

No. 763,560.

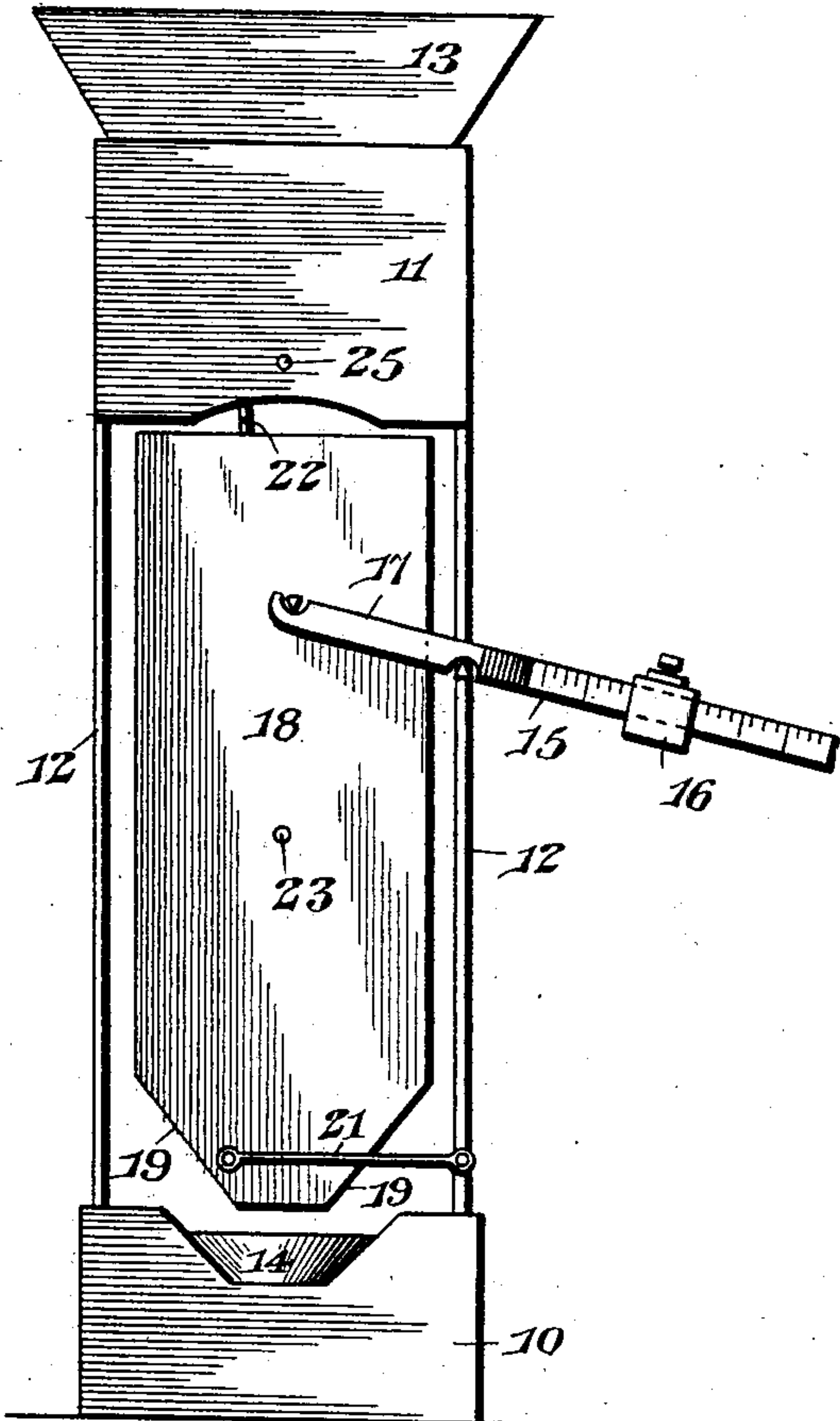
PATENTED JUNE 28, 1904.

