

No. 745,328.

PATENTED DEC. 1, 1903.

H. F. CLAYTON.
DETONATOR HOLDER OR CLIP FOR USE IN RAILWAY FOG SIGNALING
APPARATUS.

APPLICATION FILED MAR. 4, 1903.

NO MODEL.

Fig. 1.

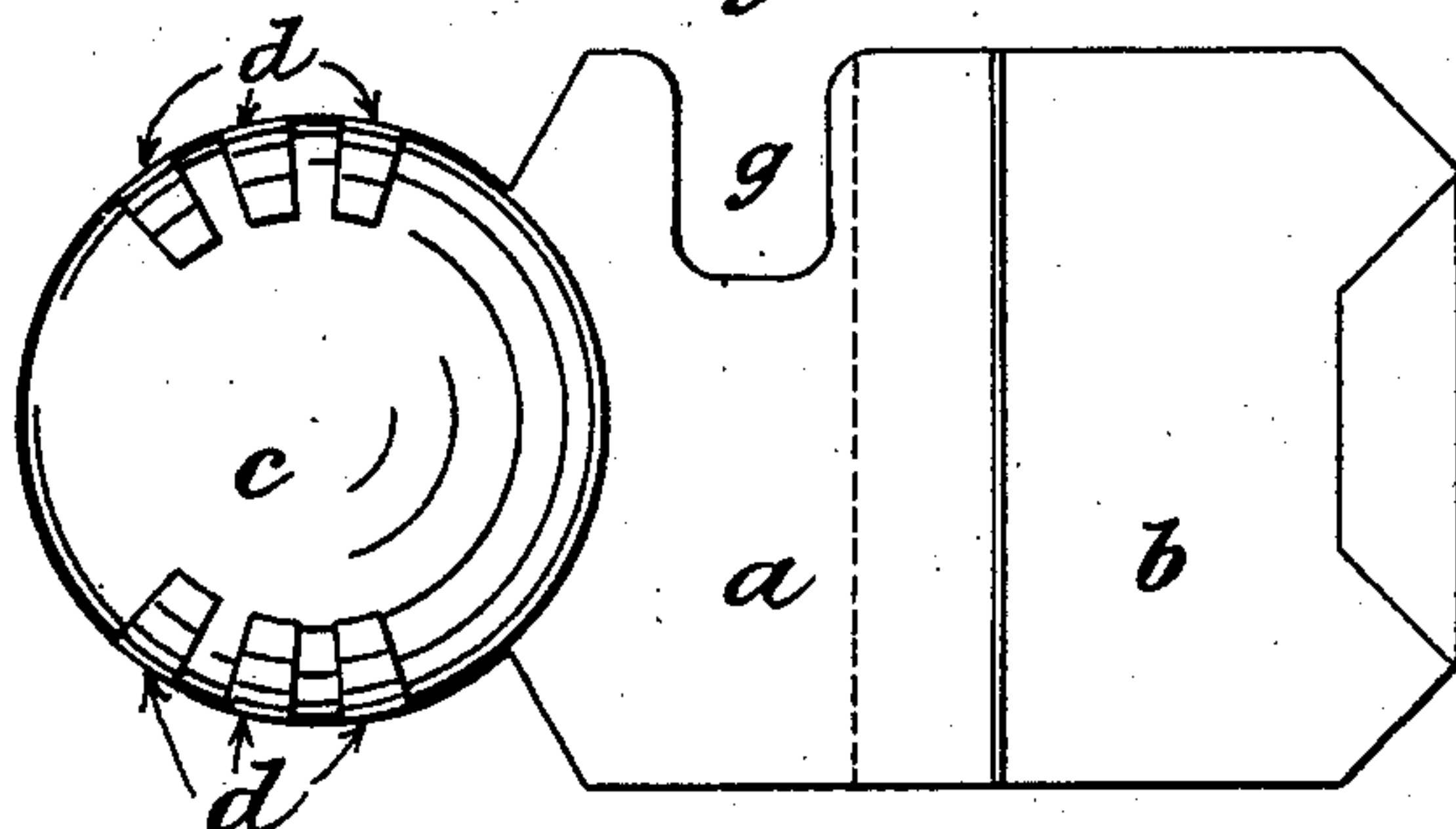


Fig. 2.

