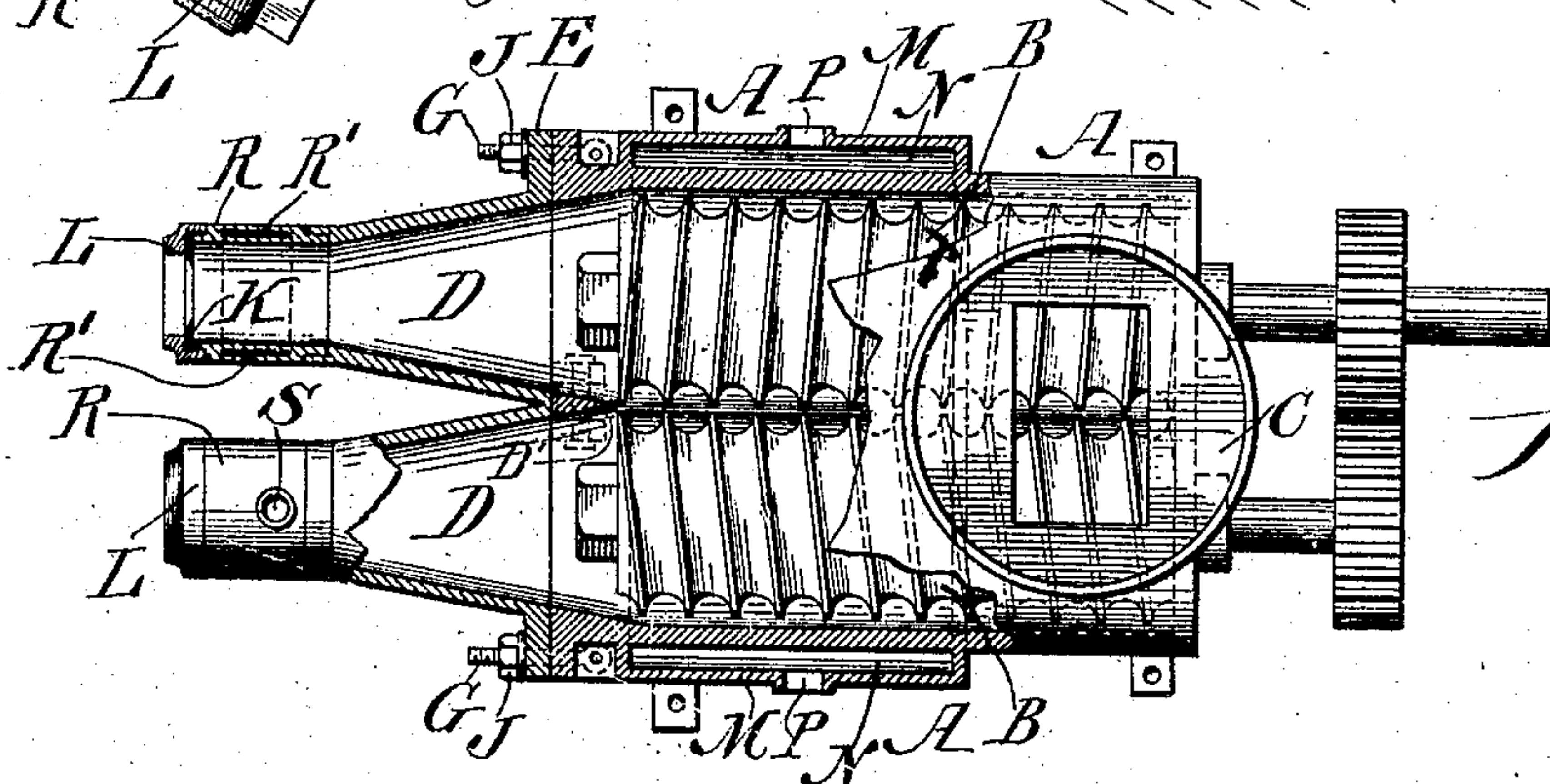
