

(No Model.)

W. S. GILMORE.  
SIGNALING APPARATUS.

No. 449,674.

Patented Apr. 7, 1891.

Fig. 1.

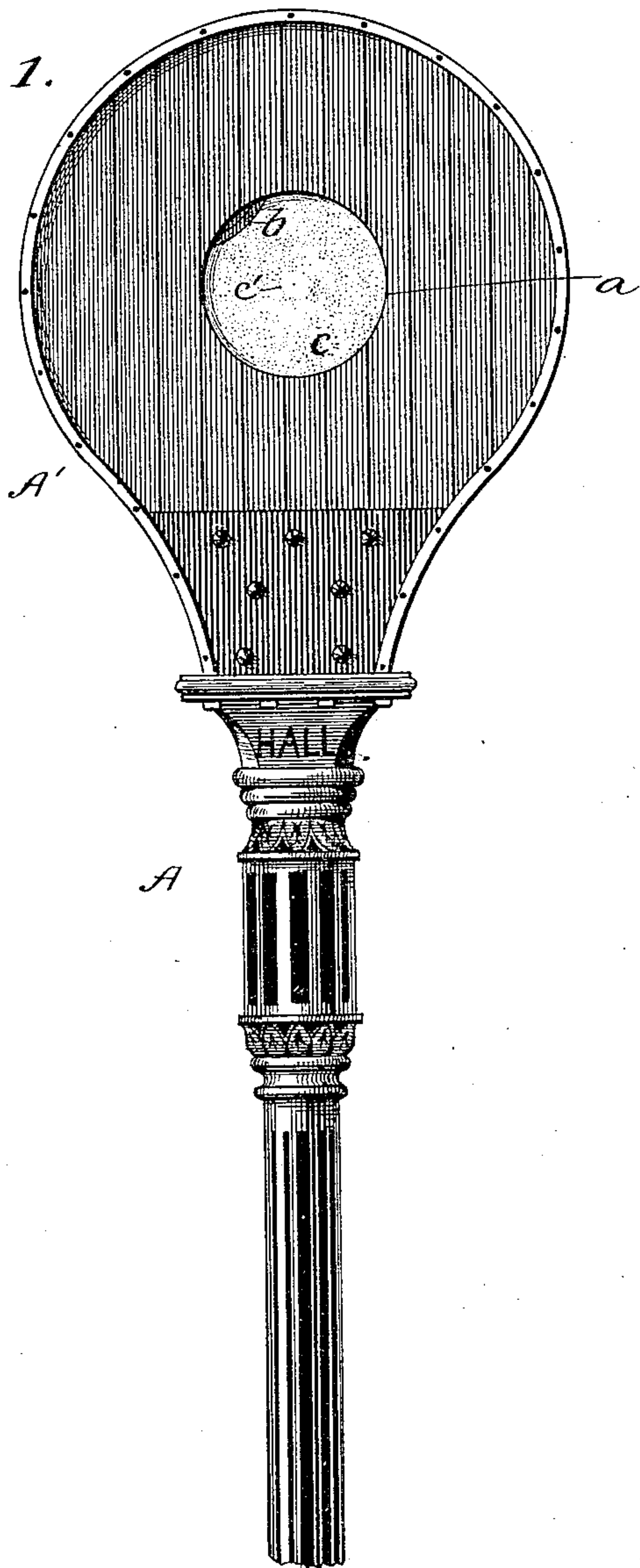


Fig. 2.

