2 Sheets—Sheet 1.

H. H. SCHULTE.

SIGNALING-LANTERN.

No. 181,108. Patented Aug. 15, 1876.

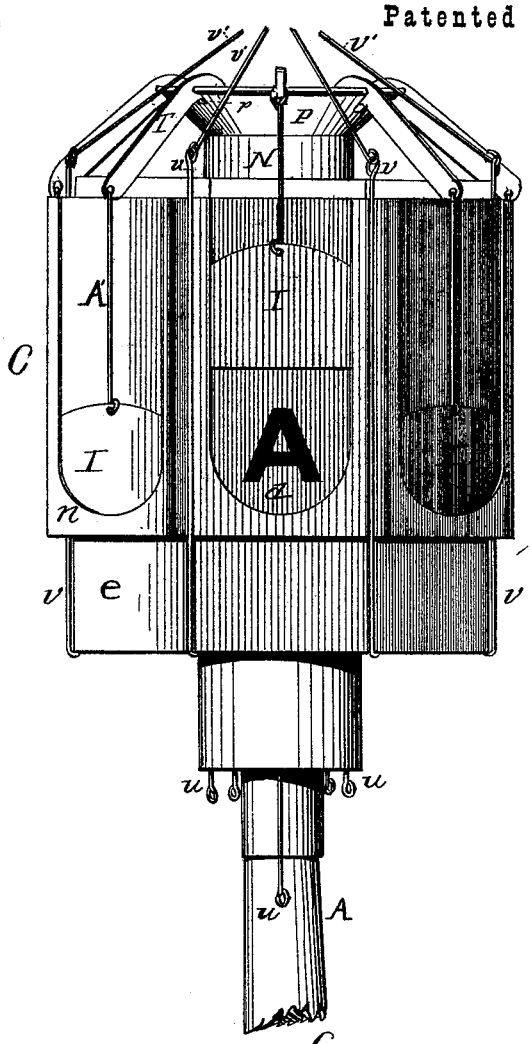

Fig. 1

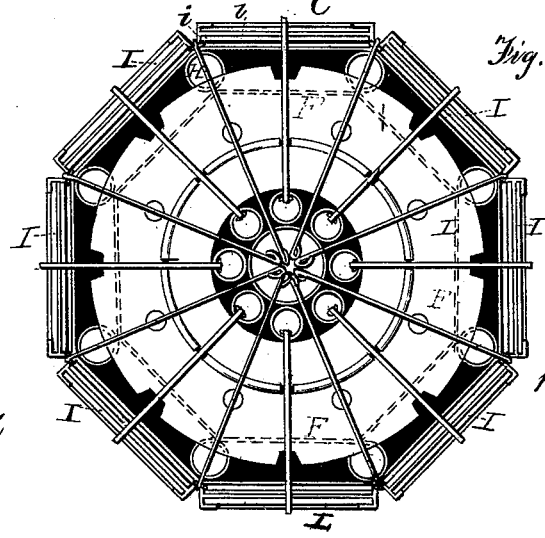

Fig. 2

Witnesses
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Dexter & Lewis.

2 Sheets—Sheet 2.

H. H. SCHULTE.

SIGNALING-LANTERN.

No. 181,108. Patented Aug. 15, 1876.