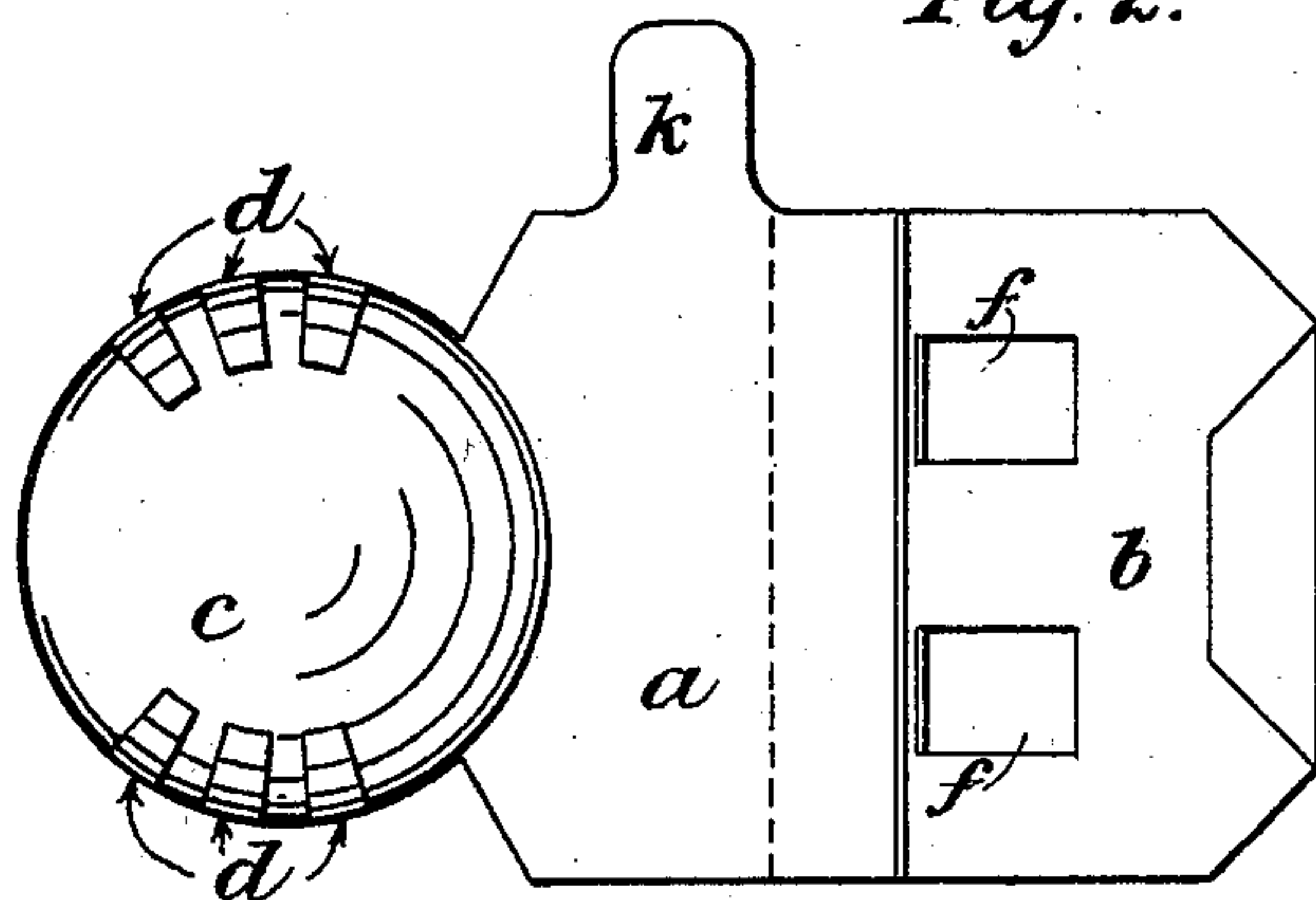


Fig. 3.

