

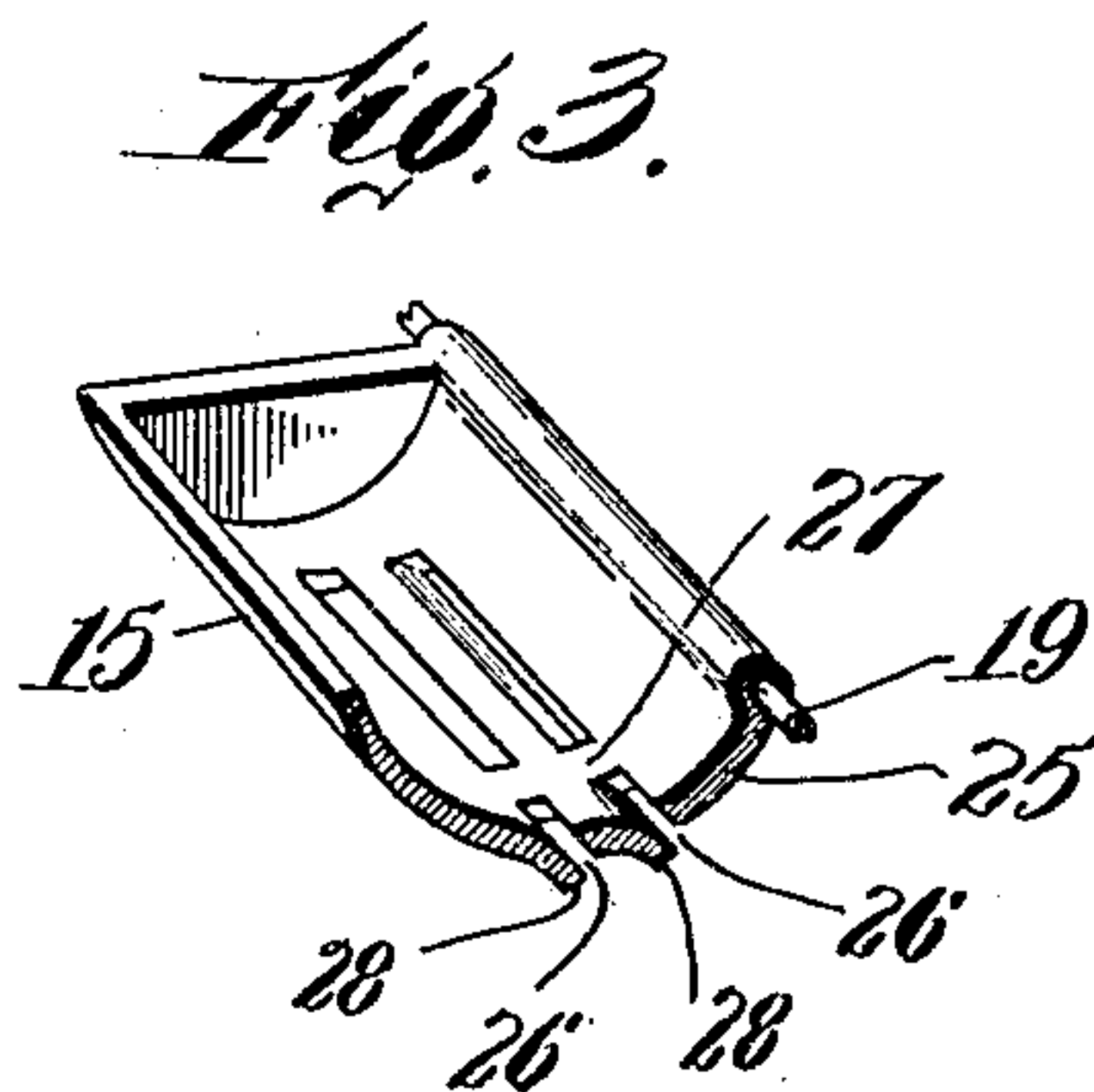
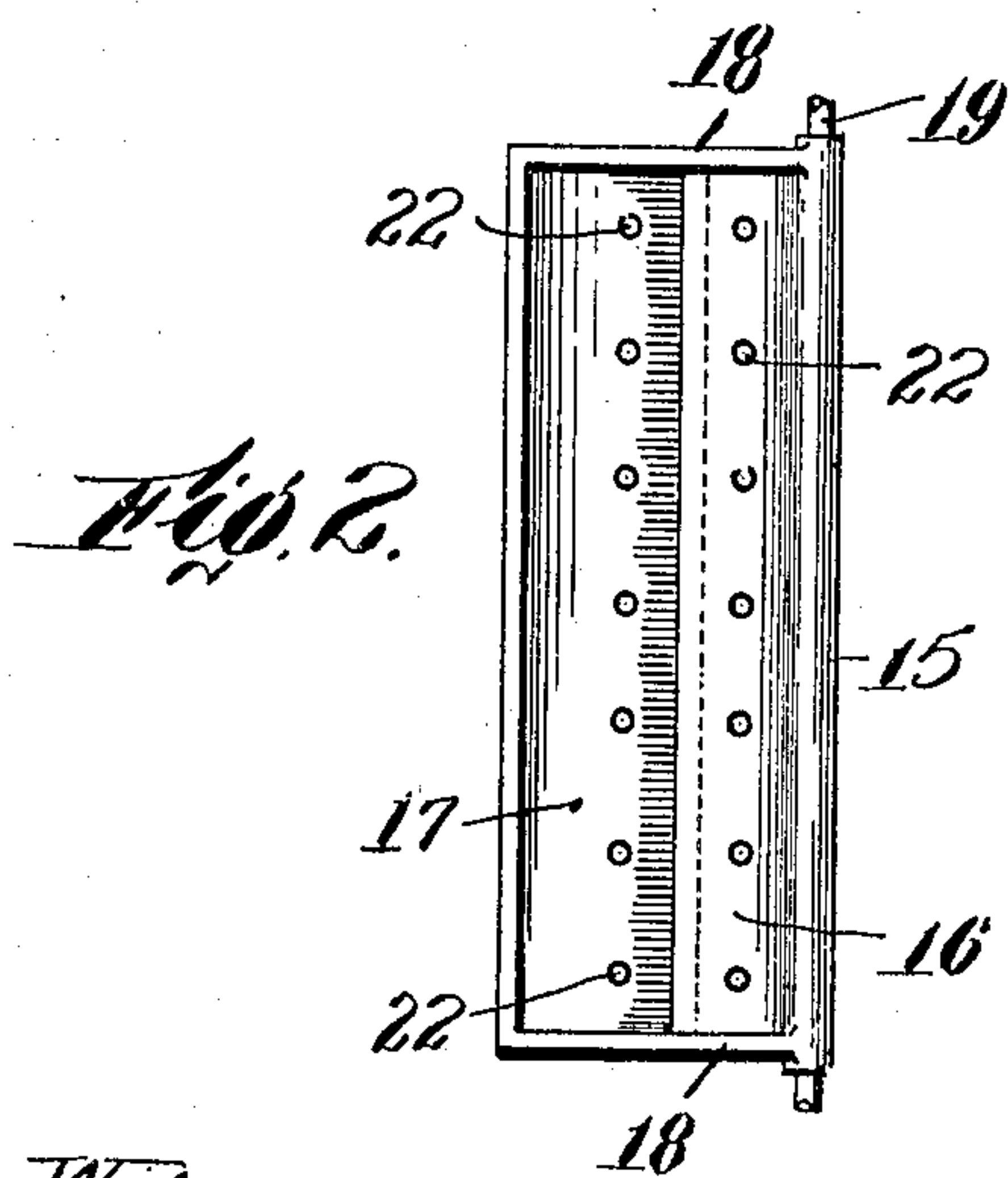
