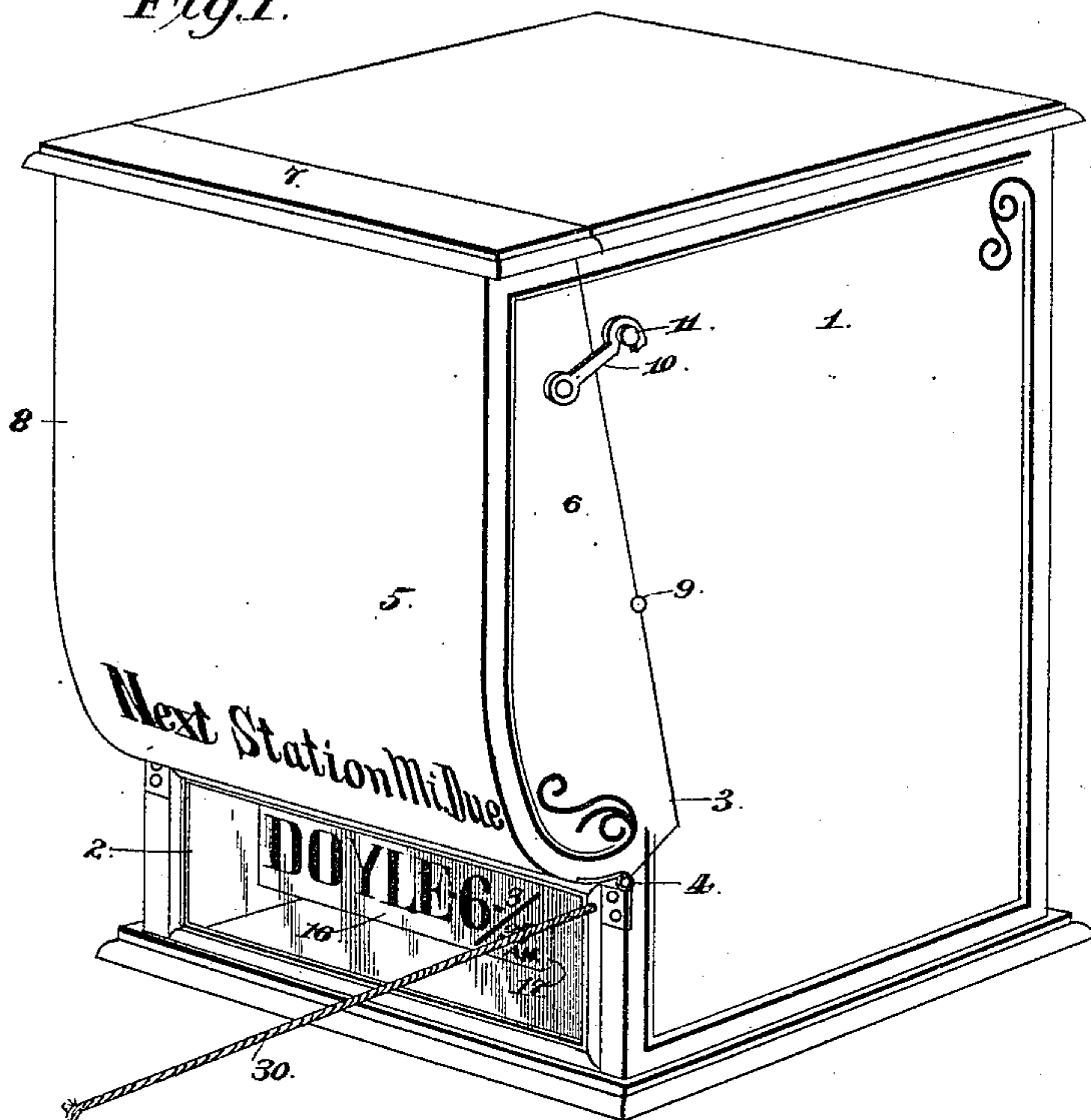


F. W. SPERRY.  
STATION INDICATOR.

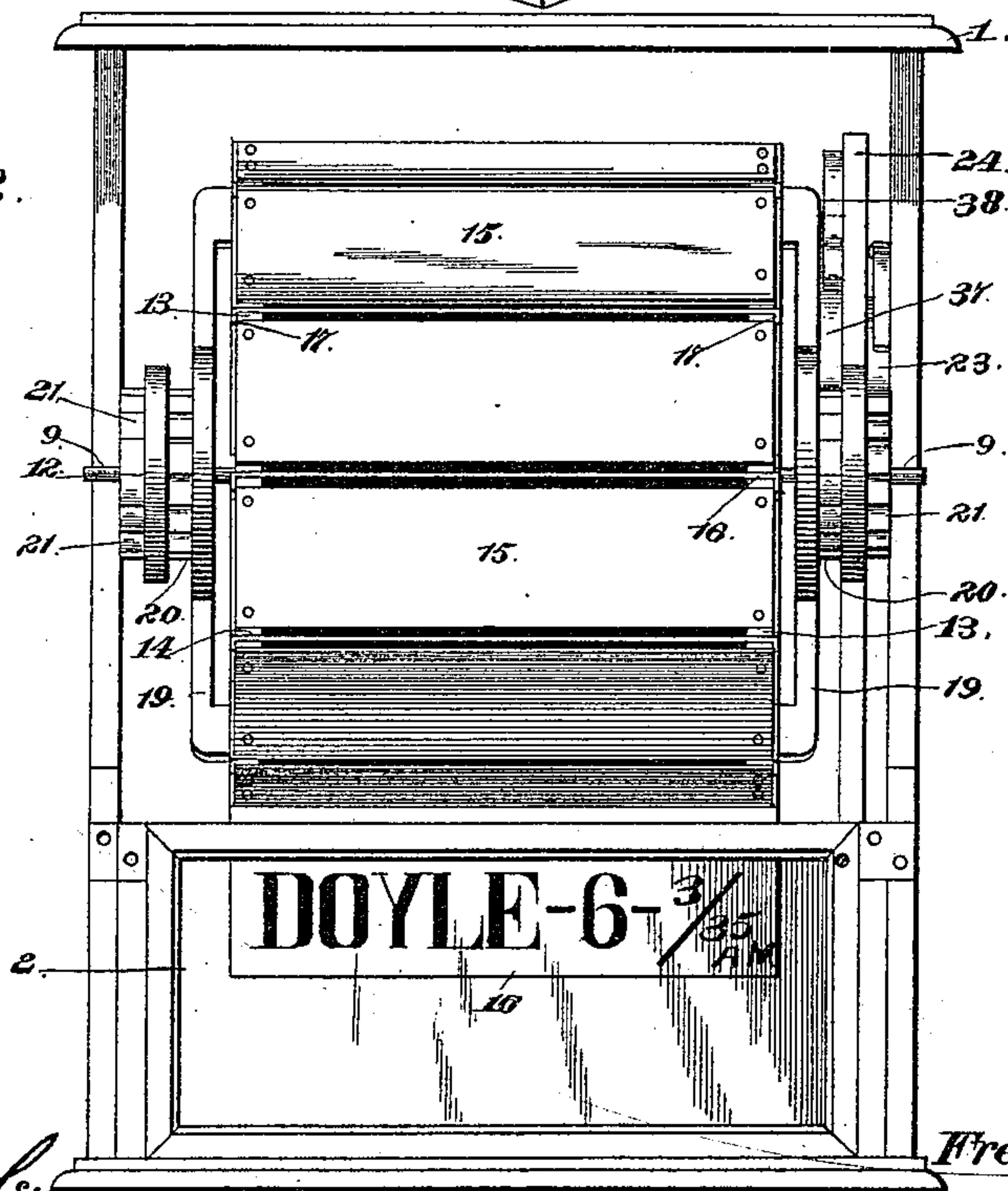
No. 438,957.

Patented Oct. 21, 1890.

*Fig. 1.*



*Fig. 2.*



Witnesses:

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*W. S. Duval*

By his Attorneys,

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Inventor

*Fred W. Sperry*

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Fig. 3.

