

No. 713,774.

Patented Nov. 18, 1902.

C. KITCHING.
SIGNALING DEVICE.

(Application filed Mar. 20, 1901.)

(No Model.)

2 Sheets—Sheet 1.

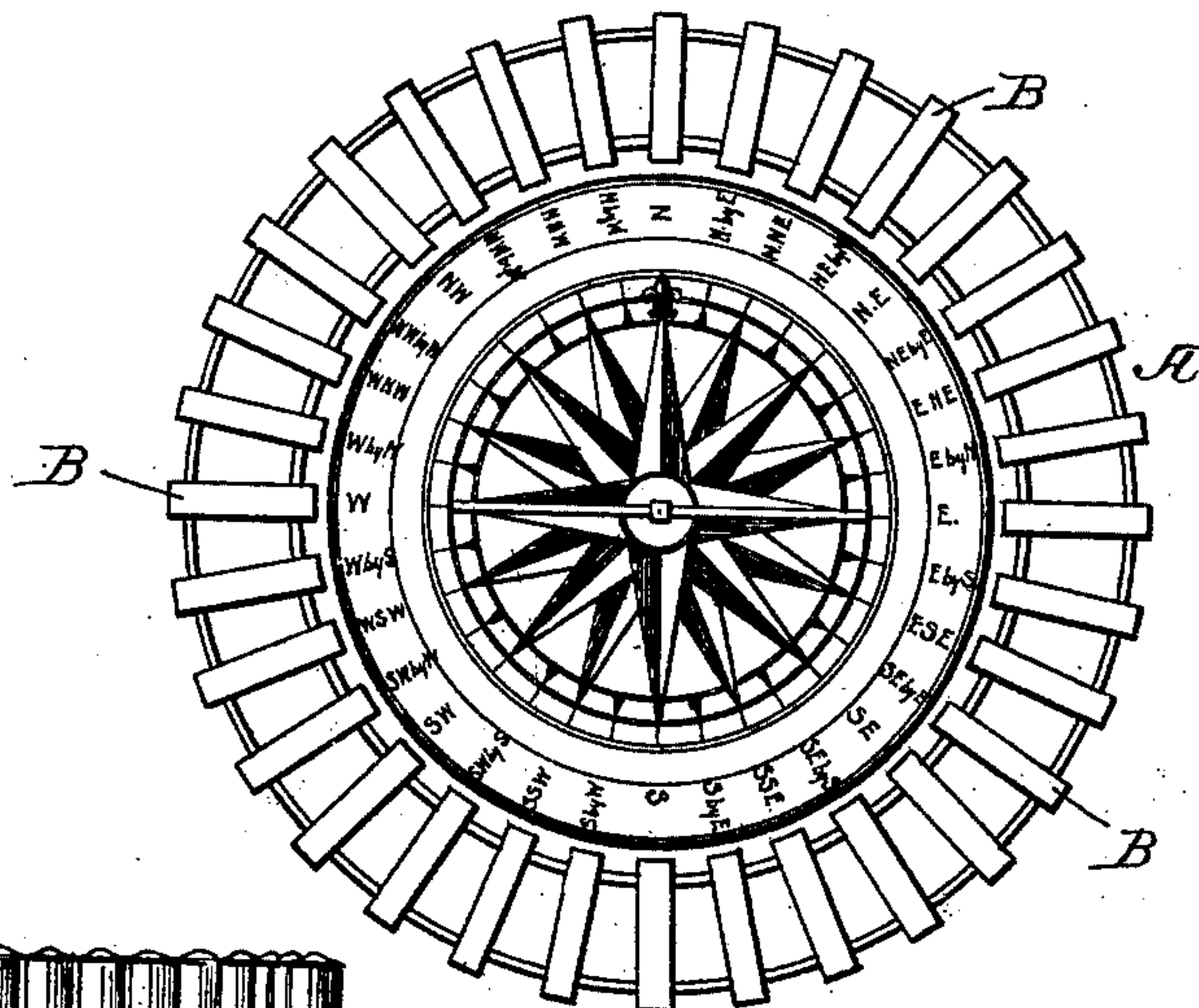


Fig. 1.