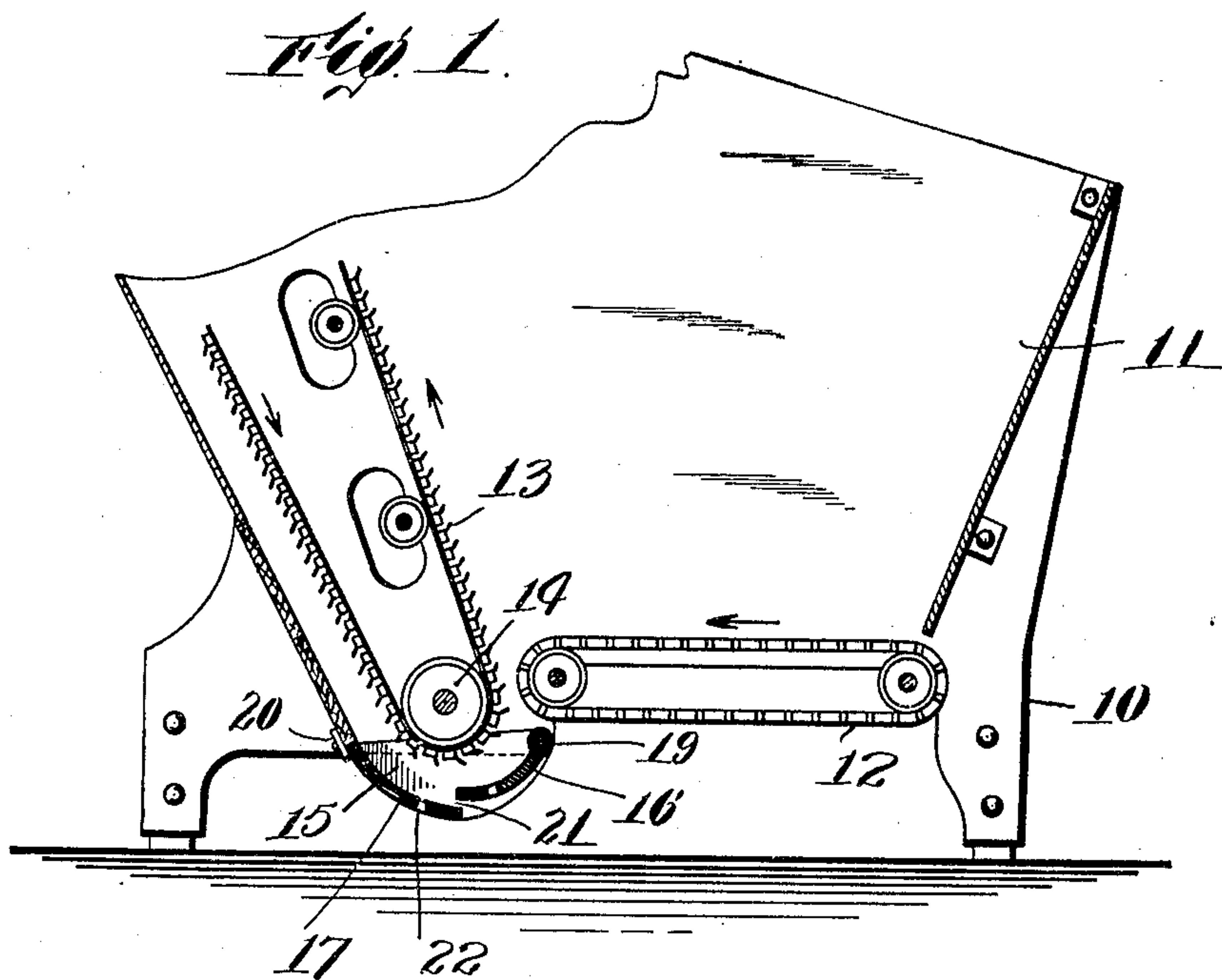
No. 885,381.

