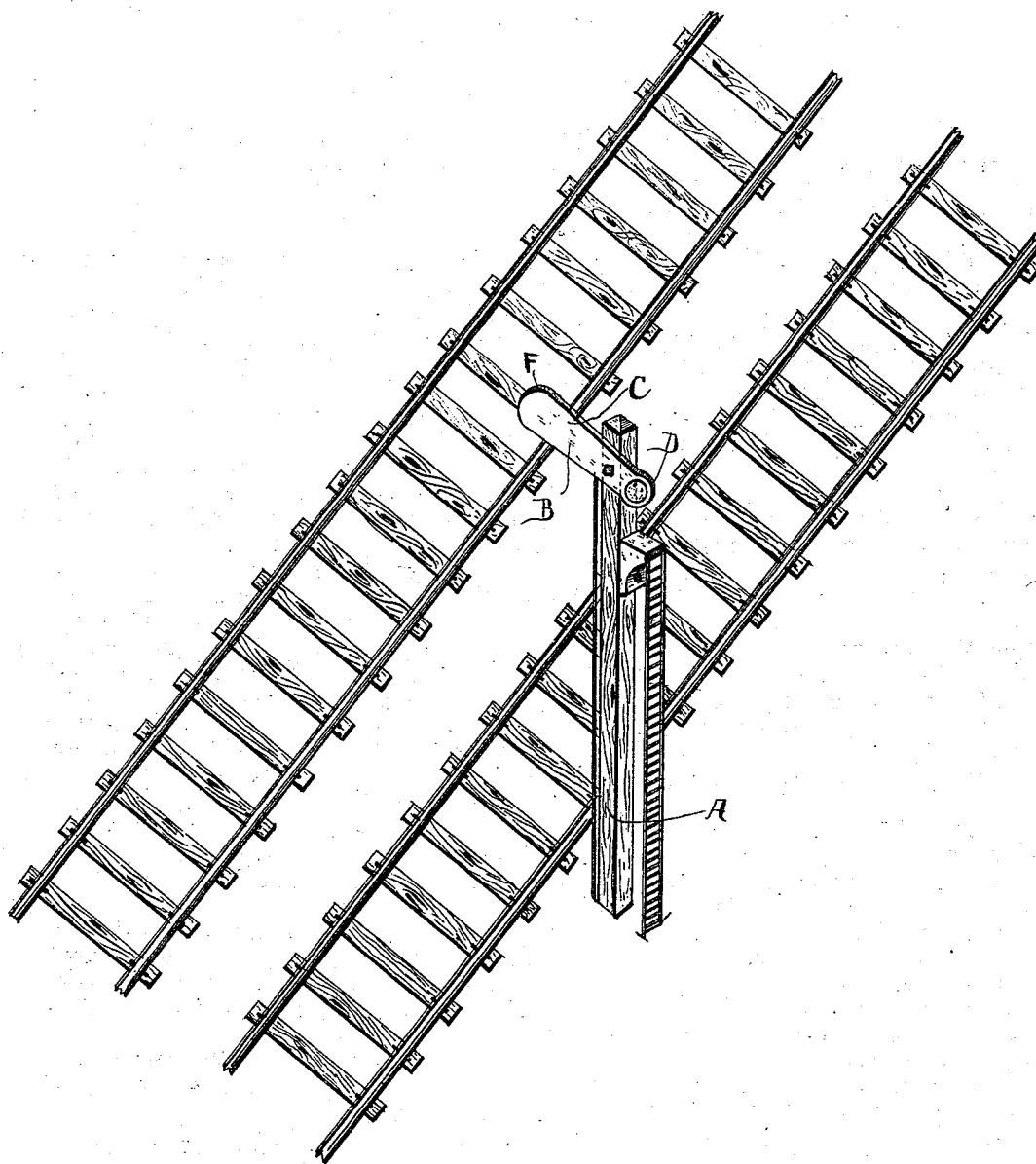


(No Model.)

M. WILLIAMS.
RAILWAY SIGNAL.

No. 501,126.

Patented July 11, 1893.



Witnesses:

Franklin Barnett
James D. Sward

Inventor-

Miles Williams
By *James H. Lancaster*
Attorney.

UNITED STATES PATENT OFFICE.

MILES WILLIAMS, OF BOOTLE, ENGLAND.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 501,126, dated July 11, 1893.

Application filed January 7, 1893. Serial No. 457,695. (No model.) Patented in England March 24, 1891, No. 5,204.

To all whom it may concern:

Be it known that I, MILES WILLIAMS, a subject of the Queen of Great Britain, and a resident of Bootle, in the county of Lancaster, England, have invented certain new and useful Improvements in Railway and other Signals, (for which I have obtained a patent in Great Britain, No. 5,204, dated March 24, 1891,) of which the following is a full, clear, and exact specification.

My invention relates to railroad signals, and the object thereof is to obtain an effective and permanent bright, plain white, or colored surface, upon plates or arms or other signals used upon railroads.

My invention consists in placing or securing plain white or colored enameled iron, steel, copper, tin or other metal upon the signal plates or arms of railways.

Referring to the drawing, which represents an elevation of a railroad signal post with arm attached, embodying my invention.

Similar letters refer to similar parts throughout the several views.

A, represents a signal post, to the top of which is pivoted the signal arm B, in the manner shown, which illustrates part or portion C, longer than part D. The part D, is provided with an opening covered with a piece of colored glass. The part C, of the arm B, has heretofore been painted on one or both sides the required signaling color, which is liable to be washed off by the rain or snow, or destroyed by excessive heat. When this takes place, the signal arm is misleading, and is liable to be wrongly interpreted by the engineer and cause an accident. To obviate this difficulty, I secure, by any suitable means, on one or both sides of the part C, of the arm

B, a metallic plate F, of the same size as the arm B. These metallic plates F, are made of enameled iron, steel, copper, tin or other metal made plain white, or colored according to the signal used. By this arrangement or substitution, I am able to give the signal board a permanent, bright, plain white or colored enameled surface which is durable, always bright and effective, and which does not require to be constantly renewed like the present painted signal boards on railways, which require to be constantly repainted, else they become dull and indistinct, which might cause serious accidents, through the engineer failing to distinguish the color. The metal signal plates F, are rendered bright and thoroughly cleansed by acid, and other chemical solutions and water; the surfaces of such plates are then covered with the required enameling coating, which may consist of a highly transparent and fusible glass, colored by any suitable substance to produce the desired color. The enameling substance is made to adhere to the plate by heat, by means of a blow pipe, or any other suitable method.

What I claim is—

In railway signals, the signal arm B, with open end D, and long end C, the latter painted with the required color and afterward enameled for the purpose hereinbefore specified and set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of May, 1892.

MILES WILLIAMS.

Witnesses:

THOS. MORGAN,
WM. J. JENKINS.