

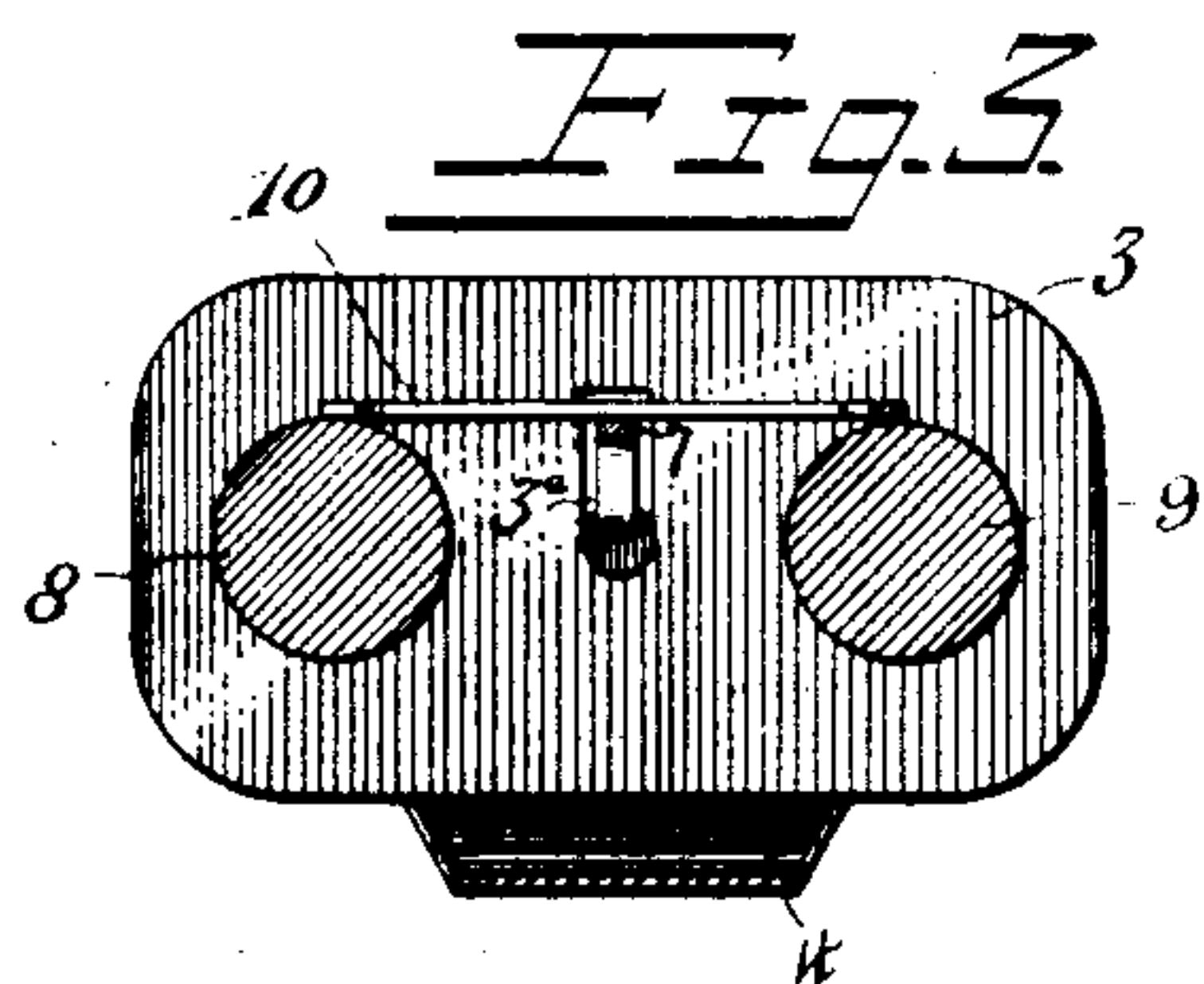
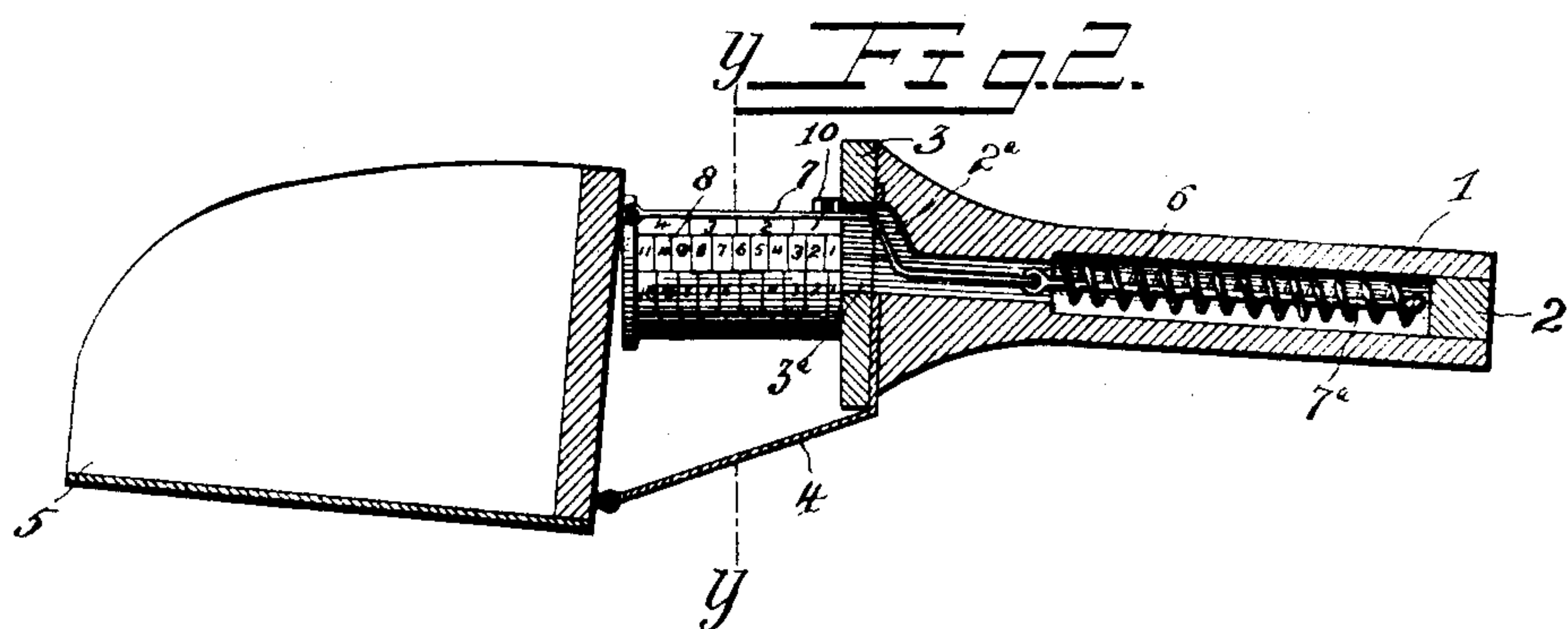