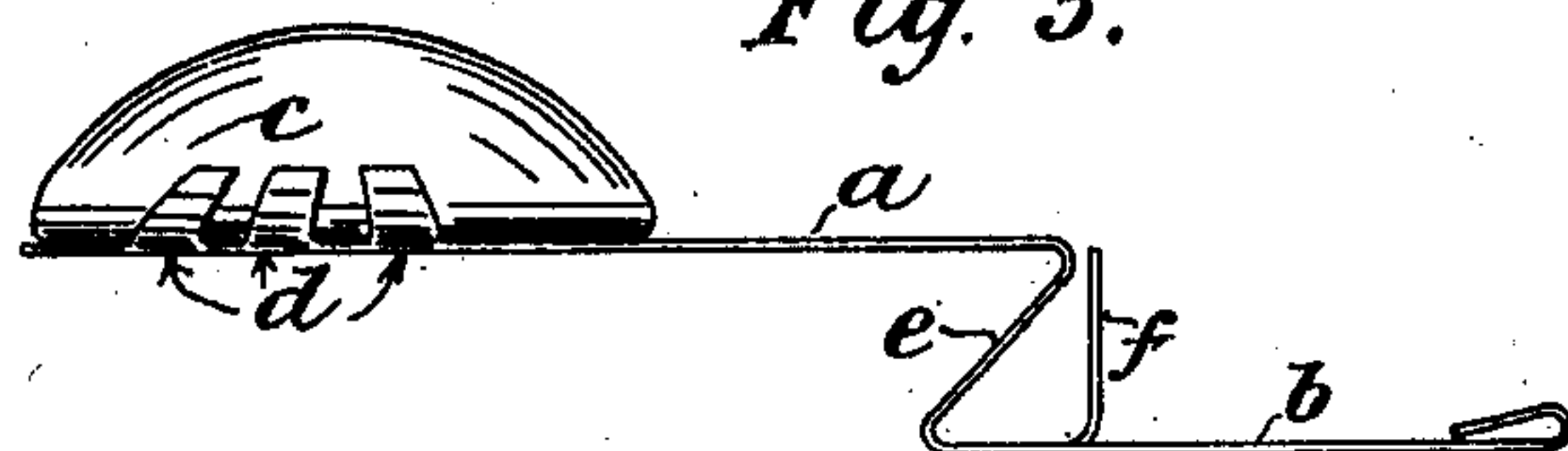


Fig. 4.

