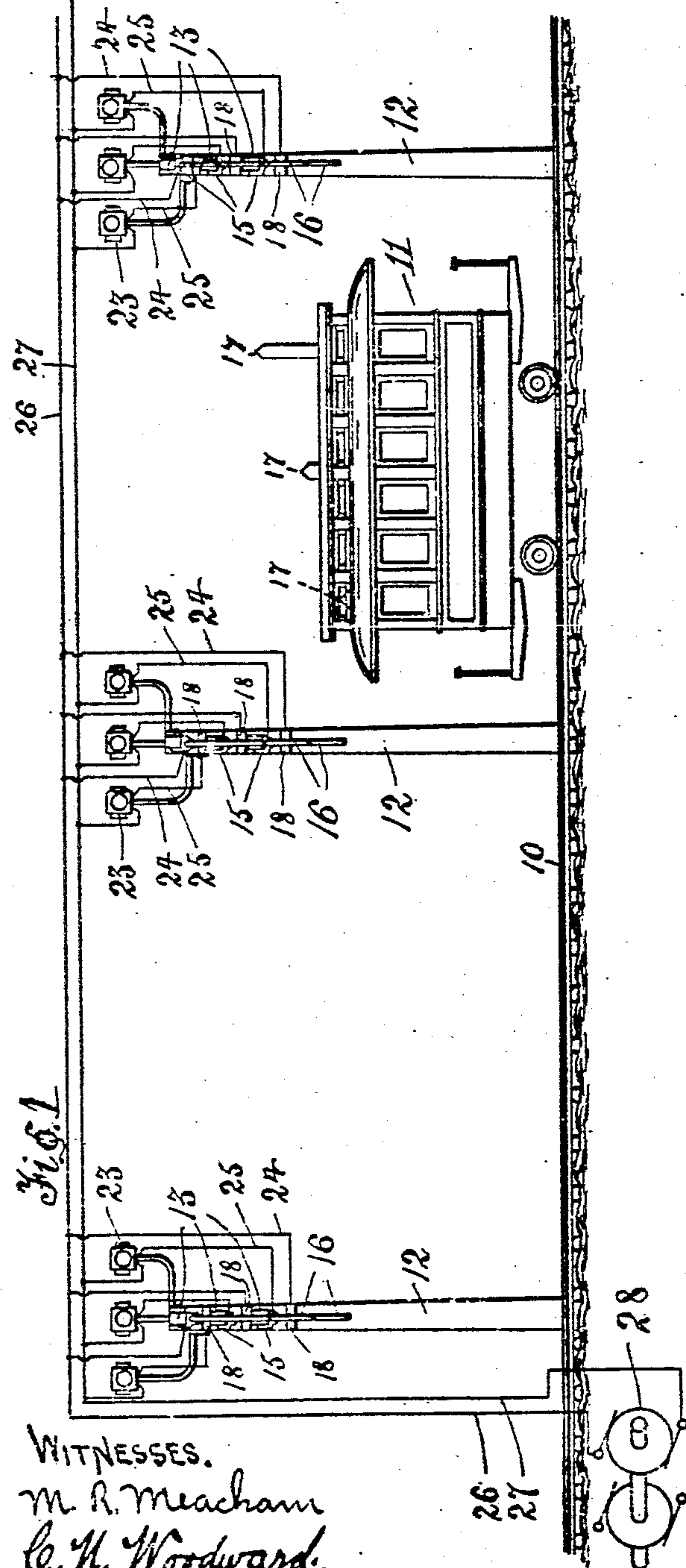
