

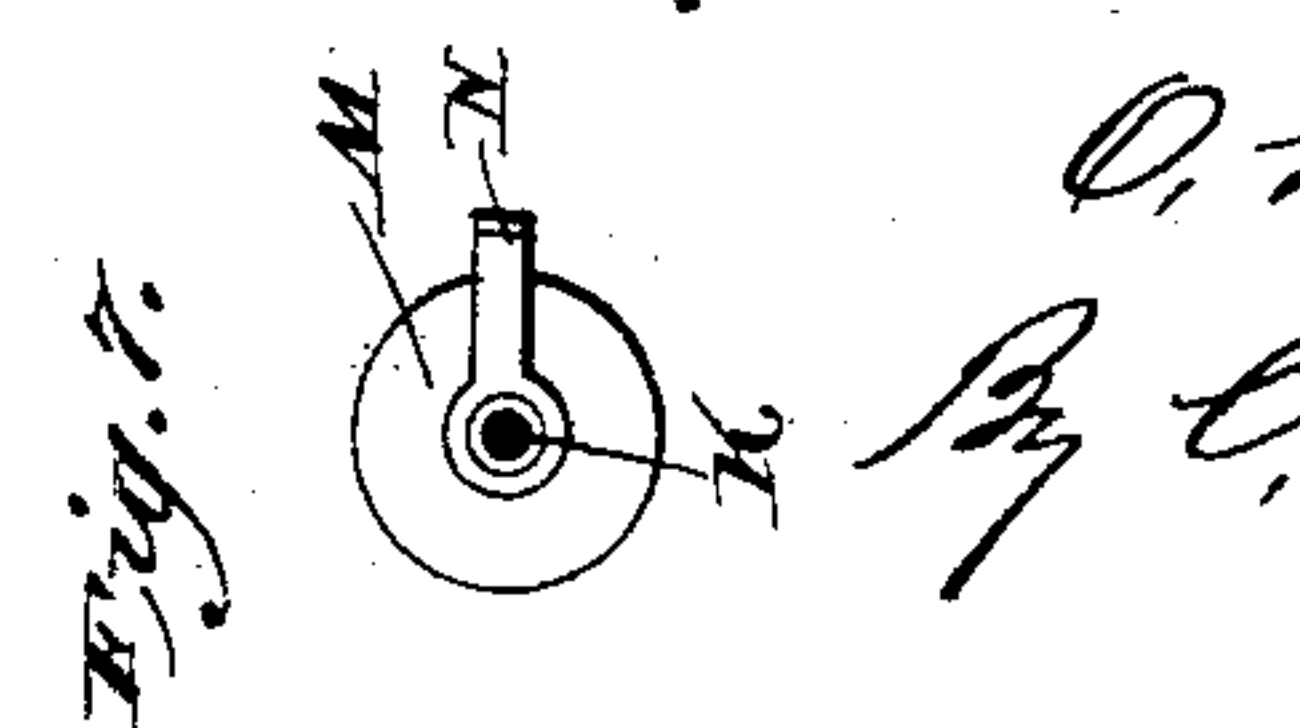