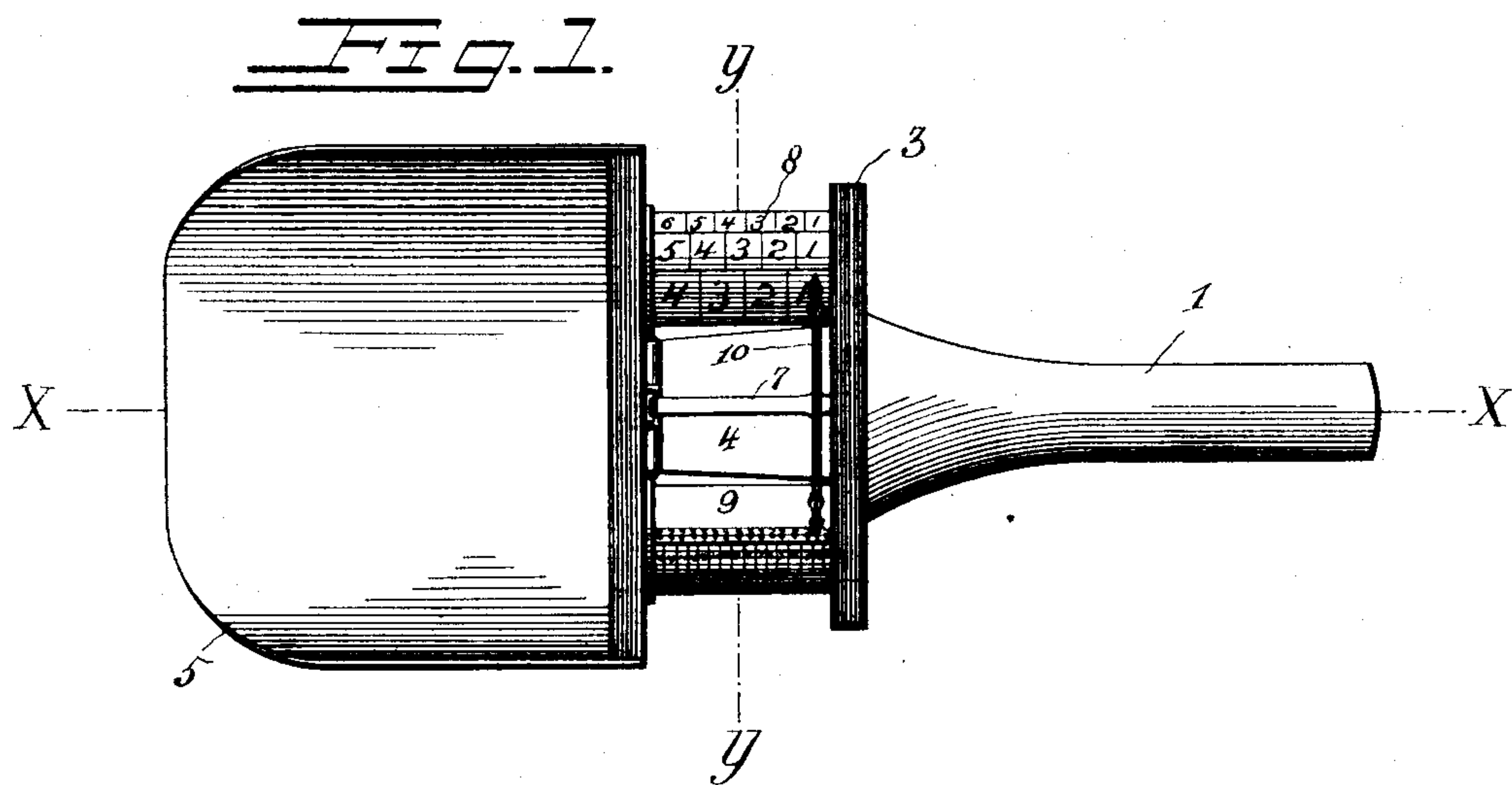
No. 607,578.