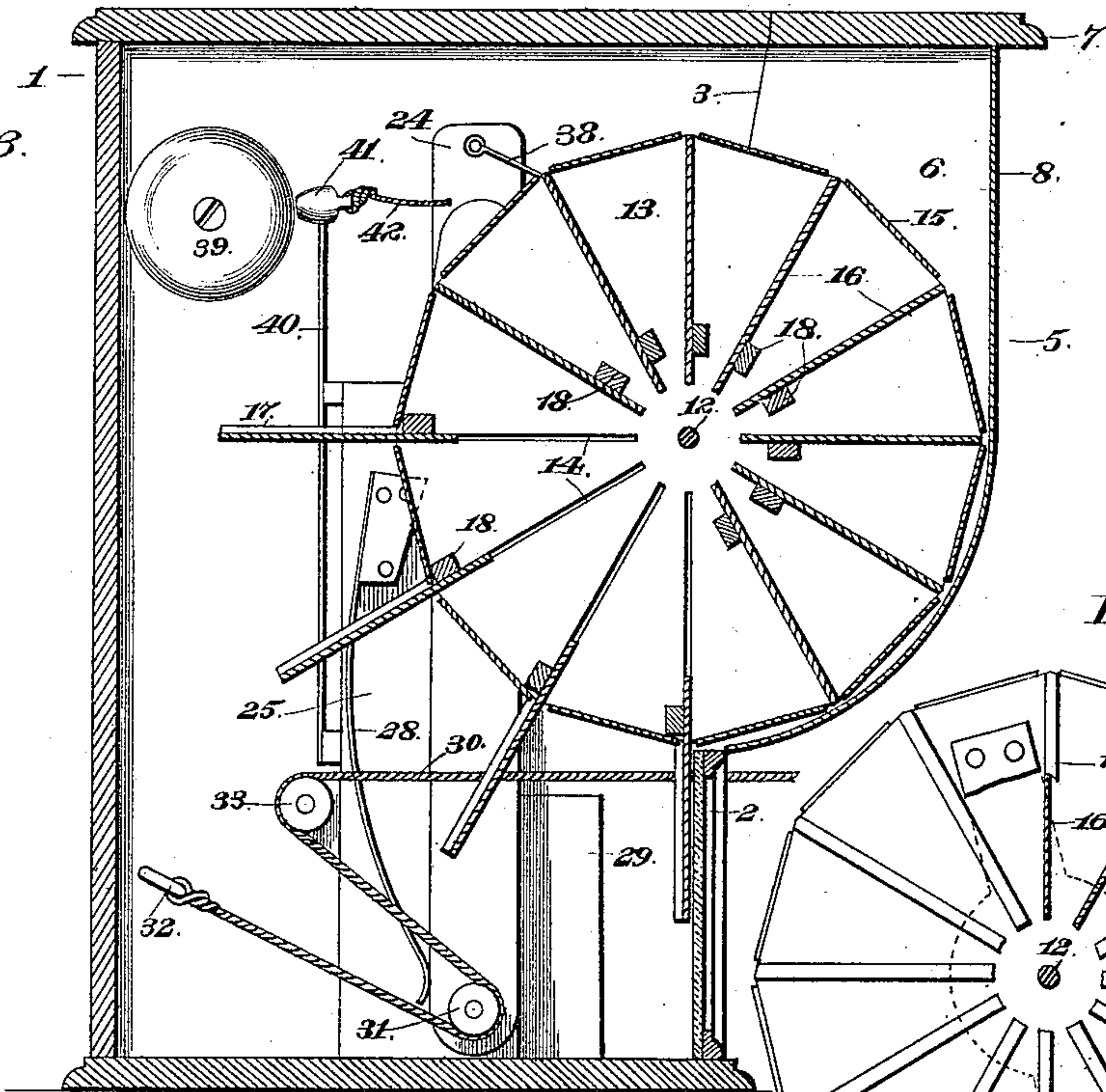


Fig. 5.