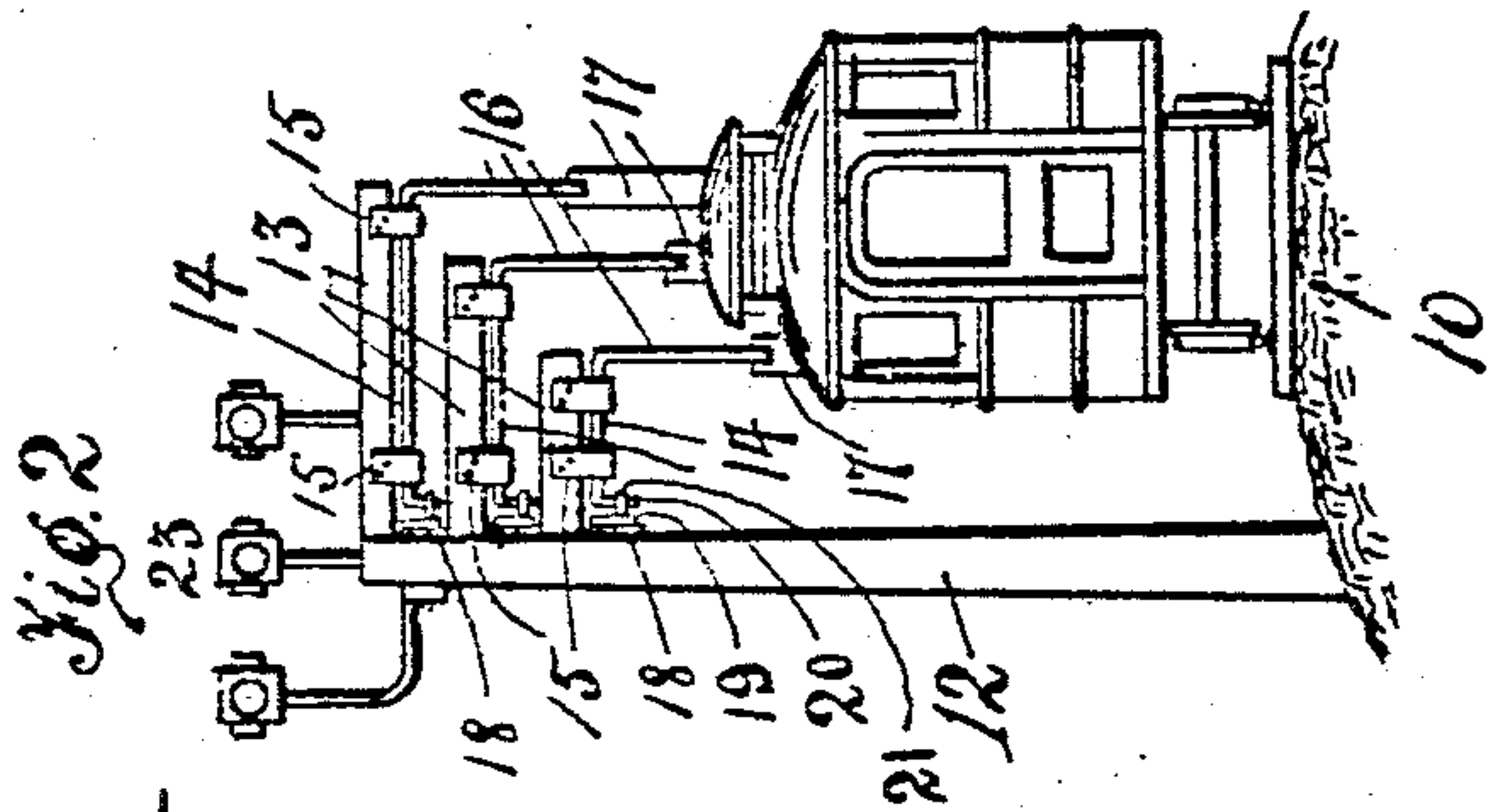


