

No. 683,130.

Patented Sept. 24, 1901.

T. H. MACDONALD.
TOY GRAPHOPHONE.

(Application filed Feb. 21, 1899.)

(No Model.)

Fig. 1.

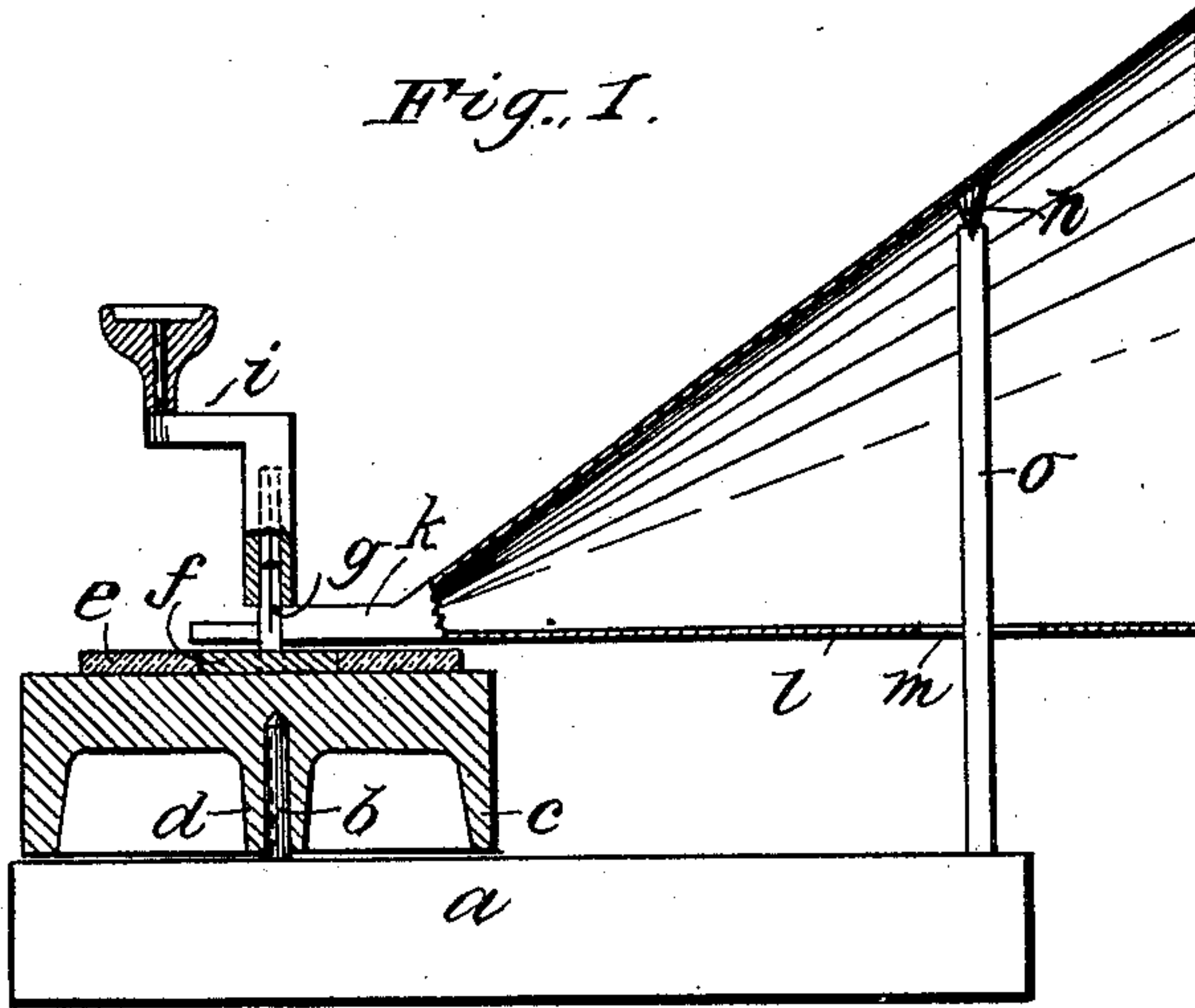
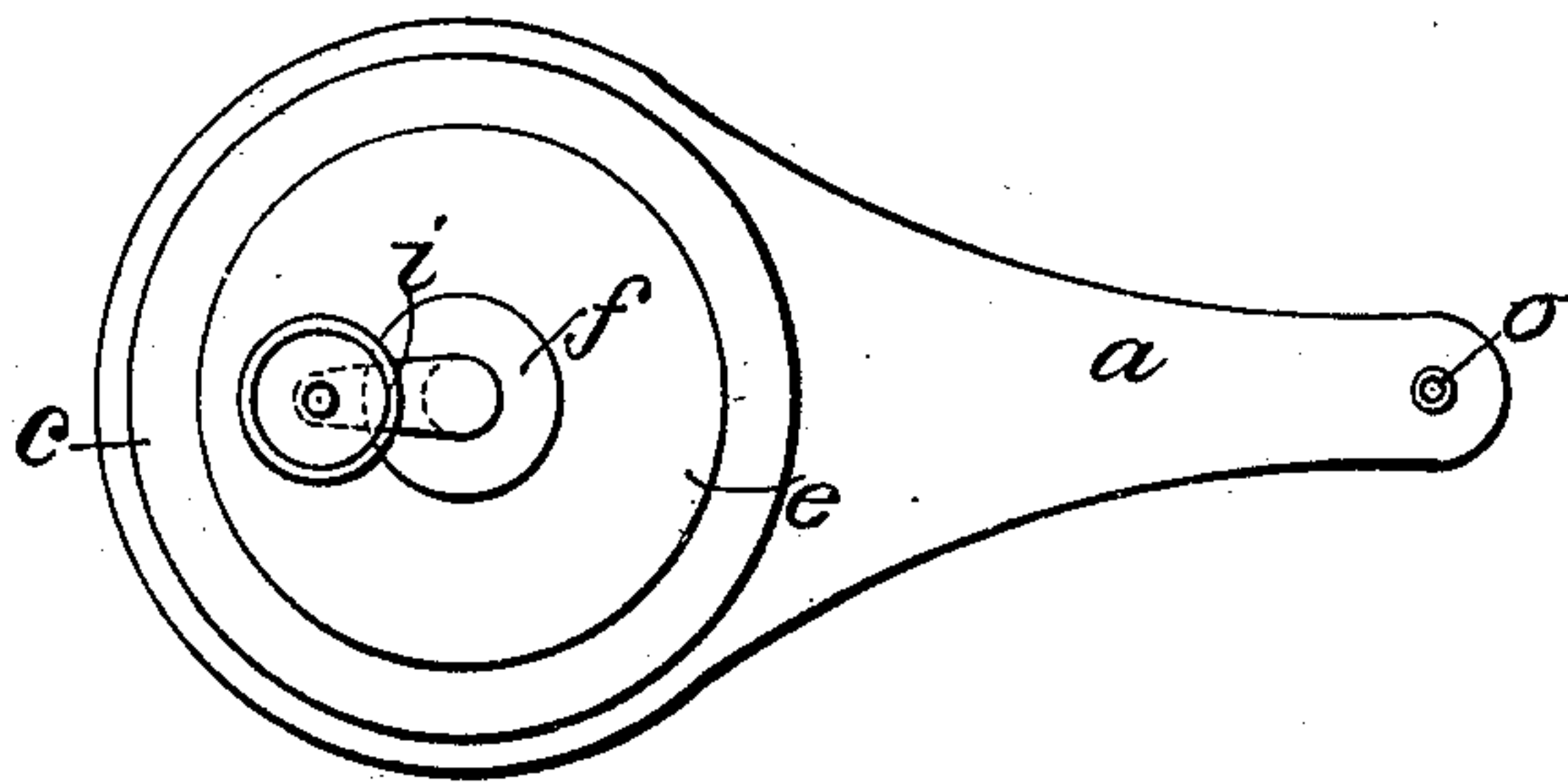


