

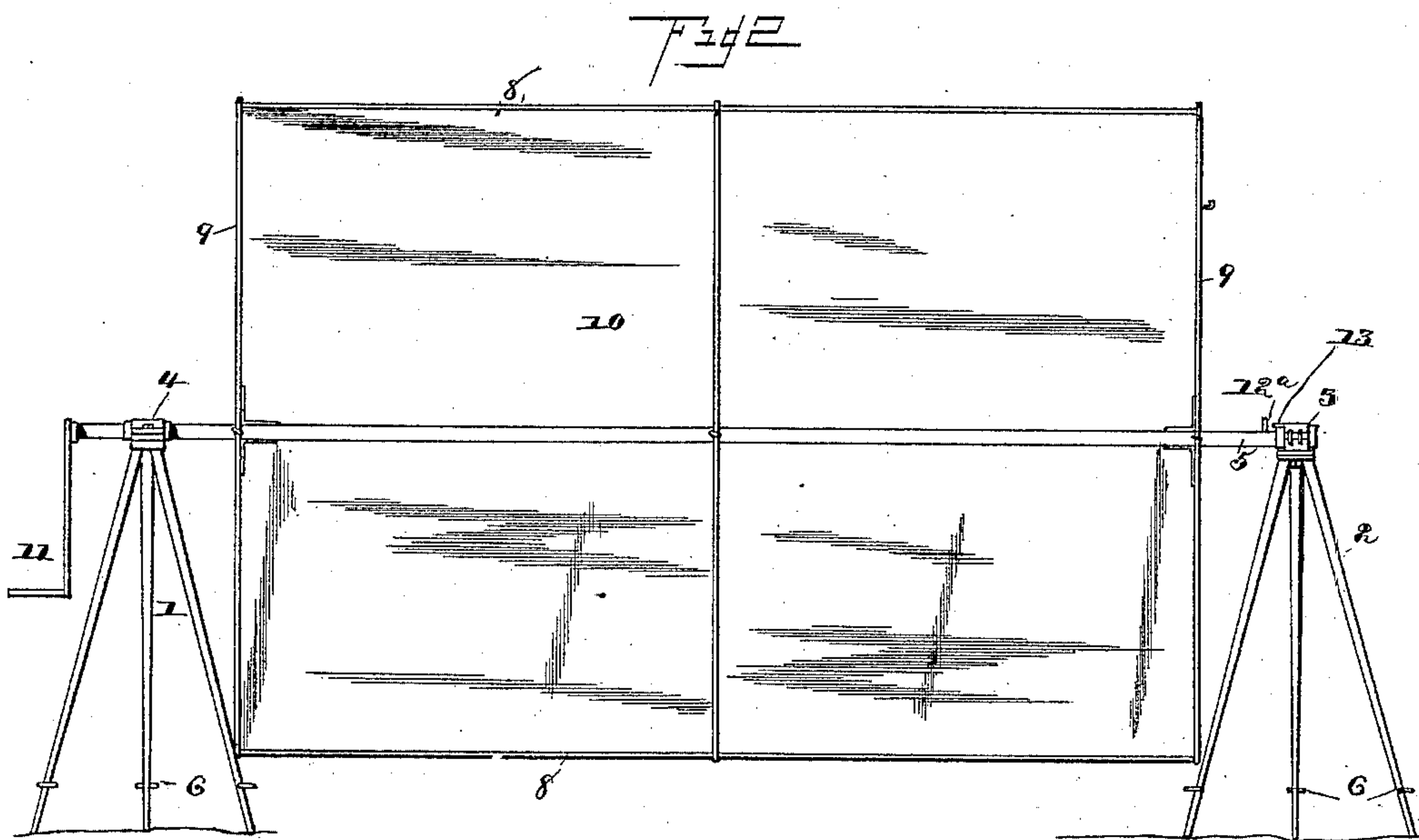