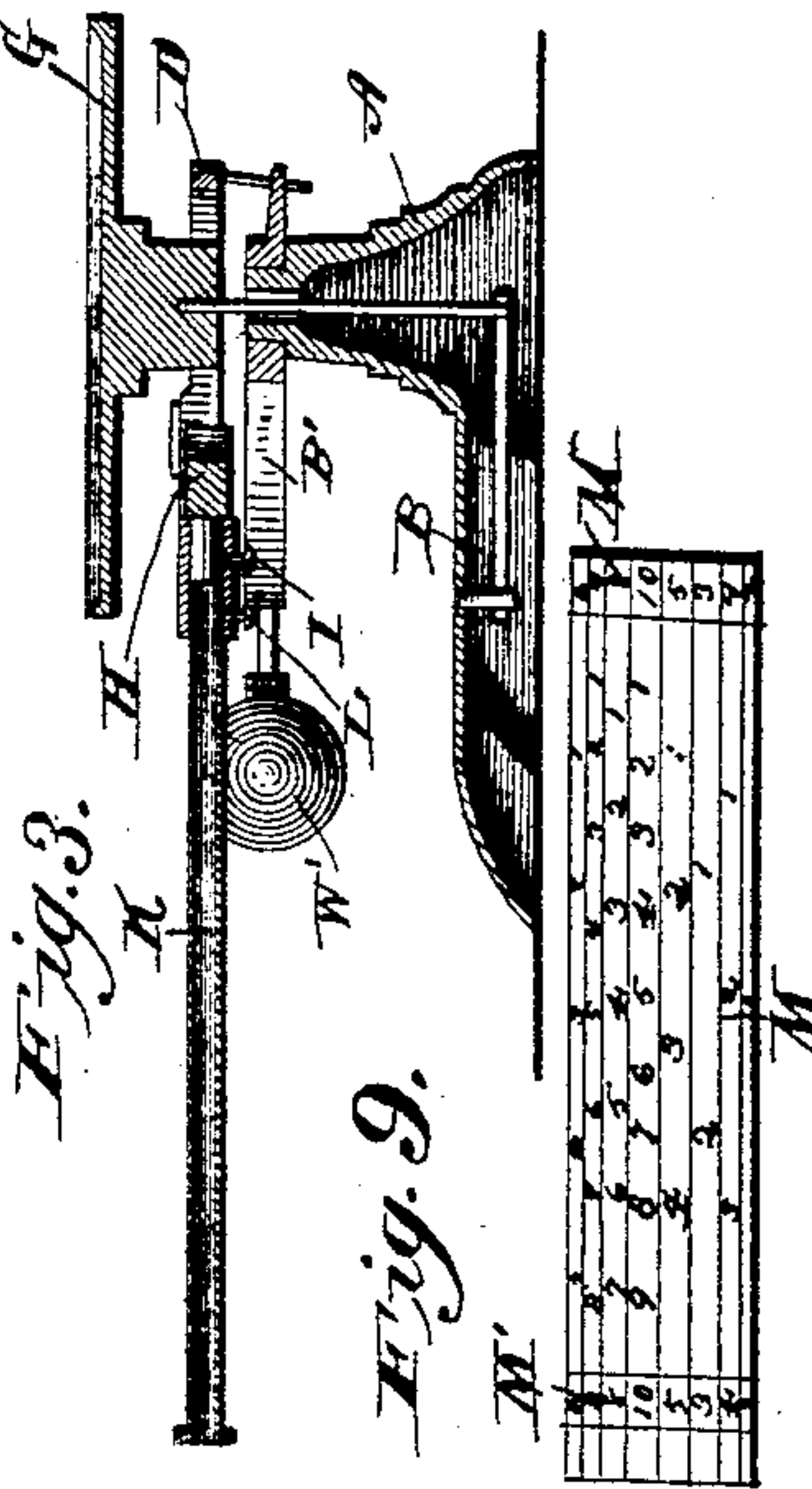