Patented July 19, 1898.

G. H. WATKINS.  
WEIGHING SCOOP.

(Application filed July 12, 1897.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE,

GEORGE H. WATKINS, OF RIDGEWAY, VIRGINIA, ASSIGNOR OF ONE-THIRD  
TO H. C. CLANTON, OF SPENCER, VIRGINIA.

## WEIGHING-SCOOP.

SPECIFICATION forming part of Letters Patent No. 607,578, dated July 19, 1898.

Application filed July 12, 1897. Serial No. 644,253. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE H. WATKINS, of Ridgeway, in the county of Henry and State of Virginia, have invented certain new and  
5 useful Improvements in Weighing-Scoops; and I do hereby 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  
10 same.

My invention relates to improvements in combined scoops and scales; and the object that I have in view is to provide a simple and inexpensive construction in which I have com-  
15 bined a scoop and a scales to indicate the weight of the contents of the scoop.

A further object of the invention is to provide an improved means forming an integral part of the structure for indicating the cost  
20 of the articles which may be weighed by the scoop, and a further object is to provide an improved compact arrangement of parts in which the weight and cost indicating cylinders are disposed entirely out of the way of  
25 the scoop, so as not to interfere with the proper use thereof.

With these ends in view my invention consists in the novel combination of elements and in the construction and arrangement of parts,  
30 as will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the same in the accompanying drawings, forming a part of this speci-  
35 fication, in which—

Figure 1 is a plan view of a scoop and scales combined in accordance with my invention. Fig. 2 is a vertical longitudinal sectional view on the plane indicated by the dotted line X X  
40 in Fig. 1. Fig. 3 is a vertical transverse sectional view through the weight and cost indicating cylinders and certain parts associated therewith, the plane of section being indicated by the dotted line Y Y in Fig. 1.