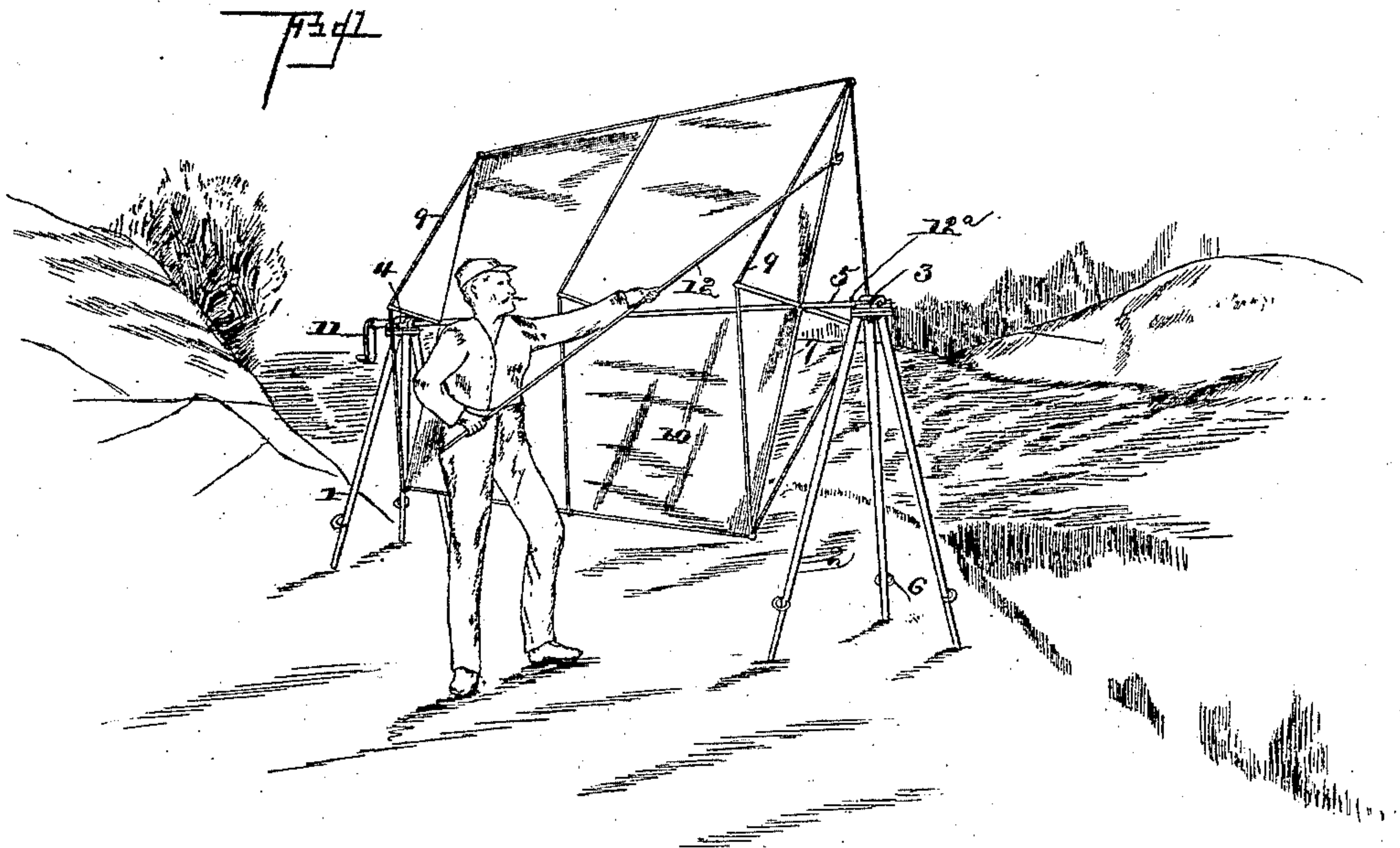
(No Model.)