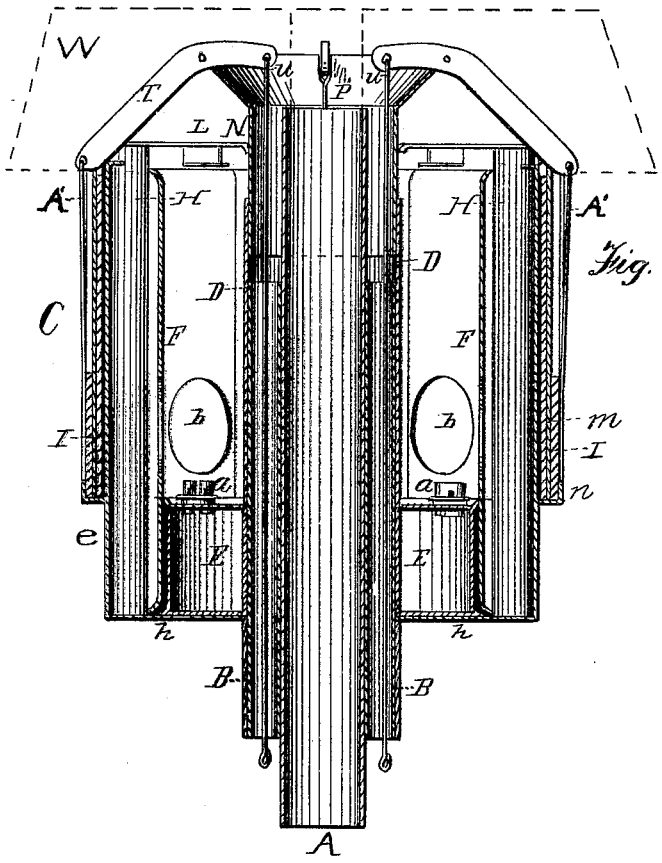

Fig. 3.

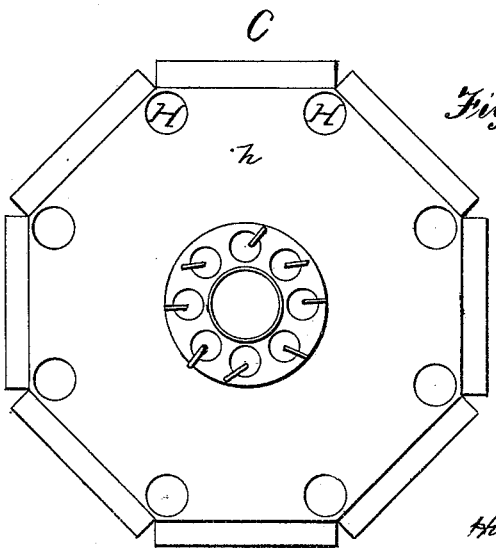

Fig. 4

Witnesses
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Chas. C. Gill

Inventor
Harmon H. Schulte
by his Attys.
Cox & Lee

UNITED STATES PATENT OFFICE.

HARMAN H. SCHULTE, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN SIGNALING-LANTERNS.

Specification forming part of Letters Patent No. **181,108**, dated August 15, 1876; application filed June 12, 1876.

To all whom it may concern:

Be it known that I, HARMAN HENRY SCHULTE, of Washington, in the District of Columbia, have invented a new and useful Improvement in Signaling Apparatuses, of which the following is a specification, reference being had to the accompanying drawings.

The invention relates to an improvement in signaling apparatuses; and consists in the mechanism hereinafter described, its object being to provide an efficient means of signaling at night, either on land or water, by a series of different-colored lights, or by the reflection of letters or other designs cut in detachable pieces of opaque material, and placed in suitably-constructed receptacles immediately in front of the flame of the gas or lamp within the device.

Figure 1 is a side elevation of a device embodying the elements of the invention. Fig. 2 is a top view of same. Fig. 3 is a central vertical longitudinal section of same. Fig. 4 is a bottom view.

In the accompanying drawing, A represents the mast of a vessel, extending through the center of the device. About this mast is placed any suitable number of cold-air pipes, B, to prevent the heat of the lamps from setting fire to the mast or pole upon which the device is elevated, and are, in the present instance, secured in a casing, the lower end of which extends a suitable distance below the base or bottom of the casing or lantern C. Around the pipes B, within the casing C, is placed the cylinder D, to insure additional security to the mast, and is provided on its lower end with the annular hollow casing or lamp E, which is provided with the burners *a*, any desirable number being used, and arranged in any suitable manner. It is preferred, however, to place one small burner before each window, a clearer and stronger light being thereby obtained. About the lamp E is detachably placed the cylinder or partition F, which rests upon the base *h* of the lantern, and is provided with any suitable number of apertures, *b*, corresponding in position with the similarly-constructed apertures *d*, cut in the casing *e*. In the upper end of the partition F may be provided apertures to allow the escape of heat and permit the passage of cool air to the interior of the lantern. Between the partition F and casing *e*, at convenient points, are provided the cool-air tubes H, which extend upward from the base *h* a suitable distance above the lamps, so that all surface about the interior of the apparatus is prevented from being overheated by the constant flow of cool air through these pipes and the air-chamber surrounding them. The casing *e*, in the present instance, is in the contour of an octagon, each side or face of which is provided with a pocket, *i*, which is of suitable dimensions to receive the glass or other transparent material *l*, and is provided in its lower end with the apertures *m*, which may be made to correspond, if desired, with the apertures *b* and *d*. Upon the sides and bottom of the pocket *i* is secured the flange *n*, forming another pocket, in which the shutters are allowed to operate.

