

No. 660,959.

Patented Oct. 30, 1900.

G. H. IRISH.

KEY BAR.

(Application filed July 30, 1900.)

(No Model.)

Fig. 1.

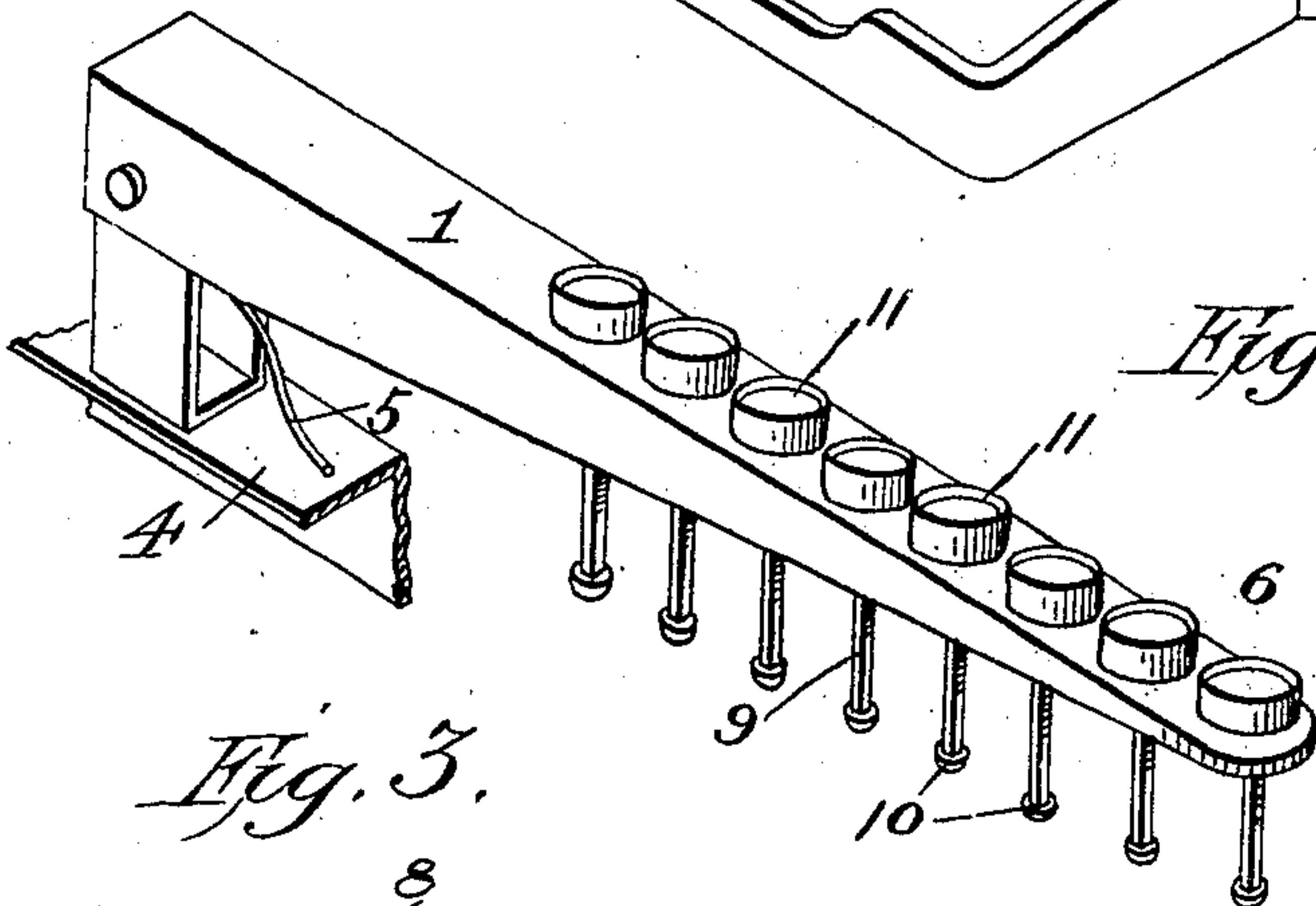
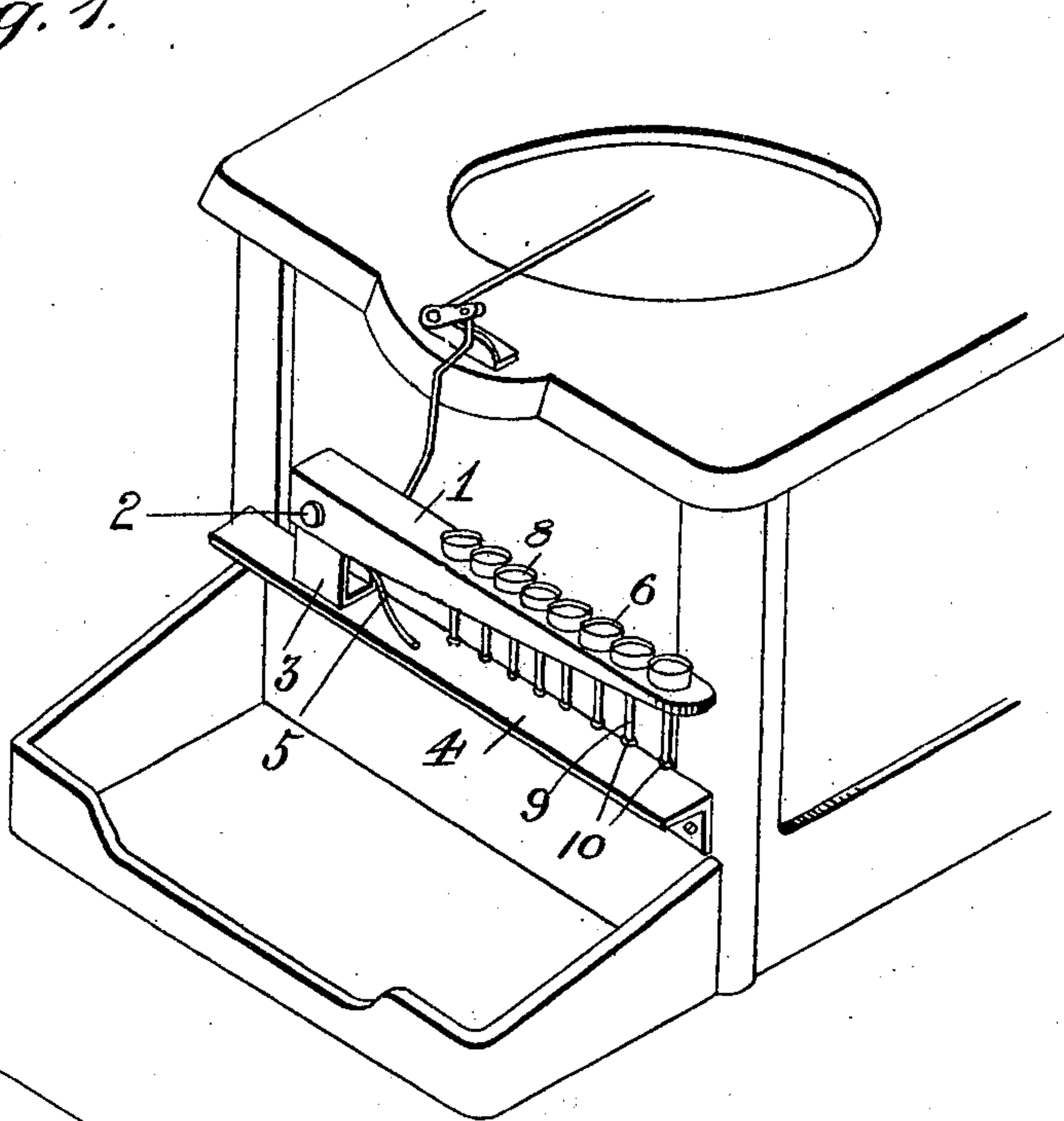


Fig. 2.

