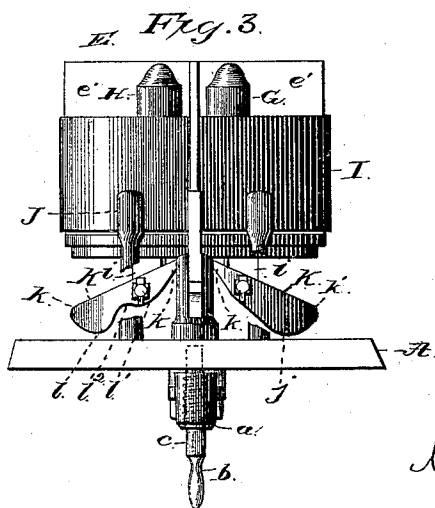
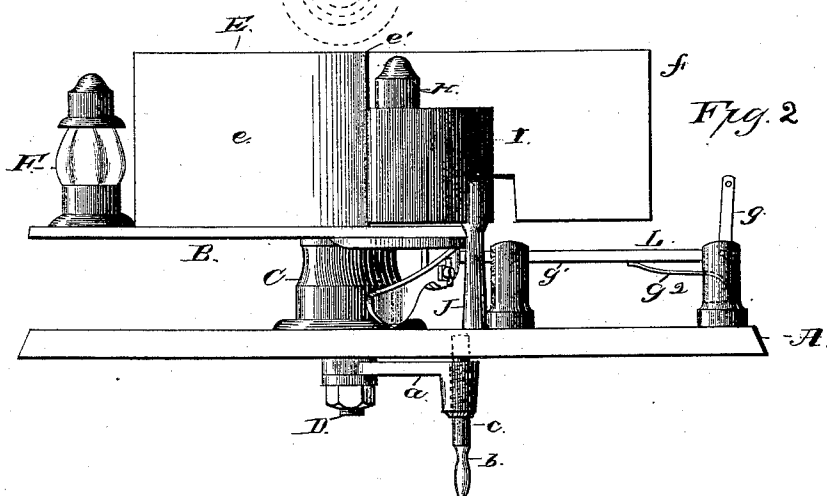
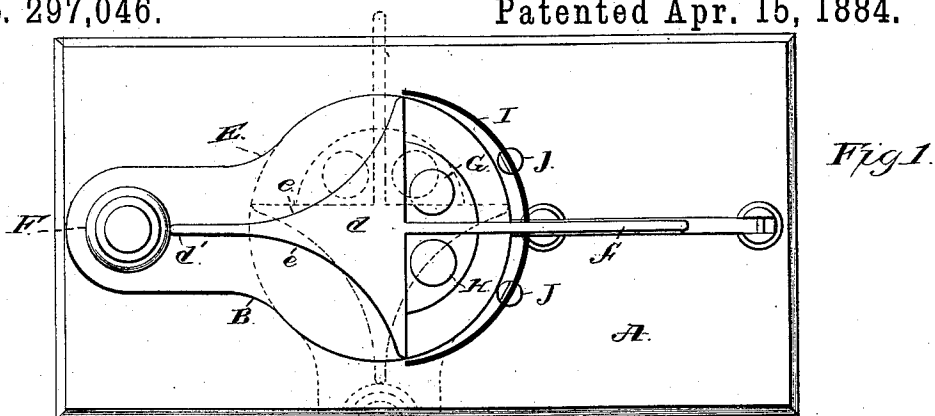


(No Model.)

M. WHITE.
NAUTICAL SIGNAL LIGHT.

No. 297,046.

Patented Apr. 15, 1884.



WITNESSES

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UNITED STATES PATENT OFFICE.

MERRITT WHITE, OF NORTH ADAMS, MASSACHUSETTS.

NAUTICAL SIGNAL-LIGHT.

SPECIFICATION forming part of Letters Patent No. 297,046, dated April 15, 1884.

Application filed January 22, 1884. (No model.)

To all whom it may concern:

Be it known that I, MERRITT WHITE, of North Adams, in the county of Berkshire and State of Massachusetts, have invented a new and useful Improvement in Nautical Signals; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention is an improvement upon that described in Letters Patent of the United States granted to me September 4, 1883, numbered 284,522, and has for its object greater security and simplicity in signaling, which is effected, principally, in two directions—viz., first, in shielding the signal-lights, so that they may not confuse the pilot and wheelman of a swift vessel following after; and, second, in providing means whereby the display of the appropriate signals for the intended course of the signaling vessel shall at the same time give the appropriate steam-whistle signals.

My invention herein consists in the system and apparatus as more fully hereinafter described and claimed, and for the better comprehension of the same reference should be had to the drawings connected herewith, in which—

Figure 1 is a top plan view; Fig. 2, a side elevation; Fig. 3, a rear end elevation, and Fig. 4 a detail of one end of the tripping-lever.

Similar letters denote corresponding parts in each figure.

