

(No Model.)

J. FINCK.  
ANNUNCIATOR.

No. 418,868.

Patented Jan. 7, 1890.

Fig. 1.

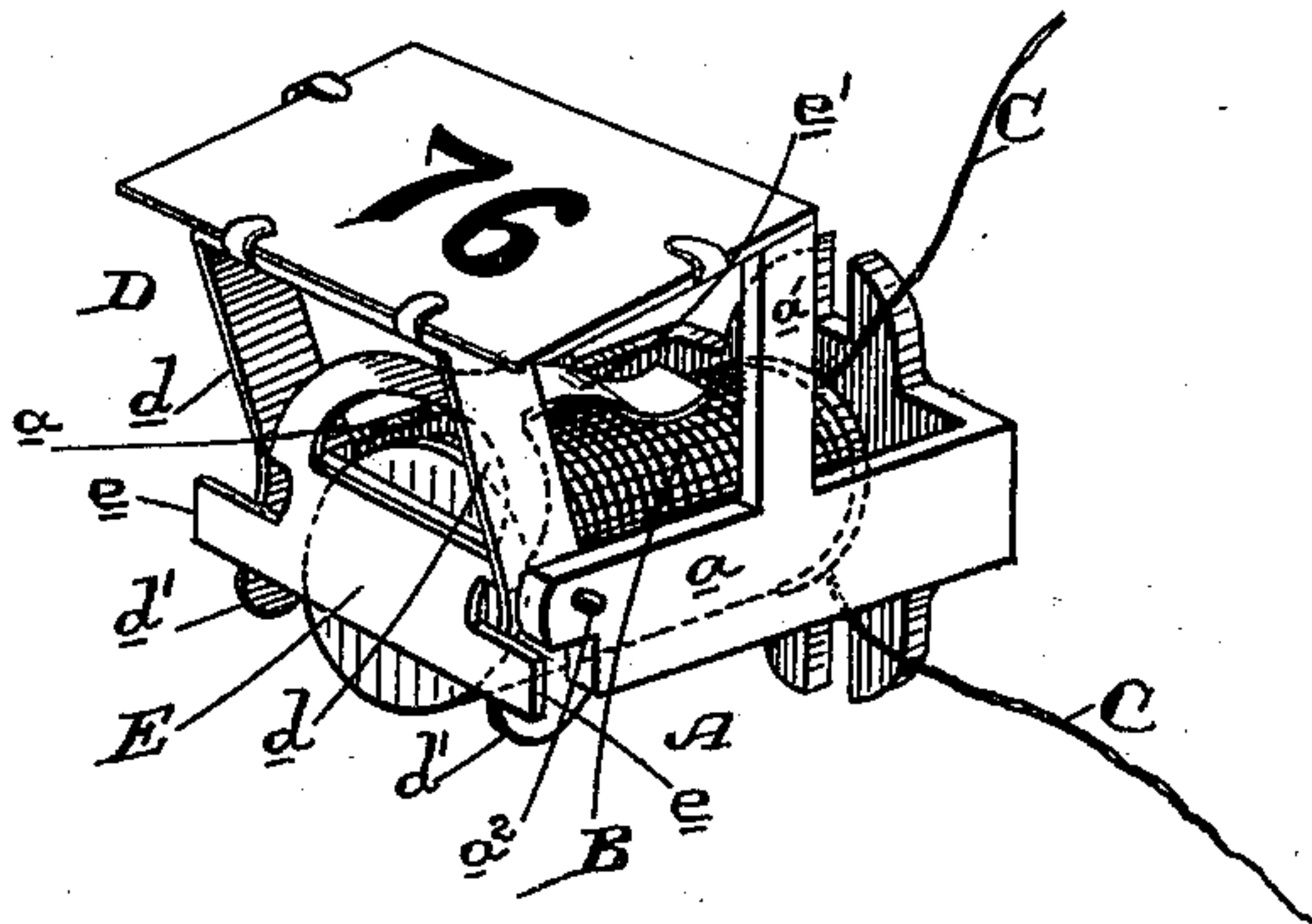
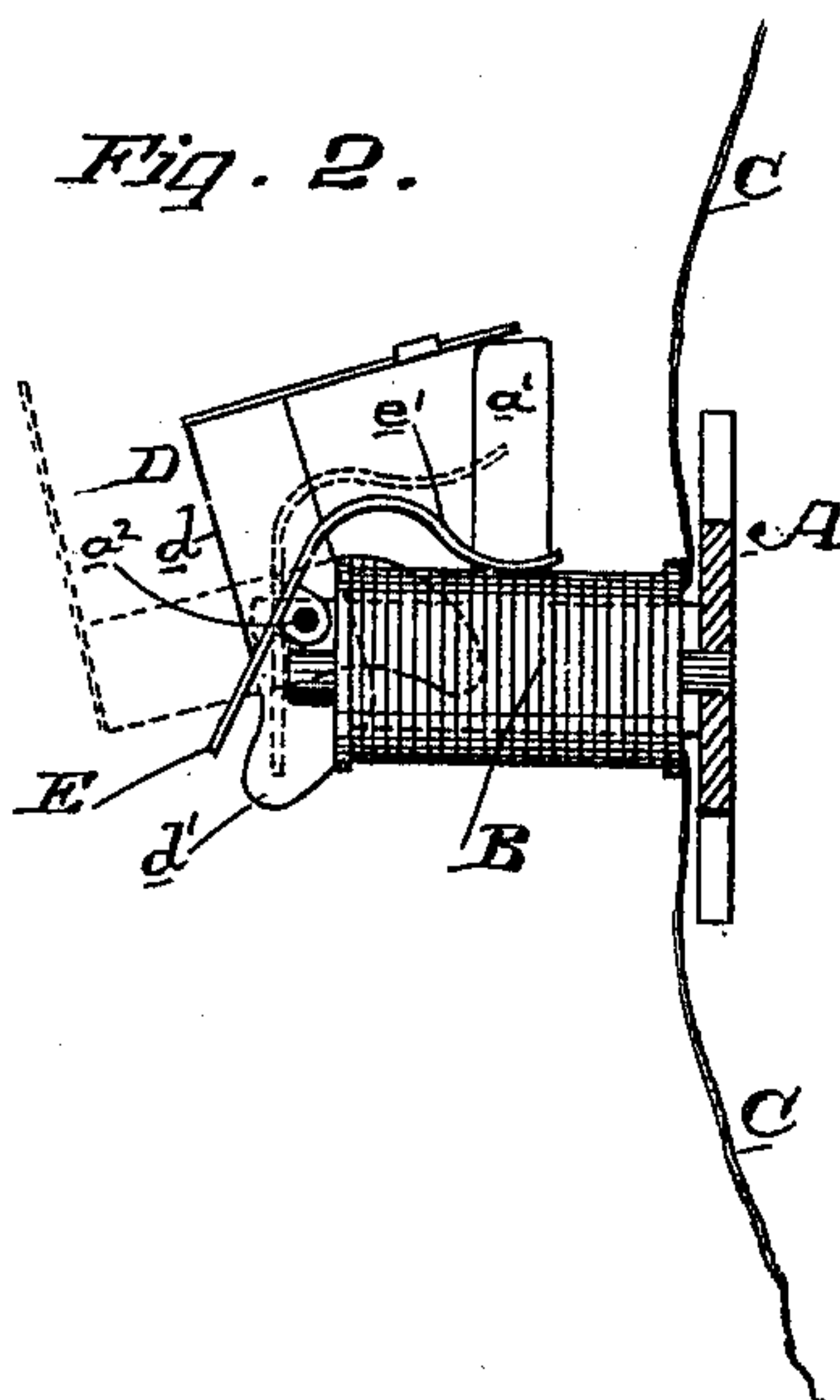


