

No. 771,598.

PATENTED OCT. 4, 1904.

W. BAKER.  
AUTOMATIC FEED REGULATOR.

APPLICATION FILED OCT. 30, 1903.

NO MODEL.

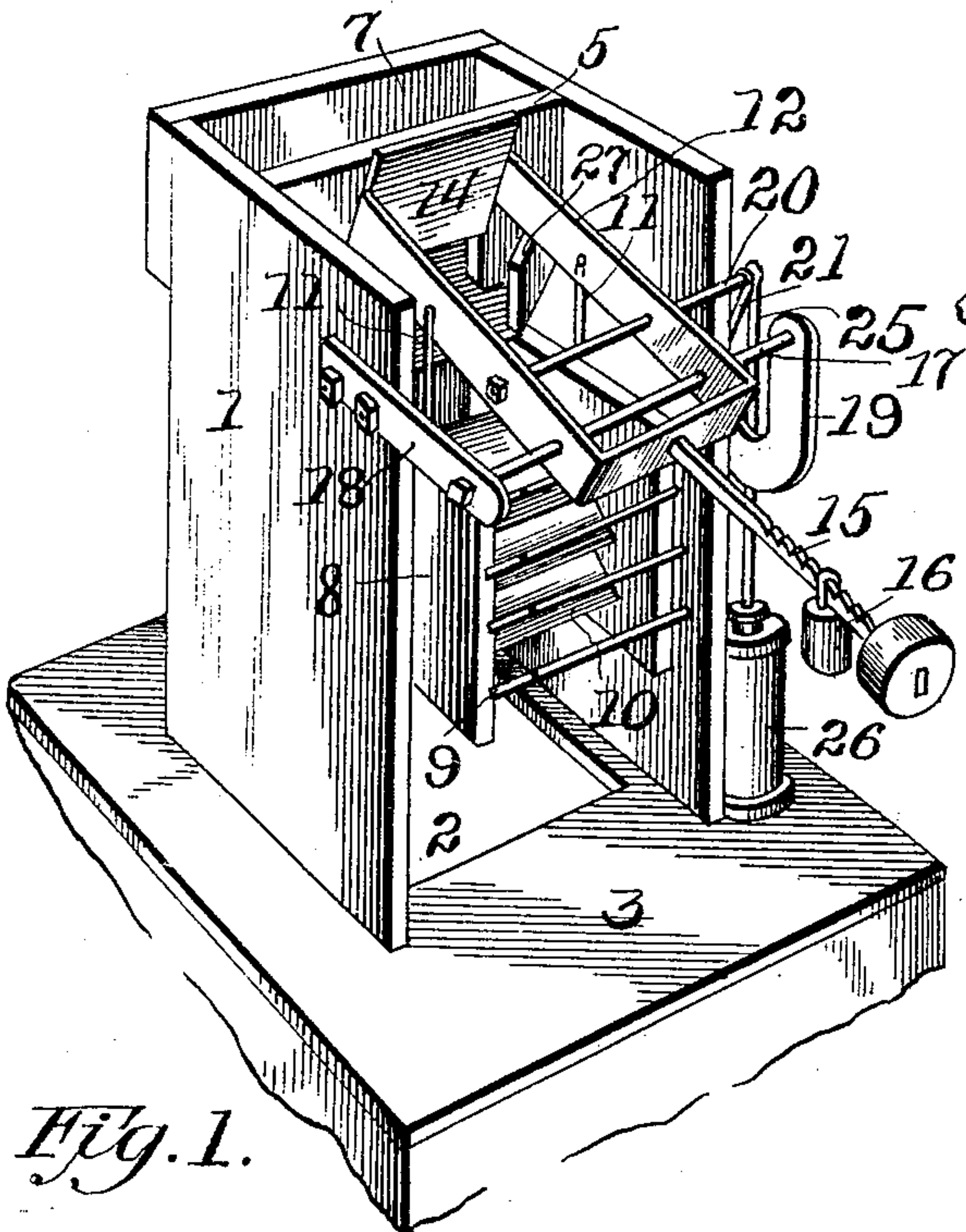


Fig. 1.