PATENTED APR. 21, 1908.

F. G. SARGENT.

ATTACHMENT FOR FEEDERS FOR FIBROUS MATERIAL.

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Witnesses:

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# UNITED STATES PATENT OFFICE.

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## ATTACHMENT FOR FEEDERS FOR FIBROUS MATERIAL.

No. 885,381.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed January 16, 1908. Serial No. 411,091.

*To all whom it may concern:*

Be it known that I, FREDERICK G. SARGENT, a citizen of the United States, residing at Westford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Attachment for Feeders for Fibrous Material, of which the following is a specification.

This invention relates to a so-called automatic feeder for supplying wool or other fiber to washers, driers, pickers, dusters, and other machinery of a similar character.

The principal object of the invention is to provide such a feeder with means for separating the fiber from dirt or other heavy particles at the bottom of the elevating apron so designed that the dirt and the like will be dropped out on the floor or into a receptacle placed to receive it, without discharging the fiber, and leaving the fiber in such position that it can be taken up by the elevating apron in a much cleaner condition than is the case at present.

As heretofore constructed these feeders have been provided with a shell at the bottom of the elevating apron which would gradually fill up with dirt and fiber until if it were not emptied the elevating apron would pick some of the fiber and the dirt in which it lay and carry it up into the machine being supplied with fiber. All this is done away with by the present invention, and the fiber which is left in the shell is in a comparatively clean condition so that it can go into the stock without injuring its quality.

