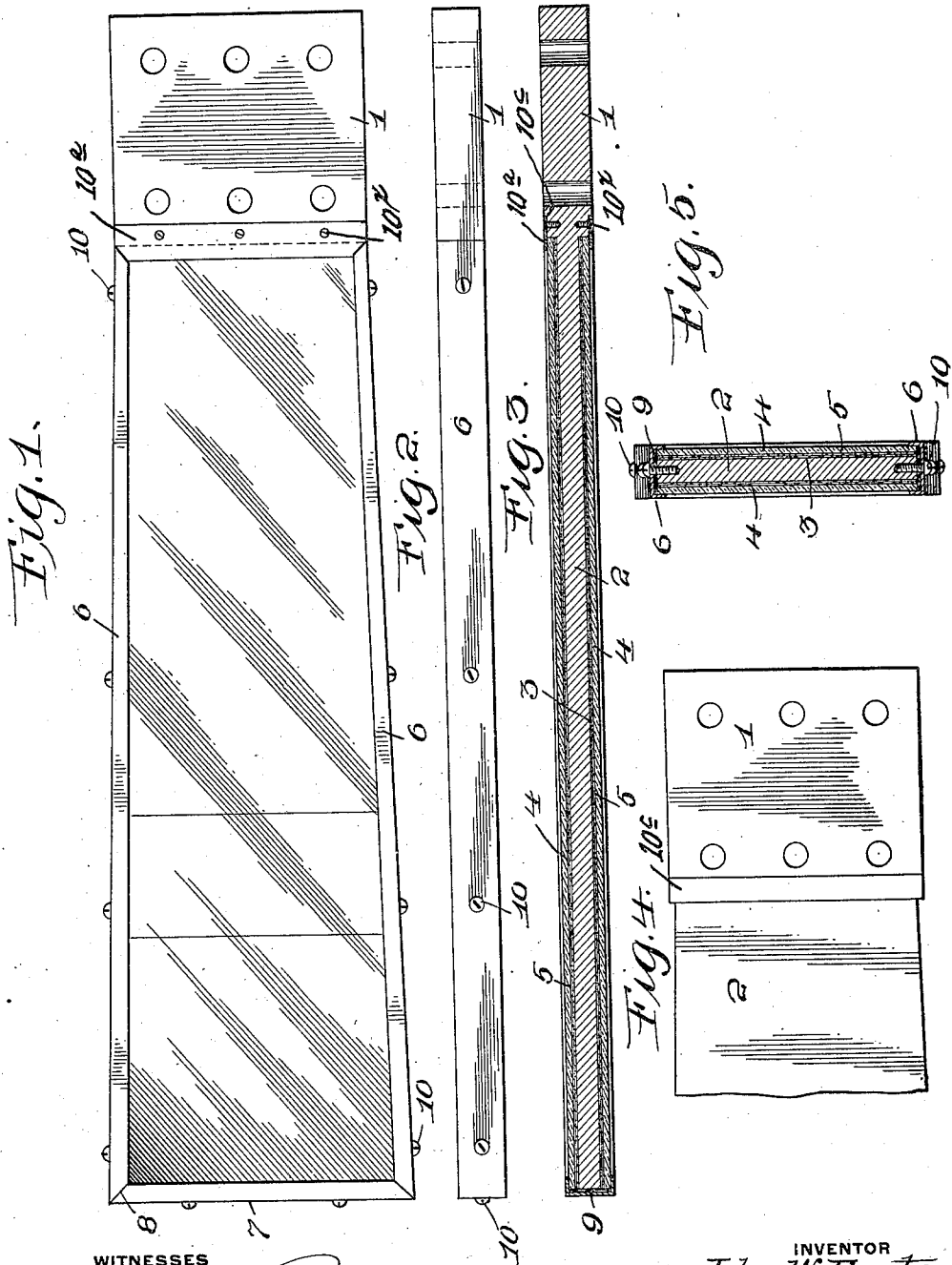


J. W. FENTON.
SEMAPHORE ARM OF RAILWAY SIGNALS.
APPLICATION FILED NOV. 10, 1910.

1,044,874.

Patented Nov. 19, 1912.



WITNESSES

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SEMAPHORE-ARM OF RAILWAY-SIGNALS.

1,044,874.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed November 10, 1910. Serial No. 591,652.

To all whom it may concern:

Be it known that I, JOHN W. FENTON, a citizen of the United States of America, residing at Millersburg, in the county of Holmes and State of Ohio, have invented certain new and useful Improvements in Semaphore-Arms of Railway-Signals, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to semaphore arms of railway signals, and more particularly to that type of arm used in connection with the present block system of steam and electric railways.

