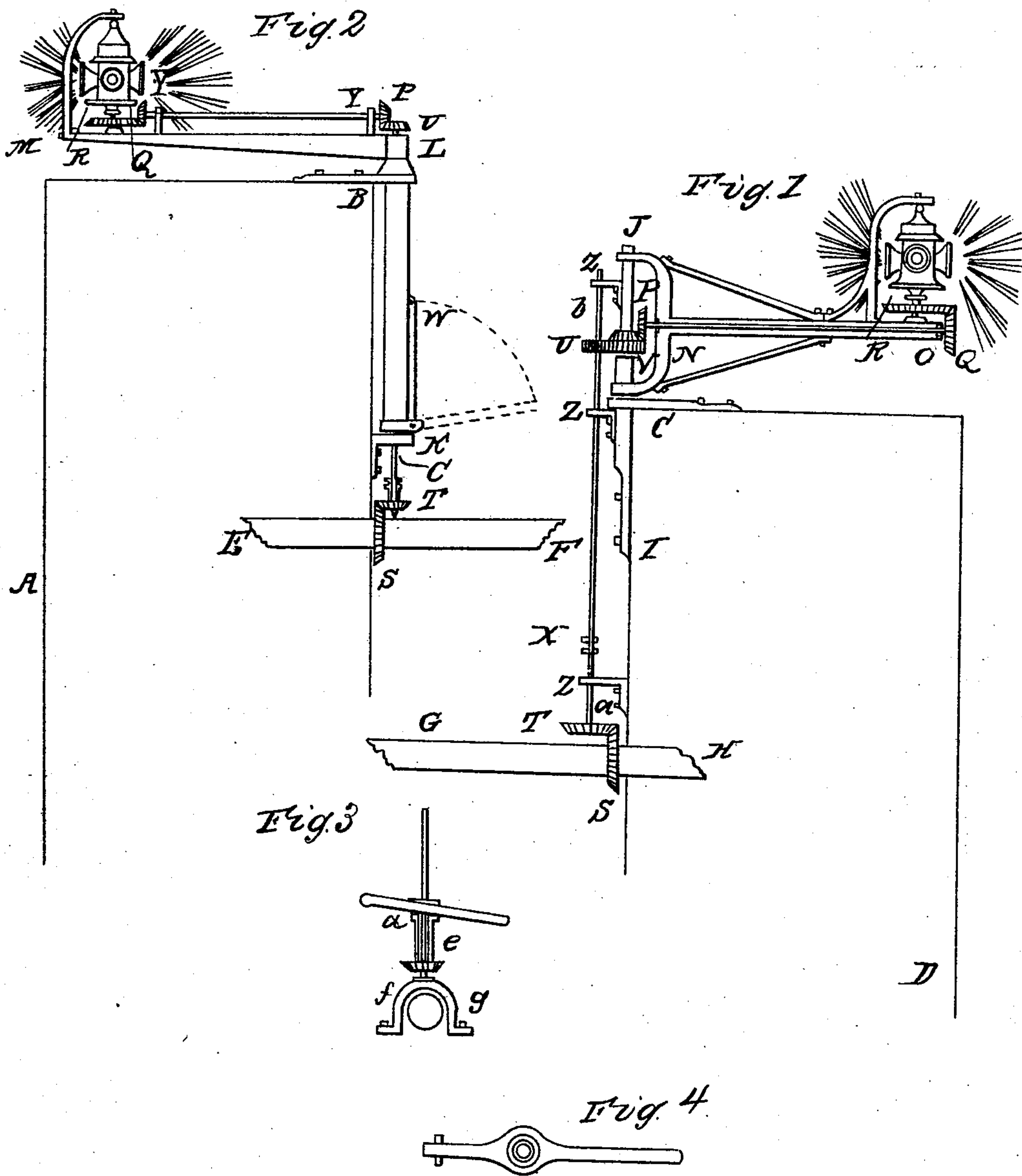


A. POTTS.
Signal Light.

No. 18,159.

Patented Sept. 8, 1857.



UNITED STATES PATENT OFFICE.

ALBERT POTTS, OF PHILADELPHIA, PENNSYLVANIA.

SIGNAL FOR STEAMBOATS.

Specification of Letters Patent No. 18,159, dated September 8, 1857.

To all whom it may concern:

Be it known that I, ALBERT POTTS, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful
5 Improvement in Revolving and Signaling Lights for Boats or Vessels Propelled by Steam; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of
10 the same, reference being had to the annexed drawings, making part of this specification, in which—

Figures 1 and 2 represent a vertical section of a paddle, or side, wheeled boat, taken
15 through the middle of the wheel-houses.

In these figures E, F, and G, H represents a position of the main shaft.