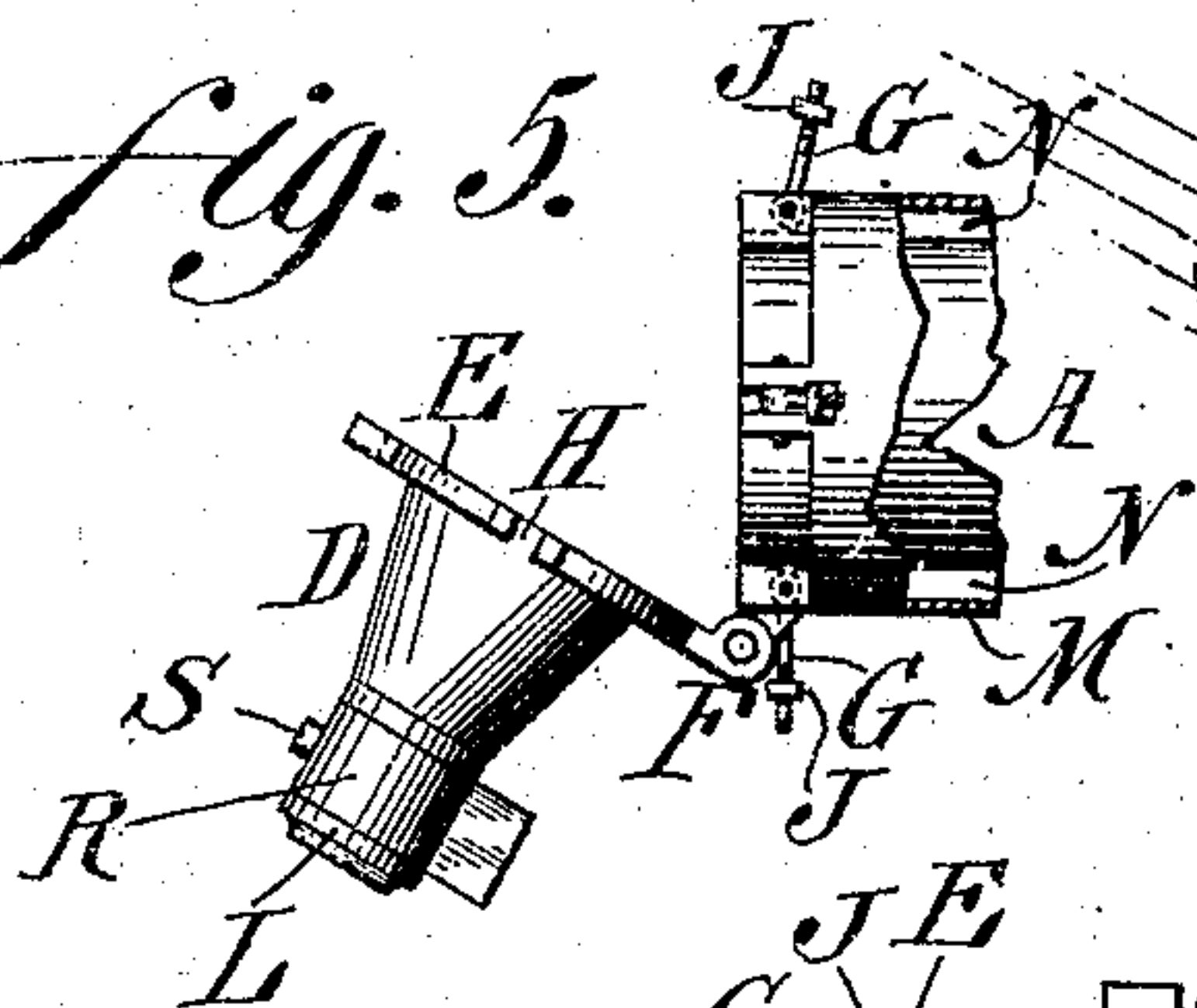
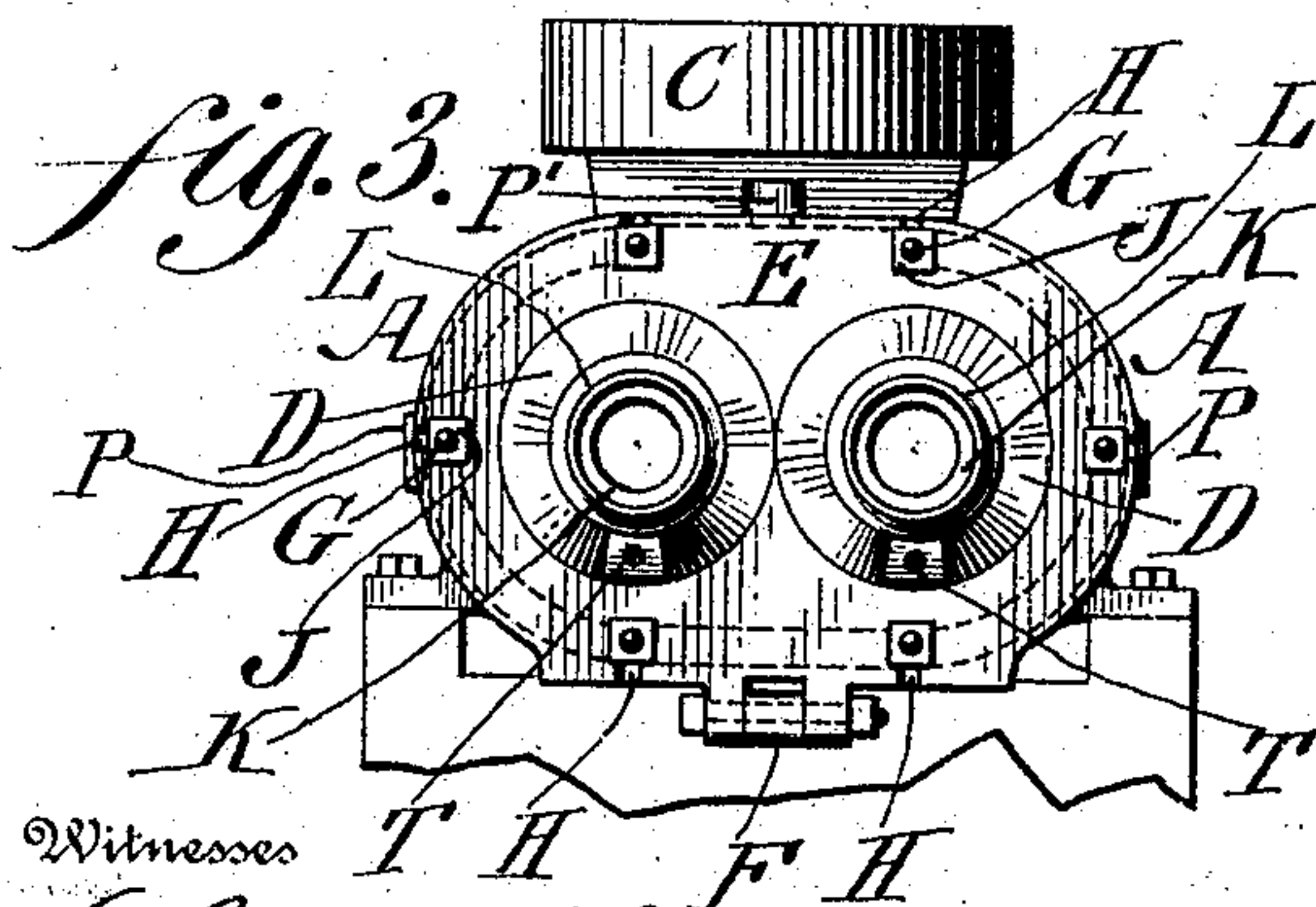