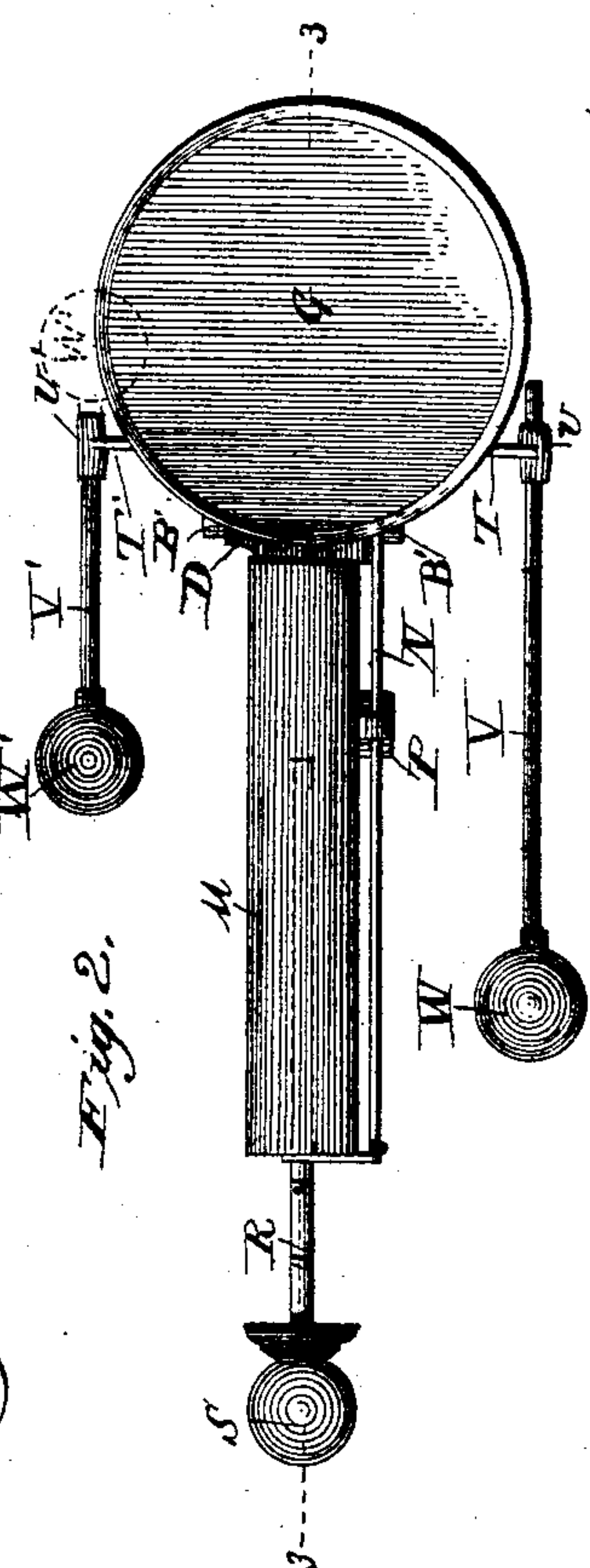
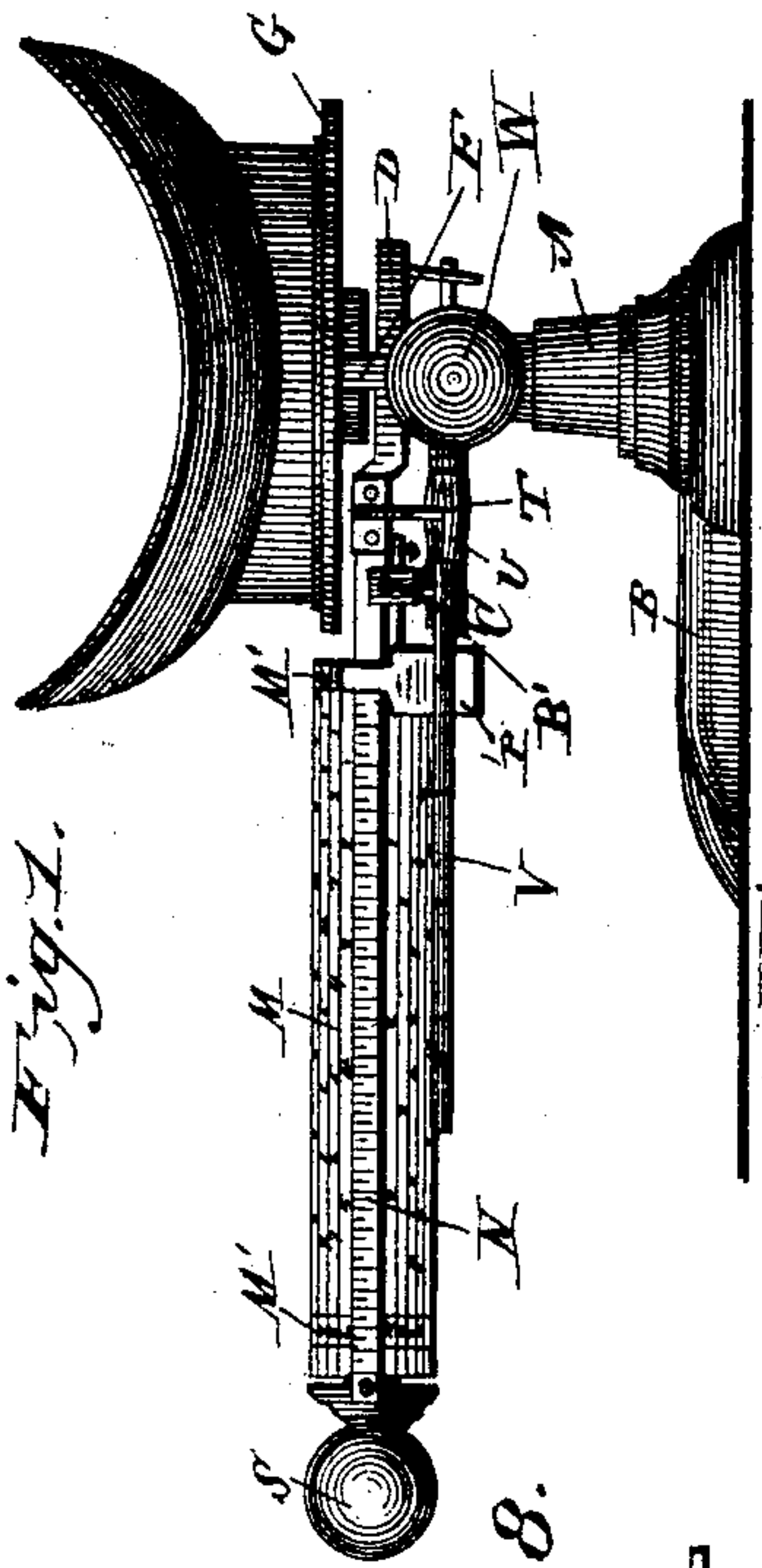
