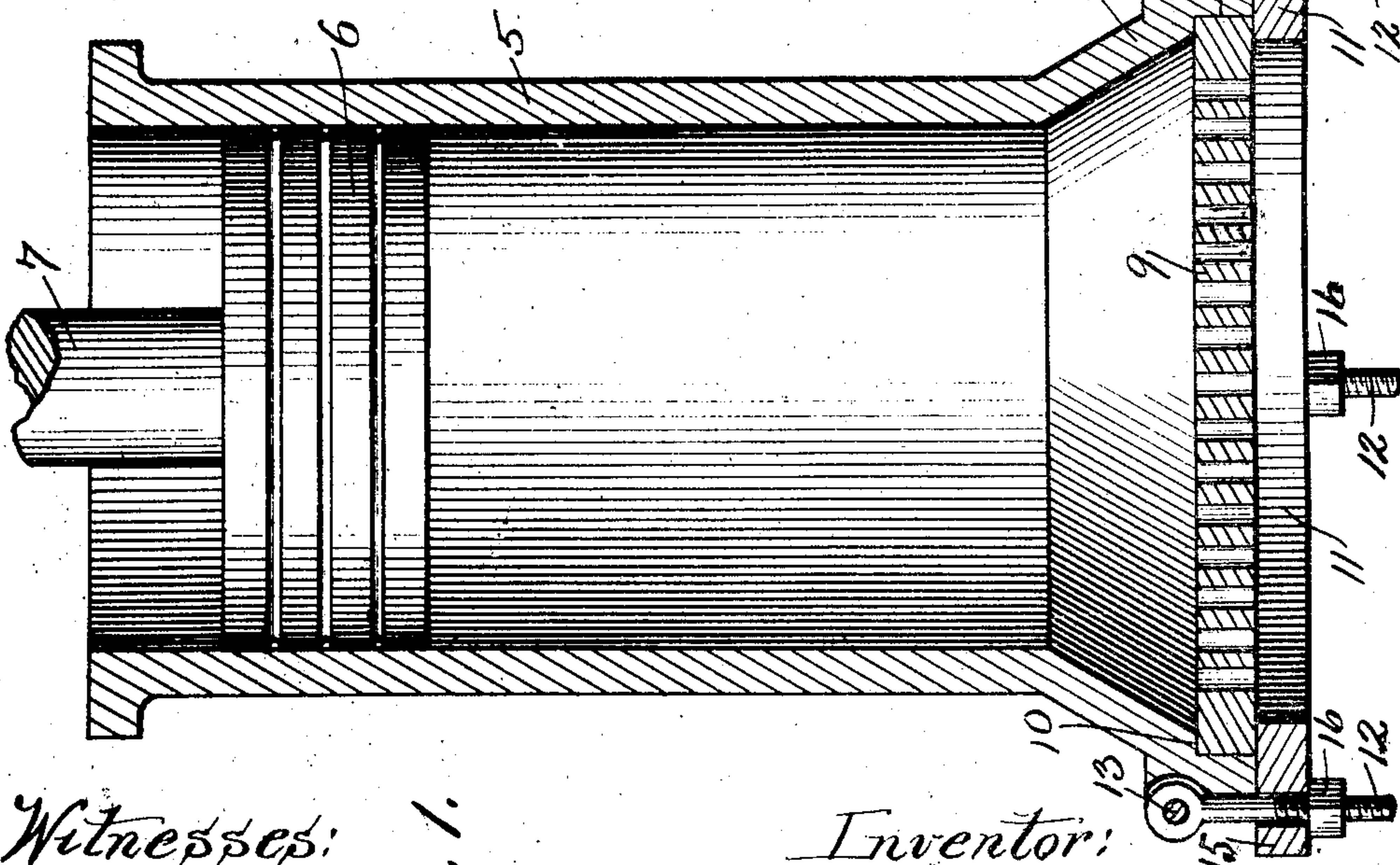