45 Like numerals of reference denote like parts in each figure of the drawings.

1 designates the handle of the implement. This handle is made hollow by constructing it with a longitudinal chamber or cavity, and  
50 the forward end of this chamber is of reduced diameter to provide an annular shoulder or

ledge, which forms a seat for one end of a tension-spring which is housed wholly within the handle. The chamber or bore of the handle is closed at the butt-end thereof by means of  
55 a plug 2, secured in place in any suitable way, and to the front end of the handle is secured a transverse plate or bridge 3. This bridge or plate is of a length greater than the diameter of the front end of the handle, and  
60 it occupies a position parallel to the rear straight end of the scoop 5. Said scoop may be of any suitable or preferred construction, and it is carried by an arm or plate 4, attached rigidly to the handle, preferably by  
65 interposing one end of the carrying arm or plate between said handle and the transverse bridge or plate 3, as shown by Fig. 2. This carrying arm or plate 4 is inclined downwardly and forwardly from the handle and beyond  
70 the transverse bridge-plate 3, and to the forward free extremity of said carrying arm or plate is pivotally attached the heel of the scoop. (See Fig. 2.)

The spring 6 is housed or arranged within  
75 the chamber of the handle to be entirely out of the way, and the front end of said spring rests upon and bears against the annular seat within said handle. Through this coiled spring extends a stem or rod 7<sup>a</sup>, the rear end  
80 of which is fastened to the corresponding end of the coil-spring.

In the transverse bridge-plate 3 is formed an opening 3<sup>a</sup>, which coincides with the reduced front end of the chamber or bore of the  
85 handle, and through said opening 3<sup>a</sup> passes a link 7, which is preferably bent at a point intermediate of its length, as shown by Fig. 2. The heel or rear end of this link is attached to the front end of the stem 7<sup>a</sup>, and the front  
90 extremity of said link 7 is pivotally connected to the heel or straight rear side of the scoop, preferably at a point near the upper edge of the wall forming the heel of the scoop.

The front end of the handle has its bore or  
95 chamber widened to produce an enlargement 2<sup>a</sup>, and the opening 3<sup>a</sup> in the bridge-plate 3 is of a width corresponding to the combined widths of the opening and its enlargement 3<sup>a</sup>. The bent part of the link 7 passes through  
100 the opening 3<sup>a</sup> of the bridge-plate and the enlargement 2<sup>a</sup> of the chamber or bore in the



handle. This construction possesses utility in that provision is made for the depression of the link 7 when the scoop is forced downward on its hinged connection with the arm 4 under the weight of the contents of the scoop, whereby the link 7 is drawn outwardly and carried downwardly by the action of the hinged scoop in a manner to place the spring 6 under tension by reason of the connection between the heel of the spring and the link, as shown.

In my improved scoop and scales I employ two cylinders 8 9 to indicate, respectively, the cost and the weight, and said cylinders are arranged in a novel compact manner between the scoop and its handle, so as to take up a minimum amount of space and to be entirely out of the way when the scoop is used to transfer merchandise from a bin or other receptacle to a sack. The cost indicating cylinder 8 is arranged between the heel of the scoop and the transverse bridge-plate 3 on one side of the longitudinal axis of the implement, and said cylinder 8 is connected to the bridge-plate, so as to turn or rotate axially thereon for the purpose of bringing either of its different scales or columns of figures into position beneath one end of the pointer. The revoluble cost-cylinder has its surface divided into a series of scales formed by different columns of figures intended for use in calculating the total cost of the merchandise, and the bottom numeral of each column of figures indicates the price per unit of weight. The columns of figures are arranged in series around the surface of the rotatable cost-cylinder, and when it is desired to weigh merchandise at a certain cost per ounce it is only necessary to turn the cylinder 8 to bring the proper scale thereon below the pointer, after which the implement may be used to scoop up the merchandise.

The front ends of the cost and weight cylinders are disconnected from and independent of the heel of said pivoted scoop, and the weight-cylinder is arranged between the bridge-plate and the scoop. The weight-cylinder lies on the opposite side of the spring-controlled link from the cost-cylinder, and the weight-cylinder is inscribed with a column of figures denoting the weight in ounces, as shown by the characters "Oz" in Fig. 1.