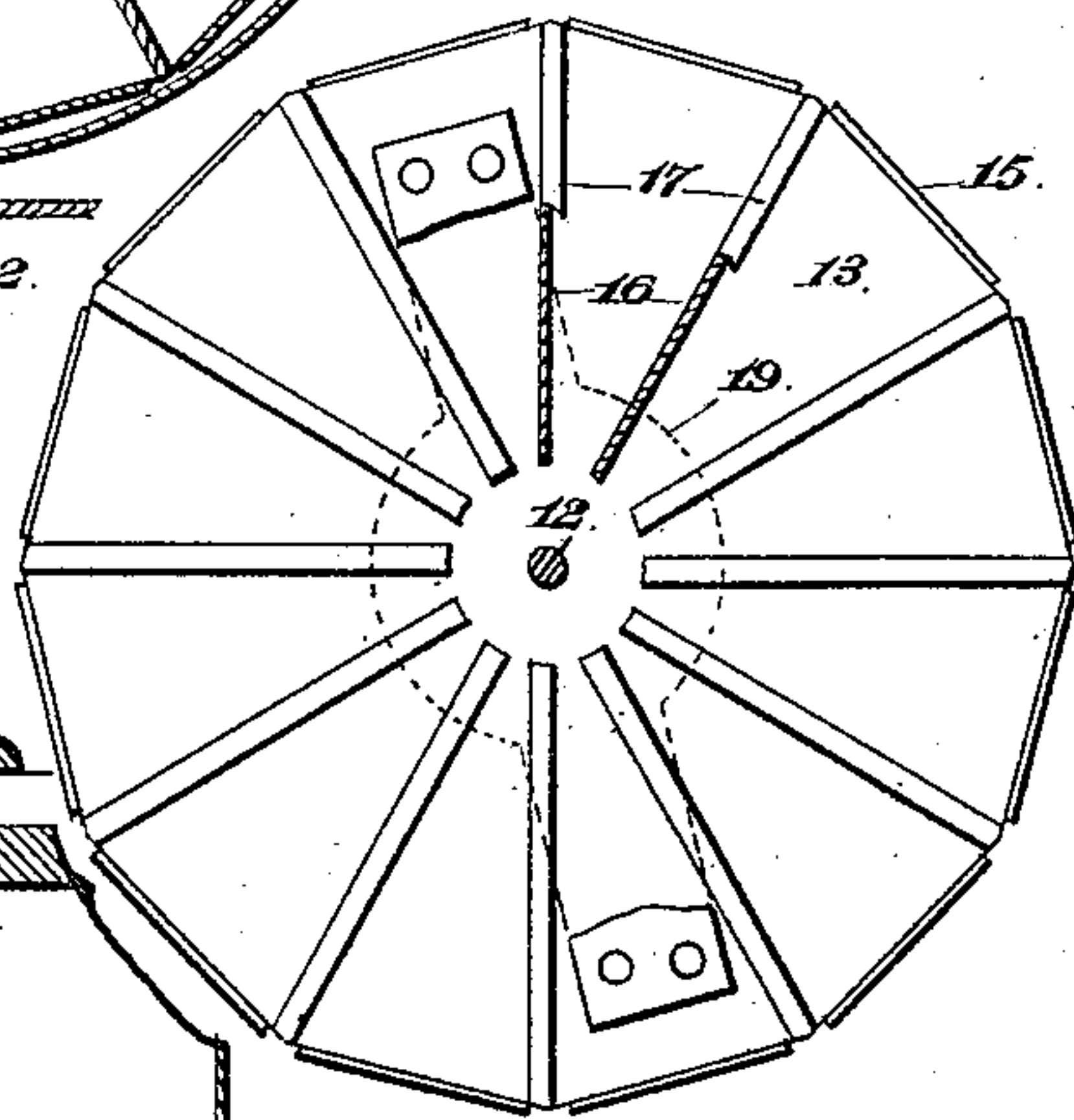


Fig. 4.