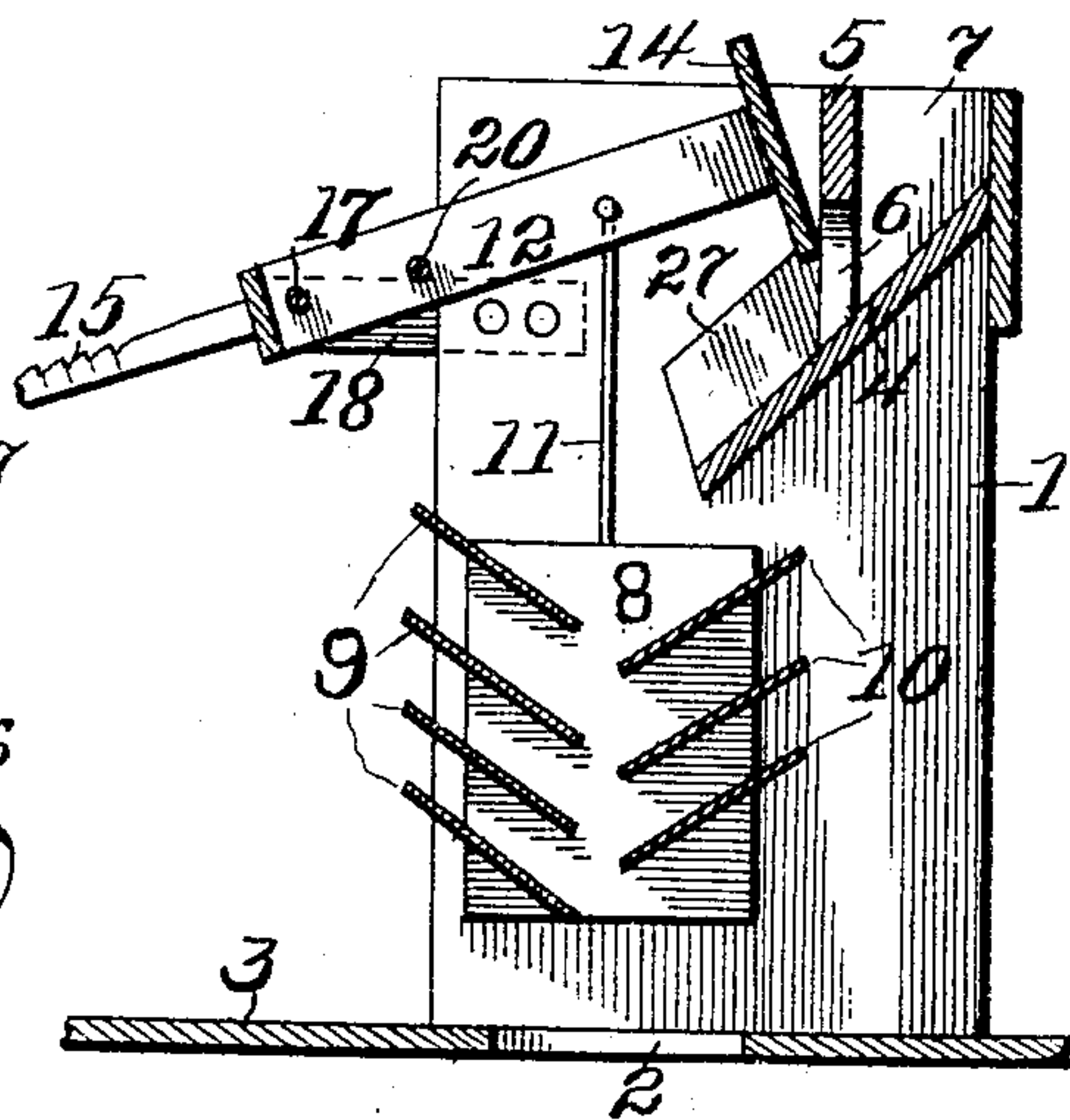


Fig. 2.