No. 879,548.

PATENTED FEB. 18, 1908.

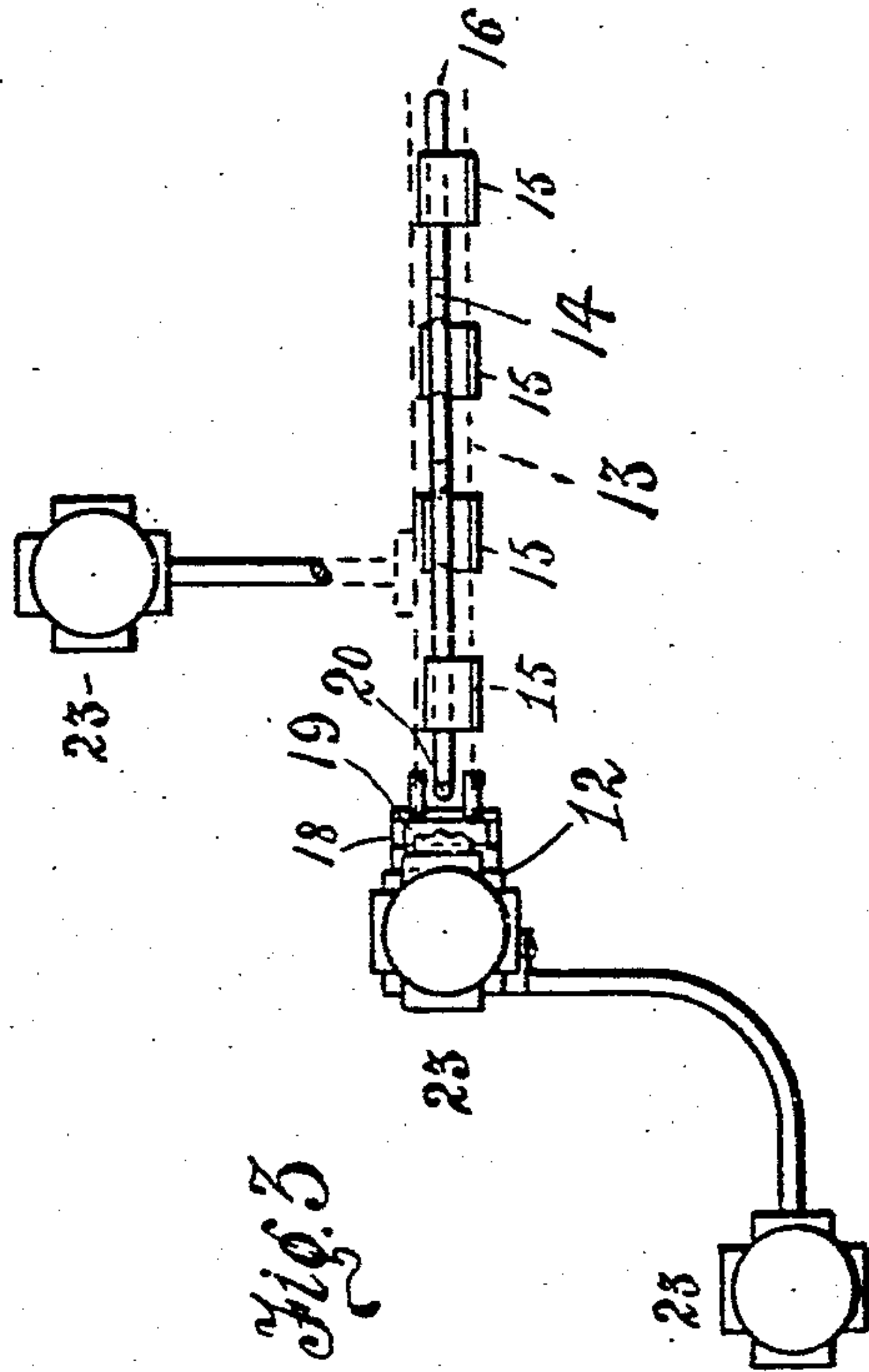
J. G. HOMET.
SIGNALING APPARATUS.
APPLICATION FILED OCT. 8, 1907.

2 SHEETS—SHEET 1.



WITNESSES.