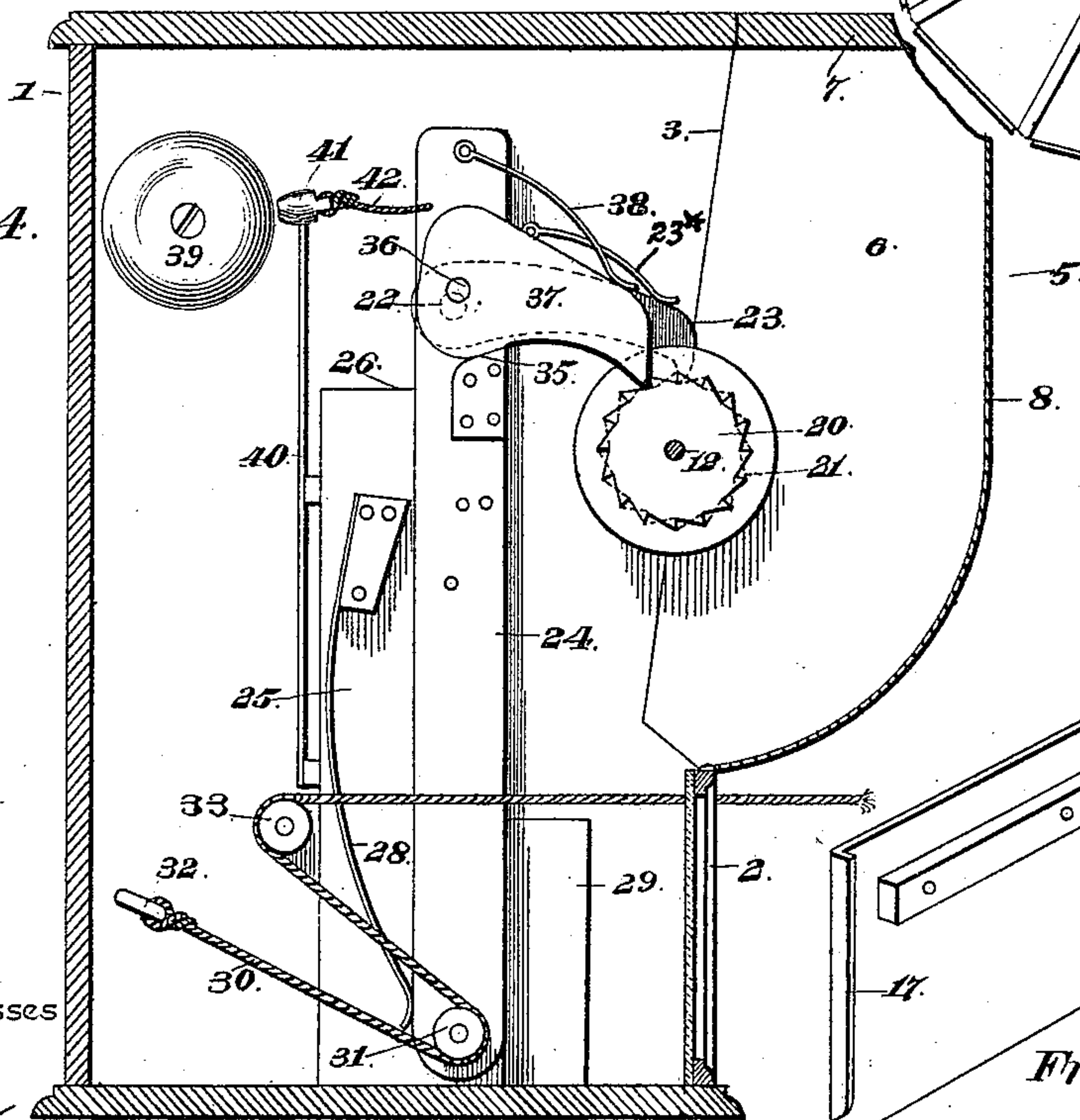
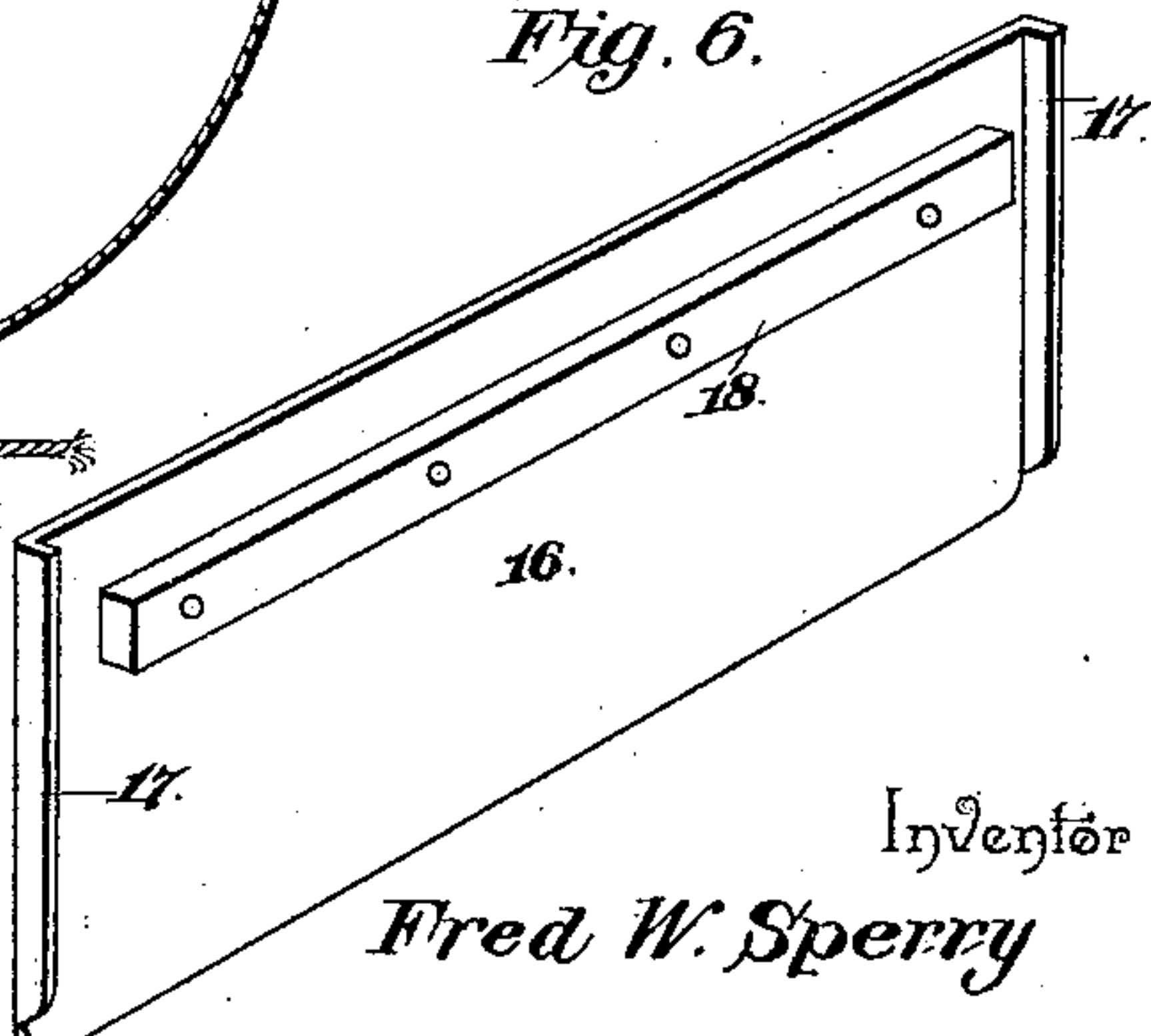