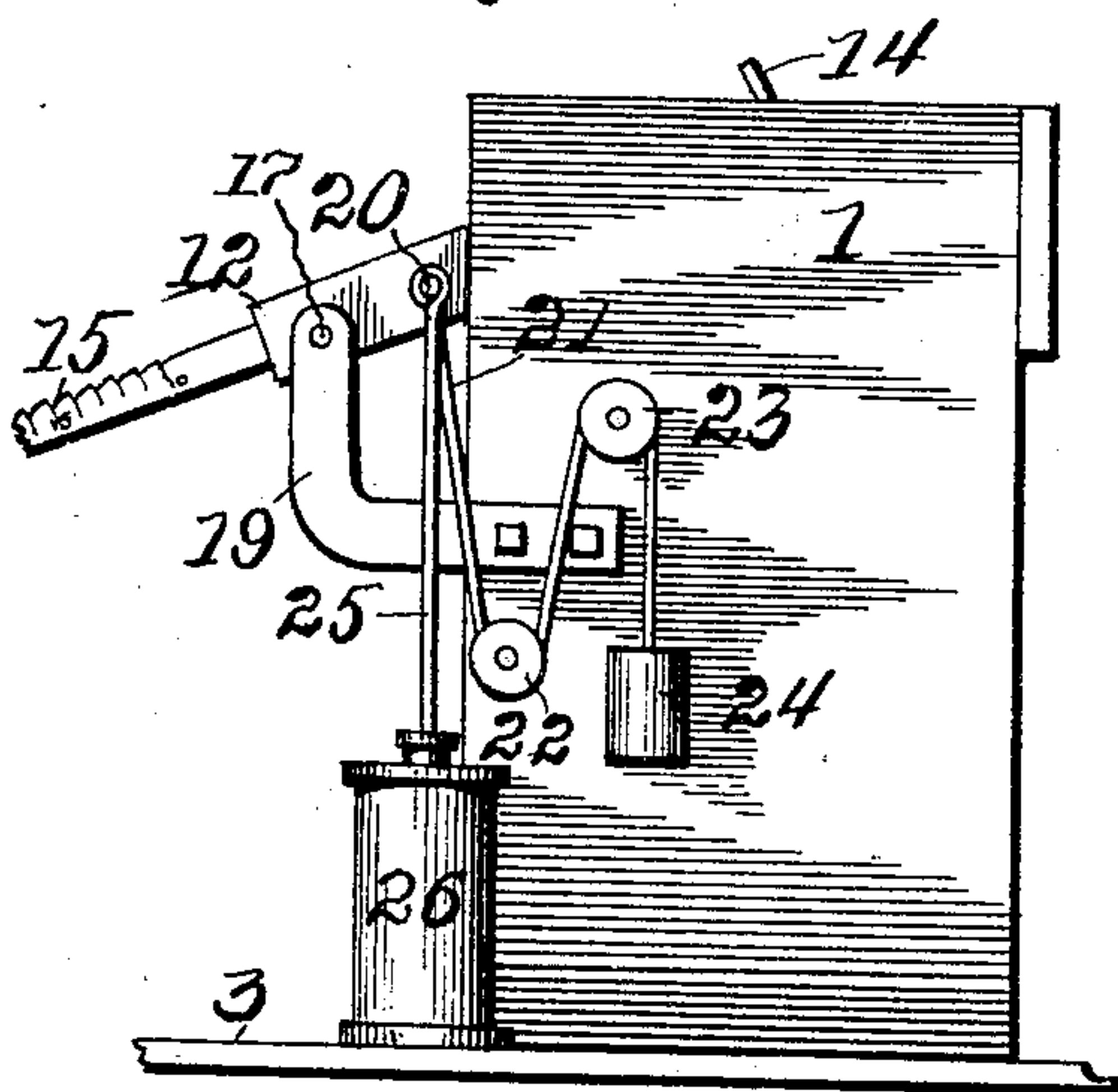


Fig. 3.