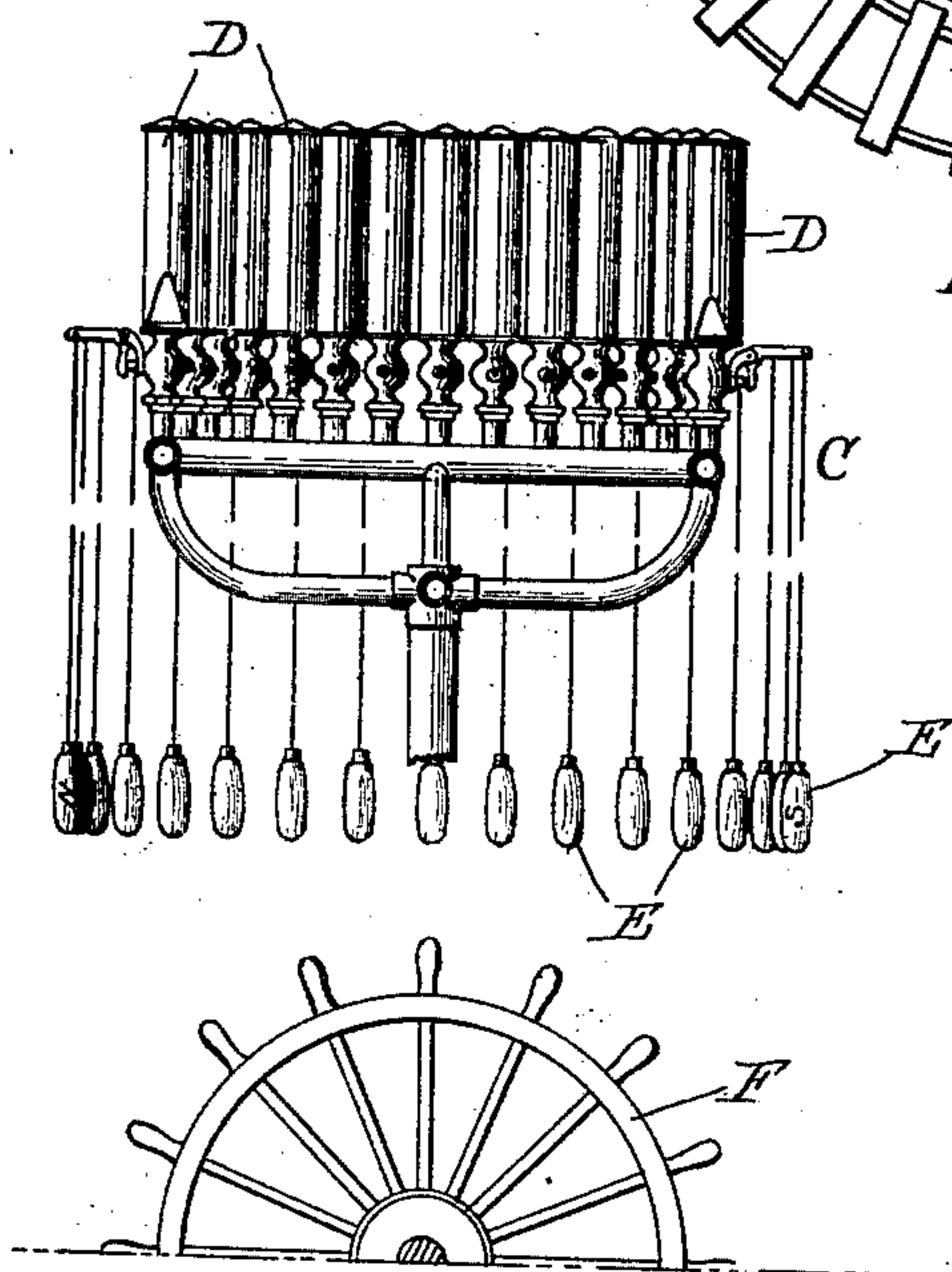


Fig. 2.

