

(No Model.)

J. G. DIXON.

DETONATOR HOLDER OR CLIP FOR USE IN FOG RAILWAY SIGNALING.

No. 527,480.

Patented Oct. 16. 1894.

FIG. 1.

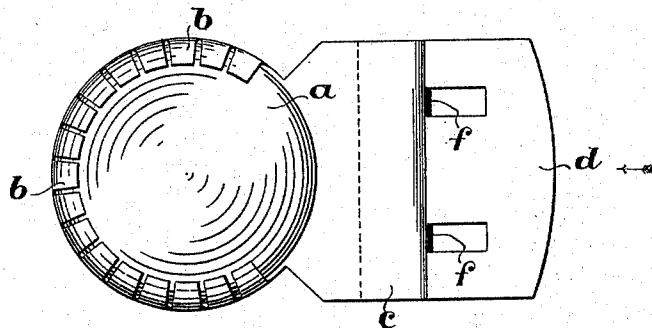


FIG. 2.

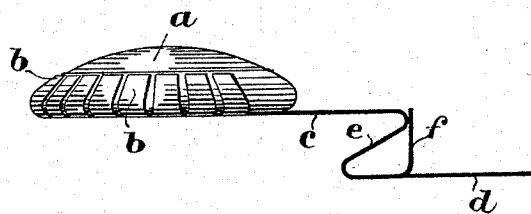
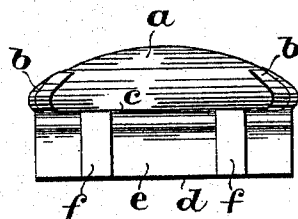


FIG. 3.



Witnesses:—

Arthur Woodman
William Hogan Lavers

Inventor.

John G. Dixon.

per

John F. O'Connell
Attorney

UNITED STATES PATENT OFFICE.

JOHN GEORGE DIXON, OF BIRKBY, ENGLAND.

DETONATOR HOLDER OR CLIP FOR USE IN FOG RAILWAY SIGNALING.

SPECIFICATION forming part of Letters Patent No. 527,480, dated October 16, 1894.

Application filed January 18, 1894. Serial No. 497,253. (No model.) Patented in England December 9, 1893, No. 23,771.

To all whom it may concern:

Be it known that I, JOHN GEORGE DIXON, a subject of the Queen of Great Britain and Ireland, residing at 98 Norman Road, Birkby, in the county of York, England, have invented certain new and useful Improvements in Detonator Holders or Clips for Use in Fog Signaling Apparatus on Railways, (for which I have obtained Letters Patent in Great Britain, No. 23,771, dated December 9, 1893,) of which the following is a specification.

This invention relates to improvements in holders or clips for detonators for use in fog signaling apparatus on railways.

In most forms of mechanical fog signaling apparatus, the object of which is in substitution of or as an auxiliary to the fogmen now employed, some sure and easy method must be employed of placing the detonator on the rail. The detonators are usually contained in a magazine.

My improved holder or clip consists of a piece of tin (or any other metal may be employed) about the same width as the diameter of the detonator. In stamping out the holder lips or projections are stamped out at one end. The detonator is placed on this end and lips or projections are bent upward and over the edge of the detonator, holding it in position. The other end of the clip or holder is made at a lower level. The bent portion joining the upper and lower levels of the holder is approximately at an angle of forty-five degrees to both. The lower level end of the holder is at a depth from the higher level equal to the height of the detonator above the higher level end. Two or more three sided cuts (or two sided in the case of a triangular obstruction piece) are made in the lower level end and bent upward at right angles, the upper part touching the higher level piece, preventing the possibility of the angular portion of one holder from being forced into the corresponding portion of the next below it in the magazine. The lower level end of the holder is that which is clipped by the jaws or forceps or other equivalent of the mechanical fog signaling apparatus.

The great advantages of higher and lower level ends of holders are (the detonator being on the higher one) that while the detonator

is in position on the rail the jaws or other equivalent of the main apparatus are below rail level and out of reach of harm or the wheels of the locomotive or carriages, and, furthermore, where a number of detonators are in a magazine each one must be forced into the same position to be in line with the jaws or forceps for engagement to be placed on the metals. There are two points of contact or bearing, therefore, in holders. The higher level end of one holder is supported by the detonator below it, and the lower end next the detonator of the upper holder bears on the upper level end of the underneath holder.

My holder is applicable to any form of mechanical fog signaling apparatus, whether automatic or non automatic, or whether operated by the signal wire or separate lever in the signal box.

In order that my invention may be better understood and more readily carried into effect I will proceed to describe the drawings hereunto annexed.

The same letters refer to the same parts in the several figures.

Figure 1 is a plan of the clip with the detonator in position. Fig. 2 is a side view of Fig. 1. Fig. 3 is an end view of Fig. 1 in the direction of the arrow.

a is the detonator.

b are the lips or projections which are bent over the edge of the detonator to hold it in position.

c is the upper level part of the clip.

d is the lower level.

e is the bent portion at an angle of forty-five degrees to *c* and *d*.

ff are the pieces which are bent upward obstructing the angular portion and preventing the detonator next above from being forced into the angle formed by *e* with *c* and *d*. *d*, the lower level, is that portion clipped by the jaws or forceps of the main apparatus.

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

1. A detonator clip formed of a single piece of metal and consisting of an upper plate *c* provided with means for holding the detonator, a lower plate *d*, a bent portion *e* connecting the two said plates, and the guard pieces

f partially cut from plate *d* and having their upper ends bearing against the end of plate *c*, substantially as set forth.

2. A detonator clip consisting of an upper
5 plate *c* provided with a series of lips *b* arranged in circular form and adapted to hold the detonator in position, a lower plate *d*, a bent portion *e* connecting the two said plates, and the guard pieces *f* projecting upwardly
10 from plate *d* and having their upper ends

bearing against the end of plate *c*, substantially as set forth.

JOHN GEORGE DIXON.

Witnesses:

FRANK C. MCGHEE,
U. S. Consul.

W. BLACKBURN,
79 Wakefield Rd., Moldgreen, Solicitor's
Clerk.