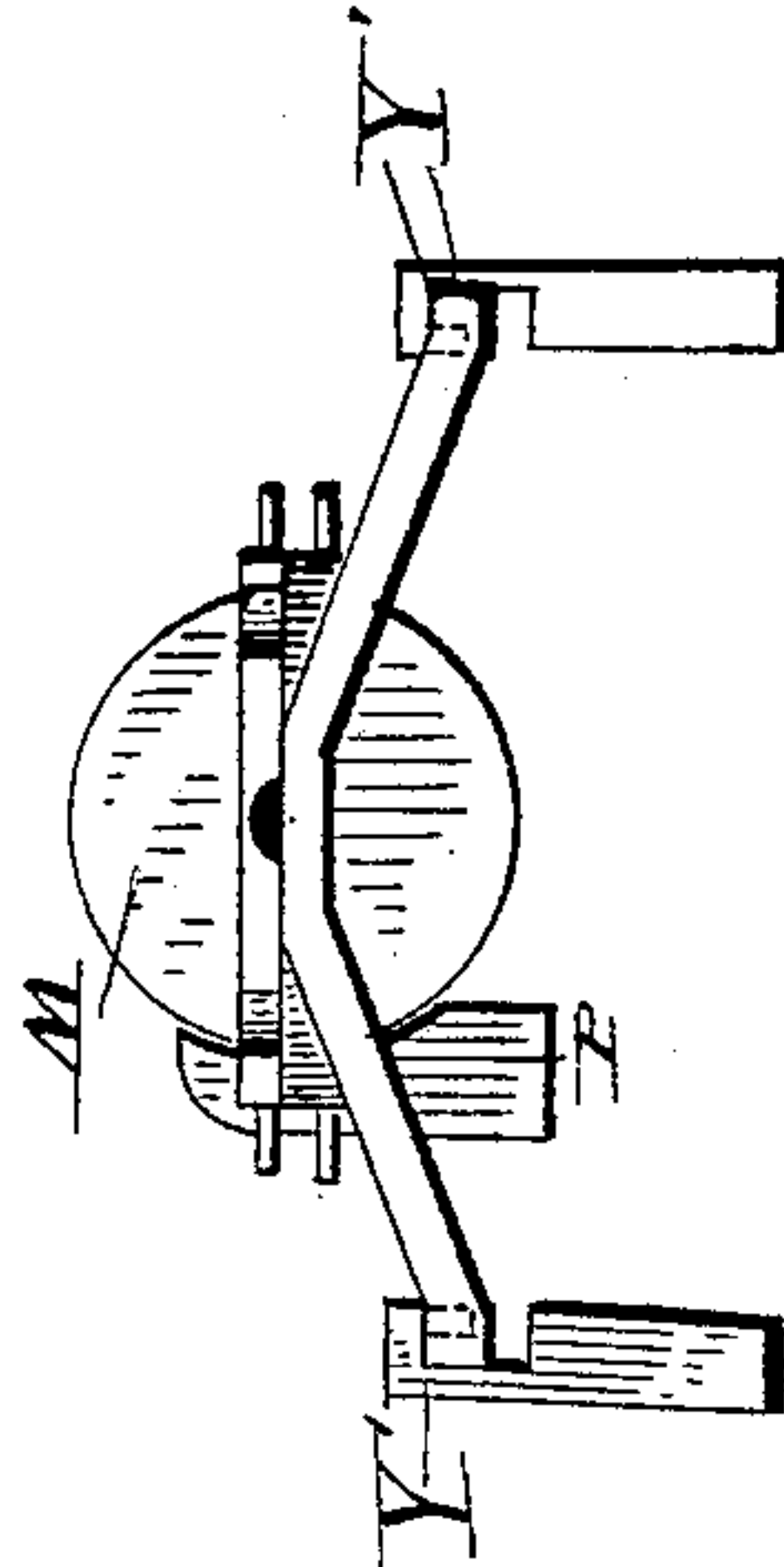