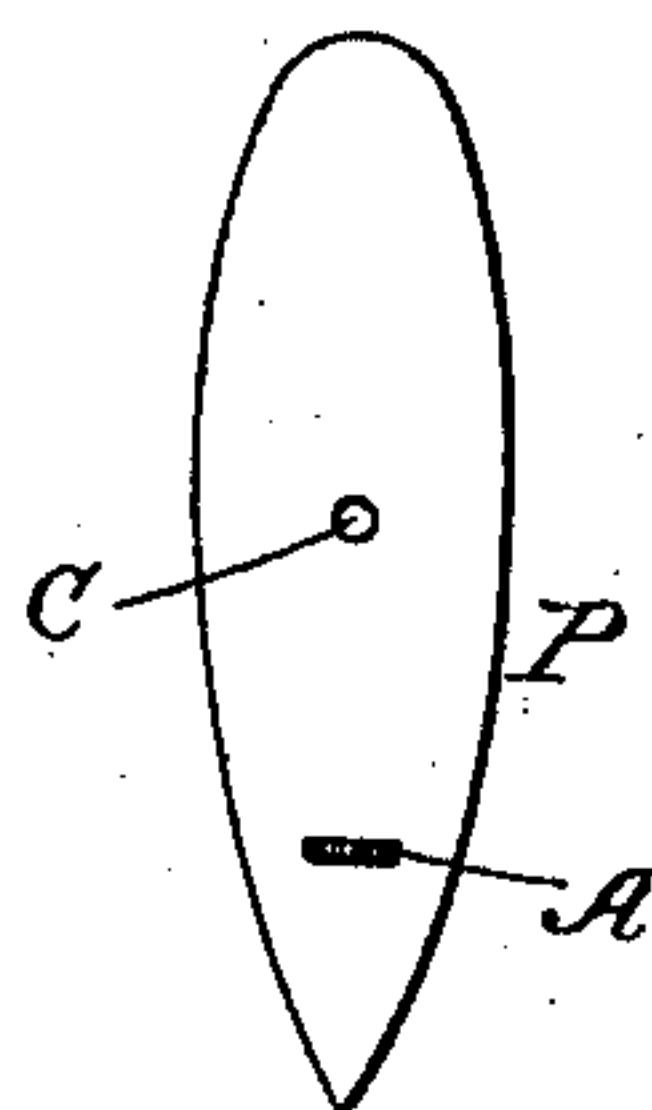
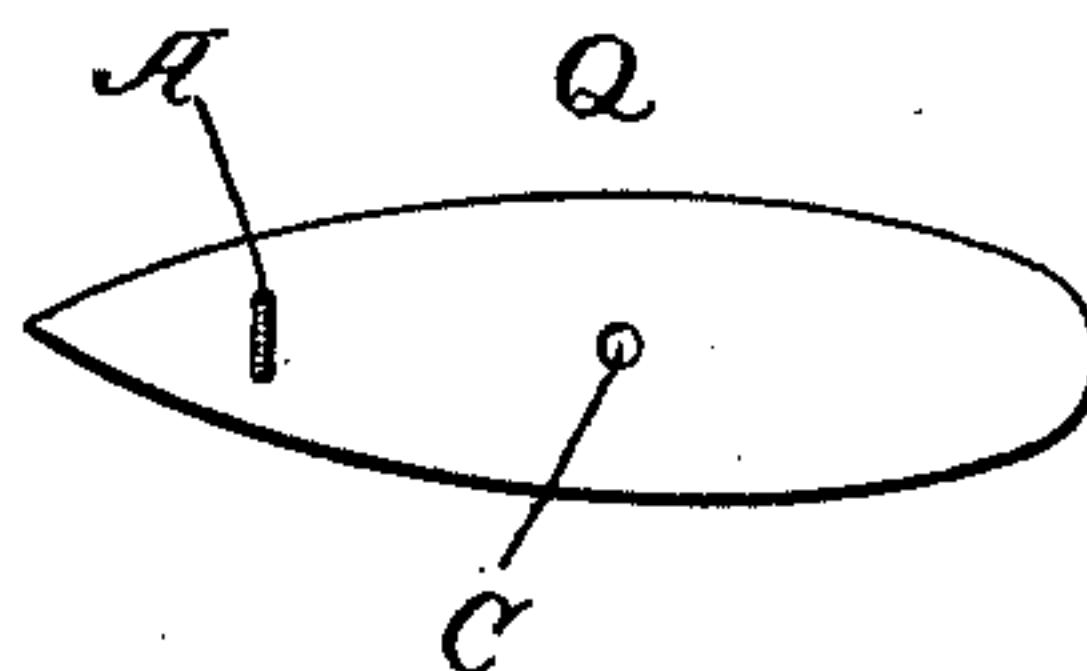


Fig. 3.