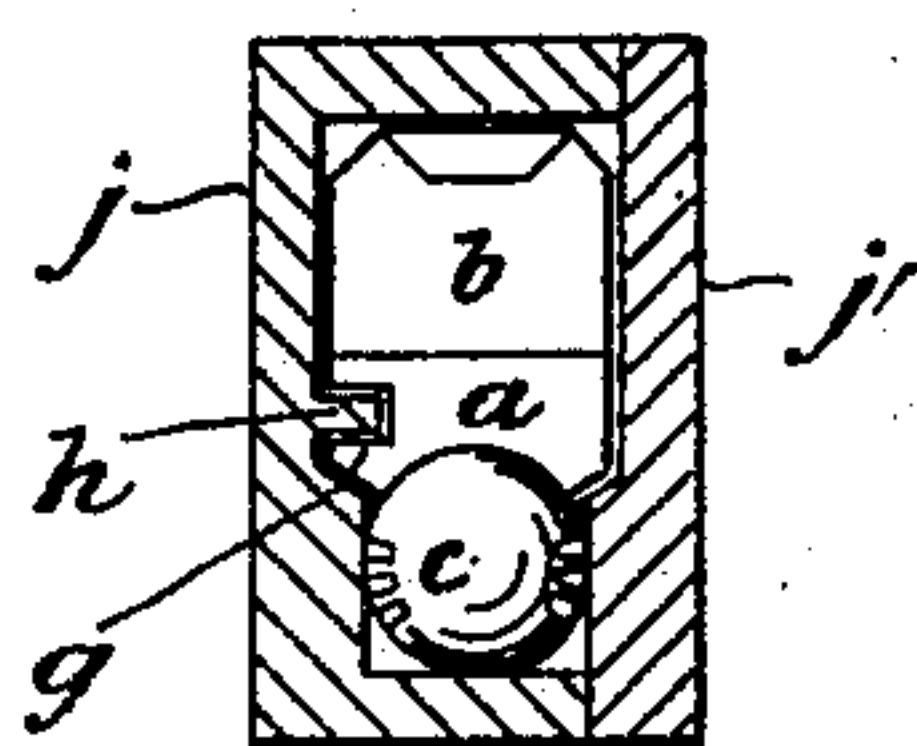
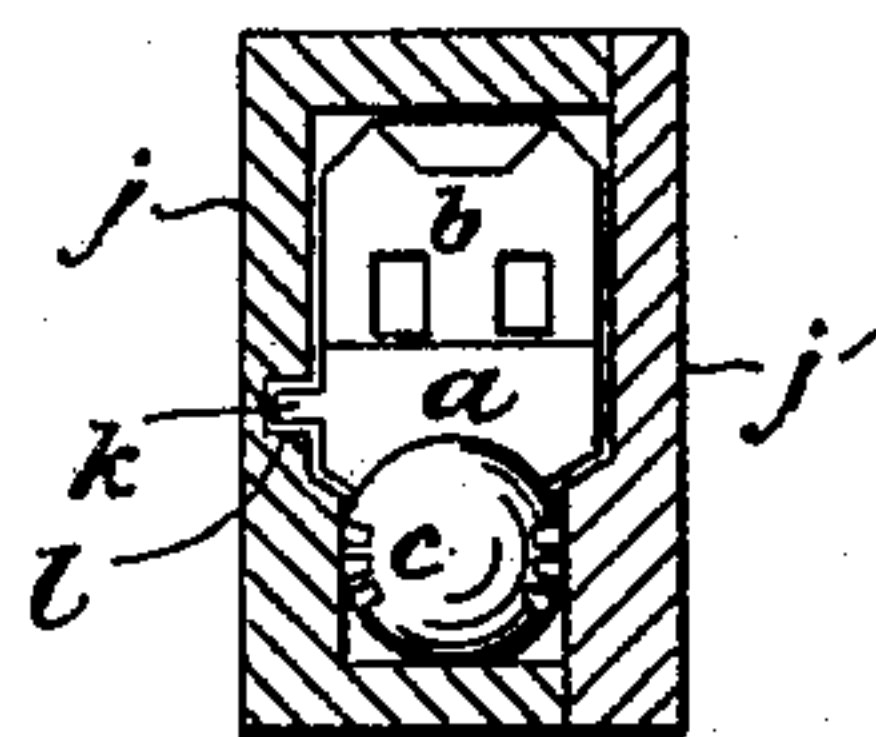


Fig. 5.



Witnesses

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Inventor

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UNITED STATES PATENT OFFICE.

HERBERT FITZROY CLAYTON, OF HUDDERSFIELD, ENGLAND.

DETONATOR HOLDER OR CLIP FOR USE IN RAILWAY FOG SIGNALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 745,328, dated December 1, 1903.

Application filed March 4, 1903. Serial No. 146,237. (No model.)

