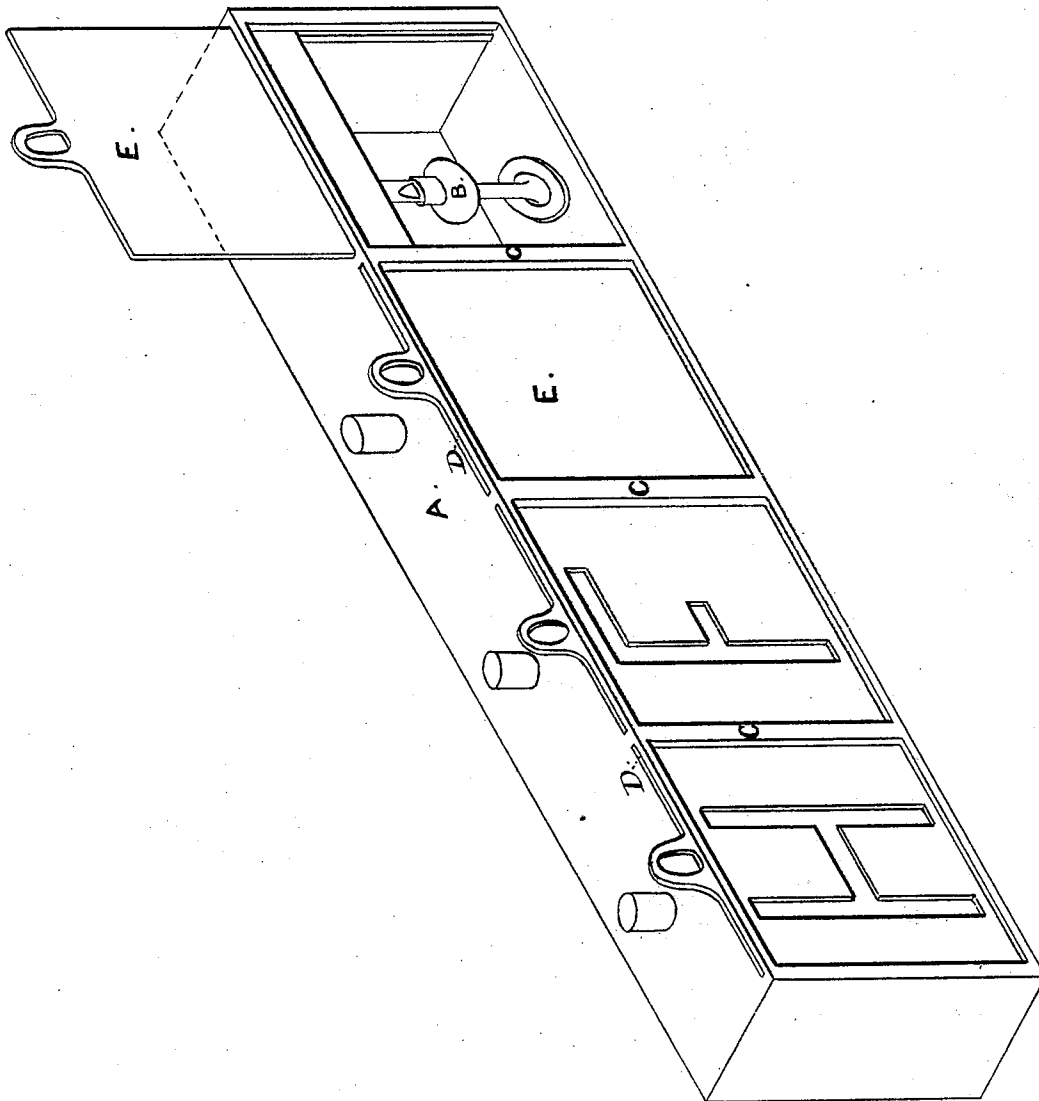


H. KINNERSLEY.
SIGNALING DEVICE.

No. 171,517.

Patented Dec. 28, 1875.



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY KINNERSLEY, OF LIVERPOOL, ENGLAND.

IMPROVEMENT IN SIGNALING DEVICES.

Specification forming part of Letters Patent No. **171,517**, dated December 28, 1875; application filed October 5, 1875.

To all whom it may concern:

Be it known that I, HENRY KINNERSLEY, of Liverpool, in the county of Lancaster and Kingdom of England, have invented a new and useful improvement in signaling apparatus, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to provide an apparatus for using the commercial code of signals, more especially at night, when, from the nature of the apparatus now used, it is inoperative, and also by day, the same set of signals being used on both occasions, if desirable.

The commercial code consists of a series of groups of one, two, three, or four consonants, representing all words or ideas useful in communication at sea, and is common to all nations. Flags are used to represent the letters. I use the letters themselves, my manner of doing so being better explained by the accompanying isometrical drawing.

In this, A is a box, having a strong reflecting-surface, or Fresnel or other reflectors, at the back. Holes for the passage of air are placed at top and bottom. In this box are placed a series of lamps, B. Equidistant in the front of the box are three grooved pillars, *c c c*, and in the top of the box, extending from groove to groove in each of the four equal divisions thus formed, is the slit D, the same width as the grooves. Twenty-two slides, E, preferably of metal, are constructed to enter the slits D and slide easily in the grooves in *c*. When in position they entirely fill up the vacant side, acting, as it were, as four sliding lids to the divisions of a box laid on its side. Eighteen of these slides have each a different one of the eighteen consonants cut out of its substance in broad, well-defined block-letter perforations; the others being left blank. The letters H and F are thus shown in the drawing. These slides can be made of any suitable material,

but I prefer them of stout sheet-iron, and tinned, not merely to preserve them, but also to reflect the light striking them, when in position in front of the lamps, back again onto the reflector behind. Of course, any series of figures could be used instead of the consonants, even toughened glass slides stained so as to represent the flags themselves.

To work the apparatus at night the lamps are lighted, and the box is placed with its open side directly facing the spectator to be signaled to. The lettered slides representing the signals required are then slid into position and successively substituted for one another. When any signal requires less than four letters the space not required is filled up with a blank. The whole apparatus can be easily carried about a ship and placed where desired. In using it on light-houses I prefer to place the apparatus perpendicular—that is, the letters one over the other. By day, black letters placed against a white sail, or the plates E themselves, if the side exposed be painted black, will accomplish the same purpose.

It is obvious that, if preferred, the letters may be made on flags or banners for day use, and made to operate the same, this being merely a matter of expediency or convenience, to be determined by the party using them.

I claim as my invention—

1. As an improvement in the devices or apparatus used for signaling in the commercial code used at sea, a series of screens or flags, each provided with a letter, substantially as described.

2. A signaling apparatus consisting of a series of compartments, each provided with a light, and with the slides or screens, arranged to operate as and for the purpose set forth.

HENRY KINNERSLEY.

Witnesses:

WM. P. THOMPSON,
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