It is obvious that for cheapness and simplicity of construction one of the pockets could be dispensed with, in which case the glass and shutter would have to be placed in the same pocket; but while this plan could be adopted with good results, the better style would be to employ both pockets; or, if desired, a greater number of pockets or receivers could be used, and several different-colored pieces of glass put in them; or, in lieu thereof, certain designs, numbers, or letters cut out of opaque material could be employed as cautionary signals, or to represent certain words, phrases, positions, &c., so that in a storm at sea the captains or other persons on vessels could talk with each other, thus facilitating their progress, and enabling a call for help. This is especially desirable in case of a wreck where accident has occurred to cannon or powder, or in a fog, and, it is thought well to say, at all times and in all emergencies.

Over the lamp-chamber, and resting upon the partition F and casing *e*, is the cover L, which is suitably provided with apertures to allow the heated air and smoke to pass off from the interior of the device.

In the upper part of the cylinder D is placed the cylinder N, which extends upward a suitable distance, and is provided with the projecting flange P, in the upper edge of which are cut the slots *p*, of any desirable dimensions, and in which the adjustable levers T are pivoted, so

as to have a free vibratory motion, their longer and heavier arms extending outward. To the shorter arms of the levers T the rods *u* are secured. These rods extend downward through the interior of the cylinder N and pipes B, their lower ends protruding beyond the lower ends of the pipes, and are connected by a ring, or other suitable device which will permit all of the rods to be worked in concert, or either one of them, as desired. If preferred, keys similar to those upon an organ could be attached to the lower ends of the rods *u*, and serve to operate the same, the keys having upon their upper surface the different signals, designs, &c., so that they could be operated below deck, or elsewhere, as convenience may permit. To the longer arms of the levers T are secured the upper ends of the rods A′, the other ends being attached to the upper end of the shutters I.

At suitable points in the lower edge of the casing *e* are secured the rods *v*, which extend upward, and are provided with eyes, in which the rods *a′* are attached, and brought to a point immediately above the center of the lantern, so that the device can, if desired, be swung from the yard-arm of a vessel, or out on one of the ropes, or anywhere preferred, either on land or water. The cover or cap W is provided to protect the device from water or dirt, and can be used or not, as desired. When desired to raise any one of the shutters, it is only necessary to pull the rod *u* downward that is connected with the lever T, that operates the shutter desired to be raised; or, if desired to elevate all of the shutters and throw the light on all sides, it is only necessary to pull the ring connecting the lower ends of the rods *u* downward, when the shutters will simultaneously ascend.

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

1. In a signaling apparatus, a series of counterbalanced levers, T, when arranged to be operated substantially as and for the purpose described.

2. In a signaling apparatus, a series of cold-air tubes, B, arranged to encircle the mast or pole upon which the said apparatus is elevated, for the purpose substantially as herein described.

3. The combination of the cylinder D, partition F, and casing *e*, substantially as described.

4. In a signaling apparatus, the cold-air tubes H, for the purpose of preventing the glass and inside periphery of the casing *e* from becoming overheated, as and for the purpose set forth.

5. The shutters I, provided with the rods A′, levers T, and rods *u*, by means of which the shutters may be operated either singly or in concert, substantially as described.

6. The case *e*, provided with the cold-air tubes B, in combination with a signaling device capable of exhibiting one or more signals simultaneously or successively, substantially as set forth.

7. The levers T and rods *u* and A′, in combination with the shutters, partition F, and casing *e*, as set forth.

8. A polygonal signal-lantern, provided with sliding shutters, operable conjointly or separately, by the means substantially as specified.

9. The lever T, pivoted as shown, so that its weight shall operate to close the shutter of a signal-lantern, substantially as set forth.

In testimony that I claim the foregoing improvement in signaling apparatuses, as above described, I have hereunto set my hand this 6th day of June, 1876.

HARMAN H. SCHULTE.

Witnesses:

I. S. STEWART,

CHAS. C. GILL.