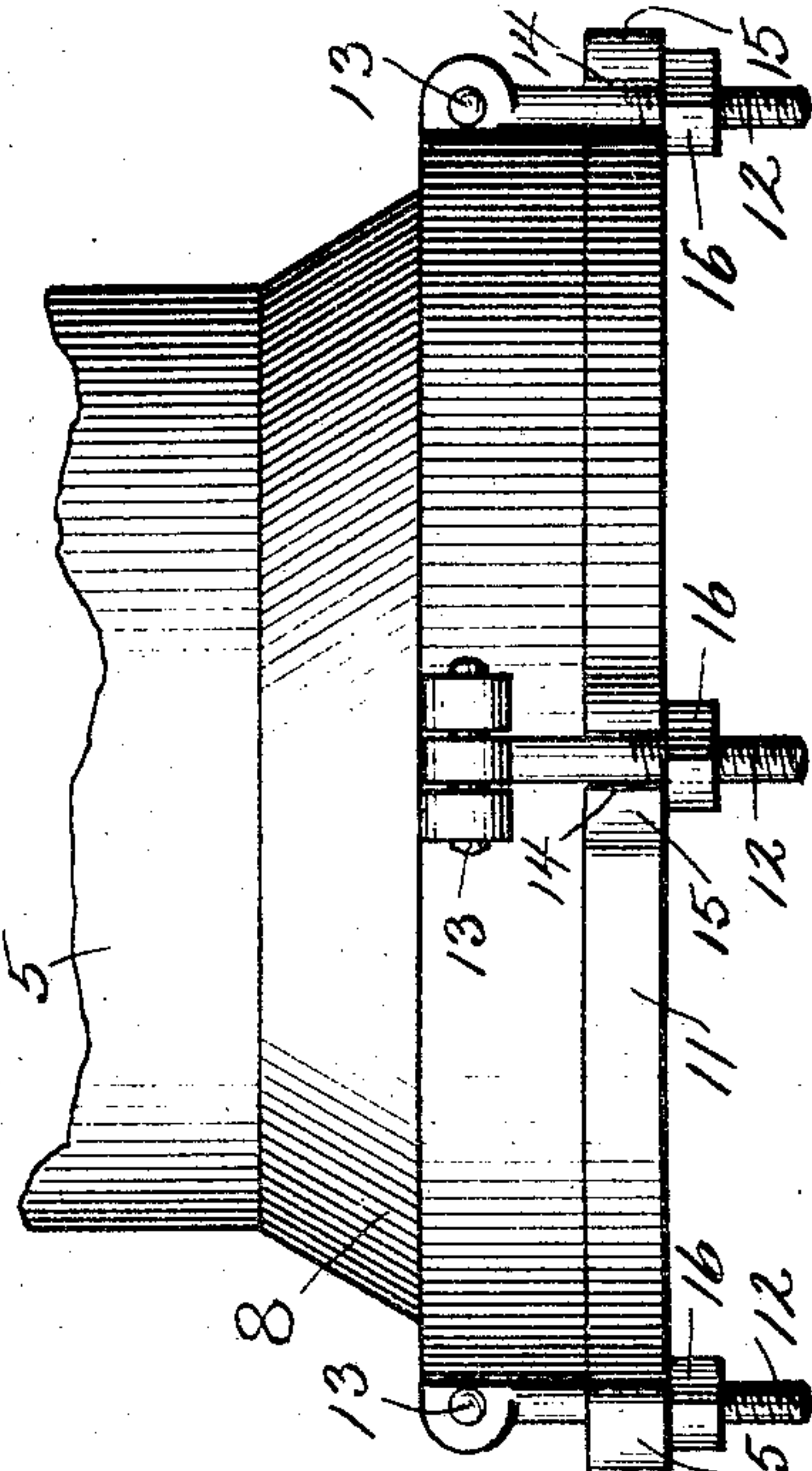