Fig. 2.



Witnesses.

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TOY GRAPHOPHONE.

SPECIFICATION forming part of Letters Patent No. 683,130, dated September 24, 1901.

Application filed February 21, 1899. Serial No. 706,411. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. MACDONALD, a resident of the city of Bridgeport, State of Connecticut, have invented a new and useful
5 Improvement in Toy Graphophones, which invention is fully set forth in the following specification.

The object of this invention is to produce a toy graphophone. To accomplish this ob-
10 ject it is necessary to secure certain results which are difficult to attain in one structure. The construction must be so simple as to admit of very economical manufacture. It must also be very simple in operation, so that its
15 use can be readily understood by children. It must be free from difficult adjustment and complication of all sorts. It must be substantial and not liable to easy derangement or breakage of any part, and these results
20 must be attained without sacrifice of the property of distinct reproduction of the recorded sounds. These results are attained, according to the present invention, mainly by the construction of the tablet-holder, which is in
25 the form, preferably, of a heavy disk mounted to rotate or spin upon a center. This tablet-holder while serving its normal purpose acts also (by virtue of its inertia) as a speed-governor. In its preferred form the tablet-
30 holder is a disk weighing, say, one and one-half or two pounds, having a long central bearing and resting removably upon a vertical pin having a conical upper end. The record-tablet, in the form of a disk, rests upon the flat
35 top of this tablet-holder, and if this surface be covered with felt or similar material it is unnecessary to employ any means for attaching the tablet to the tablet-holder. The latter can be rotated by any suitable means—
40 for example, by a string wound around its shaft (as in spinning a top) or by a crank-handle. In the wheel thus mounted we have the essential elements of a tablet-holder, motor, and speed-governor, the frame consisting
45 merely of a base-plate with an upright pin. With these parts can be combined recording and reproducing devices of known or suitable constructions. As the apparatus would ordinarily be used only for reproducing, the
50 following construction is preferred. The base-

plate is provided with a second vertical pin and post longer than the first. The reproducer is rigidly attached at the mouth of a horn, which is supported pivotally on said post and can swing thereon freely. The com-
55 bined horn and reproducer are nearly balanced on their support, there being a slight preponderance of weight at the reproducer end, so that the latter will bear with light pressure on the tablet. These constitute all
60 the essential parts. They may of course be modified in construction so as to adapt them to various kinds of toys, as will be readily understood.

In order that the invention may be fully
65 understood, one form of embodiment thereof will be described in detail, reference being had to the accompanying drawings, wherein—

Figure 1 is a sectional elevation of an apparatus constructed in accordance with the
70 invention, and Fig. 2 is a top view, the horn and reproducer being omitted.

a represents a base-plate, which may be of wood or other suitable material, and *b* a pin
75 having at its upper end a conical bearing-point. The wheel *c* is centrally supported on this pin. Said wheel has a long hub *d* to prevent lateral strain and cause it to run true. It is so shaped that the greater part of
80 its weight is at the periphery, so that it will store up considerable energy. This wheel may be employed to impart motion to the tablet in any suitable way; but preferably the tablet *e* rests directly on its upper sur-
85 face. The tablet *e* is of disk form, having a central aperture of such size as to fit around a boss *f* on wheel *c*, which centers the tablet.

From the wheel *c* rises a short spindle *g*, and I have shown as a means of imparting
90 motion thereto a removable crank-handle *i*, whose upper surface is hollowed out to receive the finger of the operator. It has been found that by imparting a few turns to the wheel *c* it will acquire considerable momen-
95 tum and spin on its center long enough to reproduce a record of considerable length, while by keeping one finger in contact with the crank-handle and turning with very slight force the speed will be maintained with practical uniformity.

The reproducer *k* (of any known or suitable type) is affixed rigidly to the small end of horn *l*. The latter has a slot or aperture *m* through one side, and at a diametrically opposite point is provided a small cone-bearing *n*, which engages in a depression or socket formed in the top of post *o*. The combined horn and reproducer are thus very delicately balanced and are easily put in place or removed. In operation the reproducer rests with proper predetermined pressure on the tablet and adjusts itself automatically, being guided by the record in the usual manner.

I claim—

1. In a graphophone, a weighted disk having a flat face or surface against which a record-tablet is adapted to be supported, said disk being adapted when put in motion to store up energy and act as a fly-wheel and speed-regulator, a central bearing on which the disk is supported and adapted to be rotated, a crank projecting centrally from the disk and having a depression or recess at its upper extremity in which the finger of an operator is adapted to be engaged to rotate the disk.

2. A graphophone consisting of a base, a weighted disk having a flat upper face for supporting a record-tablet, said disk being adapted when put in motion to store up energy and

act as a fly-wheel and speed-regulator, a pin projecting upwardly from one end of the base and having a conical point, said pin loosely engaging in a centrally-located socket in the under side of the disk, a short spindle projecting upwardly from the center of the disk, a crank on said spindle for rotating the weighted disk, a horn having a reproducer attached to its small end and having a perforation through its lower side, an upright post on the other end of the base passing through the perforation in the horn, and a bearing-point attached to the inside of the horn opposite to the perforation and engaging the top of said post.

3. The combination with the tablet-holder, of a horn having a reproducer attached to its small end, and having a perforation through one side, an upright post passing through said perforation, and a bearing-point attached to the inside of the horn opposite to the perforation, and engaging the top of said post.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS H. MACDONALD.

Witnesses:

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CLARA GIBNER.