M. HOFMANN.  
WEIGHING MACHINE.

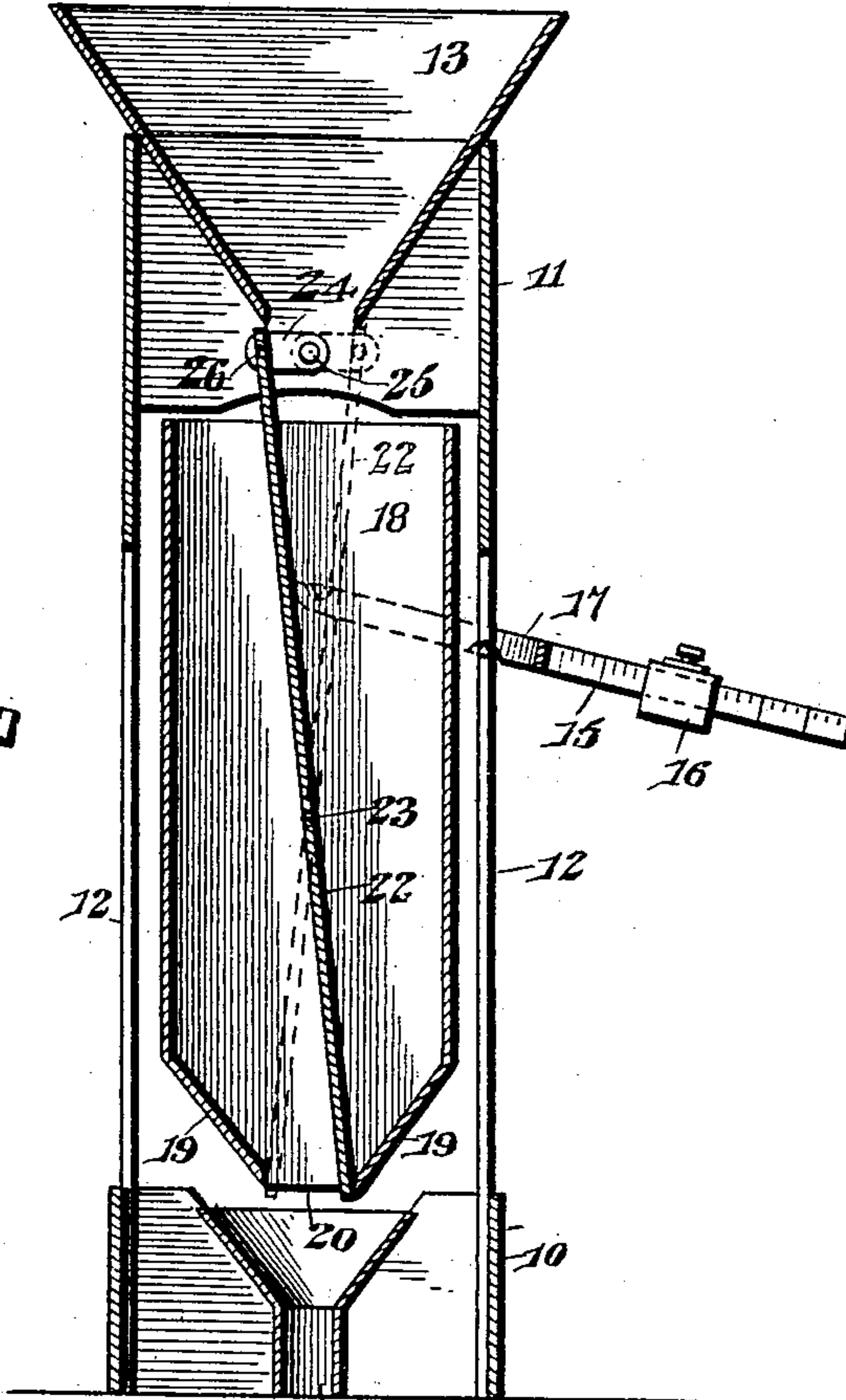
APPLICATION FILED AUG. 28, 1903.

NO MODEL.

