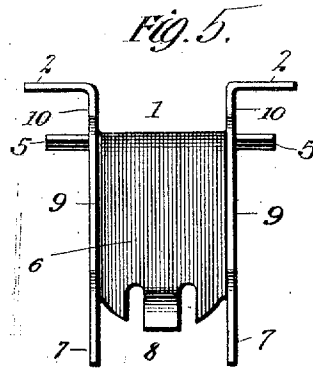
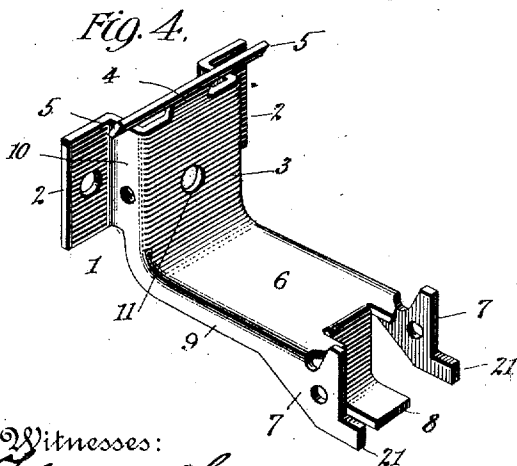
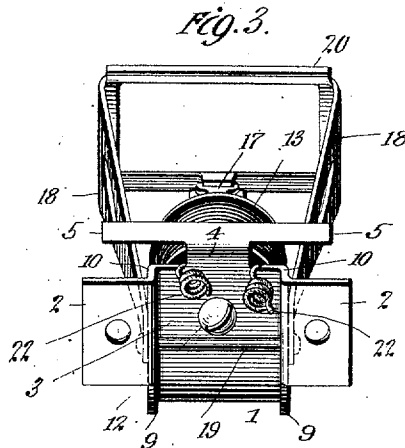
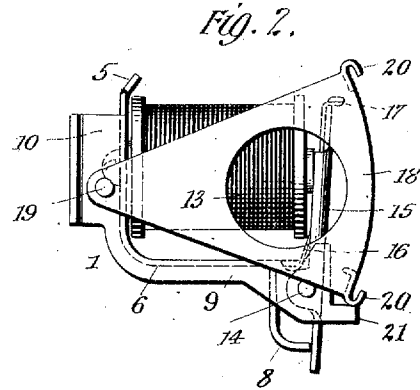
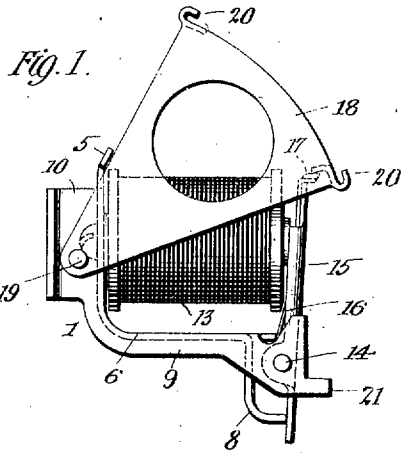


A. LUNGEN.
ANNUNCIATOR.
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973,676.

Patented Oct. 25, 1910.



Witnesses:
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UNITED STATES PATENT OFFICE.

ADAM LUNGEN, OF NEW YORK, N. Y., ASSIGNOR TO EDWARDS & CO., INC., A CORPORATION OF NEW YORK.

ANNUNCIATOR.

973,676.

Specification of Letters Patent.

Patented Oct. 25, 1910.

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To all whom it may concern:

Be it known that I, ADAM LUNGEN, a citizen of the United States, residing at the city of New York, in the borough of the Bronx and State of New York, have invented certain new and useful Improvements in Annunciators, of which the following is a full, clear, and exact description.

My invention relates to annunciators and includes several improvements over the ordinary constructions of annunciators now in use.

The aim has been to so arrange the several parts as to produce a compact and exceedingly simple structure, the reduction in cost of manufacture of which over those of a similar type being considerable. Fewer parts are necessary and the use of screws, rivets or like securing means has been reduced to a minimum. The drop or shutter is arranged to fall prominently into view, cannot be jarred out of engagement with the latch, and is arranged to trip positively with a minimum expenditure of motive force in the operating circuit.

