

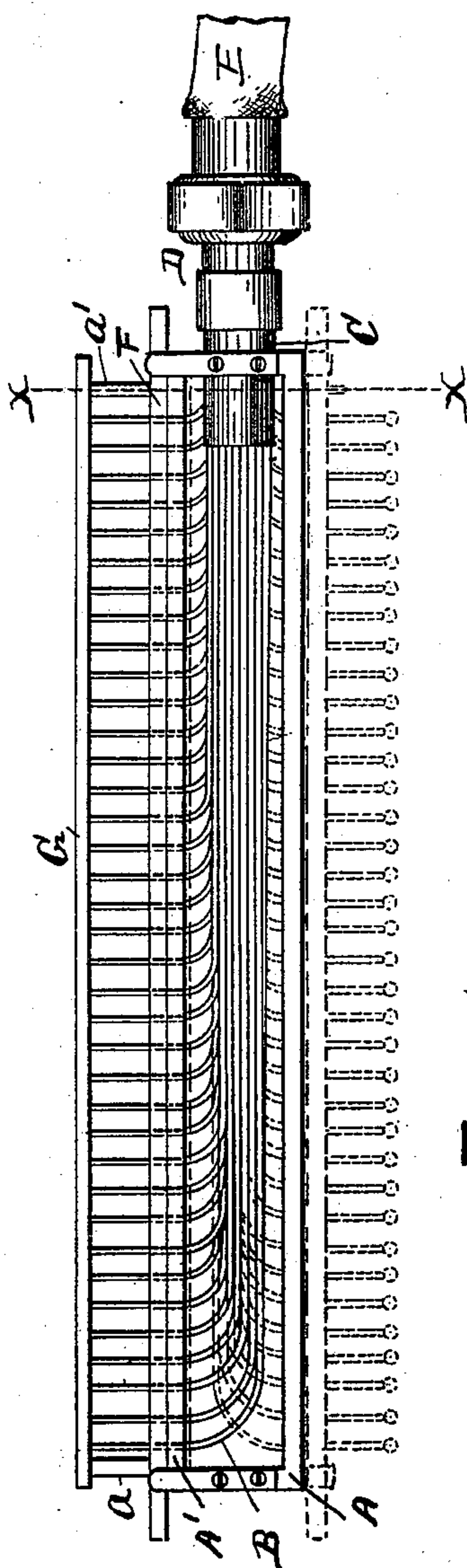
(No Model.)

A. D. STEARNS.

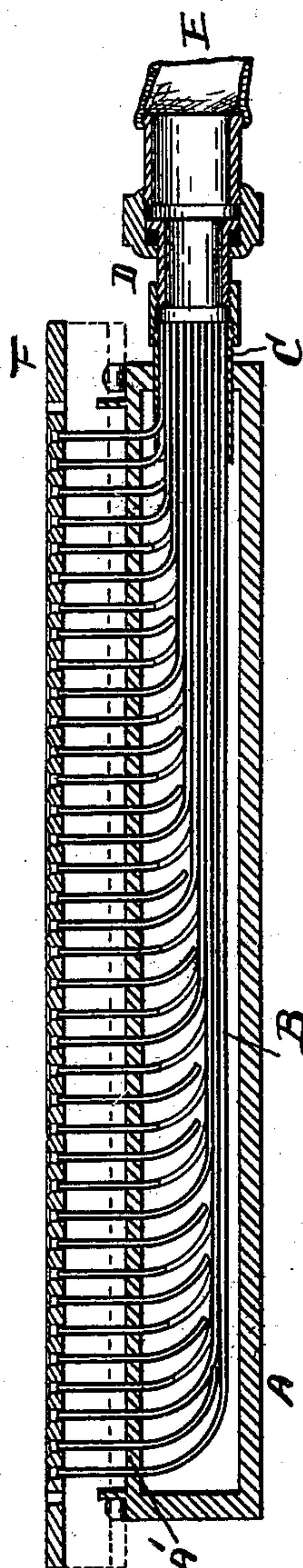
## APPARATUS FOR HOLDING AND DIPPING PILLS.

No. 504,505.