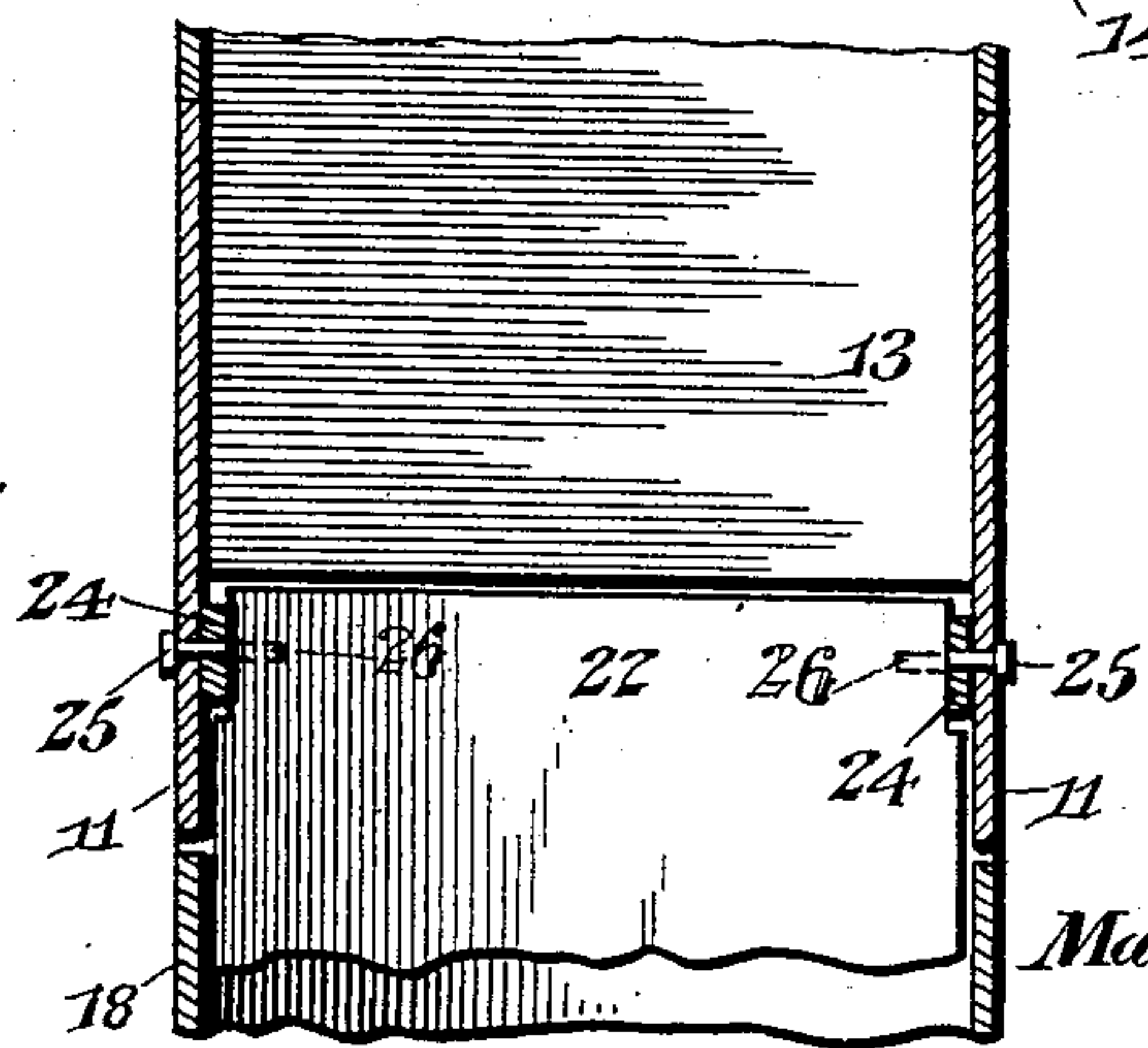
*Fig. 1.*



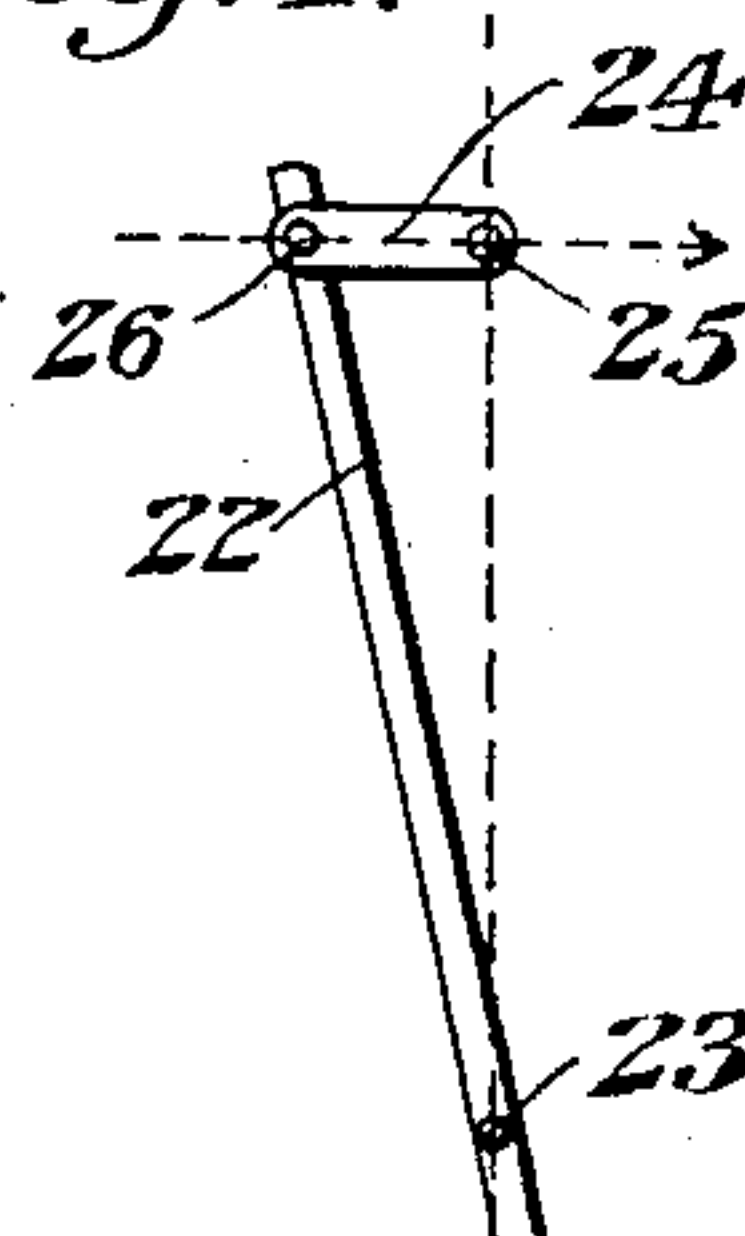
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

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## WEIGHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 763,560, dated June 28, 1904.

Application filed August 28, 1903. Serial No. 171,143. (No model.)

*To all whom it may concern:*

Be it known that I, MATHIAS HOFMANN, a citizen of the United States, residing at Knights-ville, in the county of Clay and State of In-  
5 diana, have invented a new and useful Weigh-  
ing-Machine, of which the following is a speci-  
fication.

This invention relates to weighing-machines  
of that character employing a scale-supported  
10 receptacle within which there is arranged a  
partition or valve that constitutes a partial  
support for the material placed in the recep-  
tacle and is arranged to swing with relation  
to the feed-hopper when a determinate amount  
15 of material has been placed within the re-  
ceptacle.

The prime object of this invention is to pro-  
vide a simple structure which will be accu-  
rate without regard to the amount of mate-  
20 rial in the receptacle and wherein the weight  
of the material against the partition will not  
be converted by the holding means for the  
partition into a downward thrust upon the  
receptacle until said receptacle has moved  
25 from its initial position.

The preferred form of construction is illus-  
trated in the accompanying drawings, where-  