M. R. Meacham
C. H. Woodward



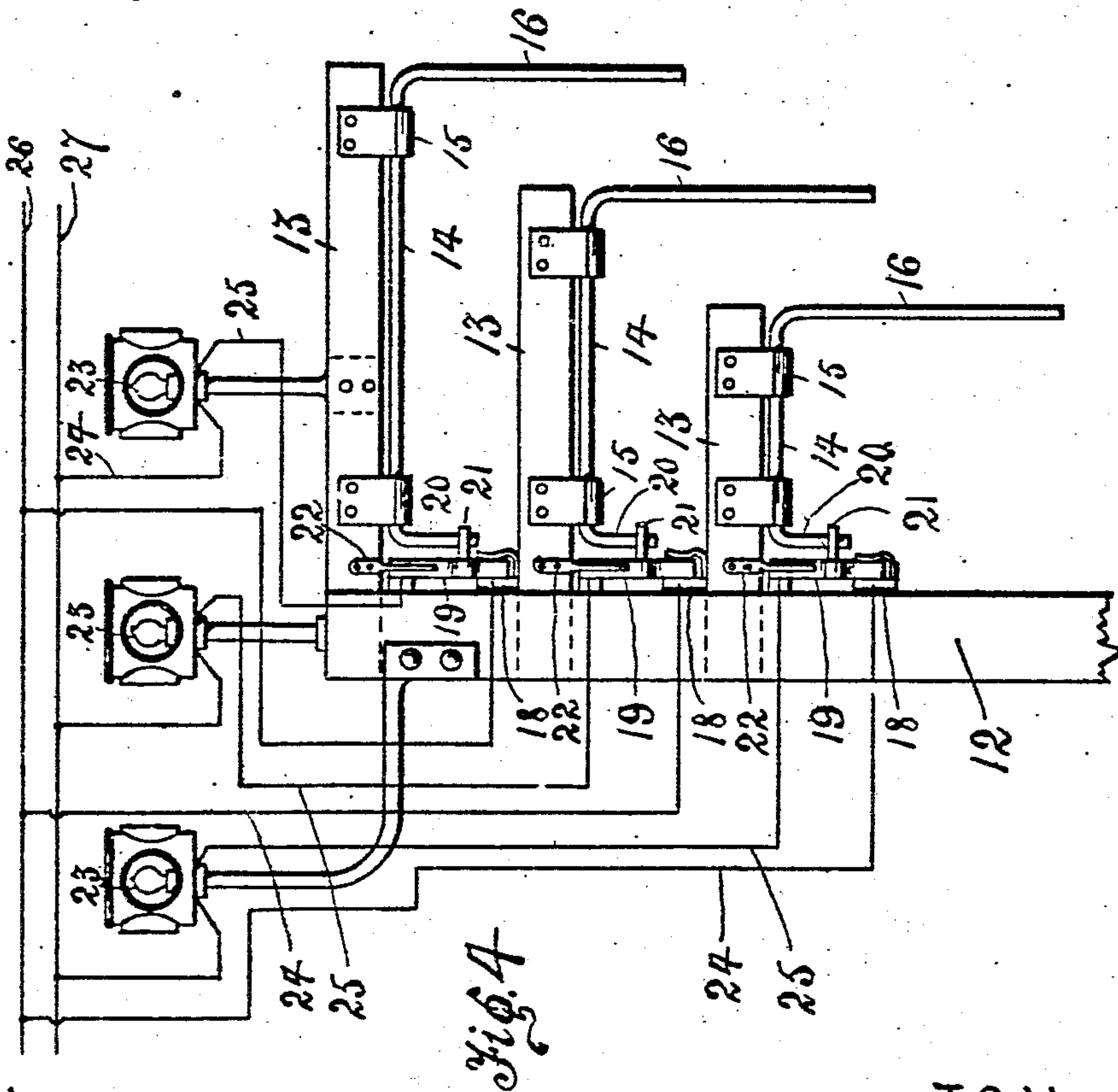