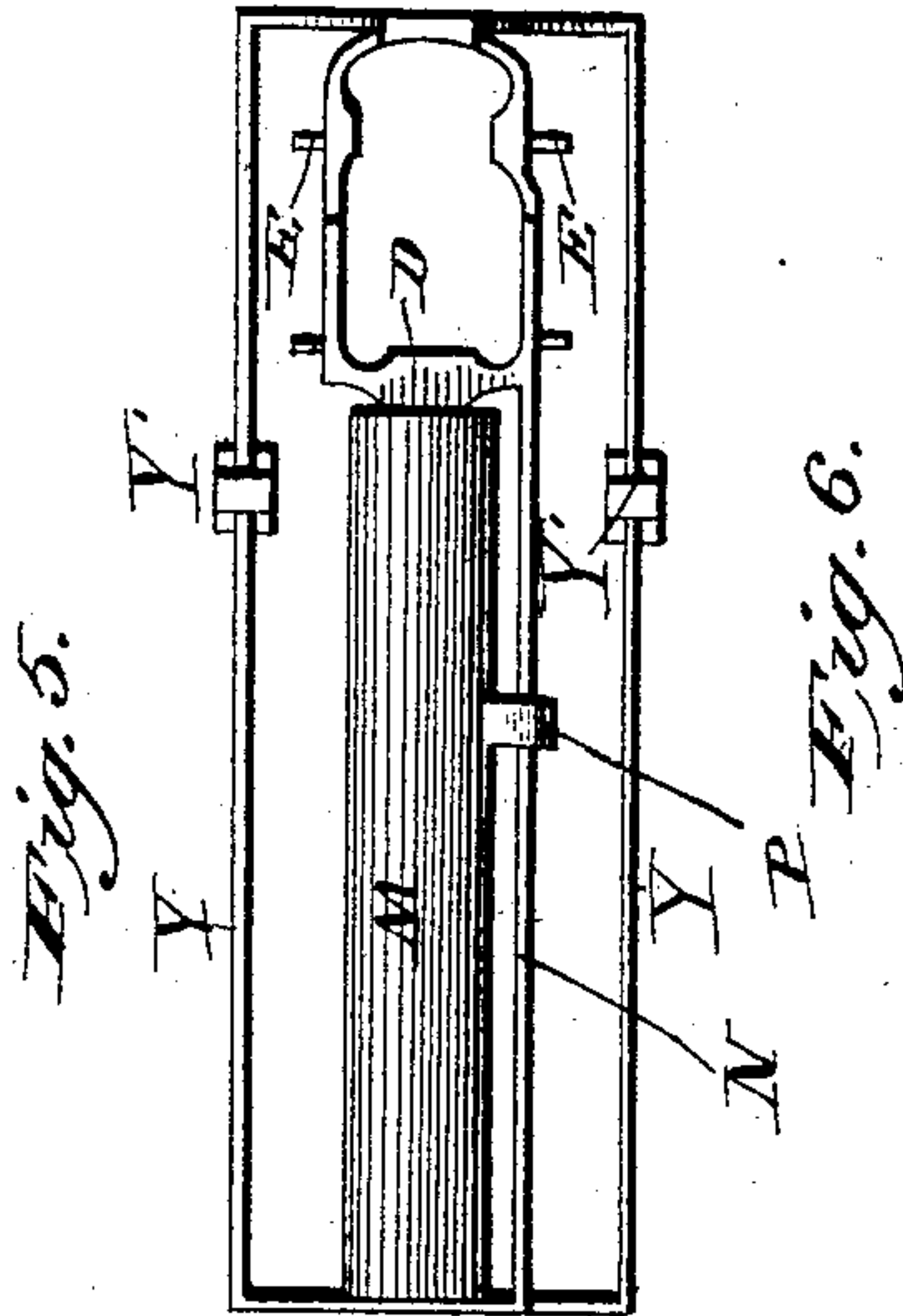