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2 Sheets—Sheet 2.

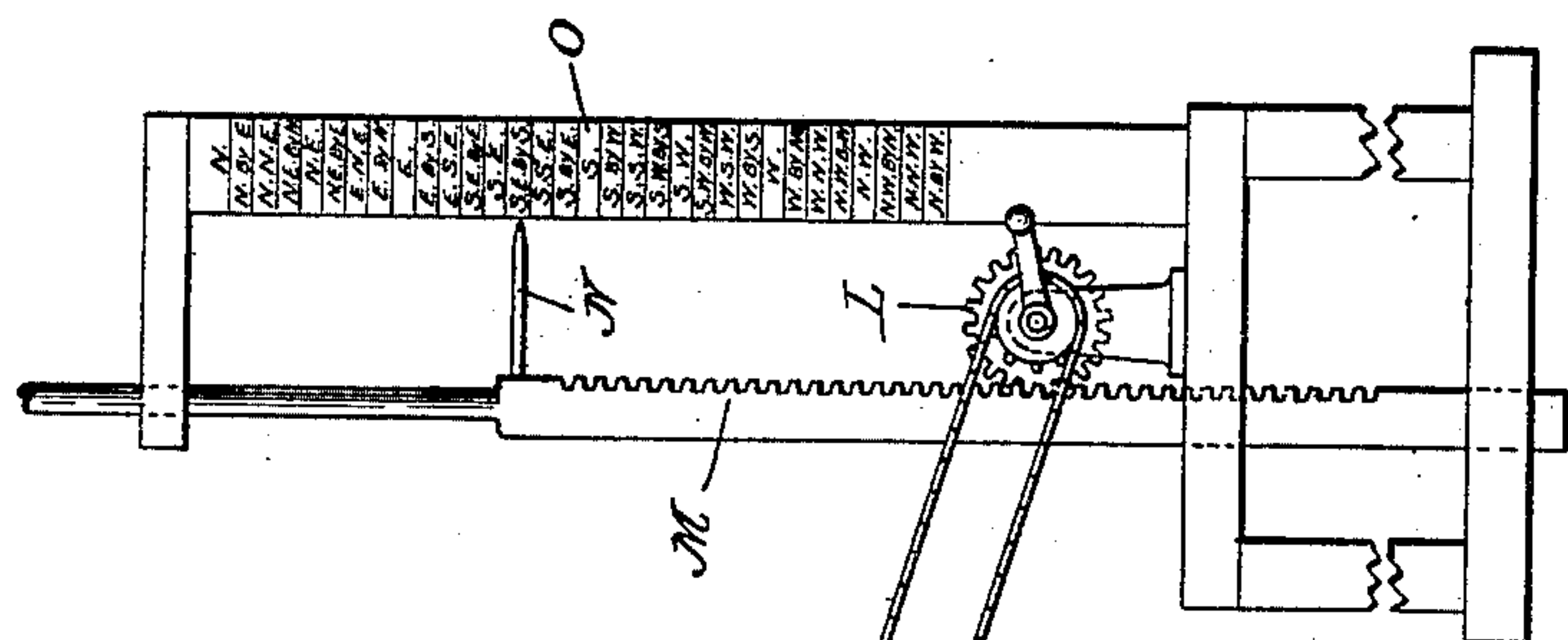


Fig. 4.