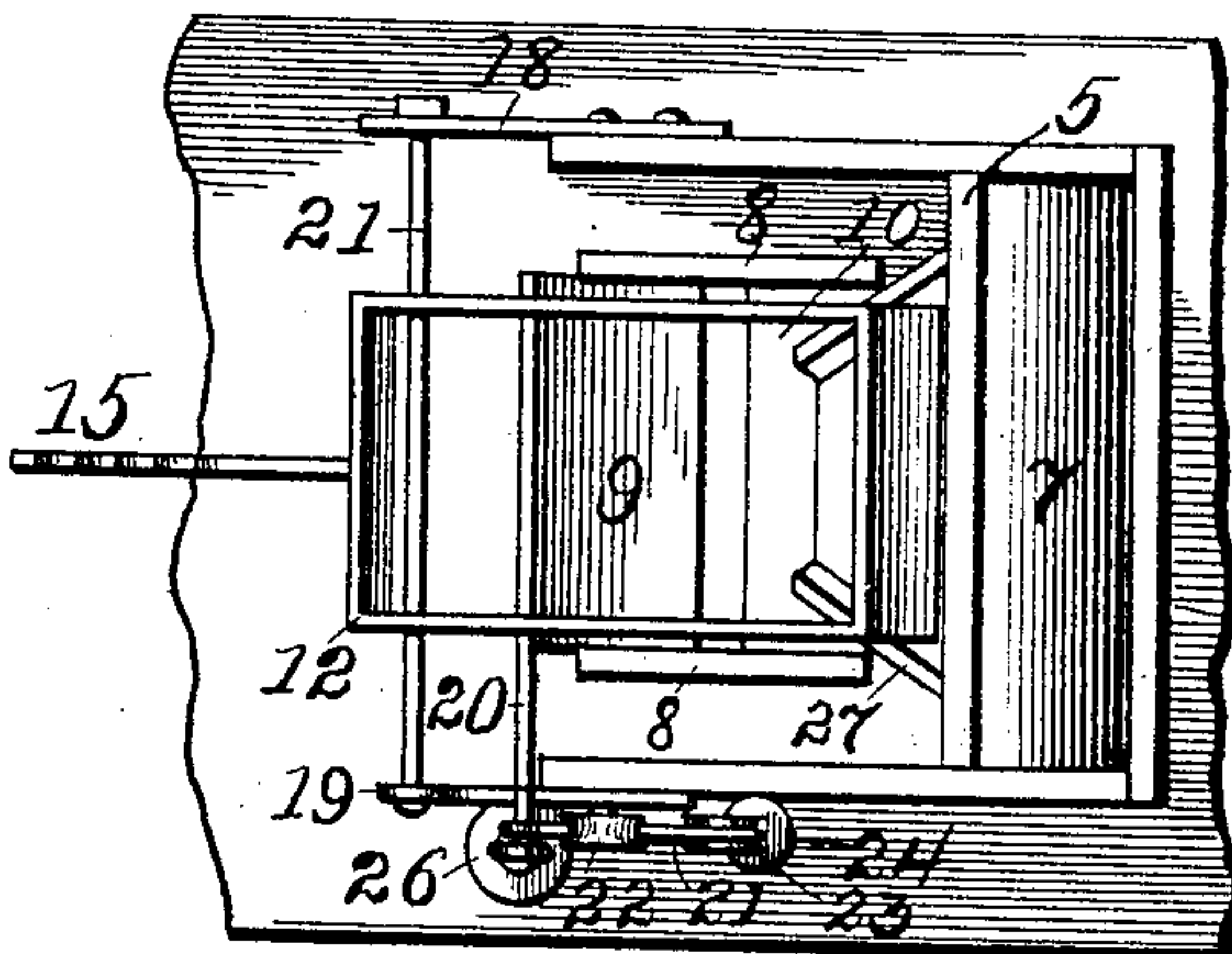


Fig. 4.

Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM BAKER, OF YOUNGSTOWN, OHIO.

## AUTOMATIC FEED-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 771,598, dated October 4, 1904.

Application filed October 30, 1903. Serial No. 179,218. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM BAKER, a citizen of the United States of America, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Automatic Feed-Regulators, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in automatic feed-regulators, and is especially designed to govern or regulators of the amount or number of pounds of grain fed from a storage-bin or  
15 other source of supply to a mill or other receptacle or receiver.

The object of the present invention is to provide a device of this character in which the governing or regulating mechanism is controlled by the volume of grain delivered to the receiver.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this application, and wherein  
25 like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a detail perspective view of my improved automatic feed-regulator. Fig. 2 is a transverse vertical sectional view thereof.  
30 Fig. 3 is a side elevation. Fig. 4 is a top plan view.