2 Sheets—Sheet 1.

O. MORGAN & J. CROWLEY.
SIGNALING APPARATUS.

No. 444,991.

Patented Jan. 20, 1891.



Witnesses

John Lonnie
Wm. Bagger

By their Attorneys,

C. A. Snow & Co.

Inventors

Octavius Morgan
Joseph Crowley

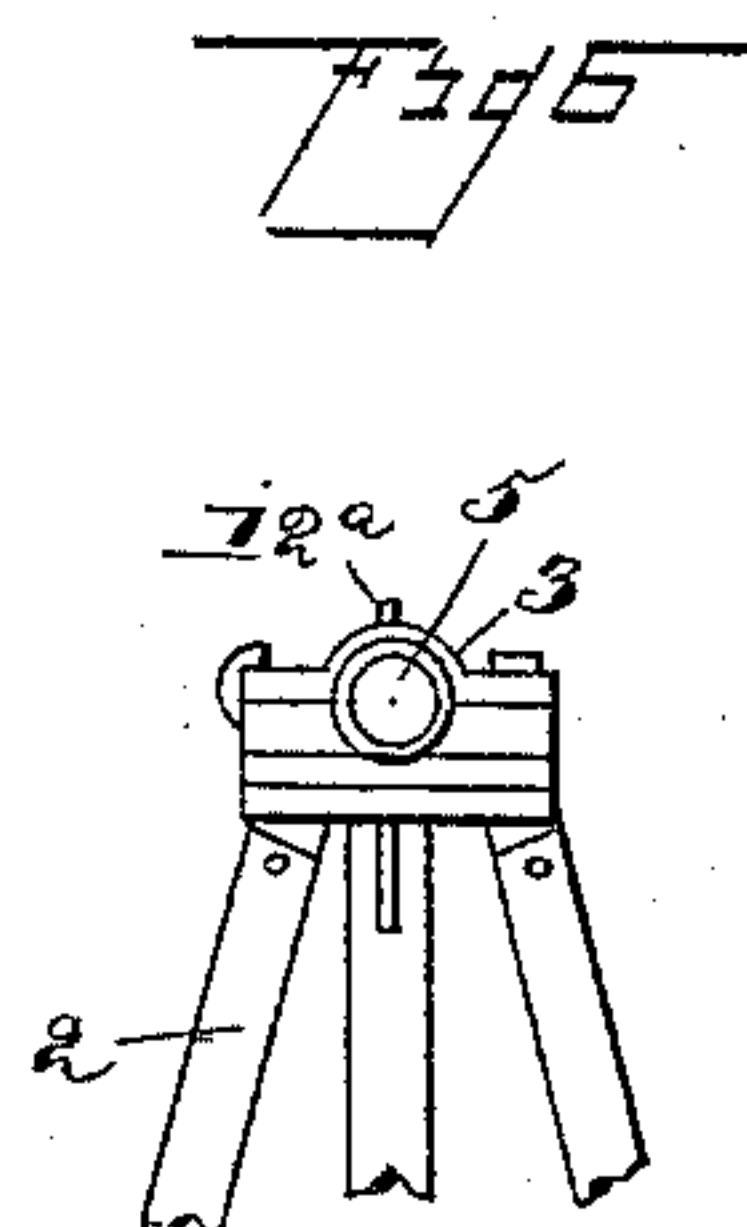
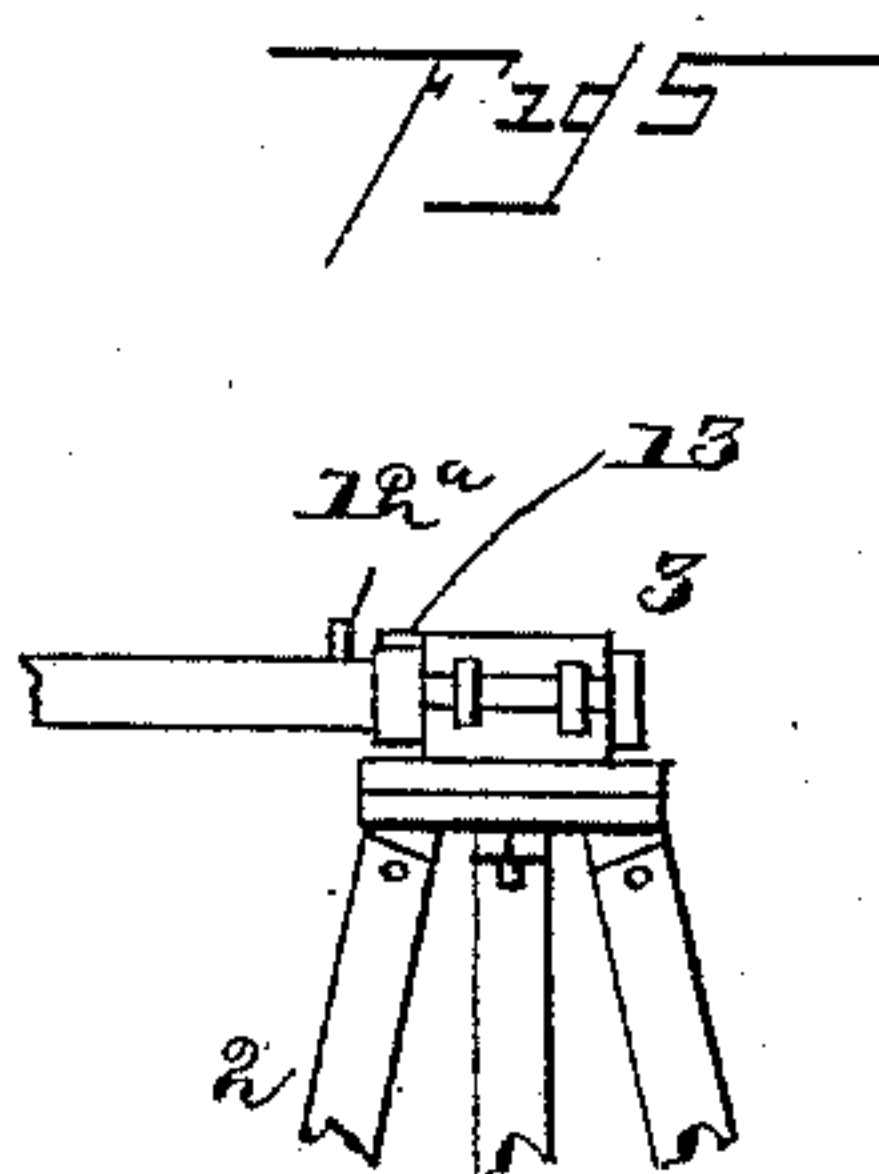
