

No. 888,341.

PATENTED MAY 19, 1908.

W. L. MERRILL.  
VISUAL SIGNAL.

APPLICATION FILED JULY 21, 1906.

Fig. 2.

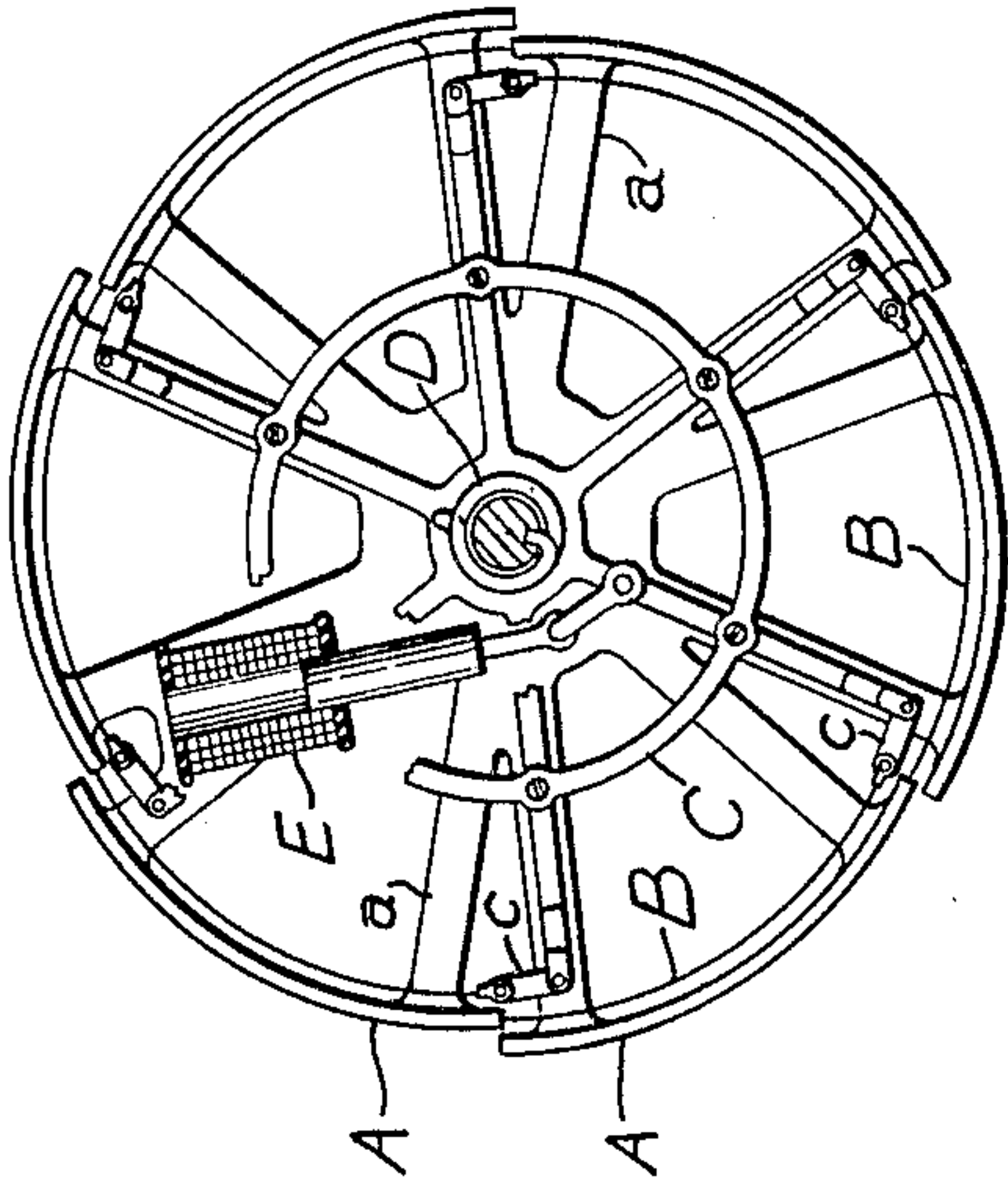


Fig. 3.