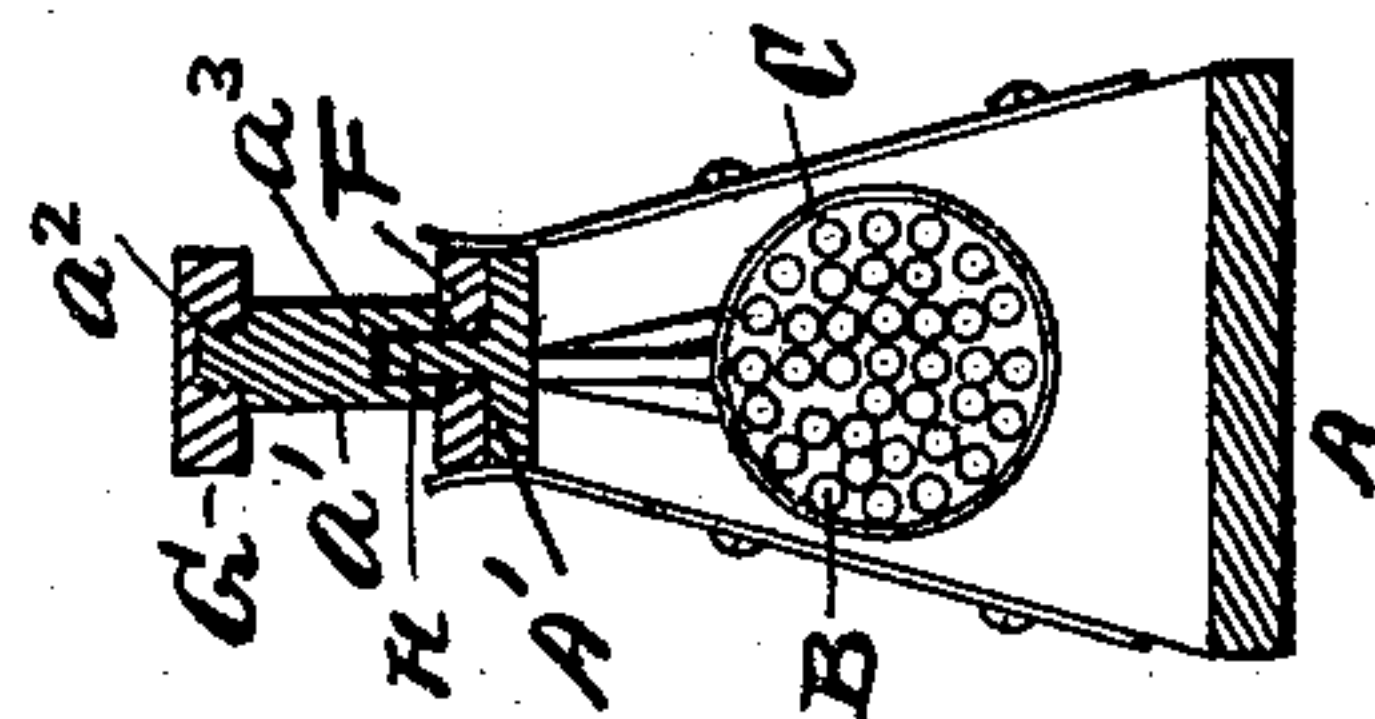
Patented Sept. 5, 1893.