Reference is to be had to the accompanying drawings which show certain preferred forms of the invention, and in which

Figure 1 is a longitudinal sectional view of a portion of an automatic feeder of a well-known type showing one form of the invention applied thereto. Fig. 2 is a plan of the shell shown in Fig. 1, and Fig. 3 is a perspective view of a modified form of shell.

Fig. 1 shows a well-known type of self-feeder in which the frame 10 is provided with a hopper 11, in which the stock is placed, and at the bottom of which is a slatted traveling endless apron 12 for constantly moving the stock towards an endless toothed elevating apron 13. This elevating apron runs over a drum 14 near the bottom of the hopper. It is well understood in the art that dirt and fiber will collect in a shell 15 located below

the bottom of the elevating apron. Ordinarily this fills up and has to be emptied, and if it is not emptied at the proper time, it reaches a point where the elevating apron will draw in the soiled fiber so collected and carry it up into the washer, drier or other machine being supplied.

In order to avoid any necessity for attending to the shell and emptying it at intervals, this shell according to the present invention is provided with means whereby the dirt and heavy materials collecting in it will be automatically separated from the fiber by gravity in such a way that the former will be discharged and fiber will be retained in the shell so that it can be carried up by the elevating apron without interfering with the quality of the stock delivered from the feeder.

In the form shown in Figs. 1 and 2 the shell is of two pieces of sheet metal 16 and 17 secured to the sides or ends 18. All these parts are preferably rigidly connected together and pivoted to the frame 10 by means of a rod 19 or the like, the shell being fastened to the frame by a fastening device 20 on the other side. The two plates 16 and 17 are shaped so as to make a partially cylindrical shell preferably substantially concentric with the drum 14 and there is a passage or slot 21 between them, the plate 16 extending over this passage and the plate 17 projecting downwardly under it. The curved plate 16 slants down to this passage all the way so that material deposited on this plate in any position will tend to slide down by gravity and the heavy particles will fall through the slot, yet the parts are in such position that the fiber will be retained by the projecting lip of the shell after the heavy particles are separated from it. On account of the operation of the elevating apron above the shell the material therein is turned over repeatedly, so that the separation is very efficient. It will be seen that with this arrangement the only thing that will collect in the shell to any extent will be fiber which has been separated from the dirt or other heavy particles, and that if the shell fills up with such fiber it can be taken up with the elevating apron 15 without injuring the quality of the material delivered from the feeder. It is preferred also to provide small perforations 22 in both of the plates 16 and 17 to assist in this operation.



In Fig. 3 is shown a form of the device in which the bottom of the shell is made of one piece of sheet metal 25 having slots 26 therein similar to the slot or passage 21. These  
5 may be divided up by cross partitions 27, and the lips 28 which extend below them are bent out from the material at the bottom and serve the same purpose as the projecting end or lip of the plate 17.

10 While I have illustrated and described two preferred forms of the invention, I am aware that many modifications may be made therein by any person skilled in the art without departing from the scope of the invention as  
15 expressed in the claims. Therefore, I do not wish to be limited to the particular form shown or to the particular type of self-feeder illustrated, but

What I do claim is:—

20 1. A feeder of the class described comprising an elevating apron, and means under the bottom thereof for separating heavy particles from the fiber, discharging the former therefrom, and retaining the fiber under the  
25 bottom of the elevating apron, said means comprising a slot and a lip projecting downwardly from one side thereof.

30 2. A feeder of the class described comprising an elevating apron, and means under the bottom thereof for separating heavy particles from the fiber, discharging the former therefrom, and retaining the cleaned fiber

under the bottom of the elevating apron, said means comprising a shell having a slot therein, and a lip projecting downwardly 35 from below the slot, the wall of the shell slanting down to the slot, whereby the material will slide down over the slot and the dirt and heavy particles will be discharged there-  
40 through.

• 3. In an automatic feeder for fibrous material, the combination with a hopper for retaining said material, a slatted traveling apron in the bottom thereof, and an elevating apron working near the discharge end of 45 said slatted apron, of a shell pivotally connected with the frame of said hopper and located below the bottom of said elevating apron, said shell being partially cylindrical in form, the cylindrical bottom wall thereof 50 being substantially concentric with the lower end of the elevating apron, and means for fastening the shell in position on the frame, said cylindrical bottom having a slot there-  
55 through near the bottom of one curved side thereof, and a lip projecting below said slot.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

FREDERICK G. SARGENT.

Witnesses:

E. A. NORMINGTON,

WM. F. SARGENT.