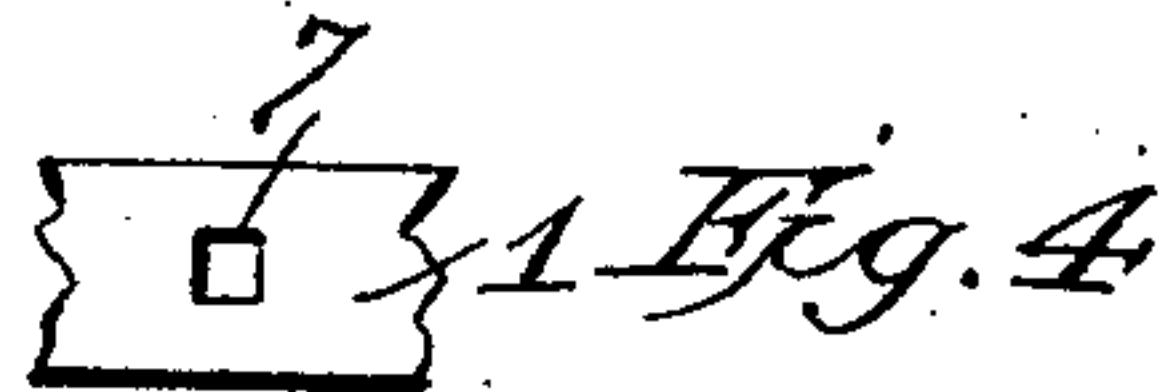


Fig. 3.