A denotes the base of the apparatus, preferably the roof of the pilot-house of a steamer; B, the pivoted platform which carries the vanes and the green and red lights, and is supported upon a hollow post or standard, C, and is capable of revolution by means of a shaft, D, which turns within such standard and passes down into the pilot-house, where it is provided with a crank, *a*, having a handle, *b*, within which is a spring-bolt, *c*, which engages with corresponding openings or recesses in the bottom of the base A, such recesses being so arranged that the bolt will hold the vanes, as shown in Fig. 1, directly in line with the vessel, or at right angles to the same, as shown in dotted lines in the same figure, and in either

direction, as may be desired. Upon this platform B there is mounted the vane E, the forward part of which, *d*, is nearly triangular, with the acute angle *d'* toward the bow of the vessel when signaling is not made. The side walls, *e*, of this portion of the vane are painted white, and a white light, F, is placed in front of it. From the base-wall *e'* of this part of the vane a single vertical vane, *f*, extends toward the stern of the vessel, and on the starboard side is painted green, as well as on its portion of the vertical wall *e'*, while on the port side of this vane and its portion of the wall *e'* it is painted red. On the green and red sides, and in the angles made by the junction of the vane *f* with the wall before spoken of, are placed lights G and H, the first being green and the last red in color. To prevent these lights from being seen from a following vessel, they are inclosed with a black stationary screen, I, extending as high as the top of the lights, but not as high as the tops of the vanes, and firmly secured to standards J J, springing from the base A. The vane *f* is cut away in the line of this screen, so as to have freedom of revolution, for the purposes hereinafter described. Now, therefore, when the vane E is rotated a quarter-revolution by means of the crank *a* in one direction, the green light G, as well as the green side of the vane *f*, is brought into a line across the vessel with the white light F and the white wall *e* of the vane *d*, and by this same revolution the green light is brought entirely out of the inclosure of the screen I, and gives out an unobstructed light to the front and one side, while at the same time the red light H is entirely obscured from observation of a following vessel by the screen I. If, instead, the vane E is rotated a quarter-revolution in the opposite direction, the red light H and the white light F are brought in line across the vessel and exhibit each their unobstructed light, while the green light G is wholly obscured from observation of a following vessel by the screen I. In this way the pilot or wheelman may signal by day or by night any proposed change of direction, the presentation to view of the white light or white signal and the red light or red signal at the same time denoting the intention of the signaling vessel to present her port side

to the approaching vessel in passing her, and, contrariwise, the presentation to view of the white light or white signal and the green light or green signal at the same time denoting the intention of the signaling vessel to present her starboard side to the approaching vessel in passing her. At the same time a more rapid vessel following by night would not see either of the signaling-lights, if no signals were made by the signaling vessel, all the lights being hidden to the vessel behind, and, if the signals were used by such vessel, would see only the white light. This is a matter of great importance, particularly in crowded rivers and harbors, as the light-signals which would indicate clearly to a vessel ahead the intended direction of the signaling vessel would, if not obscured, indicate to such following vessel a direction of the signaling vessel opposite to that intended.

In addition to the green, red, and white signals required by law, a single whistle is required to indicate an intention on the part of the signaling vessel to present her port side to a passing vessel, and two whistles to indicate an intention to present the starboard side to a passing vessel, and it is very desirable to have the proper whistle-signals produced at the same time with the color-signals and by the same means, and at the same time without limiting the employment of the whistle for other purposes. This I accomplish in the following manner: A bell-crank lever, *L*, is pivoted at the crank-angle in a suitable standard springing from the base *A*, and the short end *g* of the same is connected to a whistle rod or wire, while its long end *g'*, preferably provided with a suitable friction-roller, *h*, extends toward or under the platform *B*, so as to engage with and be depressed by the under side of the cams *K K'*, which are removably attached in any suitable way to hangers *i*, or equivalent devices secured to such platform and revolved with it. A spring, *g''*, restores such lever to a horizontal position after it has been depressed. These cams are preferably pivoted in such a way that their inner ends, *k k'*, are inclined upwardly, and their outer ends, *k'' k'''*, are inclined downwardly when at rest. The cam *K* has a single curved lower edge, *j*, and is under the green light when the signal is not in use. The cam *K'* has two cams or curved under surfaces, *l l'*, with a recess, *l''*, between them, and is under the red light when the signal is not in use. Now, when the vane *E* is revolved so as to bring the red light in line across the vessel with the white light, the long end *g'* of the lever passes under the cam *K*

and lowers such end, and consequently the short end of the lever, which pulls upon the whistle-rod and gives a single whistle. When this is done, the lever resumes its place and the whistle may be operated in any usual way. When the vane is returned to its normal un-signaling position, the long end *g'* passes over the upper plane surface of the cam without vertical disturbance of such lever. When the vane *F* is revolved in the other direction, so as to bring the green light in line across the vessel with the white light, the two curved lower edges of the cam *K'* and the intermediate recess, *l''*, produce two whistles. By simply changing the outlines of the lower edges of these cams, the length of duration of the single whistle or of the double whistle may be changed as desired, and by making the cams readily removable cams may be employed which will produce long or short whistles, as desired.

In the above description I have indicated constructions which I believe preferable; but it is evident that a considerable variety of construction may be employed without departing from the cardinal ideas of my invention.

I have described means for using the signals required by law in the most certain and effective way, and their advantages will be so apparent to the skilled as to require no further statement of them.

What I believe to be new, and desire to protect by Letters Patent, is—

1. In nautical signals, the combination of a revolving platform, colored lights upon the same, and a shield stationary relatively to said platform and lights, substantially as and for the purpose described.

2. In nautical signals, the combination of a revolving platform, colored lights upon the same, cams attached to the same, and a steam-whistle having connection with said cams, substantially as and for the purposes described.

3. In nautical signals, the combination of a revolving platform, colored lights upon the same, cams attached to the same, a steam-whistle having connection with said cams, and a spring-detent handle for revolving and holding said platform in the desired position, all arranged and operating substantially as described.

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

MERRITT WHITE.

Witnesses:

JNO. C. SCHROEDER,
GEO. H. COOPER.