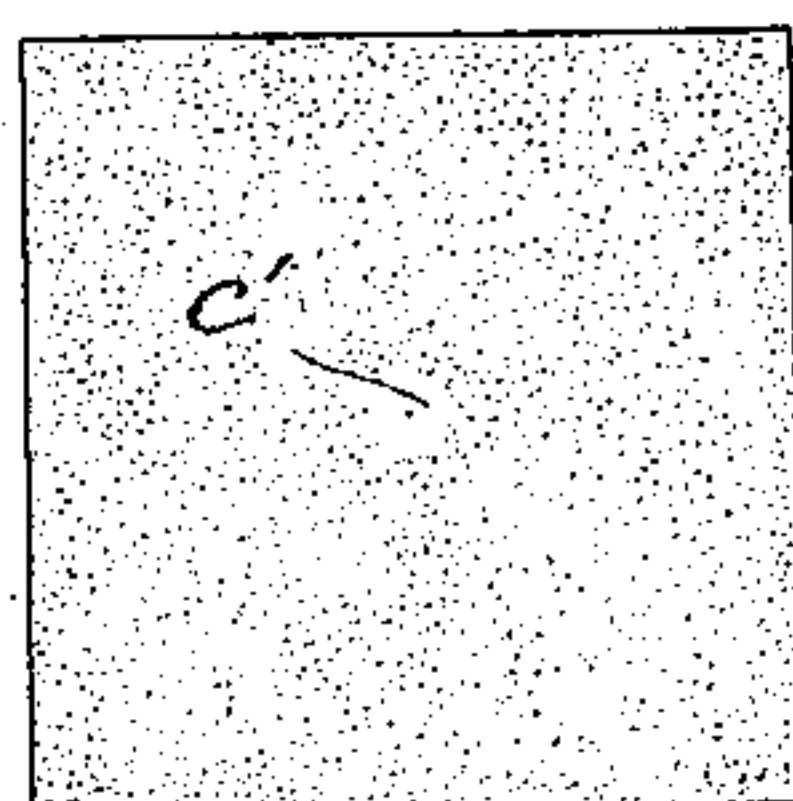
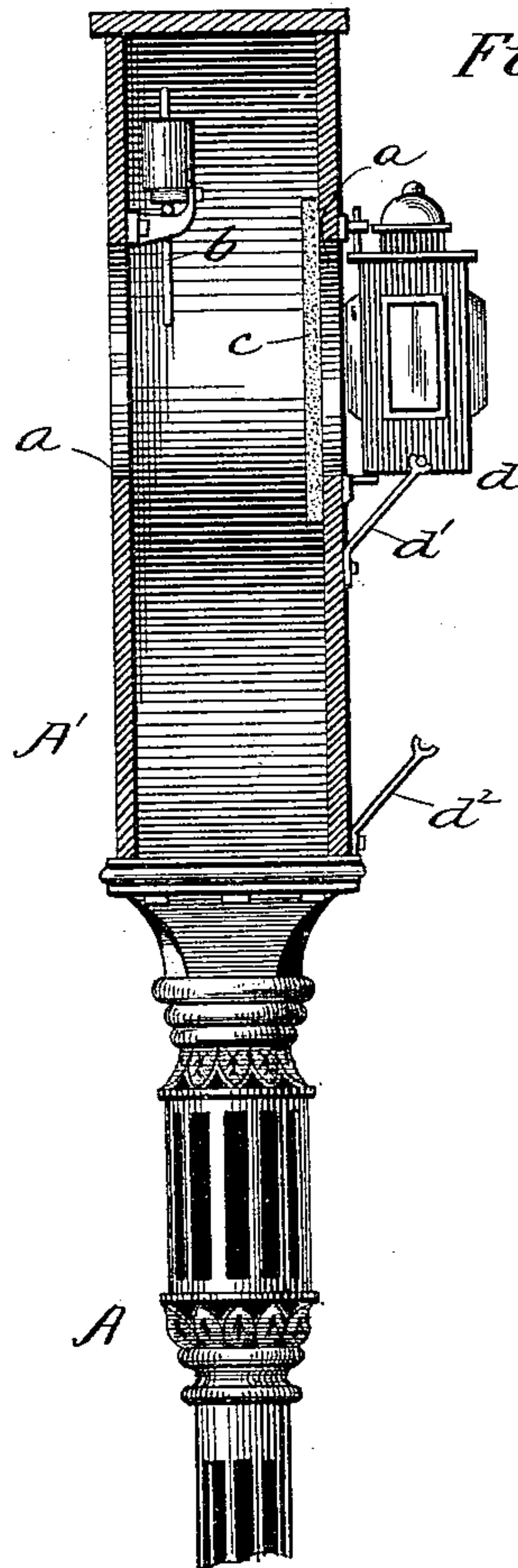


Fig. 3.