Fig. 6.



Witnesses

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*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

FRED. W. SPERRY, OF SPARTA, TENNESSEE, ASSIGNOR TO WILLIAM H. MAGNESS, JR., AND JAMES R. TUBB, OF SAME PLACE.

## STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 438,957, dated October 21, 1890.

Application filed April 21, 1890. Serial No. 348,758. (No model.)

*To all whom it may concern:*

Be it known that I, FRED. W. SPERRY, a citizen of the United States, residing at Sparta, in the county of White and State of Tennessee, have invented a new and useful Station-Indicator, of which the following is a specification.

This invention has relation to indicators for use upon street or steam railroads for indicating the street or avenue or the station which the train or car is approaching.

The objects of the invention are to provide an indicator adapted to be secured at the ends of the coaches or cars, and to be provided with a series of indicating cards or slats to be successively exposed to view simultaneous with the sounding of an alarm-bell to attract attention to the same; furthermore, to adapt said indicator to be operated by a cord or any suitable mechanism located at a distant point either by the conductor, engineer, or other authorized person, to construct the indicator in such a manner that the cards or slats as a whole may be reversed to expose either side, and to make the entire apparatus in a simple and inexpensive manner.

Other objects and advantages of the invention, together with the novel features thereof, will hereinafter appear, and be particularly pointed out in the appending claims.

Referring to the drawings, Figure 1 is a perspective of an indicator constructed in accordance with my invention, the same being secured in position. Fig. 2 is a front elevation, the case being opened, exposing the interior. Fig. 3 is a vertical transverse section through the indicating-cylinder. Fig. 4 is a similar section taken at one side of the end of the indicating-cylinder, illustrating the mechanism for operating the cylinder. Fig. 5 is an end view of the cylinder, and Fig. 6 a detail in perspective of one of the indicating-slats.

Like numerals indicate like parts in all the figures.

1 represents the casing of the indicator, which is rectangular and adapted to be secured at the end of a car or coach or convenient place in a depot or station, whereby the same may be readily seen by the public.