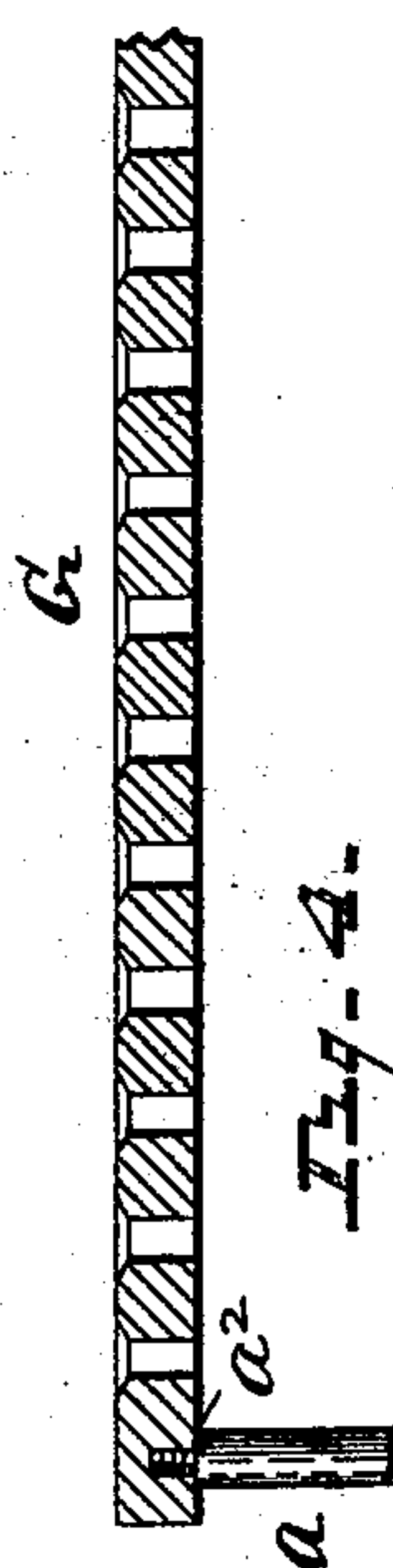
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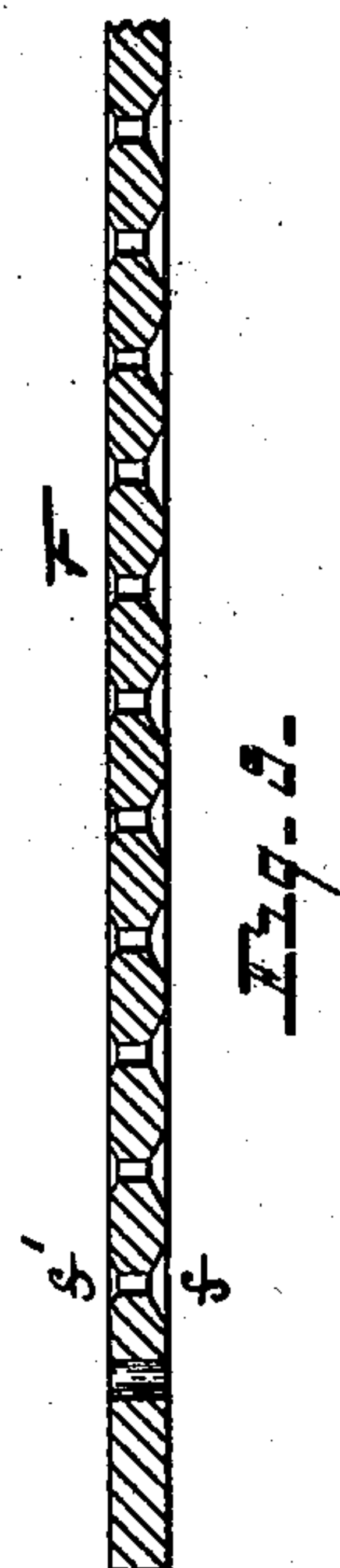
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## Witnesses

O. B. Baenziger.  
John F. Miller

Albyn D. Stearns <sup>Inventor</sup>

By his Attorney  
Newell S. Wright.



# UNITED STATES PATENT OFFICE.

ALBYN D. STEARNS, OF DETROIT, MICHIGAN, ASSIGNOR TO THE FREDERICK STEARNS & COMPANY, OF SAME PLACE.

## APPARATUS FOR HOLDING AND DIPPING PILLS.

SPECIFICATION forming part of Letters Patent No. 504,505, dated September 5, 1893.

Application filed March 28, 1893. Serial No. 467,945. (No model.)

*To all whom it may concern:*

Be it known that I, ALBYN D. STEARNS, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in an Apparatus for Holding and Dipping Pills; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in an apparatus for holding and dipping pills, in the operation of coating the pills with gelatine or other material, having for its object a device of this class of superior construction, utility and efficiency, and one which may be more conveniently and readily operated than other devices of this class heretofore employed, and it consists of the devices and appliances, their construction, combination and arrangement, as hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a longitudinal vertical section. Fig. 3 is a vertical section on the line  $x-x$  Fig. 1. Fig. 4 is a vertical longitudinal section of a portion of the feeder bar. Fig. 5 is a similar view of a portion of the lifting bar.

My invention relates, more especially, to that class of appliances for the purpose above named, in which the pills are held in place while being dipped, by suction or atmospheric pressure, produced by a suitable exhaustion of the air from one side of the pills, the pills being supported and held in place upon the open ends of a series of tubes. My present invention, moreover, is more particularly designed as an improvement upon a device of a similar nature for which United States Letters Patent were granted me March 14, 1893, No. 493,604.