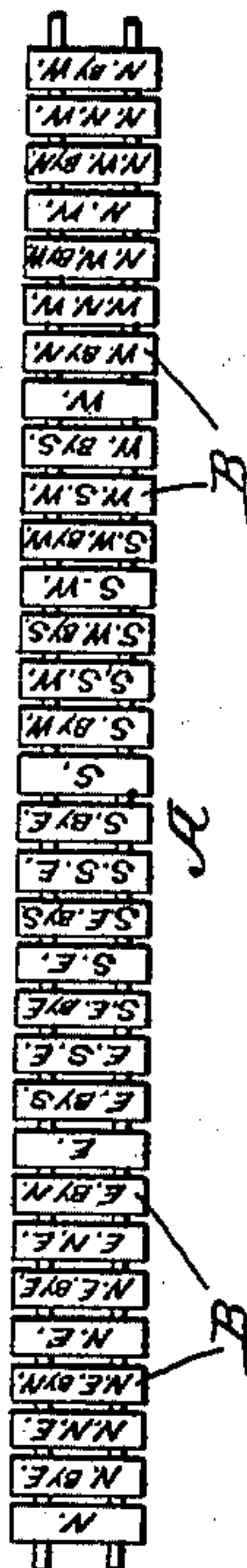
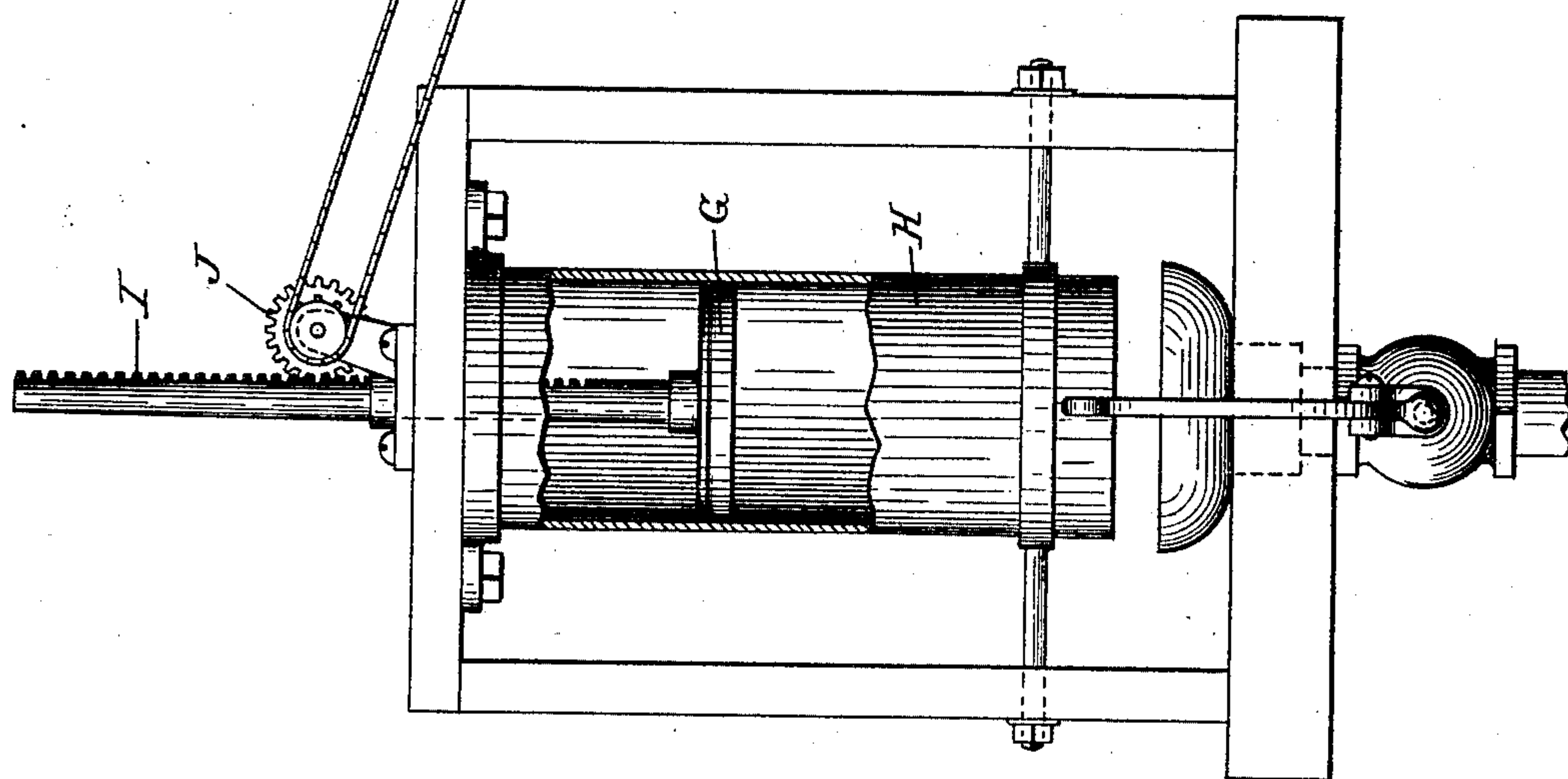


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

CYRUS KITCHING, OF CHICAGO, ILLINOIS.