To put my invention into practice, I provide a suitable casing 1, which is open at its front end and made generally in practice substantially rectangular in form and is placed  
35 directly over the opening 2, provided in the top or cover 3 of the inclosing box or casing for the grinding-rolls (not shown) or other receiver to which the grain is to be fed. Placed  
40 in the upper end of the casing 1 is a declined chute 4 and a vertically-disposed board or partition 5, the latter having at its lower end intermediate its ends an opening 6, forming a gateway for the grain or other material to  
45 flow from the hopper onto the grinding-rolls or other receiver. The hopper 7 is, it will be understood, adapted to be in communication with a storage-bin or other source of supply. The grain is discharged from the hopper 7  
50 onto what I have generally termed the "re-

ceiver," and this receiver is so constructed as to control the quantity of grain and automatically maintain the desired amount of pounds through the medium of the volume or stream of grain being delivered to the receiver. 55 This receiver as generally constructed by me in practice comprises a swinging device involving a pair of vertically-disposed side plates 8, connected together by the declined receiving-plates 9, disposed one above the 60 other, and declined receiving-plates 10, disposed one above the other alternately or staggered with respect to the receiving-plates 9. This device is suspended by rods 11, attached at their lower ends to the side plates 8 and at 65 their upper ends pivotally connected to the side bars of the yoke 12, which at its inner end carries a gate 14 to regulate the size of the opening 6 and at its outer end carries a weighted arm 15, having the adjustable weight 70 16 thereon, which may be moved toward or away from the outer end of the arm, whereby a greater or less quantity of material may be fed through gateway 6, according to the size of the opening or gateway, as determined by 75 the position of the gate 14. This yoke is suspended on a shaft or rod 17, mounted in brackets 18 19, the latter generally being in the form of an angle-bracket, as shown, in order not to interfere with the extended 80 end of rod 20, carried by the yoke 12, and to the end of which rod is connected one end of the cord or cable 21, that is passed over sheaves or pulleys 22 23 and carries on its other end a counterweight 24, or in lieu of 85 this counterweight 24 I may connect the stem 25 of the piston thereto and provide the cylinder 26 for the piston to operate in, this piston and cylinder acting as a dash-pot to centrally balance the controlling device in the 90 same manner as is done by the counterweight 24. Where I use the piston and cylinder, I have generally employed a semifluid substance in the cylinder for the piston to enter and have received excellent results from this con- 95 trolling device. The arm 15 in practice is generally corrugated in order that the weight 16 may be readily placed at any desired point, or in order to cause the grain to be delivered from the hopper 7 onto the swinging receiver 100



I preferably provide the side walls 27 on the declined board 4, which side walls are set at an angle, as shown. The yoke 12 is in the form of a U, the legs of which are straight and  
5 extend in the same plane throughout and substantially parallel with one another, its outer end extending through the open front side of the casing.

In operation the grain is delivered from the  
10 hopper 6 to the receiver and as it is discharged onto the uppermost plate 9 is projected from this upper plate to plate 10 and thence onto the second plate 9, and so on, retarding its direct flow to the rolls or other mill. The volume  
15 of the stream of grain delivered to this vertical receiver controls the opening 6 by reason of the receiver being connected to the governing mechanism, and should the size of the grain suddenly change—as, for instance, be-  
20 come smaller—the stream of grain delivered onto the swinging receiver being increased the latter immediately acts on the yoke 12 to partially close the gate 14, immediately regulating the amount in pounds per unit to main-  
25 tain a uniform feed in weight, as is desired.

While I have shown in the accompanying drawings and described in detail a practical embodiment of my invention as it is practiced by me, yet I do not wish to limit myself to  
30 the details of construction which I have selected to illustrate the invention, but wish it understood that so far as the broad idea of the invention is concerned I desire protection

broad enough to cover any device working in substantially the same manner as that illus- 35 trated for accomplishing the same results.

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

1. A feed - regulator comprising a casing 40 having a passage therein, said casing being open at its one side, a yoke pivoted at its rear end to the casing, said end of the yoke extending through the said open side of the casing, counterbalancing means on said last- 45 named end of the yoke, and means on the other end of the yoke for controlling said passage, and means connected to the yoke adjacent the said last-named end thereof for receiving grain. 50

2. A feed - regulator comprising a casing having a passage, means pivoted at its one end for controlling the passage, means connected intermediate the ends of said first-named means for counterbalancing the re- 55 ceiver, and a receiver connected to the first-named means adjacent the opposite end thereof, said receiver having oppositely-disposed declined plates arranged in staggered relation to each other. 60

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM BAKER.

Witnesses:

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