With the foregoing objects in view one embodiment of my invention consists in the features of construction hereinafter set forth and claimed.

In the drawings: Figure 1 is a side elevation of an annunciator embodying the principles of my invention. Fig. 2 is a similar view showing the shutter in dropped or indicating position. Fig. 3 is a perspective rear view of the annunciator with the shutter in raised position. Fig. 4 is a perspective rear view of the keeper frame; and Fig. 5 is a bottom view of said frame.

Referring to the drawings in which like characters designate like parts throughout the several views, 1 designates a frame or keeper preferably made of stamped sheet iron, having laterally deflected ears 2 which are rearwardly positioned with respect to the back plate 3 of the keeper. A tongue 4 extends upwardly from said plate and carries wings 5, the use of which will be hereinafter described. The keeper is substantially L-shaped, one leg of the L being formed by the back plate 3, and the other by the bottom plate 6. The forward end of the bottom plate is provided with depending lugs 7 and an L-shaped forwardly projecting tongue 8. The frame is flanged as at 9 on the respective sides, which flanges

unite the lugs 7 and the rearwardly extending walls 10, which latter carry the ears 2. Perforations or the like are provided in said ears for the reception of supporting screws. The base plate is perforated at 11 for the reception of screw 12, which screw engages the core of electro-magnet 13, holding the same firmly in position upon the keeper.

The lugs 7 are perforated and a pin 14 extends therethrough, said pin serving as a pivot for the armature plate 15. A flat spring 16 holds said armature normally away from the electro-magnet, the tongue 8 forming an abutment against which the lower end of the armature normally bears. The upper extremity of the armature is bent to form a lip 17 (Fig. 3) which maintains the shutter or drop 18 in its raised or non-signaling position. Upward movement of said shutters is arrested by the wings 5, before mentioned. The shutter is pivoted upon a pin 19 which extends through the walls 10, and is provided with lips 20 which serve to retain a signaling card insertible therebetween. In its downward position the shutter rests upon fingers or prongs 21 which extend outwardly from the lugs 7, and it is hence apparent that the shutter movement is limited downwardly by said prongs and upwardly by wings 5. The keeper is offset from the supporting ears 2 in the manner aforesaid in order that the terminal wires 22 of the electro-magnet may be positioned thereunder.

The operation of the device is as follows: Shutter 18 being in its raised position as shown in Fig. 1, is supported by lip 17 of the spring pressed armature. Upon energizing the magnet, the armature, being drawn thereto, will release the shutter which falling by gravity will engage the supporting prongs 21. The shutter may then be returned to its non-signaling position by any of the well known means commonly employed for this purpose. It will be particularly noted that the L-shaped keeper is formed integral with the securing ears 2, arresting wings 5, and the abutting tongue 8, all of said parts being struck up from a common plate. By this construction the essential parts of the device are reduced to a supporting, attaching and limiting frame, an armature, an electro-magnet and a shutter. The keeper frame therefore performs

a variety of functions, to wit, it supports the magnet and provides a path for the magnetic flux, it affords a support for the pivoted shutter and armature, it provides supporting or securing means whereby the device as a whole may be supported from a wall or other surface, and finally affords limiting devices for the armature and for the shutter.

10 What I claim, is:—

1. In an annunciator, an electro-magnet, an armature, a shutter and a sheet metal keeper carrying said magnet, armature and shutter, said keeper having supporting means, and having struck up therefrom upwardly and laterally projecting shutter limiting means and also an armature limiting extension.

2. In an annunciator, the combination of

an electro-magnet, an armature therefor, a shutter and a sheet metal keeper carrying said magnet and armature and having a downwardly disposed limiting abutment for said armature struck up therefrom.

3. In an annunciator, an electro-magnet, an armature, a shutter and a sheet metal keeper carrying said magnet, armature and shutter and having rearwardly disposed supporting ears, upwardly disposed shutter limiting means and downwardly disposed armature limiting means struck up therefrom.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

ADAM LUNGEN.

Witnesses:

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