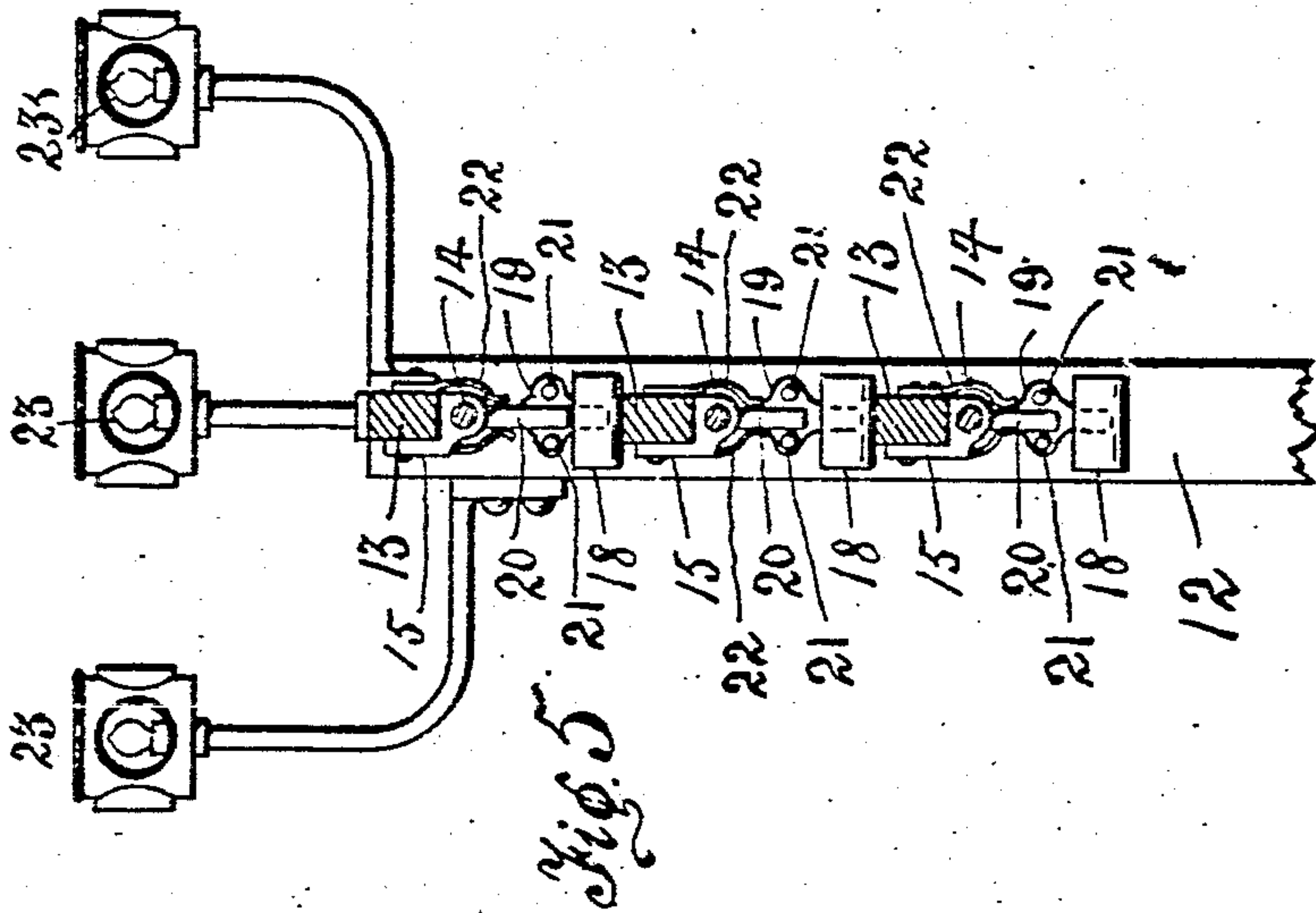
J. G. HOMET, INVENTOR.
By *[Signature]*
ATTY.