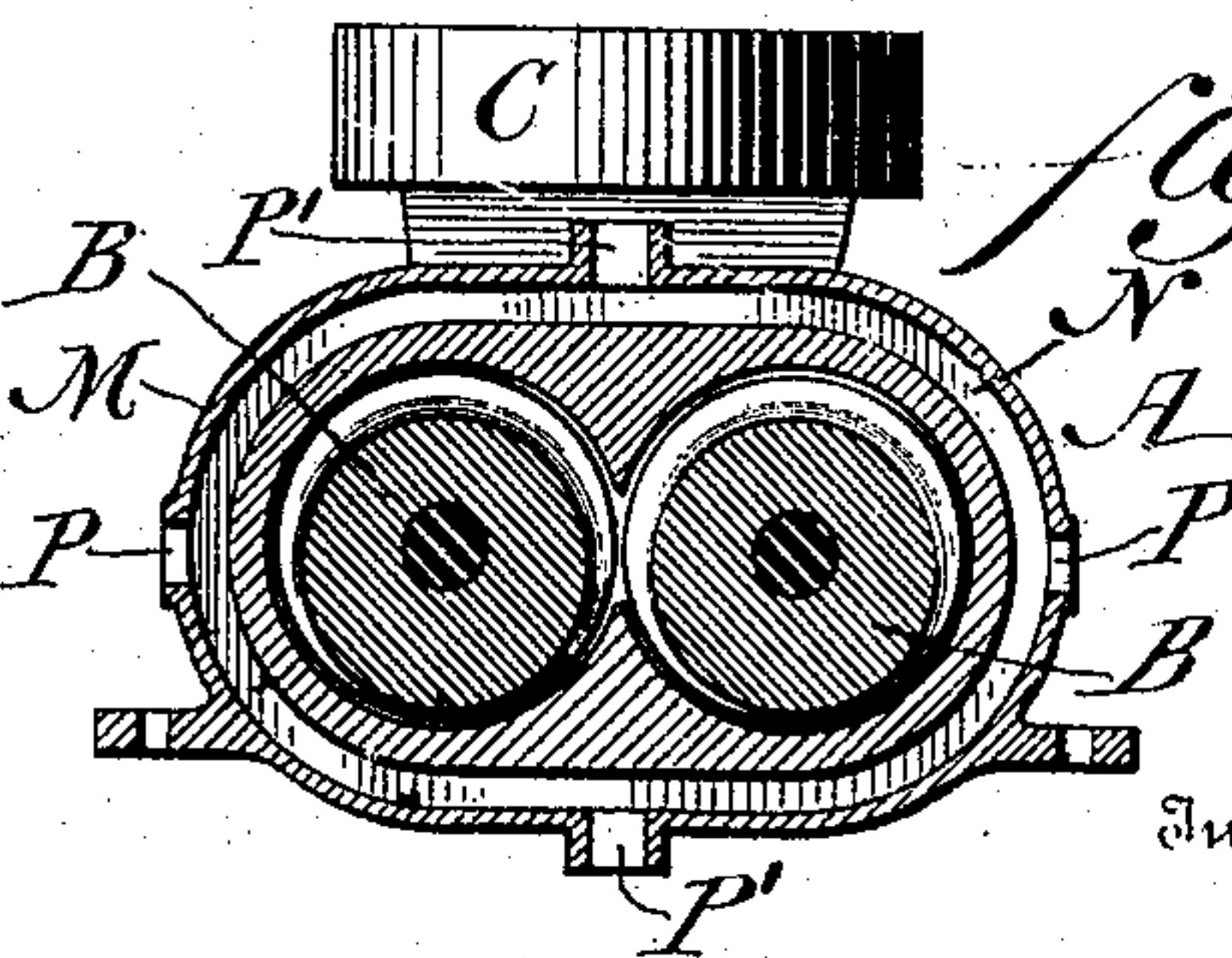