in—

Figure 1 is a side elevation of the improved  
30 weighing-machine. Fig. 2 is a vertical lon-  
gitudinal sectional view through the same.  
Fig. 3 is a detail sectional view taken at right  
angles to Fig. 2, and Fig. 4 is a diagrammatic  
view showing the relation of the several piv-  
35 ots and the manner in which they coact.

Similar numerals of reference designate  
corresponding parts in all the figures of the  
drawings.

In the embodiment a supporting-frame is  
40 employed comprising a lower boxing 10 and  
an upper boxing 11, connected at their cor-  
ners by suitable standards 12. Supported  
within the upper boxing is a hopper 13, the  
opposite walls of which converge, while a dis-  
45 charge-funnel 14 is suitably arranged at the  
lower portion of the supporting-frame pref-  
erably within the lower boxing.

Pivotally supported upon certain of the  
standards 12 is a scale-beam 15, having the  
50 usual arm upon which is slidably mounted a

weight 16. The inner end of this beam is in  
the form of a stirrup 17, between and to  
which is hung a receptacle 18, said receptacle  
thus being disposed within the supporting-  
frame with its open upper end beneath the  
55 hopper 13. The lower end of the receptacle  
is contracted by walls 19 and has a discharge-  
opening 20, which is located directly over the  
funnel 14. A guiding-link 21 is preferably  
employed, being attached at one end to the  
60 lower end of the receptacle and at the other  
end to one of the standards 12.