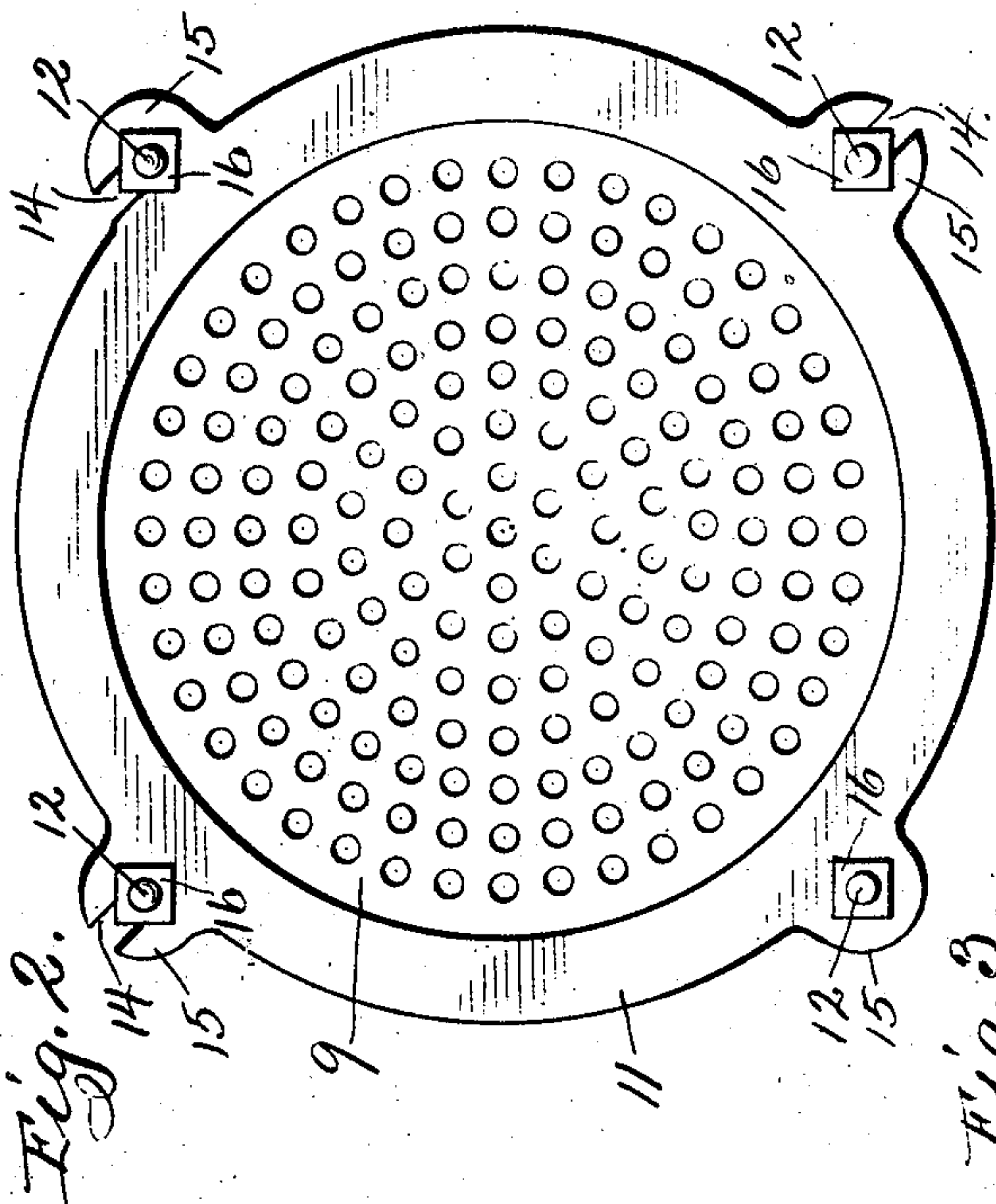