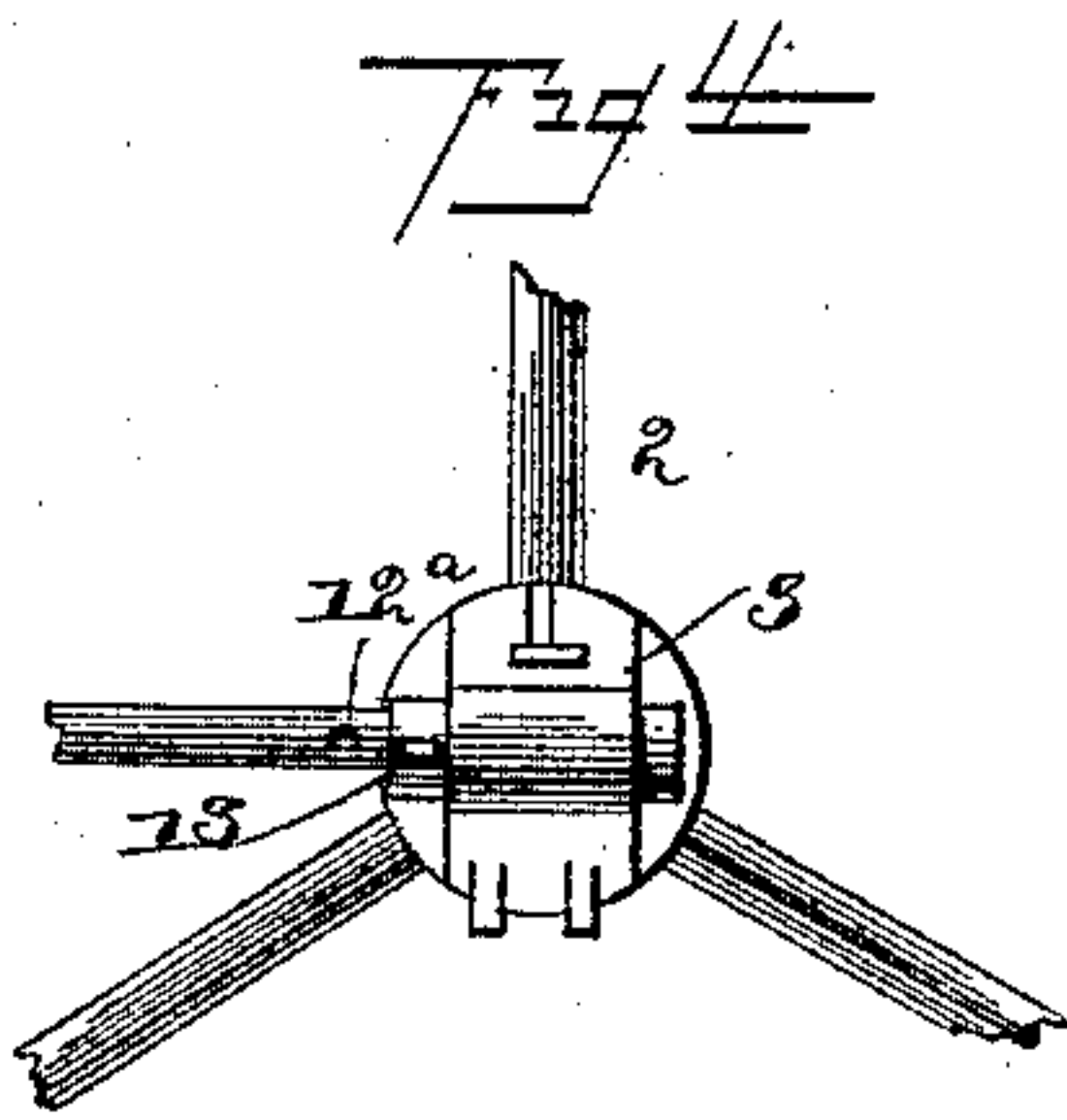
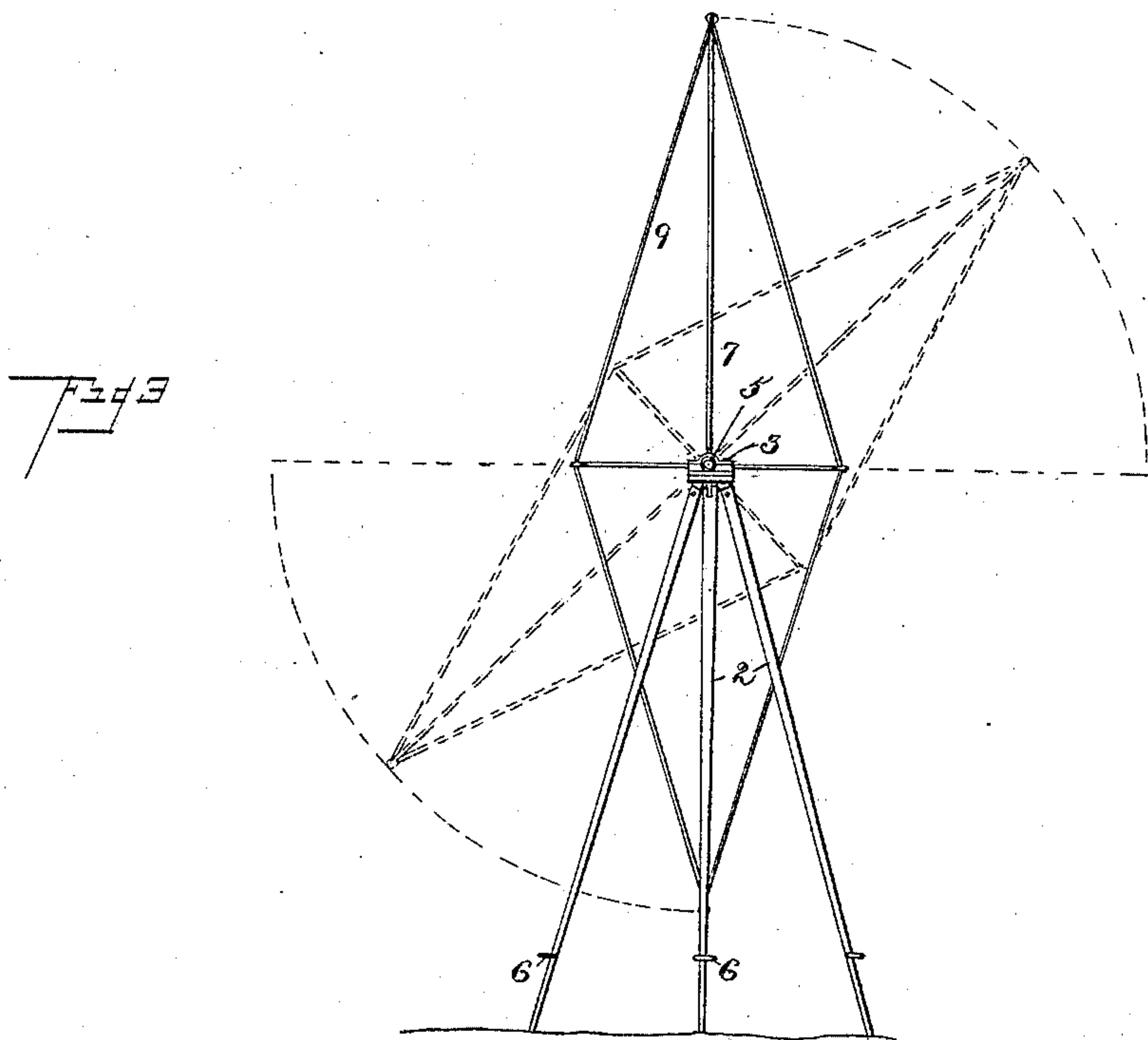
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UNITED STATES PATENT OFFICE.