Pivoted intermediate its ends within the re-  
ceptacle is a valve or partition 22, the pivot  
23 of which is arranged centrally of said re-  
65 ceptacle. The upper end of the partition pro-  
jects above the receptacle and coacts with the  
oppositely-inclined walls of the hopper 13,  
the lower end being movable between the  
lower edges of the converging bottom walls  
70 19 of the receptacle. Holding-links 24 are  
pivoted to the upper boxing 11, the pivot 25  
being disposed in vertical alinement with the  
pivot 23 of the partition, and the vertical  
plane in which these pivots are located pass-  
75 ing centrally through the hopper 13. The  
other ends of the links 24 are pivoted, as in-  
dicated at 26, to the upper end of the parti-  
tion, and when said partition is in coacting re-  
lation with the walls of the hopper the links  
80 will be arranged horizontally, or, in other  
words, at right angles to a line intersecting  
the vertically-alined pivots. The manner of  
using this structure will be readily understood  
by those skilled in the art. The weight 16  
85 having been adjusted to the amount desired,  
it will be evident that material passed through  
the hopper 13 will enter the closed compart-  
ment formed by the partition 22 until the  
weight of said material will depress the recep-  
90 tacle. This will cause the partition to swing  
upon its pivot, thereby opening the compart-  
ment and permitting the discharge of the ma-  
terial into the funnel 14. The lateral pres-  
sure against the partition will be sufficient to  
95 insure its swinging to the position shown in  
dotted lines, whereupon an oppositely-ar-  
ranged compartment will be formed, into  
which the material will now gravitate, and the  
operation above described will be repeated. 100



It is especially desired to call attention to two features in this operation. In the first place the lateral pressure of the material against the partition will not be converted by the holding means 24 into a downward thrust upon the receptacle until said receptacle has moved from its initial position. This is due, as will be evident, especially by reference to Fig. 4, to the arrangement of the links in horizontal position, or, in other words, at right angles to a line intersecting the pivots 25 and 23. This is due to the fact that the pivots 25 and 26 are on a dead-center, and the pressure against the links will be in a direct line and not tend to throw said links downwardly. As soon as the downward movement of the receptacle begins, however, the pivots move out of this dead-line, and as a result the pressure of the material against the partition will be converted by the links into a downward thrust, accelerating the depression of the receptacle and effecting a rapid discharge. At the same time the momentum caused will insure the swinging of the partition to its opposite position. Thus no matter how much material is to be weighed the machine will be accurate, there being no variation in the downward thrust, yet at the same time after the full amount has been obtained rapidity of discharge is acquired. These are two important features in this structure.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. A weighing-machine, including a scale, a vertically-movable receptacle for the material to be weighed, a laterally-movable partition

controlling the escape of the material from the receptacle, and a link for retaining the partition against lateral movement, said link being disposed to sustain the partition against the pressure of the material when the receptacle is in its elevated position without converting said pressure into a downward thrust upon the receptacle.

2. In a weighing-machine, the combination with a support, of a scale, a receptacle supported by the scale, a swinging partition located within the receptacle, and a link pivoted to the partition and to the support, said link, when the receptacle is elevated, being disposed in a horizontal position.

3. In a weighing-machine, the combination with a support, of a scale, a receptacle supported on the scale, a partition pivotally hung intermediate its ends within the receptacle, and a link pivoted at one end to the support in substantially vertical alinement with the pivot of the partition, the other end of the link being pivotally attached to the partition so that when the receptacle is elevated the link will be at substantially right angles to a line intersecting said vertically-alined pivots.

4. In a weighing-machine, the combination with a support, of a hopper located at the upper end of the support, a scale mounted on the support, an open-ended receptacle supported on the scale and arranged below the hopper, a partition pivotally hung intermediate its ends within the receptacle, the upper end of the partition coacting with the opposite walls of the hopper, and the lower end being movable across the bottom of the receptacle, and links pivoted to the hopper and to the partition, said links, when the receptacle is elevated, being disposed in substantially horizontal position.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MATHIAS HOFMANN.

Witnesses:

J. M. RAWLEY,  
ELVA CLINGERMAN.