Fig. 2.



Witnesses,  
R. H. House  
H. C. Lee.

Inventor,  
Julius Finck,  
By Dewey & Co  
attys



# UNITED STATES PATENT OFFICE.

JULIUS FINCK, OF SAN FRANCISCO, CALIFORNIA.

## ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 418,868, dated January 7, 1890.

Application filed October 16, 1889. Serial No. 327,217. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS FINCK, a citizen of the United States, residing at the city and county of San Francisco, and State of California, have invented an Improvement in Electric Annunciator-Drops; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the class of electric annunciators, and especially to the drops thereof; and my invention consists in the novel arrangement of the drop-shutter and the armature of the magnet, which will be hereinafter fully described, and specifically pointed out in the claims.

The object of my invention is to provide an annunciator-drop which is adapted to be operated by a simple construction and arrangement of the armature, thereby simplifying and lessening the cost of manufacture of the device.

Referring to the accompanying drawings, Figure 1 is a perspective view of my annunciator-drop, showing it in its normal or raised position. Fig. 2 is a side elevation, the frame being in section. The drop-shutter is shown in the figure in full lines in its normal position, and in dotted lines in its dropped position.

A is a small frame, having a back plate, side arms  $a$ , and vertical arms  $a'$ . In this frame is mounted a single field-magnet B, with which the line-wires C are connected.

D is the drop-shutter, consisting of a light plate or sheet of metal, on the face of which is delineated or attached the number or other character intended to be shown. The shutter is provided at its forward edge with two arms  $d$ , extending from its back, and these arms are pivoted freely upon a cross pin or bar  $a^2$ , extending between the forward ends of the said arms  $a$  of the frame. The lower ends  $d'$  of the arms  $d$  are extended beyond the pivotal pin or bar and are turned forward slightly, as shown.

E is the armature of the magnet, consisting of a plate which is also pivoted upon the cross pin or bar  $a^2$ . The main body of the armature plays between the arms  $d$  of the drop-shutter; but it has end projections  $e$ , which pass in front of the lower ends  $d'$  of the arms  $d$  of the shutter.

The armature is provided with a top portion  $e'$ , which serves as a counter-balance for it and keeps it away from the pole of the magnet, and also away from the ends  $d'$ , so as to leave a clear space between the projections  $e$  of the armature and the extended ends  $d'$  of the arms of the shutter.

When in a normal position, the upper edge of the shutter rests upon the upright arms  $a'$  of the frame, and in this position the shutter is in a state of equilibrium. As soon as the magnet is energized and attracts its armature the projections  $e$  of the armature, coming in contact with the lower or extended ends  $d'$  of the arms  $d$  of the shutter, force said ends backwardly, thereby tilting the shutter sufficiently to cause it to pass the center of gravity and drop forward into an exposed position, and it is held in this position by its arms coming in contact with and resting on the said projections  $e$  of the armature. These said projections, being normally held at a little distance from the ends of the arms  $d$ , are enabled to acquire sufficient movement when attracted by the magnet to come forcibly in contact with the ends of the frames, whereby they throw the shutter over positively.

I am aware that in this class of devices the shutters have been dropped by tripping them through the action of an armature, and I am also aware that they have been positively pushed over from behind by means of the armature and devices connected therewith. In this latter case the force has always been applied from behind, and consequently above the pivotal center of the drop-shutters.

In my device the application of the force is below the pivotal center of the shutter and in front of the arms thereof. This construction is not only effective, but is simple and reduces materially the cost of manufacture.

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

1. In an electric annunciator, the combination of the frame having the upright arms, the magnet carried by said frame, the drop-shutter normally supported on said upright arms and having arms pivoted in the frame, said arms extending below their pivotal points, and an armature pivoted in the frame



and having its ends passing in front of the shutter - arms below their pivotal points, whereby when the armature is attracted its ends will come in contact with the arms and  
5 throw the shutter down, substantially as described.

2. In an electric annunciator, the combination of the frame with its upright arms normally supporting the drop-shutter, the magnet carried by said frame, the drop-shutter  
10 having arms pivoted to the front of the frame and extending below their pivotal points, and the armature pivoted in the front of the frame and having its ends extending in front  
15 of the shutter-arms below their pivotal points, said armature having a top portion serving as a counter-balance for holding it normally away from the arms, substantially as described.

20 3. In an electric annunciator, the combination

of the frame having the sides  $\alpha$  and the upright arms  $\alpha'$ , the magnet carried in said frame, the drop-shutter adapted to rest normally upon the upright arms  $\alpha'$  of the frame, said shutter having arms pivoted in the front  
25 of the frame and extending below their pivotal points, and the armature pivoted in the front of the frame and having its side projecting in front of the arms of the shutter below their pivotal points, whereby when  
30 the armature is attracted its ends come in contact with the shutter-arms and drop said shutter, substantially as described.

In witness whereof I have hereunto set my hand.

JULIUS FINCK.

Witnesses:

C. D. COLE,  
J. H. BLOOD.