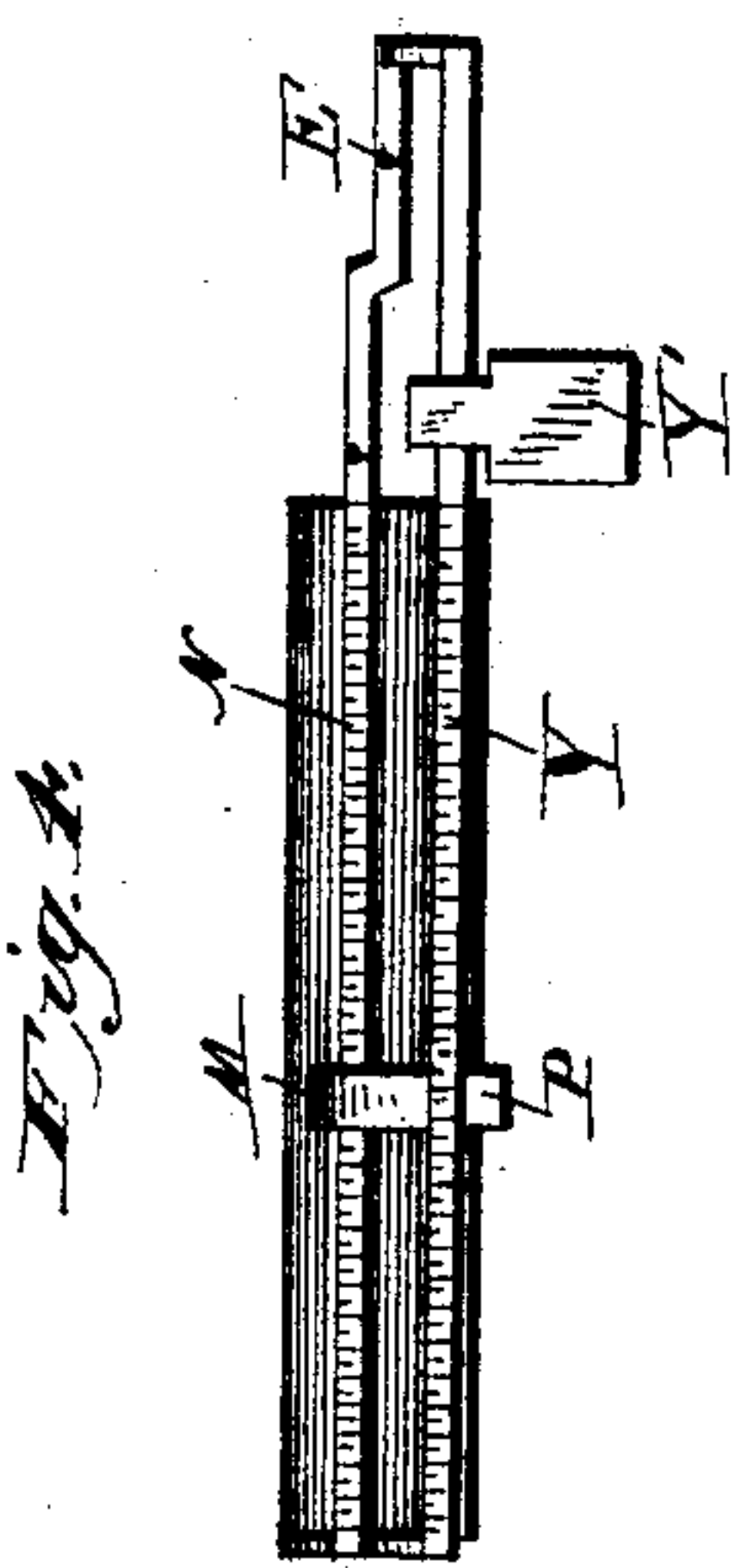
(No Model.)