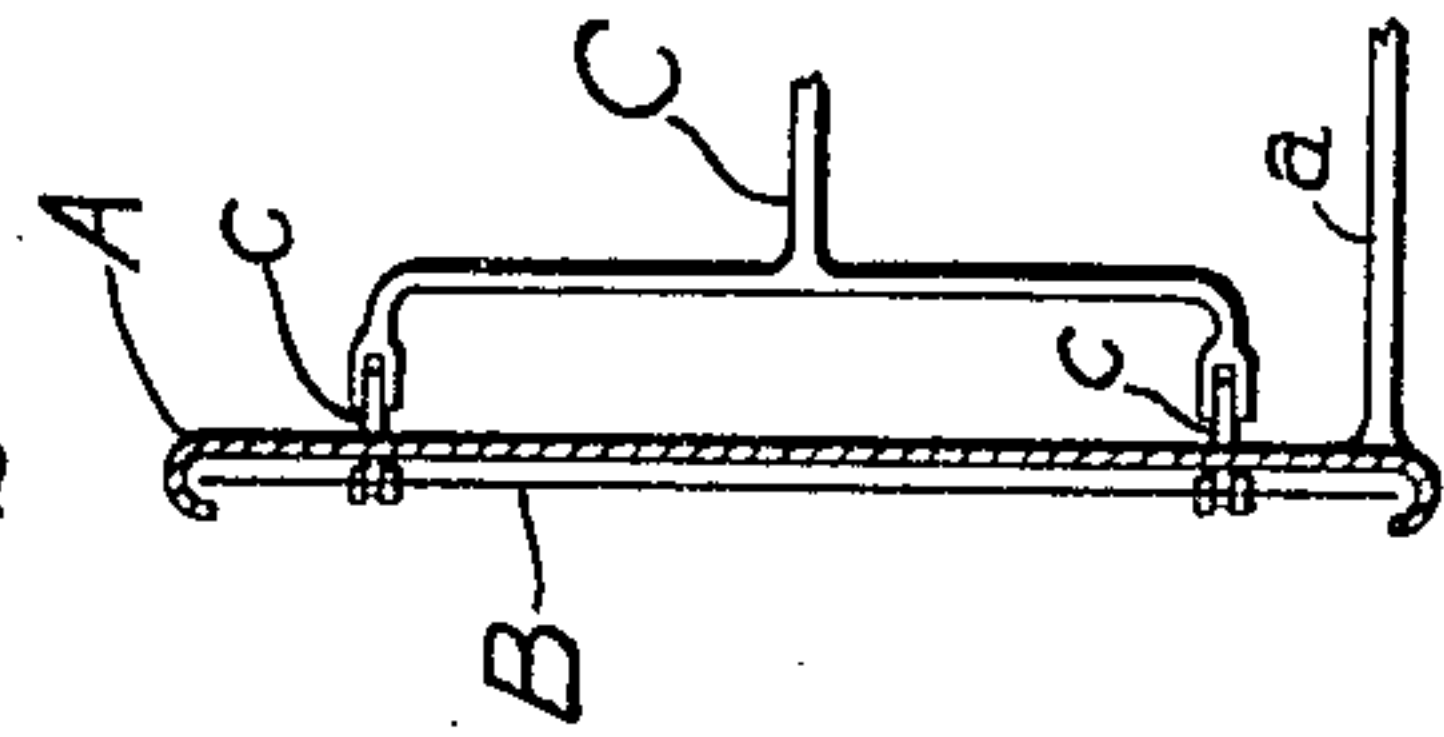