SIGNALING DEVICE.

SPECIFICATION forming part of Letters Patent No. 713,774, dated November 18, 1902.

Application filed March 20, 1901. Serial No. 52,072. (No model.)

To all whom it may concern:

Be it known that I, CYRUS KITCHING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Signaling Devices, of which the following is a specification.

My invention relates to signaling devices, and has for its object to provide a new and improved device or arrangement of this description.

My invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a diagrammatic view illustrating the interpreter used in connection with my apparatus. Fig. 2 is a diagrammatic view of the producer used in connection with my apparatus. Fig. 3 is a diagrammatic view illustrating the use of my invention in connection with ships at sea. Fig. 4 is a view showing one form of producer. Fig. 5 is a view of one form of interpreter.

Like letters refer to like parts throughout the several figures.

My invention is adapted to be used for various purposes and in many different connections. For purposes of explanation, however, I have illustrated it as used in connection with boats. When two vessels, for example, are in proximity to each other during a fog, there is great danger of a collision, because of the fact that each is obscured from the vision of the officers and crew of the other. It is customary under such conditions for the vessels to blow a signal; but experience has shown that this is not sufficient to remove the danger. If, for example, some means were devised by which the course or direction in which one vessel is moving could be made known to the officers and crew of the other the danger of collision would be obviated.

One of the objects of my invention is to provide devices to be located on both vessels, by means of which the course either vessel is pursuing is made known to the officers and crew of the other, even when both are enveloped in a dense fog. In carrying out my invention I provide each vessel with what I have termed a "producer" and an "interpreter." These devices, which I have illustrated diagrammatically as sound-producers and in-

terpreters, are so arranged that a predetermined sound produced by one vessel can be interpreted upon the other, and hence the desired information conveyed, even though the vessels are entirely separated and enveloped in a dense fog. If, for example, it is desired to convey from one vessel to the other the course the vessel is pursuing, the sound-producer would be arranged so as to give forth a number of signals corresponding to some or all of the points of the compass, and the interpreter would be arranged on the other vessel to interpret these sounds in the language of the points of the compass. It will thus be seen that by this arrangement the course or direction pursued by each vessel may be accurately conveyed to the other.

It is of course evident that any desired sound-producer and sound-interpreter may be used, and I have not attempted to define in detail all such constructions, but have only endeavored to set forth a simple construction by means of which my invention may be clearly understood.

Referring now to Fig. 1, I have shown the sound-interpreter A in a diagrammatic manner as located in proximity to the compass and as composed of a series of devices B, each located opposite a designated point of the compass.

In Fig. 2 I have shown diagrammatically a sound-producer C, which in this instance consists of a series of devices D. These devices D are arranged to represent the different points of the compass and are provided with operating means by which any one may be operated so as to designate any desired point of the compass. A suitable device of any description may be used for this purpose. As herein illustrated, I have shown a series of handles E, connected with said devices and marked with the points of the compass. Each of the devices is adjusted or attuned so as to correspond with one of the devices B of the interpreter, and the arrangement is such that when the device D is operated corresponding to a given course pursued by the vessel the corresponding device B can be ascertained by a person on the other vessel, and hence the course of the first vessel will be made known. The devices of the producer and interpreter

are not arranged in accordance with the musical scale, but are arranged so there will be no octaves and also so that none of the devices D will be in harmony with any of the devices

5 B except the one which corresponds with it.

It is of course evident that each vessel would be provided with a sound-producer C and a sound-interpreter A and that the devices may be arranged at any point desired and controlled by any desired means. It is also evident that several interpreters may be located at different points of the vessel, if desired, and that each may be under the control of a different person, so that a check as to accuracy will be provided. In Fig. 2 I have shown the operating device for the producer as in proximity to the wheel F, so as to be under the control of the man at the wheel. If, for example, one boat was steering north, the producer would be operated so as to sound forth the north signal at suitable intervals, and this north signal would be made known to the other vessel by the interpreter.