No. 841,852.

PATENTED JAN. 22, 1907.

N. D'AGOSTINO.  
CYLINDER FOR MACARONI MACHINES.  
APPLICATION FILED NOV. 24, 1903.



Witnesses:  
A. U. Lecher  
C. L. Brown

Fig. 1.

Inventor:  
Nicola D'Agostino

By R. J. Jaeger

Atty.



# UNITED STATES PATENT OFFICE.

NICOLA D'AGOSTINO, OF CHICAGO, ILLINOIS.

## CYLINDER FOR MACARONI-MACHINES.

No. 841,852.

Specification of Letters Patent.

Patented Jan. 22, 1907.

Application filed November 24, 1903. Serial No. 182,509.

*To all whom it may concern:*

Be it known that I, NICOLA D'AGOSTINO, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Cylinder for Macaroni-Machines, of which the following is a specification.

My invention relates to improvements in the construction of the discharging end of the cylinder, the die or forming-plate, which is secured to the cylinder, and the manner of securing the die to the cylinder; and the objects of my invention are, first, to provide an enlarged discharging end on the cylinder whereby the amount of pressure required to force the piston is decreased and the output of the machine is increased, and, second, to provide means whereby the dies can readily be changed.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of a cylinder embodying my invention, Fig. 2 an inverted plan of the same, and Fig. 3 an elevation of the lower end of the cylinder.

Similar reference characters refer to similar parts throughout the several views.

The greater portion of the cylinder 5 is of uniform size to accommodate the moving piston 6, which is secured to the end of the piston-rod 7 and operated by any of the well-known devices.

In the drawings I have shown a cylinder which has its discharging end at the bottom, and the lower end of the cylinder 5 is enlarged, as at 8, to accommodate a die 9 of greater surface area than the end of the piston 6.

While I at present prefer to make this flaring enlarged end 8 integral with the cylinder 5, it may be a separate portion bolted to the cylinder.

Heretofore the dies used in cylinders of this class were of substantially the same area as the piston 6, and the stiffness of the macaroni-dough made it necessary to use considerable force to press the dough through the die. Besides, the output of the finished macaroni was a great deal less than is possible with my invention.

As far as I know I am the first to use a macaroni-forming die of greater area than the piston, and I therefore lay claim to such a construction broadly.

The die 9 shown in the drawings is for

forming solid round macaroni bars or strings and can be removed and a die of any desired construction put into position in its stead.

A recess 10 is formed in the lower end 8 of the cylinder 5, into which fits the edge of the die 9, and a clamping-ring 11 is secured by bolts 12 to the cylinder 5 to hold the die 9 in its proper place in the recess 10 and to resist the pressure exerted against it by the action of the piston 6 while the macaroni is forced through the die 9.

The ring 11 may be secured in any ordinary way; but for the purpose of convenience and speed in changing the dies I prefer to employ two or more bolts 12, pivoted at one end, as at 13, to the cylinder 5 and extending down through slots 14 in the ears or lugs 15 on the ring 11.

When it is desired to remove the die 9, the nuts 16 on the bolts 12 are turned loose and the bolts 12 turned up on their pivots 13 out of engagement with the ring 11, allowing the same to be turned about one of the bolts 12.

While I have shown the die 9 in the drawings as being only slightly greater in area than the end of the piston 6, I desire to have it understood that its area could be a great many times the area of the end of the piston 6 and still come within the scope of my invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A macaroni-cylinder provided with a flat perforated forming-die, the perforated area of which is materially greater than the cross-sectional area of said cylinder.

2. A macaroni-cylinder provided with a flat perforated die through which the macaroni is delivered, the perforated area of said die being materially greater than the piston within said cylinder.

3. In a macaroni-press, a cylinder, a piston fitted in said cylinder, an enlarged mouth on said cylinder and a perforated forming-die secured in the extreme delivery end of said mouth, the perforated area of said die being materially greater than the cross-sectional area of said cylinder.

4. In a macaroni-press, a small cylinder, a piston fitted to move in said chamber, a large chamber provided with an exit, and a perforated forming-die secured in the extreme delivery end of said exit; the perforated area of said die being materially greater than said piston.

5. A macaroni-cylinder provided with a



perforated forming-die, the combined cross-sectional area of said perforations being materially greater than the cross-sectional area of said cylinder.

5 6. A macaroni-cylinder provided with a perforated die through which the macaroni is delivered, the combined cross-sectional area of said perforation being materially greater than the piston within said cylinder.

10 7. In a macaroni-press, a cylinder, a piston fitted in said cylinder, an enlarged mouth on said cylinder and a die provided with a plurality of perforations secured in said mouth; the combined cross-sectional area of said perforations being materially greater than the  
15 cross-sectional area of said cylinder.

8. In a macaroni-press, a small chamber, a piston fitted to move in said chamber, a large chamber communicatively connected to said small chamber provided with an exit, and a 20 die provided with a plurality of perforations secured in said exit; the combined cross-sectional area of said perforations being materially greater than said piston.

In testimony whereof I have signed my 25 name to this specification, in the presence of two subscribing witnesses, this 21st day of November, 1903, at Chicago, Illinois.

NICOLA D'AGOSTINO.

Witnesses:

R. J. JACKER,  
E. G. JACKER.