O. W. VAN DENBURGH.

WEIGHING AND PRICE SCALE.

No. 397,040.

Patented Jan. 29, 1889.



WITNESSES
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ORVILLE W. VAN DENBERGH, OF SCHUYLERSVILLE, NEW YORK.

WEIGHING AND PRICE SCALE.

SPECIFICATION forming part of Letters Patent No. 397,040, dated January 29, 1889.

Application filed July 26, 1888. Serial No. 281,116. (No model.)

To all whom it may concern:

Be it known that I, ORVILLE W. VAN DENBURGH, a citizen of the United States, residing at Schuylersville, in the county of Saratoga and State of New York, have invented certain new and useful Improvements in Weighing and Price Scales, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain improvements upon the invention covered by Letters Patent of the United States granted to Ly-
mon B. Gibson the 17th day of November, 1885, No. 330,690, for improvements in scale-
15 beams, as will more fully hereinafter appear.

This invention consists in certain novel features of construction, that will be fully hereinafter described, and particularly set forth in the claims appended.

20 In the accompanying drawings, Figure 1 represents a side elevation of an improved scale constructed according to my invention. Fig. 2 represents a plan view thereof. Fig. 3 represents a longitudinal sectional view of my
25 improved scale, taken on the line 3 3 of Fig. 2, the sliding weight S and its rod being removed; Fig. 4, a detached side elevation of a modification of the balance-frame; Fig. 5, a plan view of the balance-frame shown in Fig.
30 4; Fig. 6, an end view of the same; and Fig. 7, an end view of the rotating cylinder, showing the connection of the same with the frame of the scale-beam; Fig. 8, a detail view of the removable weight W'; Fig. 9, a detail side ele-
35 vation of the rotating cylindrical indicator.

Referring to the drawings, the letter A indicates the vertical standard which supports the balancing portion of the scale. This is provided with a suitable base, B, which may
40 be of any convenient form. The standard at its upper end is provided with a horizontal bracket or extension, B', which carries the usual short uprights, C, having bearings for the usual knife-edged fulcrums of the beam
45 or balance-frame D. The said frame, as shown in Fig. 5 of the drawings, is provided at the rear of its fulcrum-bearings with knife-edged lateral projections E, upon which rest the recessed hangers F of the platform G in
50 the usual manner. The forward end of the frame, midway between its sides, is provided with a longitudinal cylindrical recess, and in

the rear end of said recess is fitted the cylindrical projection of an adjustable weight, H, which is capable of adjustment by means of a set-screw, I, so that the scale-beam may be accurately balanced initially and maintained in such balanced position. In the forward end of said recess is fitted a hollow cylindrical beam or tube, K, which may be adjusted and held therein by means of a binding-screw, L. Upon the said beam is mounted a cylindrical rotating scale, M, the periphery of which is provided with a series of longitudinal parallel lines extending from the rear to the forward end thereof. At each end of the ruled portion of the cylinder an annular space, M', is ruled off, as indicated, and in such annular spaces are arranged the figures of the "price-list." The spaces between the longitudinal lines within the portion bounded by the annular price-lists are subdivided into as many portions as the corresponding numerals at the ends on the price-lists indicate. For instance, the longitudinal space within the line opposite to or registering with the numerals 10 is divided by transverse marks into ten equal spaces, while the space included between the lines opposite the numerals 50 is divided into fifty spaces.

The forward end of the balance-frame, at one side, is provided with a scale-beam, N, which is graduated to indicate fractions of a pound, and on this beam is mounted a sliding weight, P, by which the article on the platform may be weighed off in fractions of a pound. Within the hollow beam before mentioned is arranged a sliding beam, R, having at its outer end a fixed weight, S. The said beam is graduated at intervals to indicate pounds, and is used by sliding the said beam out or in the hollow beam to increase or decrease the leverage, as required, when the article to be weighed is over one pound.