WITNESSES:

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## SIGNALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 449,674, dated April 7, 1891.

Application filed October 7, 1890. Serial No. 367,449. (No model.)

*To all whom it may concern:*

Be it known that I, WINFIELD S. GILMORE, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Signaling Apparatus, of which the following is a specification.

This invention has reference to signaling apparatus, the object being to provide means whereby a signal may be easily and correctly discerned.

The invention relates more particularly to that class of signals which consist in general of a board or frame provided with an opening in which the signal is displayed. The board is usually painted a color which strongly contrasts with the colors of the signals, and thereby serves as a background against which the signals are seen.

Ordinarily the unobstructed opening means "safety," while a colored diaphragm obstructing the opening means "danger." In practice mistakes often occur in reading the signals by reason of the colors in the landscape or sky beyond the signal. If, for instance, a green diaphragm is the danger-signal, the lookout may mistake the foliage of trees beyond the signal, and which is discernible through the opening, as the danger-signal; or if the danger-signal is a red diaphragm a red sky may lead to the same error. Again, the color of objects back of the signal may be so near the color of the background on the frame or board as to render it doubtful what the signal is.

With the idea of preventing such errors as these my invention consists of a signal-board frame or background provided with the usual opening where the signal is displayed, in combination with a translucent or white diaphragm permanently in position across the opening. This diaphragm, however, must be of such construction as not to interfere with the use of a lantern and colored transparent diaphragms at night; and to this end the said diaphragm is provided with an opening or perfectly-transparent portion at its center, through which the rays of light from a lantern located back of the signal may pass. The area of this opening is small compared with the total area of the translucent portion of

the diaphragm, so that from the distance which these signals are sighted it is not observable and the diaphragm appears as an uninterrupted sheet of white.

I will now describe my invention with reference to the accompanying drawings, in which—

Figure 1 represents a front elevation of the head of a signal-post of the type to which my invention is applicable. Fig. 2 represents a central section of the same, and Fig. 3 a view of the translucent diaphragm.

The type of a signal here shown is that of the Hall Signal Company, in use on many of the roads of the United States. It consists of a post A, carrying a flat head or case A', the front elevation of which is an inverted-pear shape. In the center of this case an opening *a* is provided about twelve or fourteen inches in diameter. This opening extends through the front and back walls of the casing. The casing contains a colored diaphragm *b*, which is adapted to be thrown across the opening as a signal. The opening in the back wall is covered by a glass or other transparent diaphragm *c*, which is secured permanently in place. The greater part of the surface of this diaphragm is made translucent by grinding, painting, or covering with white thin paper or similar material, a small free and clear space *c'* being left at the center about two or three inches in diameter.

*d* represents a lantern, which at night is placed on a bracket *d'* at the back of the signal-head, and so arranged that its light will be directly behind the clear space *c'* in the diaphragm *c*. If the lantern is a small one, it may occupy the position shown both night and day, as it would then not obscure the diaphragm; but it perhaps will be best to remove the lantern in the morning and place it on the bracket *d''* below the diaphragm. When the translucent diaphragm is unobscured, it will always appear from a distance as an unbroken circle of white. Daylight shining through the back will insure the whiteness of the diaphragm without showing the colors of objects back of the signal. At night darkness will prevent the translucent diaphragm being seen, but the rays of light from the lantern *d* may be plainly seen through the clear space in the diaphragm.

It is obvious that this invention is not confined to the particular form of signal here shown and described, as the translucent diaphragm may be used wherever daylight is  
5 depended upon for the signal. The diaphragm may, for instance, be placed across an opening in the arm of a semaphore-signal.

Having thus described my invention, I claim—

10 A signaling device consisting of a board or background provided with an opening in which the signal is displayed, in combination

with a diaphragm located across said opening, a portion of said diaphragm being translucent and another portion transparent, and 15 a lantern located to throw its rays through the transparent portion, as set forth.

In witness whereof I have hereunto affixed my seal and signed my name in the presence of two subscribing witnesses.

WINFIELD S. GILMORE. [L.S.]

Witnesses:

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I. A. MOORHEAD.