fig. 2.



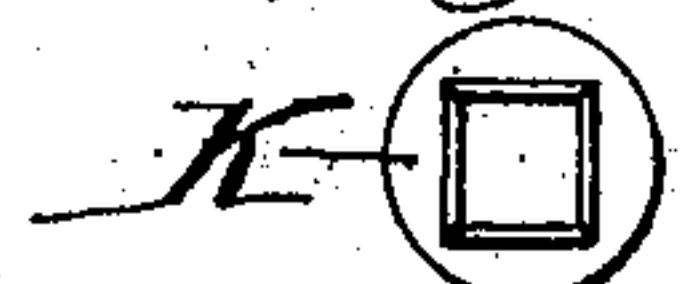
Witnesses
L. M. Dourville,
P. F. Lagle.

fig. 6.



Inventor

fig. 7.



Oscar F. Rutschman
Diedersheim & Fairbanks
Attorneys

UNITED STATES PATENT OFFICE.

OSCAR F. RUTSCHMAN, OF PHILADELPHIA, PENNSYLVANIA.

MACHINE FOR PLOTTING SOAP, &c.

No. 806,502.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed November 19, 1904. Serial No. 233,396.

To all whom it may concern:

Be it known that I, OSCAR F. RUTSCHMAN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Machine for Plotting Soap, &c., of which the following is a specification.

My invention consists of a plotting-machine formed of a casing having therein a plurality of chambers each having a spiral conveyer therein and a plurality of discharge-nozzles confluent at the end of said casing whereby the soap may be properly plotted in a plurality of streams, thus occasioning a large increase in the product of the machine, means being provided for preventing streaks and other defects in the soap and adapting the plotted material to be immediately cut and pressed without being necessarily dried.

Figure 1 represents a perspective view of a soap-plotting machine embodying my invention. Fig. 2 represents a partial top or plan view and a partial horizontal section thereof. Fig. 3 represents an end view thereof. Fig. 4 represents a vertical section on line $x x$, Fig. 1. Fig. 5 represents a side elevation of a detached portion, showing certain parts in different positions from those shown in Fig. 4. Figs. 6 and 7 represent face views of different forms of dies that may be employed.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a casing having therein two cylindrically-shaped parallel chambers, each containing a cylinder B, said cylinders having their peripheries spirally or helically grooved, the grooves of one cylinder extending in a reverse direction to those of the other cylinder, the two cylinders having their shafts geared together and receiving power in any suitable manner, so as to rotate in reverse direction.