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2 SHEETS—SHEET 2.



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By *[Signature]* ATT'Y.

UNITED STATES PATENT OFFICE.

JEWET G. HOMET, OF SCRANTON, PENNSYLVANIA.

SIGNALING APPARATUS.

No. 879,548.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed October 8, 1907. Serial No. 396,450.

To all whom it may concern:

Be it known that I, JEWET G. HOMET, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Signaling Apparatus, of which the following is a specification.

This invention relates to electric signaling apparatus, and is more particularly adapted for use in connection with electric railway systems, but it may also be employed in connection with railways operated by steam or other power.

One object of the invention is to produce a simply constructed apparatus whereby the location of a car upon any portion of the line is indicated at predetermined points, such as stations, crossings, and at as many other points as may be required, so that persons in the vicinity of the track are notified of the approach of the car, and also as to its distance from the point of observation, and also as to the direction in which it is moving.

Another object of the invention is to provide a simply constructed apparatus, whereby a code of signals is established, which indicates the approach of the car, its distance from the observer, and the direction from which it is approaching.

With these and other objects in view, the invention consists in certain novel features of construction and arrangement of parts hereinafter shown and described and specifically pointed out in the claims.

In the drawings employed for illustrating the embodiment of the invention is shown the preferred form of such embodiment, and in the drawings thus employed, Figure 1 is a side elevation of a portion of a railway track, a car mounted upon the track, and the improved apparatus partly in diagrammatic form arranged adjacent to the track. Fig. 2 is a transverse section on the line 1—1 of Fig. 1 with the car in end elevation upon the track. Figs. 3, 4, and 5 are enlarged detail views of the contact mechanism, whereby the normally connected lamps are intermittently extinguished to produce the requisite signaling.

The improved device comprises a railway track indicated, as a whole, at 10, a car movable upon the track and indicated in outline at 11, a plurality of supports generally in the form of posts 12, disposed at suitable inter-

vals adjacent to the track, or at any convenient point where the lamps carried thereby may be readily observed, each post provided with one or more arms 13 projecting toward the moving car.

Attached to each arm 13 is a shaft 14 preferably supported by bearings 15, so that the shaft may be oscillated in the bearings. Each shaft is provided with a depending arm 16 at its outer end, the arm projecting toward the car and into the path of a suitable block or other operating device 17 carried by the car, so that as the car passes beneath the arm 16 the latter will be moved and thus oscillate the shaft 14. Attached to each of the supports 12 are as many stationary contacts 18 suitably insulated from the post as there are signal devices, and swinging from the post are movable contacts 19, each movable contact normally in engagement respectively with one of the stationary contacts, as shown. Each of the shafts 14 is provided at its inner end with a depending arm 20 adapted to actuate one of the swinging contacts 19, as by spaced pins 21 projecting from the swinging contacts and between which the swinging arms 20 extend. Springs 22 are arranged to maintain the swinging arms 19 normally in their central position and in constant engagement respectively with the contacts 18, as shown. By this arrangement it will be obvious that as the car 11 moves along the track and causes the operation of the shafts 14 through the co-action of the blocks 17 and the arms 16, the swinging contacts 19 will be disengaged for a brief period of time from the stationary contacts 18, the period of time depending upon the sizes or lengths of the blocks 17, as hereinafter more fully explained. Attached to each of the supports 12 are electric lamps each indicated, as a whole, at 23, the lamps connected with the contacts 18—19 by wires 24 and 25, as shown. The lamps are also connected in series by conductor wires 26—27 to any suitable source of electric power, indicated diagrammatically at 28. By this simple arrangement it will be obvious that the lamps are normally in circuit with the source of electric power, and will remain illuminated so long as the contacts 18—19 remain engaged, but when the car passes beneath the arms 16 the circuits are broken for a short period of time and the lamps extinguished,

thus indicating to the observer that a car is approaching. The lamps may be located at suitable intervals, as for instance, at stations, crossings, and at other points where it is desired to notify passers by of the approach of the car.

The above description embraces the invention in its simpler form, but a simple code of signals is employed in connection with the apparatus which materially increases its usefulness and enlarges its scope, and these enlarged features will now be described.

As before mentioned two or more of the arms 13 may be employed on each support 12, and for the purpose of illustration three of these arms are shown in Figs. 1—2—3 and 4 each with its separate rock shaft 14 and its series of contacts 18—19, and each with its lamp 23, and the car 11 is provided with a corresponding number of blocks 17, one block for each of the depending arms 16, in the illustration 3 of each member being employed, as above noted. It will be obvious, however, that any required number of arms and series of contacts and lamps may be employed.