To all whom it may concern:

Be it known that I, HERBERT FITZROY CLAYTON, a subject of the King of Great Britain and Ireland, residing at Craigmhor, Huddersfield, in the county of York, England, (whose post-office address is Craigmhor, Huddersfield, in the county of York, England,) have invented certain new and useful Improvements in Detonator Holders or Clips for Use in Railway Fog Signaling Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in holders or clips for use in fog signaling apparatus on railways, and particularly to improvements in the holder or clip described and illustrated in the prior specification of Letters Patent No. 527,480 of A. D. 1894.

The present invention consists, essentially, in a detonator holder or clip so formed or constructed as to insure the holder or clip, and consequently the detonator, being properly placed and held in a detonator magazine or receptacle employed in connection with railway fog signaling. The arrangement is such that unless the detonators are placed in proper position in the magazine the magazine-door cannot be closed or fastened in its closed position.

I will now describe my invention with reference to the accompanying drawings, in which—

Figure 1 is a plan of a holder or clip with a detonator in position comprising my present invention. Fig. 2 is a plan of an alternative form of my invention. Fig. 3 is a side view of Fig. 2. Figs. 4 and 5 are sectional plan views of detonator-magazines, showing the holders or clips (with detonators) in position in the magazine.

In my present invention, as in said prior patent, the holder or clip is stamped or formed out of a piece of tin (or other suitable metal) about the same width as the detonator, and consists principally of an upper level *a* and a lower *b*, the detonator *c* being placed on the upper level *a*, whose outer end is provided with lips or projections *d*, stamped out at opposite sides, as shown in Figs. 1 and 2, said lips or

projections being bent upward and over the edge of the detonator, so as to hold it in position on said end.

The bent portion *e*, which joins the upper and lower levels *a b* of the holder, is approximately at an angle of forty-five degrees to both *a* and *b*.

In the lower-level portion *b* of the clip a tongue or tongues *f* may be cut or stamped out of the metal and turned up so as to touch or be practically on a level with the upper level *a* of the clip, said tongues *f* being for the purpose of preventing the angular portion of one holder or clip from being forced into the corresponding portion of the next holder below it in the magazine.

In Figs. 1 and 4, *g* is a recess or embayment formed in the clip or tin, (preferably in the upper level *a*,) said recess being formed by stamping or cutting out in any convenient manner. Recess *g* is adapted to engage a rib or projection, such as *h*, Fig. 4, in the magazine, and thus insures the detonator holder or clip with detonator being properly placed and held in longitudinal alinement, one above the other, in the magazine.

In Figs. 2 and 5, which show a modified arrangement, *k* is a tongue or projection (more than one of such projections may be provided, if desired) formed on the holder or clip by stamping or cutting out, said tongue *k* being adapted to engage a recess or channel, such as *l*, which channel may be either formed in the casting of the magazine or subsequently formed in the magazine. The tongue or projection *k* may be much wider and shallower than as shown in these figures.

In Figs. 4 and 5, *j* indicates the magazine, and *j'* the magazine-door.

Although I have herein described and shown a clip or tin consisting of upper and lower levels with a connecting part (*e*) approximately at an angle of forty-five degrees to both, it is obvious that my improvements for insuring the proper placing of the detonators in the magazine may be applied to other forms of tins or clips.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a box or magazine for holding a series of detonator-clips when arranged one above the other, of a deto-

nator-clip having means for engaging with a detonator at one end thereof, one of the said parts being provided at its middle part with a projection and the other said part being
5 provided with a recess which engages with the said projection, whereby the said clip is guided in the said box.

2. The combination, with a box or magazine for holding a series of detonator-clips
10 when arranged one above the other, said box

being provided with an internal projecting guide-rib, of a detonator-clip provided with a recess which engages with the said rib.

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

HERBERT FITZROY CLAYTON.

Witnesses:

I. B. H. SHAW,
W. BOOCOCK.