The lower front portion of the indicator-casing is open, as at 2, or may be covered by any transparent panel. Above said opening the front edges of the side walls are cut away or recessed, as at 3, and to the lower ends of the recesses there is hinged, as at 4, a hinged section or front 5, said front consisting of opposite side pieces 6, a top section 7, and a front section 8. The front section 8 is curved, as shown, and in the front edges of the side walls of the case are formed opened bearings 9, said bearings being closed when the front hinged section is swung to a closed or vertical position, in which position said section is maintained by means of a pair of pivoted hooks 10, mounted thereon and overlapping headed studs 11 projecting from the side walls of the indicator-casing 1.

The indicator or cylinder comprises a transverse shaft 12, upon which, near its ends, are mounted opposite heads 13 of polygonal shape, which heads are readily recessed or kerfed, as at 14, and connected intermediate the kerfs by means of cross-strips 15, spaced apart to form intermediate spaces aligning with the opposite kerfs. In each of the kerfs there is mounted a thin and preferably sheet-metal slat 16, the opposite ends of which are bent, as at 17, to overlap the exterior surfaces of the heads and form guides for the movements of the slats within the kerfs. The size of the slats are such that they are adapted to be wholly inclosed by the cylinder when inserted therein, and they are loosely mounted in the kerfs in such a manner as when in a vertical position below the shaft of the cylinder to fall by gravity, exposing themselves to view, their downward movement being limited by a stop-cleat 18, secured to the inner edges of the slats and adapted to come into contact with the cross-strips 15 of the cylinder. Mounted upon the shaft 12 at the outer sides of the heads are bridges 19, and at the sides of the bridges upon said shaft are ratchets 20, and beyond the ratchets 20 is a second pair of ratchets 21, said ratchets 21 having their teeth disposed in opposite directions to those of the ratchet 21, and also with relation to each other, so that the indicator may be used either side to the front, and in either instance



the pawls 23 and 37 are adapted to coact with the ratchets in the manner described, as hereinafter set forth. The head bridges and ratchets are all fast or rigid upon the shaft, and the shaft is inserted in the open bearings 9 of the casing in such a manner that when the slats are dropped by gravity successively from the cylinder their faces are exposed through the sight-opening 2 of the casing. By the manner of mounting herein described it will be apparent that by swinging the front of the casing to the open position said cylinder may be withdrawn and reversed, so that both faces of the slats may be utilized for the purpose of bearing such characters as the names of succeeding streets, stations, train-times, &c. The curved front of the casing is so arranged with relation to the cylinder and its slats as to serve as a stop for those slats approaching a point vertically opposite the shaft of the cylinder, so that none but the proper slat and the one directly opposite said shaft will be permitted to fall in view of the public or occupants of the coaches or cars.

To the inner surface of one of the side walls of the indicator-case there is pivoted, as at 22, a pawl 23, the front end of which is pressed into mesh with the outer ratchet 21 by means of a flat spring 23\*, arranged above the pawl, which latter serves to act as a retaining-pawl and prevent any retrograde movement of the cylinder.

24 represents a lever arranged vertically within the casing and pivoted to a space-block 25, arranged under the pawl 23, as shown at 26, so that said lever is out of contact with said pawl and the movements of the one will not interfere with those of the other. A spring 28 is secured to the space-block and has its lower free end bearing upon the lower end of the lever, which end is pressed against a stop 29, projecting from the casing at the front of the lever. A cord 30 is secured at the lower end of the lever by being passed around a pulley 31, affixed upon said lever. One terminal of the cord is then secured to the casing, as at 32, and the opposite terminal passed over a pulley 33 in rear of the lever, and thence through the front of the casing, and extends within easy grasp of the conductor of the car at the rear end of the car. When used upon a series of coaches, as in a train, the cords 30 may be simultaneously operated by means of a single cord. (Not shown.) The upper end of the lever is cut away to form a recess 35 and pivoted as at 36. Within the recess is a pawl 37, spring-pressed against the bottom of the recess, which forms a stop therefor by means of a flat spring 38.

This being the construction, the operation is as follows: The lever, it will be observed, may be operated in many different ways from that herein shown, which is one of the simplest known, and I do not limit my invention in this respect, but hold that I may vary the

same in accordance with the location of the apparatus. A movement of the lever, it will be apparent, will cause the pawl at the upper end of the same to rotate the ratchet 20 one tooth, which ratchet is provided with a tooth for every indicating-slat of the indicating-cylinder, so that at each movement of the lever the cylinder is moved and a new slat permitted to fall from the curved front into view and over the opening 2 of the casing. The companion pawl serves to prevent any retrograde movement of the cylinder when the feed-pawl is being carried to the rear by the flat spring bearing against the lever, and it will be observed that said pawls by reason of the opposite disposition given the teeth of the ratchet act to hold the cylinder against movement in either direction, except when desired, and the machine is operated.

