(No Model.)

W. THORNBURGH.

SEMAPHORE SIGNAL.

No. 346,243. Patented July 27, 1886.

Fig. 1.

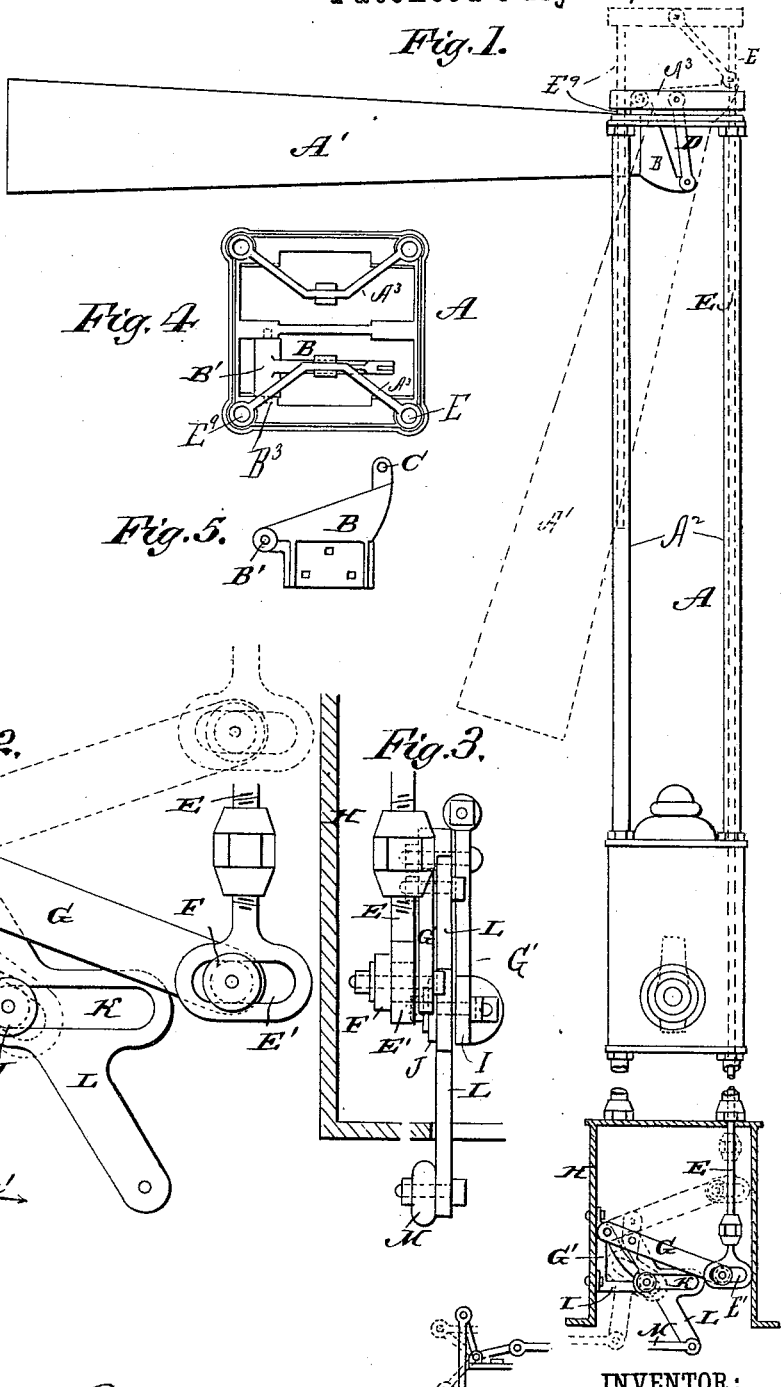

Fig. 4.

Fig. 5.

Fig. 2.

Fig. 3.

WITNESSES:

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WILLIAM THORNBURGH, OF ELYRIA, OHIO.

SEMAPHORE-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 346,243, dated July 27, 1886.

Application filed May 7, 1885. Serial No. 164,663. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM THORNBURGH, of Elyria, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Semaphore-Signals, of which the following is a full, clear, and exact description.

This invention relates to certain new and useful improvements in the semaphore-signal, for which United States Letters Patent No. 308,013 were issued to me on the 11th day of November, 1884.

The object of my invention is to simplify the mechanism for working the signal-wings in such a manner that they occupy less space.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improved semaphore-signal, which is to be used on railroads for signaling trains, &c., parts of the signal being broken out and others being in section, and part of the working mechanism detached from the main signaling device, said detached part being the part which is located some distance from the signal, and is used for operating the signal. Fig. 2 is an enlarged detail side view of the mechanism for operating the rods for swinging the signal-wings. Fig. 3 is an edge view of the same. Fig. 4 is a plan view of the upright part of the apparatus. Fig. 5 is a detail side view of the joint-plate on the pivoted end of a wing.

On the end of the semaphore-wing, A′, a triangular plate, B, is secured which is provided at one corner with a hole, B′, for pivoting said wing on the top of the upright frame A, as shown at B^3, Fig. 4, the frame being provided with a central projection or bar in which one end of the pivot rests, the other end of the pivot being in the side piece of the frame. The plate B is also provided with the eye C, to which a lever, D, is pivoted, the other end of which is pivoted to the middle of a bar, A^3, which is of a shape similar to that of the letter V, but may have any other suitable shape, the ends of said bar A^3 being secured to the rod E and the guide-rod E^9, both passing through the vertical tubes A^2, forming the frame A. The rod E^9 extends down into the tube A^2 a sufficient distance to be properly guided, whereas the rod E extends entirely through its tube A^2 and is also guided. The two tubular standards A^2 A^2, referred to above, are on one side of the frame, and in the other two tubes A^2, like rods, E and E^9, may be placed, and they may also be connected at their upper ends by a bar, A^3, which may be connected with an additional semaphore-wing in case the apparatus is to have two wings. In the lower end of the rod E, which is in a suitable casing, H, at or near the ground, a transverse eye or slot, E′, is formed, through which a roller, F, is passed, which is pivoted on the end of a lever, G, pivoted to a bracket, G′, secured on the inner side of the casing H. On the end of the arm I of the bracket G′ a roller, J, is pivoted, which is passed through a transverse slot, K, in a lever, L, having its upper end pivoted to the lever G, and at its lower end connected with a pulling or throwing rod, M.

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

1. The combination, with the rod E, of the pivoted lever G, connected with the rod E, and of the lever L, provided with a transverse slot through which a pin or roller passes, projecting from a fixed object, and which lever L has its upper end pivoted to the lever G, substantially as herein shown and described.

2. The combination, with the rod E, having the eye or slot E′, of the pivoted lever G, the roller F on the same passed through the slot E′, the bracket G′, having an arm, I, the roller J on the said arm, the lever L, having a slot, K, through which the roller J is passed, the upper end of the said lever L being pivoted to the lever G, substantially as herein shown and described.

3. The combination, with the pivoted signal-wing A′, of the rod E, the lever G, the bracket I, the lever L, having the slot K, and pivoted to the lever G, and of the bar M, substantially as herein shown and described.

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