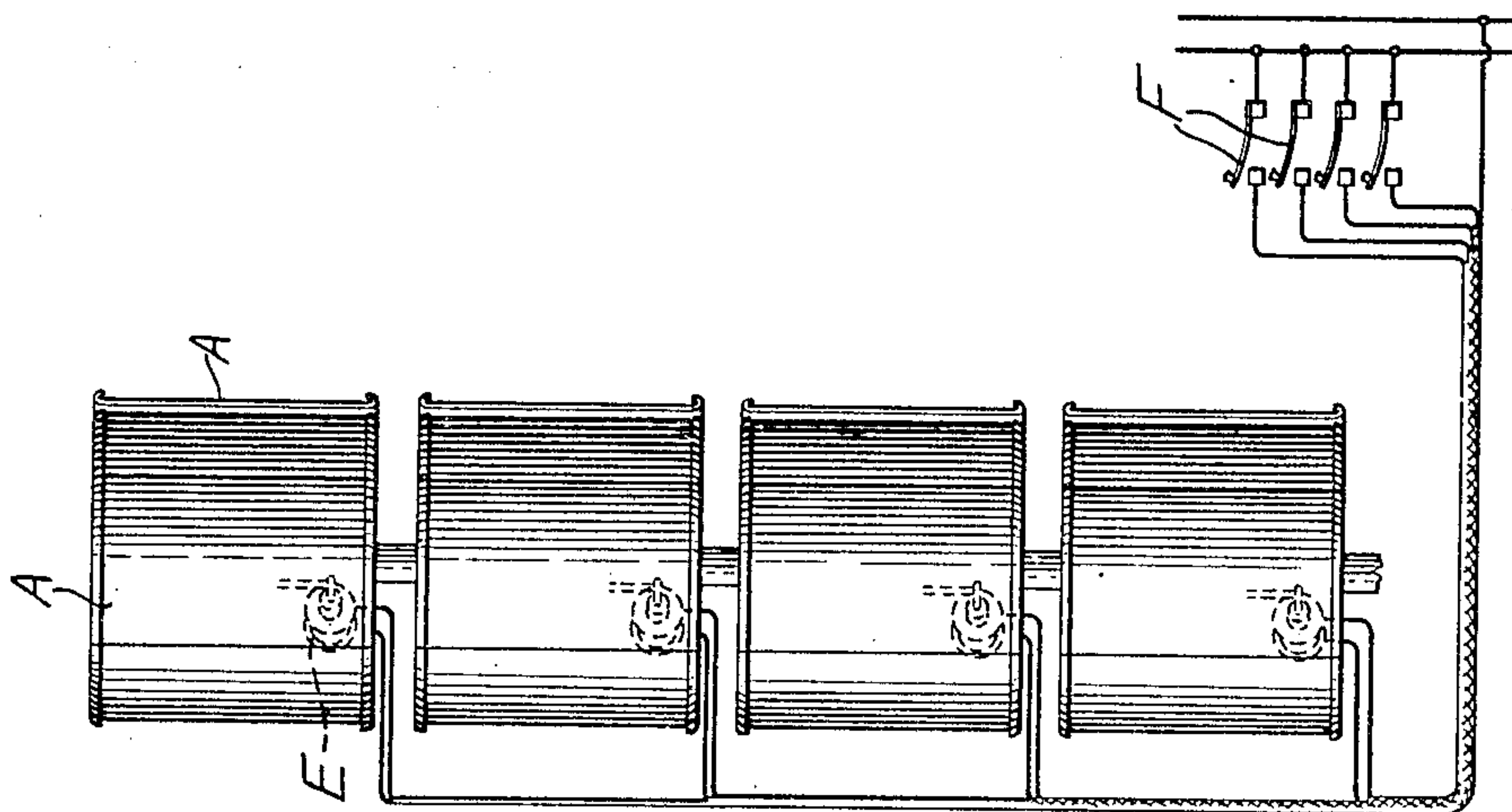