C designates a hopper or funnel on the casing A and opening into the same for supplying the chambers with the soap or material to be plotted. At the end of the casing opposite to the hopper C are discharge spouts or nozzles D, each of the same leading from the respective chambers A, said spouts projecting from the plate E and being confluent at the latter, the inner walls of said nozzles joining and forming the tapering deflector D', whose apex points toward the central space between the cylinders, said plate being connected with the casing by the hinge F, which admits of the opening of said end

plate, whereby access may be had to the interior of the casing A and the cylinders therein. In order to retain said plate E in closed condition, there are hinged or pivoted to the casing the longitudinally-extending bolts G, which are adapted to enter recesses or bifurcations H in the peripheral portion of said plate E, when by means of the nuts J on said bolts the plate E may be firmly connected with the ends of the casing, it being evident that when said nuts are unscrewed the bolts may be thrown out of the bifurcations H, when the plate E is free to be moved from the casing, as shown in Fig. 5.

In the outer ends of the nozzles D are the dies K, which are held in place by the couplings or nuts L, which engage said nozzles and have their openings of the suitable contour desired to be imparted to the streams of soap. Surrounding the casing A is a jacket M, which forms the chamber N, into which cold water or other fluid is admitted through openings P, so as to cool the casing A and the contents thereof, the discharge of said fluid being through the openings P'.

The discharge ends of the spouts or nozzles D are surrounded by the jackets R, forming the chambers R', which have inlets and outlets S T, so that water or other fluid in hot condition may be introduced into said chambers or suitably heated after entrance therein, so as to heat said discharge ends.

It will be seen that when a mass of soap is admitted through the hopper C into the casing A it is engaged by the spiral peripheries of the cylinders and so worked and conveyed through the casing around the cylinders toward the center of the casing, the streams on the cylinders uniting in the space between the cylinders, forming a single stream, which divides, and each stream continues around the respective cylinder and again unites at the center and again divides at the terminals of the cylinders, when the streams flow uninterruptedly into the confluent nozzles D, from which they are ejected through the dies K, the streams of soap thus receiving the shape of the dies, it then being directed to a table or other support, where it may be sliced, pressed, or otherwise manipulated, according to requirements, it being seen that the mass of soap while in the casing is intermingled and incorporated by the two spiral cylinders or conveyers, so that it becomes homogeneous, in which condition it is formed into independent streams, which

subsequently leave the machine intact without liability to break or crumble.

As the casing, and consequently the soap therein, are kept cool, I avoid the formation of blisters and bubbles in the mass, the heating of the discharge end of the spouts serving to sufficiently soften the soap to assist the forward passage of the streams, and thus the latter will be found to be free from streaks or other defects, while the streams will be in condition for slicing or pressing without necessarily placing them on racks to dry.

It is evident that by means of the machine presented candy, glue, and other plastic substances may be plotted, it being only necessary to employ a proper die to impart the required shape to the material to be plotted.

The cooling fluid for the chamber N may enter the openings P and discharge through the openings P', or vice versa, according to the right or left position of the machine in a shop, in which case the unused openings may be closed by suitable stoppers.

Various changes may be made in the details of construction shown without departing from the general spirit of my invention, and I do not, therefore, desire to be limited in each case to the same.

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

1. In a plotting-machine of the character stated, a casing, a plurality of parallel communicating chambers therein, a spiral con-

veyer in each of the chambers with the spirals reversely arranged a deflector extending within the casing opposite the space between the said spirals, a feeding-hopper, a plate at the discharge end of said casing, a plurality of discharge-nozzles on said plate in communication with said chambers, and a detachable connection between said nozzles and casing.

2. In a plotting-machine of the character stated, a casing, a plurality of parallel communicating chambers therein, a spiral conveyer in each of said chambers with their spirals reversely arranged, a feeding-hopper, a plate at the discharge end of said casing, a plurality of discharge-nozzles on said plate in communication with said chambers, a hinge connected with said nozzles and casing and means for securing said plate to said casing in the operative position of said nozzles.

3. In a plotting-machine of the character stated, a casing having a plurality of chambers, a cylinder in each chamber with spirally-grooved peripheries reversely arranged, said cylinders having their shafts geared to rotate in reverse direction, nozzles removably mounted on said casing at the discharge end thereof, dies carried by said nozzles and a tapered divider mounted on said casing and extending therewithin with its apex opposite the space between said cylinders.

OSCAR F. RUTSCHMAN.

Witnesses:

JOHN A. WIEDERSHEIM,
S. R. CARR.