To each side of the balance-frame are secured two laterally-extending hangers, T T', which are provided with cylindrical socketed bearings U U', parallel with the scale-beams before mentioned. In the bearing U is fitted a reversible sliding beam, V, having a weight, W, at one end, for the purpose fully explained in the patent hereinbefore mentioned. In the other bearing, U', is affixed rigidly a rod or tube, V', carrying a removable weight, W', at

its end, the said removable weight being adapted to be removed from the end of the tube V' and inserted in the other end of the bearing U', as shown in dotted lines in Fig. 2, the weight being provided with a suitable pin for this purpose.

In the modifications shown in Figs. 4, 5, and 6 of the drawings the balance-frame is extended forward at each side, forming lateral beams Y, which are provided with sliding weights Y', by means of which the weighing capacity of the scale may be increased without destroying the compactness of the scale.

The operation of my improved scale is as follows: The weights all being in normal position, as shown in Fig. 1 of the drawings, the weighing portions of the scale will all be accurately balanced. Suppose, now, it is desired to weigh off a quantity of any article or commodity weighing less than one pound. The rotary scale is turned until the numerals of the price-lists indicating the price for which said article is selling per pound are just above or in line with the upper edge of the beam N. The sliding weight P is then moved thereon until its forward edge comes opposite the division marked with the total cost of the article to be sold or purchased at the given price per pound. The article is then placed upon the scale-pan in the proper quantity to balance the weight, thus weighing off the precise amount to which the customer is entitled. To take a practical illustration, suppose a customer desires to purchase six cents' worth of an article selling at the rate of ten cents per pound. The seller will first revolve the cylinder M until the numerals 10 in the price-lists can be seen just above the upper edge of the beam N, when the weight P on this beam is moved along the beam until its inner edge comes opposite the division on the cylinder marked 6. The article is then placed in the scale-pan until it properly balances, thus weighing off the exact amount the customer is entitled to. When a receptacle for the article to be weighed is required, such receptacle is placed upon the platform or in the scale-pan, and it is accurately balanced by means of the sliding weight W previous to weighing. When the commodity to be weighed amounts to more than one pound, the weight on the sliding bar R is brought into requisition by withdrawing the bar a sufficient distance, and the fractional portions are indicated by the sliding weight on the scale-beam N, before mentioned. The weighing capacity of the scales may be still further increased by bringing the side weight, W, into requisition, as may be required.

As the object and manner of using the indicating-cylinder M and the sliding weights S and W are fully described in the Gibson patent herein mentioned, I do not deem it necessary to describe these parts further in this specification. The removable weight W' is intended to still further increase the capacity of the scale. The weight is of a given weight—say one pound—and when not in use it is inserted in the bearing U', as shown in dotted lines in Fig. 2, where it just balances the scale. When it is desired to increase the weighing capacity of the scales to the extent of the weight, the same is removed from the bearing U' and inserted in the end of the tube V', as shown in full lines in Fig. 2. By making the tube V' longer the capacity may be increased without increasing the size of the weight W'.

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

1. The combination of a suitable standard, a rigid frame, B', supported upon the said standard, a balance-frame, D, pivotally supported upon the said frame B', a platform, G, pivotally supported upon the said frame D, a beam, K, secured to the balance-frame, a revoluble indicating-cylinder, M, journaled upon this beam K, a graduated beam, N, secured to the frame D, and extending out parallel with and to one side of the said indicating-cylinder, and a sliding weight upon this beam N, the said cylinder M being graduated and marked off, substantially as shown, and for the purpose described.

2. The combination of a suitable standard, a stationary frame, a balance-frame supported upon the stationary frame, a platform, G, supported upon the balance-frame, a tubular beam, K, adjustably secured to the said balance-frame, a revoluble indicating-cylinder upon this beam, this cylinder being provided with suitable figures and spaces, a stationary graduated beam, N, secured to the said balance-frame and extending out parallel with and in front of the cylinder, the forward end of this graduated beam being connected to the forward end of the beam K by an arm, a sliding graduated rod, R, inserted in the outer end of the said hollow beam K, and provided with a weight, S, and a sliding weight, P, upon the said graduated beam N, substantially as and for the purpose described.

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

ORVILLE W. VAN DENBURGH.

Witnesses:

JNO. S. FINCH, Jr.,

CHAS. L. COOMBS.