I carry out my invention as follows:

A denotes an elongated rack or frame provided with an upper perforated portion A'. Through said perforated upper portion of the frame, projects a series of independent tubes B, the ends of the tubes projecting upward

from the portion A' a desired distance. My present invention contemplates grouping all these independent tubes B and carrying them laterally to one end of the frame A, where they are held together in any suitable manner, as by a ferrule or cap C, and passed collectively through one of the end portions of the frame, as the end A<sup>2</sup>.

D is a swivel union engaged with the cap C or the collected ends of the tubes B, said swivel union having a stationary engagement with an exhaust hose or pipe E. Thus said cap may have a swivel, or rotatable connection, in any suitable manner with the union D, so that, without disconnecting the frame A, or tubes B from the union D, the frame with the series of independent tubes connected therewith, may be reversed or rotated from the normal position shown in full lines, Fig. 1, into the reverse position shown in dotted lines in said figure, and vice versa. This construction and arrangement obviously allow the rack or frame to be reversed without twisting the tubes. The rack or tubes carried thereby may have a swiveled or reversible connection with the exhaust pipe E in any desired manner within the scope of my invention.

F denotes a perforated lifting bar constructed and arranged to be located over the ends of the tubes B, above the cross bar or portion A' of the rack A.

G denotes a feeding bar, also perforated, to be located over the ends of the tubes, as shown. The feeder G is preferably supported, when in place, upon posts "a," "a'," having a screw threaded engagement therewith, as shown at "a<sup>2</sup>," Fig. 3, and a socket at the base, as shown in Fig. 3, at "a<sup>3</sup>," to rest upon a stud H, permanently engaged with the bar A', and projecting through the lifter F.

The perforations in the feeding bar are constructed of sufficient diameter to allow the pills to fall therethrough upon the ends of the tubes B, which register therewith. This feeding bar acts as a guide to direct the pills to their seats upon the ends of the tubes. By this means an attendant may rapidly distribute a hand full of pills over and upon the feeding bar, the pills dropping therethrough into place upon the ends of the tubes. The feeding bar is then removed by being lifted



off from the tubes. The pills are then in place upon the tubes. The attendant then rotates or reverses the position of the rack into the position shown in dotted lines, Fig. 1, to dip  
5 the pills in the coating material. The rack is then again turned into an upright position shown in full lines, Fig. 1. The lifting bar may then be lifted off from the tubes carrying the pills therewith, seated upon the per-  
10 forations therethrough.

For convenience, I prefer to construct each lifter bar for use with two different sizes of pills. This may readily be done by reaming out the extremities of the perforations on op-  
15 posite sides, of different sizes, as shown in Fig. 5 at "f" and "f'." By reversing said bar, it will serve for dipping two different sizes of pills.

By mounting the feeding bar upon screw  
20 threaded posts, various feeder bars for different sizes of pills may be engaged upon the same posts.

What I claim as my invention is—

1. In an apparatus for holding and dipping  
25 pills, the combination with a rack provided with a cross bar A', of a series of tubes engaged therewith at one of their extremities, and assembled at their opposite extremities, a perforated lifting bar located over said  
30 tubes upon said cross bar, and a perforated feeding bar supported at the upper ends of said tubes, substantially as described.

2. In an apparatus for holding and dipping pills, the combination of a rack provided

with a cross bar, a series of tubes engaged  
35 with said cross bar, and a perforated lifting bar engaged over the extremities of the tubes upon said cross bar, said lifting bar constructed with different sized seats for the pills on opposite sides of said lifting bar, substan-  
40 tially as described.

3. In an apparatus for holding and dipping pills, the combination of a rack provided with a cross bar, of a series of tubes engaged  
45 with said cross bar, a perforated feeding bar located at the upper ends of said tubes, and posts "a," "a'" supporting said feeding bar, substantially as described.

4. In an apparatus for holding and dipping pills, the combination of a rack A, provided  
50 with a cross bar A', a series of independent tubes projecting upward from said cross bar at one of their extremities, their opposite extremities carried laterally and assembled together, and an exhaust pipe E, having a swiv-  
55 eled connection with the assembled ends of said tubes at one end of said rack, whereby the opposite ends of the tubes may be rotated vertically into opposite positions for dipping and removing the pills, and without discon-  
60 necting the rack from the exhaust pipe, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

ALBYN D. STEARNS.

Witnesses:

N. S. WRIGHT,  
JOHN F. MILLER.