In Fig. 4 I have shown one device which may be used as a sound-producer. This device simplifies the construction and consists, generally speaking, of a whistle provided with a movable piston G, working in the cylinder H. This piston is controlled by any desired mechanism, so that it may be moved up and down to vary the sound given out by the whistle. As herein illustrated, the piston is connected with a rack I, which is engaged by a pinion J. This pinion is connected by a suitable belt or other power-transmitting device K with a pinion L, which engages the rack M. This rack is mounted, so as to be reciprocated, and is provided with the pointer N, adapted to move along the scale or graduated bar O, which is marked off to indicate the points of the compass. The several parts are so arranged that by rotating the pinion or wheel L the rack M can be moved, so that the pointer will be opposite any desired graduation, and the piston will be simultaneously moved, so that the whistle will give forth a sound corresponding to the point of the compass designated. If, for example, the vessel is steering west, the pointer N will be moved opposite the graduation indicating west, and when in this position the whistle, when operated, will give forth the sound which corresponds to west.

The interpreter, as shown in Fig. 5, consists of a series of bells B, each attuned to one of the points of the compass. In Fig. 3 I have illustrated diagrammatically two vessels P and Q sailing different courses, each provided with a producer C and an interpreter A. When the producer, say, on the vessel P is operating, an instrument—such as a small bar, pencil, or the like—may be run along the various bells of the interpreter A on the vessel Q by the operator who has charge of it until the operator, by the sound, finds the one which corresponds to the signal given out by the producer on the vessel P.

He can then read off the point of the compass and will know the course the vessel P is pursuing. In a similar manner the operator on the vessel P is made acquainted with the course of the vessel Q, and hence the two vessels can conduct themselves so as to avoid a collision.

In cases, for example, where whistles are used as producers they could not be used on small sailing vessels; but in this event other producers might be used or such sailing vessels could be provided simply with an interpreter and could thus ascertain the course of any larger vessel in proximity to it, and hence avoid being run down.

I have described in detail a construction mostly diagrammatic and by means of which my invention may be understood; but I of course do not limit myself to the devices illustrated or to the particular uses described.

I claim—

1. An apparatus for communicating the course pursued by one vessel to a person on a distant vessel, comprising a sound-producer and a sound-interpreter, one located on one vessel and one on the other, means for producing different sounds upon the sound-producer corresponding to a number of the points of the compass, the sound-interpreter having associated with it indications of said several points of the compass and arranged so that any sound given by the producer can be interpreted on the distant vessel in terms designating the course of the other vessel.

2. An apparatus for communicating intelligence, comprising a producer and interpreter, said producer and interpreter being disconnected and located at separated points, a series of characters associated with the producer, each indicating an item of intelligence it is desired to convey, means for operating the producer to give forth a signal corresponding to each of said items, said interpreter provided with a series of parts, a series of characters associated with said parts corresponding to the characters associated with the producer, each part corresponding with and adapted to interpret one of the signals given forth by the producer.

3. A device for communicating intelligence, comprising a sound-producer, means associated with said sound-producer for sending forth a number of sounds of different vibrations, a series of characters associated with said producer, one adapted to represent each sound, a sound-interpreter located at a distant point and disconnected from the producer, comprising a series of bells adapted to produce different sounds, each bell producing a sound of the same number of vibrations as one of the signals of the producer, said bells having a series of characters associated therewith corresponding to the characters associated with the sound-producer, whereby when the signal is sent forth from the producer the bell corresponding thereto may be designated and the signal interpreted.

4. A device for communicating intelligence, comprising a sound-producer, consisting of a cylinder provided with a movable piston, means for admitting steam into said cylinder
5 so as to produce a sound, a scale provided with graduations indicating a number of the points of the compass, a pointer associated therewith, means for moving this pointer, and a connection between the pointer and the piston whereby they are moved simultaneously,
10 so that the sound produced is varied as the pointer moves along the graduations of the scale.

5. As means for communicating between
15 ships at sea, a sound-producer adapted to produce a series of sounds, each associated with a certain idea of direction, on one ship,

and a sound-receiver on the other ship, with a series of receiver devices adapted each to receive and interpret one only of the sounds
20 emitted by such producer.

6. An apparatus for communicating between ships at sea, comprising a sound-producer on one ship adapted to produce a series of separate sounds, each of which indi-
25 cates a certain direction in the course of the ship, with a sound-receiver, comprising a series of receiving means, one for each of said separate sounds.

CYRUS KITCHING.

Witnesses:

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HOMER L. KRAFT.