The primary object of the invention is the provision of novel means in a manner as will be hereinafter set forth for protecting the arm from the forces of nature, thereby increasing the longevity of the same and decreasing the expense of maintenance.

Another object of the invention is to furnish a semaphore arm with transparent means for protecting the faces thereof and metallic means for protecting the edges of said arm.

A further object of the invention is to obviate the necessity of continually repainting and repairing semaphore arms due to the forces of nature which have a tendency to obliterate the colors and injure the body of the arm.

A still further object of this invention is to accomplish the above results by an arm that is simple in construction, durable, inexpensive to manufacture, easy to clean and highly efficient for the purposes for which it is intended.

With the above and such other objects in view as may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing forming a part of this specification, wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof are susceptible to such changes as fall within the scope of the appended claim.

In the drawing:—Figure 1 is an elevation of a semaphore arm in accordance with this invention, Fig. 2 is a plan of the same, Fig. 3 is a longitudinal sectional view of the arm, Fig. 4 is an enlarged elevation of

a portion of the arm, and Fig. 5 is a vertical sectional view of the arm.

The reference numeral 1 denotes that end of a semaphore arm adapted to be connected by bolts or other fastening means (not shown) to the operating mechanism of an electrically or manually operated signal, the semaphore arm being made of wood, as is of the ordinary practice, but can be made of any other durable material.

The arm for a greater portion of its length is reduced to provide a body 2 and this body is flared or gradually tapered from the end 1 to the free end of said arm. The body 2 which is of a less thickness than the end 1 has the faces thereof painted, coated or otherwise marked, as at 3 according to the present system of code or color signals.

Mounted against the colored faces or sides of the body 2 are transparent plates 4, preferably of glass, said plates having the sides thereof confronting the body 2 painted, coated or otherwise marked, as at 5 similar to the coloring of the body 2. The plates 4 have an area corresponding to the sides or faces of the body 2 and said plates are retained in position by longitudinal channel-shaped metallic holders 6 and an end holder 7, said holders having the ends thereof beveled, as at 8 whereby they can be snugly fitted upon the edges of the body 2 and the plates 4. Interposed between the channel-shaped holders 6 and 7 are strips of felt, rubber or other yieldable and resilient material 9, and said holders are retained in place by screws or other fastening means passing through said holders, the strips 9 and entering the edges of the body 2.

Side plates 10^a can be secured to the arm, as at 10^b to hold the inner ends of the plates 4, the arm being cut away to provide a seat 10^c for the side plates.

From the foregoing it will be observed that the transparent plates 4 are adapted to protect the body 2 from the forces of nature, the plates 4 being made of glass or other transparent material having a flat smooth surface being readily cleaned and maintained in such condition that the colors carried by the inner faces of the plates 4 or the outer faces of the body 2 can be readily observed by an engineer or motorman. The coloring matter carried by the plates 4 is intensified by the coloring matter carried by the outer faces of the body 2, and should the transparent plates 4 be broken, the coloring

matter of the body 2 serves functionally the same purpose as though the coloring matter of the plates 4 existed, consequently an engineer or motorman will not be misled or
 5 orders misinterpreted by a misunderstanding of the position or color of a semaphore arm.

It has been the present practice to paint ordinary wooden semaphore arms, and the
 10 forces of nature have been such as to deteriorate and eventually destroy the arms, thus making it necessary for labor to be especially employed to maintain the semaphore arms in proper condition, whereby
 15 there will be no misunderstanding on the part of an engineer in observing the same. The employment of such a force to maintain the arms in proper condition incurs considerable expense, and it is in view of these
 20 facts that I have devised the present improvement to obviate the necessity of continuously renewing the arms, particularly the colors carried thereby.

I reserve the right to make the plates 4
 25 in sections, as shown in Fig. 1 of the drawing, whereby various colors can be displayed upon the semaphore arm, and with the channel-shaped holders 6 and 7 made of a non-corrosive material, the life of the semaphore arm is materially increased and the

expense of maintenance reduced to a minimum.

What I claim is:—

A semaphore arm comprising a rectangular body portion having a securing part 35 and a signal part, the former being of greater thickness than the latter to provide shoulders on opposite sides thereof, said signal portion having its opposite faces colored, angle-shaped holders extending per- 40 ripherally around the signal portion and having a lateral width substantially equal to the width of the securing portion, said holders having a portion mounted upon the securing portion of the body portion, said 45 portions of the holders projecting over the faces of the signal portion and spaced therefrom, and transparent plates mounted between said holders and the faces of the signal portion and having their inner surfaces 50 colored to correspond to the color of the face of the signal portion with which it contacts.

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

JOHN W. FENTON.

Witnesses:

N. H. FARREN,

MAX H. SROLOVITZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."