In Fig. 1 I, J represents a stout iron, or wooden, post firmly fastened against the
20 side of the wheel house directly over the main shaft. On the upper part of this post, which is rounded for the purpose, is fitted the movable arm or bracket N, O. This arm it will be understood is movable around
25 the post I, J as its center of motion. On the main shaft G, H is fitted the beveled cog wheel S. On the lower end of the rod *a, b*, is fitted the beveled cog wheel T, which connects with the cog wheel S on the
30 main shaft. U is a small pinion on the rod *a, b*, which gears into the pinion, or spur, wheel V. This latter wheel is beveled on the upper side, and is made to play freely around the rod or post I, J supported there-
35 on by a shoulder on said post. P is also another small beveled wheel in constant gear with the upper portion of V. The axis of the wheel P consists of a small rod passing through the center of the arm or bracket N,
40 O, and having on the other end the small beveled wheel Q. This latter wheel is connected with the beveled wheel R fastened to which is the lantern containing the lights. It will be readily understood from the ar-
45 rangement of the parts, as above described, that when the main shaft is in motion by the power of the engine, a rotary motion will be thus communicated to the lantern so long as the wheels S and T remain in
50 contact. In order to stop the rotary motion of the lantern, at pleasure, the rod *a, b* is made to slide up and down freely in the guides Z, Z, Z by means of a lever forked at one end and inserted between the bosses X
55 on the rod.

In Fig. 2 is given another arrangement

for the same purpose. In this K, L, represents a hollow post or shaft, on which is firmly fastened the arm L, M which carries the lantern. The hollow post K, L is sus- 60
tained by the straps K and B and is made to turn freely in them, by which means the arm L, M may be made to describe an entire circle around the center of said hol- 65
low post. In order to place the arm L, M in any required position, the lever K, W is attached to the post by a strap or loose collar, so that when the lever is brought down to a horizontal position, the end of the lever embraced within the collar being 70
shaped eccentrically, will thus impinge against the post sufficiently to hold and turn it. By elevating the lever the collar is again loosened from the post and may be readily moved around to any other position there- 75
on.

In Fig. 1 the arm or bracket N, O may be moved by means of cords fastened to any convenient part of the arm, and passing through pulleys on the wheel house. 80

The communication of motion to the lantern in Fig. 2 is very similar to that already described in Fig. 1. The rod *c, V* in this case passes through the hollow post, and carries on its upper end the beveled wheel U. This 85
rod is not made to lift up and down as in Fig. 1, but in lieu thereof the lower end of the rod for a short distance is made square, or angular, on which slides the short tube *d, e* shown in Fig. 3. The lower end of the 90
rod turns in a bridge *f, g* spanning the main shaft. On the upper end of the tube *d, e* a lever is attached by means of the bosses and collar as shown in Fig. 4. This lever when raised carries with it the short tube *d, e* 95
and also the beveled wheel T fastened on the lower end of said tube.

It will be readily understood from the above that motion may be communicated to the lanterns as already described by means 100
of cords or belts in lieu of the cog-gearing as above mentioned.

In order to apply this improvement to propellers, in which the main shaft runs fore and aft, it will only be necessary to transmit 105
the motion of said shaft, by cross gearing, in the ordinary mode of transmitting motion. In such cases the lanterns may be placed on each side of the boat as represented in the drawing, or they may be affixed amidships 110
to any convenient mast, with the arms extending toward the sides of the boat. On

small boats, propelled by steam, where but few signals would be required, the lanterns may be placed directly on top of the rods *a*, *b*, Fig. 1, or *c* U Fig. 2, and the arms or brackets in this case entirely dispensed with. For the purposes of signaling it will be understood that this consists in the numerous changes, or relative position, which may be given to the arms or brackets, and the number of revolutions which the said lanterns may be made to perform in any required position of said arms.

In order to exhibit when the lanterns have made a complete revolution on their axis, one of the lenses, in each lantern, is made plain, or white, or any other color different from the rest. Thus for instance suppose the lights to be on a vessel, as represented in the drawings. Any other vessel seeing these lights in motion, would at once know that the boat carrying them was a steam vessel. This information, of itself, would be a very important signal, inasmuch as it would indicate the character of the vessel in sight, and very nearly the rate of speed at which she was moving. Suppose now

that assistance is required from the vessel in sight, this may be notified by moving the arms or brackets to and fro in a rapid manner. To multiply the number of signals, one revolution of the lantern, and then a stoppage, in any required position of the arm may indicate one symbol, two revolutions another symbol, three another, &c. Thus it will be seen from the many thousand changes that may be made with these lights, simply by throwing in and out of gear, and changing the position of the arms or brackets, an indefinite number of symbols may be thus formed whereby a complete signaling vocabulary may be constituted.

What I claim as my improvement and desire to secure by Letters Patent, is—

The system of signals for steamers formed as herein set forth by lights mounted upon movable cranes and rotated from the paddle wheel or propeller shaft.

ALBERT POTTS.

Witnesses:

CHARLES POTTS,
JOHN APPLE.