The lamps may preferably be surrounded by casings or hoods having openings covered with glass, mica, or other transparent material of different colors, as required. The lamps arranged to be operated through the contacts associated with one of the arms will be provided with hoods having red transparent material over their openings, while the hoods covering the lamps associated with another set of contacts will be provided with green transparent material, and the lamps associated with other contacts will be provided with other colors, as may be required, and it will be obvious that the color scheme may be extended to any required extent, and I do not desire, therefore, to limit the invention to any particular number of the colors or their arrangement, as this may be varied to suit circumstances. Then again, the operating block 17 may be arranged to signal in any desired manner or at any suitable intervals. For instance, the arms 16 of one set of shafts 14 may be arranged to operate the shaft to which they are connected when the car is moving in one direction only, by simply removing one of the pins 21. By this means, when the car is moving in one direction it will not operate the arms 16, consequently the signal will be made only when the car is moving in the opposite direction, and thus the device may be employed to indicate to the observer from which direction the car is approaching, as will be obvious. It will thus be obvious that a simple code of signals may be readily arranged to denote to the observer, first, that a car is approaching, second, from what direction the car is approaching, third, the distance at which the car is located or

moving, and fourth, it will be obvious that by noting the intervals of time between the extinguishment of the lights it will be a very easy matter to estimate the speed at which the car is approaching, as the posts or supports 12 are generally located at equal distances apart, and by timing the intervals of extinguishment of the lights, the speed can be readily estimated.

While we have shown an improved construction capable of producing the required results, we do not desire to be limited thereto, as the minor details of construction may be varied, as required, and changes may be made therein within the scope of the appended claims, without departing from the principle of the invention or sacrificing any of its advantages.

Another advantage of the improved device is that signals may be readily transmitted over the line in either direction by actuating the movable arms 16 by hand, so that in event of accident, for instance, a conductor or motorman may readily notify the next station that help is required, employing in this connection a system of pre-arranged signals.

What is claimed as new is:—

1. In an apparatus of the class described, a plurality of electric lamps connected in parallel, and means whereby said lamps are consecutively extinguished momentarily by a moving car.
2. In an apparatus of the class described, a plurality of lamps, and means whereby said lamps are consecutively extinguished momentarily by a moving car.
3. In an apparatus of the class described, a railway track, a car movable upon said track, a plurality of electric lamps spaced apart and connected in parallel, and means whereby said lamps are momentarily extinguished consecutively by the moving of said car.
4. In an apparatus of the class described, a railway track, a car movable on said track, a plurality of electric lamps spaced apart and connected in parallel, and means operative by said car whereby said lamps are consecutively extinguished momentarily.
5. In an apparatus of the class described, a plurality of electric lamps disposed at spaced intervals and connected in parallel, and means operative from a moving car whereby said lamps are momentarily extinguished consecutively.
6. In an apparatus of the class described, a plurality of electric lamps, a source of electric power, means for maintaining said lamps normally in circuit with said source of electric power, a moving car, and means operative from said car whereby said circuit is momentarily broken consecutively between each pair of lamps.
7. In an apparatus of the class described, a railway track, cars moving upon said track,

electric lamps disposed at intervals adjacent to said track, a source of electric power, means for maintaining said lamps normally in circuit with said electric power, and means
5 operative by a moving car whereby said circuits are consecutively broken and the lamps momentarily extinguished.

8. In an apparatus of the class described, a plurality of supports spaced apart and each
10 provided with a set of contacts comprising a stationary member and a movable member normally in engagement, an electric lamp connected with each set of said contacts, a
15 source of electric power, means for maintaining said lamps normally in circuit with said electric power, and means actuated by a moving car for successively operating said mov-

able contacts to cause said lamps to be thereby momentarily extinguished successively.

9. In an apparatus of the class described, 20 a plurality of electric lamps each having a transparent shield of a different color, a source of electric power, means for maintaining said lamps normally in circuit with said electric power, a moving car, and means 25 operated by said car for breaking said circuits and momentarily extinguishing said lamps in predetermined order.

In testimony whereof I affix my signature in presence of two witnesses.

JEWET G. HOMET.

Witnesses:

JOHN SHARKEY,
MARTIN A. MULLIGAN.