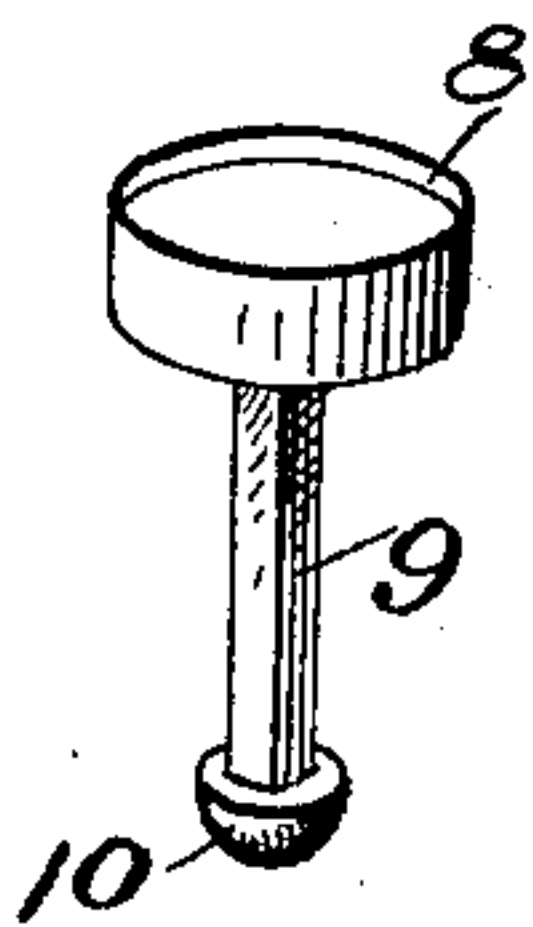
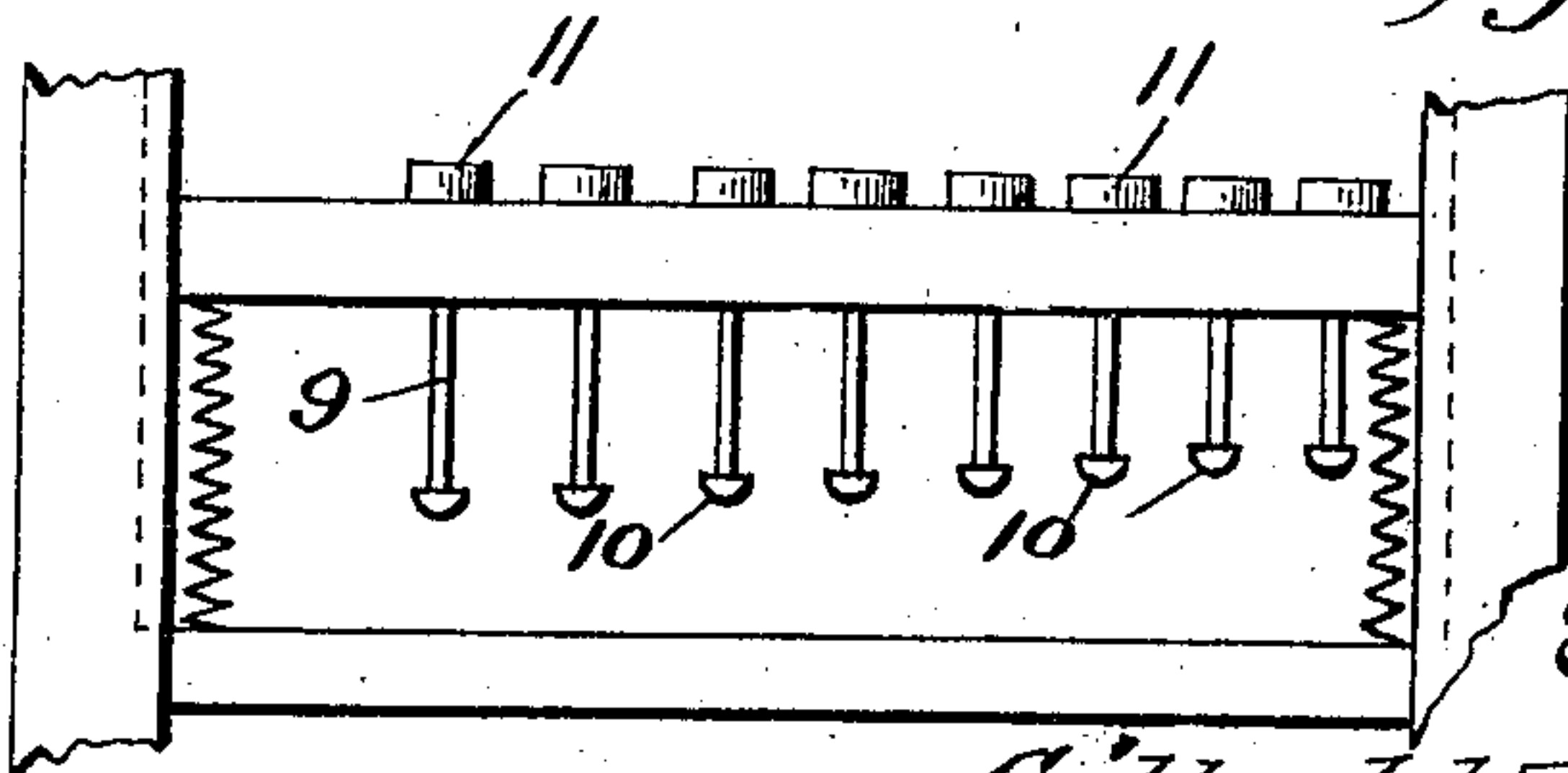


Fig. 5.



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UNITED STATES PATENT OFFICE.

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KEY-BAR.

SPECIFICATION forming part of Letters Patent No. 660,959, dated October 30, 1900.

Application filed July 30, 1900. Serial No. 25,260. (No model.)