OCTAVIUS MORGAN AND JOSEPH CROWLEY, OF LOS ANGELES, CALIFORNIA;
SAID CROWLEY ASSIGNOR OF PART TO JAMES DOUGLAS, OF SAME PLACE,
WILLIAM H. BURNETT, OF OURAY, COLORADO, AND ALFRED SALTER AND
AUBREY DE VERE HUNT, OF LONDON, ENGLAND.

SIGNALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 444,991, dated January 20, 1891.

Application filed August 16, 1889. Serial No. 320,951. (No model.)

To all whom it may concern:

Be it known that we, OCTAVIUS MORGAN and JOSEPH CROWLEY, citizens of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Signaling System and Apparatus, of which the following is a specification.

This invention relates to an improved device or apparatus for signaling on land or sea, which shall be designed to take the place of flags or of the heliograph, being simpler in construction and more easily operated than either, and capable of being operated successfully at times when it would be impossible to work the heliograph, owing to the lack of sun, and at distances where flags would be useless, likewise for night-signaling.

The invention comprises a large screen or surface of any suitable conspicuous color, which shall be exposed alternately with its face and edge in the direction where the signal is to be read, the theory being that at a considerable distance the screen or surface which is in itself plainly visible shall vanish when exposed edgewise, thus enabling any desired message to be transmitted by the well-known system or code of dots and dashes.

The invention consists in the improved construction and arrangement of the said screen and its supports, substantially as will be more fully shown and described with reference to the drawings, in which—

Figure 1 is a perspective view illustrating the operation of our improved signaling apparatus. Fig. 2 is a front view of the signaling apparatus. Fig. 3 is an end view of the same; and Figs. 4, 5, and 6 are detail views illustrating the revolving cap at the upper end of one of the supporting-tripods.