Fig. 1.



Witnesses:

*Burchard W. Keller*  
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Inventor:

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# UNITED STATES PATENT OFFICE.

WILBUR L. MERRILL, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

## VISUAL SIGNAL.

No. 888,341.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed July 21, 1906. Serial No. 327,153.

*To all whom it may concern:*

Be it known that I, WILBUR L. MERRILL, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Visual Signals, of which the following is a specification.

My invention relates to visual signals, and its object is to provide a novel and simple type of signal which presents the same appearance when viewed on any side. Such a signal is particularly advantageous on ship-board, as, for instance, in signaling orders from a flag-ship to the rest of a fleet.

My invention consists in providing a series of circularly-arranged vanes which from a distance present the appearance of a solid cylinder, and mounting a second similar series of vanes of different appearance from the first, and relatively movable thereto, in such manner that the second series of vanes may be brought inside or outside of the first series. One series of vanes may be of some obscure color and the other of a bright color, so that by shifting the vanes the color of the cylinder apparently changes. By displaying a number of these signals, indications may be transmitted in accordance with any code. The signals are arranged to be controlled from a distance, preferably by an electro-magnet, so that they may be mounted on a mast-head and operated from the bridge or any part of the ship.

My invention will best be understood by reference to the accompanying drawings, in which

Figure 1 shows in elevation a number of signals arranged in accordance with my invention; Fig. 2 shows an enlarged plan view of the same; and Fig. 3 shows a detail of one movable and one stationary vane.

In the drawings, A A represent a series of stationary vanes supported on radial arms *a*, or in any other suitable manner and circularly-arranged so as to present the appearance at a distance of a cylinder. One end of each stationary vane is at a slightly greater radial distance from the center of the cylinder than the adjacent end of the adjacent vane, so that a space is left between each two vanes, in which a vane B may move. The stationary vanes A may be bent over at top and bottom, as shown in Fig. 3, to form guides for the movable vanes B. The vanes

B are carried at the extremities of the spokes of a wheel C, which is rotatably mounted, and which is normally held in the position shown by the spiral spring D. In this position, each vane B is behind or inside of a vane A of the stationary series. By rotating the wheel C against the tension of the spring D each vane B is brought in front of or outside of the adjacent vane A. By painting the vanes A an obscure color, such, for instance, as dull gray or dull brown, and painting the vane B a bright color, such as red or white, or both, the appearance of the cylinder changes from an obscure to a bright color as the wheel C is rotated against the spring. To allow for the slight radial movement of the vanes B, when wheel C is rotated, links *c* are inserted between the wheel and vanes. For rotating the wheel a magnet E is provided, which, when energized, moves the wheel against the spring tension, and when deenergized allows the wheel to be returned to the position shown. A plurality of signals may be mounted in a row, as indicated in Fig. 1, and the several cylinders controlled by contacts F placed at any desired point on the ship. By closing different contacts, different combinations of signals may be displayed and messages sent in accordance with any code desired.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. A visual signal comprising a series of vanes of arc-shaped cross-section arranged in cylindrical formation, and a second similar series of vanes of different appearance, each of the second series being relatively movable in a circumferential direction between two vanes of the first series.

2. A visual signal comprising a series of vanes of arc-shaped cross-section arranged in cylindrical formation, each vane having one of its edges parallel to the axis of the cylinder farther from said axis than the other, and a second similar series of vanes of different appearance, each of the second series being relatively movable in a circumferential direction between two vanes of the first series.

3. A visual signal comprising a series of vanes of arc-shaped cross-section arranged in cylindrical formation, a second similar series of vanes of different appearance, each of the second series being relatively movable

in a circumferential direction between two vanes of the first series, and means controllable from a distance for moving said vanes.

4. A visual signal comprising a series of  
5 vanes of arc-shaped cross-section arranged in cylindrical formation, each vane having one of its edges parallel to the axis of the cylinder farther from said axis than the other, a second similar series of vanes of different  
10 appearance, each of the second series being

relatively movable in a circumferential direction between two vanes of the first series, and an electromagnet for moving said vanes.

In witness whereof, I have hereunto set my hand this 20th day of July, 1906.

WILBUR L. MERRILL.

Witnesses:

BENJAMIN B. HULL,  
HELEN ORFORD.