To all whom it may concern:

Be it known that I, GILBERT H. IRISH, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented new and useful Improvements in Key-Bars, of which the following is a specification.

My invention relates to key-bars; and the object of the same is to produce improved key-bars which can be used on type-writers, cash-registers, &c.

My device is especially designed for use on a tabulating attachment for type-writers which forms the subject-matter of a separate application for patent; but obviously its utility is not limited to employment in that connection.

The specific object of my construction is to provide means for giving a graduated series of throws to a key-bar. With this object in view I mount a series of keys of different lengths or of the same length transversely the key-bar above a base with which they are adapted to contact. I provide each key with a flat head on one end and a contact-knob on the other. By this arrangement the keys are left free to move longitudinally between certain limits, unless held in contact with the bar, and the bar is free to respond to any key depressed, the other keys not interfering with its movement.

In the drawings which accompany this specification, and of which they form a part, Figure 1 is a perspective of my key-bar with keys of equal length mounted therein. Fig. 2 is a perspective of my key-bar with keys of graduated length mounted therein. Fig. 3 is a perspective of one of my keys. Fig. 4 is a plan view of a fragment of the key-bar. Fig. 5 is a front elevation of a modified form of mounting for my key-bar with a graduated set of keys.

Like numerals of reference designate like parts wherever they occur in these drawings.

As shown in Fig. 1, the numeral 1 designates a bar, shown as tapering uniformly from one end to the other; but it will appear that I may use a bar of equal thickness throughout by employing keys of greater length. The bar 1 is pivoted on a pintle 2, secured in a support 3. The support 3 rests

in turn on a base 4. The base 4 may be either plain or recessed to correspond to the points of contact of the keys, as will be set forth. The pintle 2 is surrounded by a spring 5, which bears against the base 4 and serves to return the bar 1 to its initial position after having been depressed. Mounted in the bar 1 are a series of keys 6, which keys fit smooth transverse apertures 7, formed in the bar. Each of the keys 6 consists of a head 8, a stem 9, and a contact-knob 10. The stems 9 fit the apertures 7, and the head 8 and knob 10 limit the movement of the key. The stems 9 are shown as square in cross-section; but they may be of any other shape adapted to keep them from revolving in the bar, so that characters placed on the head will not change their upright positions.

In operating my device the keys are struck in succession with the fingers. When a key is struck, the finger is left in contact with the head 8, the head held in contact with the bar, and the bar depressed until the knob 10 contacts with the base 4. The bar will always be carried down till the knob of the key struck contacts with the base 4, because the other keys are free to slide up through the bar as soon as their knobs contact with the base, and hence do not limit its motion. It is evident that when all the keys are the same length the key farthest from the pivot will correspond to the minimum throw of the bar, and conversely.

In Fig. 2 are illustrated keys 11 of different lengths, graduated from the pivot out. By this arrangement the minimum throw of the bar can be made to correspond to the key nearest to the pivot and conversely. This may also be accomplished by using a recessed base. In fact, any key of the series may be made to correspond to the minimum or maximum throw by this arrangement or by using keys of assorted lengths.

The essential feature of my key-bar is that the key struck alone limits the movement of the key-bar, the others not interfering with it.

The use of my keys is not limited to pivoted bars, for they will serve equally well in bars mounted in guides adapted to be depressed parallel to the base, as is illustrated in Fig. 5.

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

1. In a key mechanism, the combination,
5 substantially as described, of a movable bar, a series of keys provided with heads by which said keys are supported in said bar, and a fixed stop to limit the movement of said keys.

2. In a key mechanism, the combination,
10 substantially as described, of a movable bar, a series of keys carried by said bar, and

loosely mounted to slide therein, and a base with which said keys are constructed to contact to limit their movement after being depressed.

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

GILBERT H. IRISH.

Witnesses:

Mrs. A. H. PECK,
DELTA ADAMS.