Like numerals of reference indicate like parts in all the figures.

1 and 2 designate a pair of tripods, the latter of which is provided at its upper end with a revolving or swiveled cap 3, while the former has a stationary cap 4. The caps 3 and 4 are provided with bearings for a shaft 5, which may be constructed of wood, tubular metal, or other suitable material, which

shall be light, strong, and rigid. When made of tubular metal it may be constructed of several sections adapted to telescope into each other. The tripods are constructed in such a manner as to be capable of being folded into small compass, and the feet of said tripods are provided near their lower ends with rings 6, through which stakes may be driven into the ground for the purpose of securing them in position, or which shall enable the said tripods to be conveniently tied to some suitable support. The shaft 5 is provided with hinged arms or braces 7, which when extended may be connected by means of suitable cross-braces and stays 8 and 9, thus forming the frame, to which a screen 10, of cloth or other suitable material, may be secured and tightly stretched. One end of the shaft may be provided with a crank or handle 11; or an operating-rod 12 may be connected directly to the screen-frame, as shown in Fig. 1 of the drawings. To limit the rotary movement of the shaft, the latter may be provided with a small arm or projection 12^a, adapted to engage a projection 13, secured adjustably to the cap 3.

The method of operating our improved signal apparatus will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. When the device is extended for use, as shown in the accompanying drawings, it must be set with the angle of vision facing the direction in which the messages are to be sent. This may be readily adjusted by moving only one of the supporting-tripods, owing to the pivoted arrangement of the cap 3. When the proper position has been secured, the screen is worked by means of the operating handle or rod, so as to expose alternately its face and edge, thus enabling the desired message to be sent by the well-known code of dots and dashes. The opposite sides of the screen may, when desired, be painted in different conspicuous colors in order to render it easily visible at a great distance. At night a strong light may be arranged in front of the screen and focused directly upon the same, thus enabling it to be plainly seen at a great dis-

tance. When used for signaling at short distances, a series of screens of a smaller size may be arranged in a suitable frame above or adjacent to each other, thus enabling the letters
5 of the message to be spelled out more rapidly and conveniently than if a single screen were used.

This invention, it will be readily understood, is applicable to a great variety of signaling purposes, and while we have herein described what we consider to be a convenient and desirable construction of the device
10 or instrument we desire to have it distinctly understood that we do not limit ourselves to the construction herein shown, but reserve the privilege of making any alterations and modifications which may be resorted to without departing from the spirit of our invention.
15

20 Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A signaling apparatus comprising a large plane surface mounted pivotally on a longitudinal axis, so as to be capable of being exposed alternately with its face and edge to the angle of vision, substantially as set forth.
25

2. A signaling apparatus comprising a screen or surface mounted pivotally on a longitudinal axis, so as to be capable of being exposed alternately facewise and edgewise to the angle of vision, in combination with stops to limit the rotary movement of the shaft upon which said screen or surface is mounted,
30 said stops being attached, respectively, to the

shaft of the screen and to one of the bearings in which said shaft is journaled, substantially as set forth.

3. A signaling apparatus comprising a large screen or surface mounted pivotally on a longitudinal axis, so as to be capable of being exposed alternately facewise and edgewise to the angle of vision, in combination with folding tripods having bearings for the shaft of such screen or surface, one of said bearings being swiveled to the supporting-tripod, substantially as set forth.
40 45

4. In a signaling apparatus, the combination, with a pair of supporting-tripods having bearings at their upper ends, of a shaft journaled in said bearings, a folding frame attached to said shaft, a screen secured detachably to said frame, and means for rotating the said shaft, substantially as set forth.
50

5. A signaling apparatus comprising a large screen or surface mounted pivotally on a longitudinal axis, so as to be capable of being exposed alternately facewise and edgewise to the angle of vision, in combination with folding tripods having bearings for each end of the shaft of such screen or surface, substantially as set forth.
55 60

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

OCTAVIUS MORGAN.
JOSEPH CROWLEY.

Witnesses:

N. LINDENFELD,
HERMAN ERLING.