From the above it will be apparent that I have provided an exceedingly simple apparatus that will positively act at all times, and that the cylinder by reason of the manner of mounting the shaft of the same and the duplication of the ratchets may be readily reversed, so that each side of the slat may be employed as indicating mediums.

In the rear of the upper end of the lever there is secured to the inner wall of the casing an alarm-bell 39, and below said bell there is secured to the casing the lower end of a resilient hammer-rod 40, having a head 41 at its upper end, which by the rod is normally pressed into contact with the bell. A string or wire 42 connects the head with the upper end of the lever, so that said head is withdrawn from contact with the bell by the movement of the lever in the act of operating the machine, and when the lever is released and returned by its spring to its normal position the hammer-head is by its resilient rod thrown against the bell and sounds the same simultaneously with the changing of the indicating-slat.

Having thus described my invention, what I claim is—

1. In an indicator, the combination, with the casing having a curved front at its upper portion and below the same an opening and bearings formed in the side walls of the indicator, of a shaft loosely mounted in the bearings, mechanism for rotating the shaft, a cylinder mounted on the shaft and provided with a series of radiating recesses, and a series of loose slats mounted in the recesses and adapted to fall by gravity therefrom and be supported as and until they approach a point vertically below the shaft by means of said curved front, substantially as specified.

2. In an indicator, the combination, with the casing, of a hinged front, the adjacent edges having formed therein bearings, a reversible indicating slat-carrying cylinder and its shaft, the latter removably mounted in the bearings, and means for operating said cylinder in either position, substantially as specified.



3. In an indicator, the combination, with the casing having an opening near its bottom and provided with bearing-openings, of a shaft removably mounted in the openings, a reversible cylinder mounted upon the shaft and provided with a series of radiating recesses, indicating-slats loosely mounted in the recesses and adapted to fall by gravity from the same when vertically below the shaft, opposite pairs of ratchets mounted at each side of the cylinder upon the shaft and having oppositely-disposed teeth, a pivoted pawl engaging one of the ratchets, a lever arranged in rear of the other ratchet and having a pivoted pawl at its upper end engaging the opposite ratchet, a spring for retracting the upper end of the lever, and means for operating said lever, substantially as specified.

4. In an indicator, the combination, with the casing having an opening near its bottom and above the same provided with bearing-openings, of a shaft mounted in the bearings, a cylinder mounted on the shaft and provided with a series of radiating recesses, a series of indicating-slats mounted in the recesses, a ratchet mounted on the shaft and having a series of teeth agreeing in number with the recesses, a pivoted lever and means for operating the same arranged in rear of the shaft, a pawl pivoted to the lever and engaging the ratchet, a spring for retracting the lever, a bell arranged in rear of the lever, and a hammer-rod formed of spring-wire, pivoted in rear of the lever and loosely connected therewith, the head of said rod being normally maintained against the bell, substantially as specified.

5. In an indicator, the combination, with the casing having an opening near its lower end and above said openings provided with bearings, of a shaft removably mounted in the bearings and provided with opposite heads radially kerfed and connected between its kerfs by cross-strips, a series of indicating-slats loosely mounted in the kerfs and having their outer ends loosely embracing the heads, stop-cleats secured to the inner edges of the slats, and mechanism for operating the cylinder, substantially as specified.

6. In an indicator, the combination, with the casing having opposite open bearings, of a shaft removably mounted in the bearings, a slat-carrying cylinder mounted upon the shaft, pairs of ratchet-wheels located upon the shaft at the opposite end of the cylinder, the teeth of each pair being oppositely disposed with relation to each other, and those of one pair being disposed in a direction opposite to those of the other, a holding-pawl pivoted to the side of the casing and engaging the teeth of the outer ratchet at that side of the machine, and a pivoted lever located a short distance from the wall of the casing and provided with a feed-pawl for engaging and operating the inner ratchet, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FRED. W. SPERRY.

Witnesses:

EDGAR PEARSON,  
CHARLES YOUNG.