It will be understood that in my improved weighing-scoop I employ two independent cylinders 8 and 9. Of these cylinders the cylinder 9 is fixed to the handle on one side of the link and is inscribed with a scale indicative of the weight in ounces, as shown by Fig. 1, while the other cylinder 8 is revolvably fitted to the handle and is inscribed with a plurality of differential rate-scales to indicate the cost per pound or fraction thereof. The scales on the cost-cylinder are graduated according to the different rates and to the relation that the indications on the cost-cylinder bear to the fractional denominations on the weight-cylinder; but the scales on the

cost-cylinder all begin with the unit "1," opposite to which the pointer lies when the scale is unloaded. The graduations on the scales of the cost-cylinder are arranged to indicate the cost of fractional parts of the goods weighed in the scale, and the cost-cylinder may be adjusted to bring either of the scales thereon in proper relation to the pointer. Of course the cylinder 8 should be adjusted to bring the scale corresponding to the price or rate of the goods it is desired to sell.

The slidable link 7 between the scoop and the spring carries a double indicator or pointer 10, consisting of a bar having both ends thereof suitably shaped to form the pointer. This bar is arranged in a horizontal position to span the space between the two cylinders 8 9, and said bar is fastened rigidly to the link 7 for the purpose of making the bar move or travel with the link.

The tension of the spring is such that when the scoop is free from a load the scoop is held in the raised position shown by Fig. 2 and the indicator-bar points to zero on the scales of the cost and weight cylinders. (See Fig. 1.) To use the scoop, it is thrust into the merchandise in the ordinary way, and it is then lifted and held up to view before the operator. The gravity of the contents of the scoop depresses the latter to an inclined position, the scoop moving on its hinged or pivoted connection with the carrying-arm 4 and pulling endwise on the link 7 and stem 7<sup>a</sup> to place the spring under tension. This movement of the link carries with it the indicator-bar 10, one pointer of which indicates the cost on the cylinder 8, while the other pointer indicates the weight of the contents of the scoop on the cylinder 9. It is evident that the contents of the scoop may be increased or diminished until the scoop contains the desired quantity, and the scoop may thus be used in a very convenient manner to weigh out granular materials and deposit the same in a sack or bag without the necessity of employing a separate scales to determine the weight of the material.

It is evident that slight changes in the form and proportion of parts may be made without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a weighing-scoop, the combination with a hollow handle, and a hinged scoop, of a compression-spring within said handle, an endwise-movable link pivoted at one end to the scoop and extending into the handle to connect with the compression-spring therein, a weight-indicating cylinder mounted between the handle and scoop on one side of the link, a cost-indicating cylinder also between the handle and scoop and on the other side of the link, and a pointer carried by said link to travel adjacent to both cylinders, substantially as described.

2. In a weighing-scoop, the combination



with a hollow handle, and a hinged scoop, of  
an endwise-movable link attached to said  
scoop, a compression-spring seated in the  
handle and connected to the link, a cost-in-  
dicating cylinder rotatably mounted on the  
5 handle and parallel to the link, a weight-in-  
dicating cylinder fixed to the handle and on  
the opposite side of the link from the first-  
named cylinder, and a pointer attached to  
10 the link to travel adjacent to both cylinders,  
substantially as described.

3. In a weighing-scoop, a chambered han-  
dle and a transverse bridge attached to one  
end of the handle, combined with an arm  
15 fixed to said handle, a scoop pivoted to the  
free end of said arm, a slidable link pivoted  
to said scoop, the cylinders mounted on the  
bridge-plate and arranged between the scoop  
and handle, and a pointer attached to the  
20 link and arranged to travel over both cylin-  
ders, substantially as described.

4. The combination of a handle provided  
with a transverse bridge-plate, a spring seated  
within the handle, a pivoted scoop carried by  
25 said handle, a link pivoted to the scoop and

connected to the spring, a revoluble cost-in-  
dicating cylinder mounted on the bridge-plate  
on one side of the link, a weight-indicating  
cylinder attached to the bridge-plate on the  
opposite side of the link thereof, and an indi- 30  
cator attached to the link and having its ter-  
minals adjacent to the rate and weight indi-  
cating cylinders, substantially as and for the  
purposes described.

5. In combination, a handle, a pivoted 35  
scoop, a torsion-spring operatively connected  
with the scoop, a weight-cylinder, a revolu-  
ble cost-cylinder provided with columns of  
figures indicative of the total costs at differ-  
ent rates, and a pointer controlled by the 40  
connections between the scoop and spring  
and adapted to traverse the weight and cost  
cylinders, substantially as described.

In testimony whereof I have signed this  
specification in the presence of two subscrib- 45  
ing witnesses.

G. H. WATKINS.

Witnesses:

JNO. H. STANLEY,

B. G. STULTZ.