

No. 768,193.

PATENTED AUG. 23, 1904.

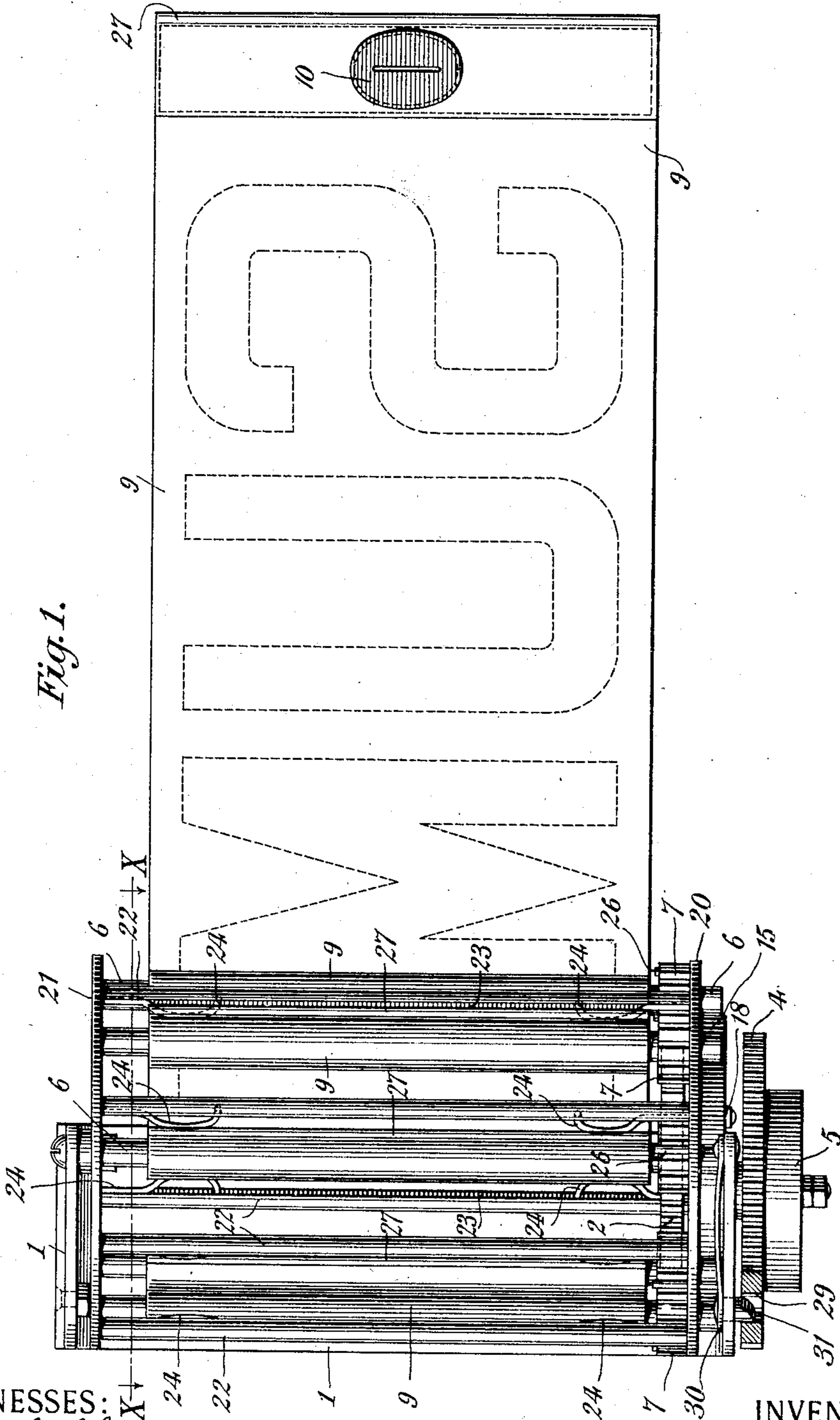
G. W. PEIRCE.
VEHICLE DESTINATION SIGN.

APPLICATION FILED APR. 16, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

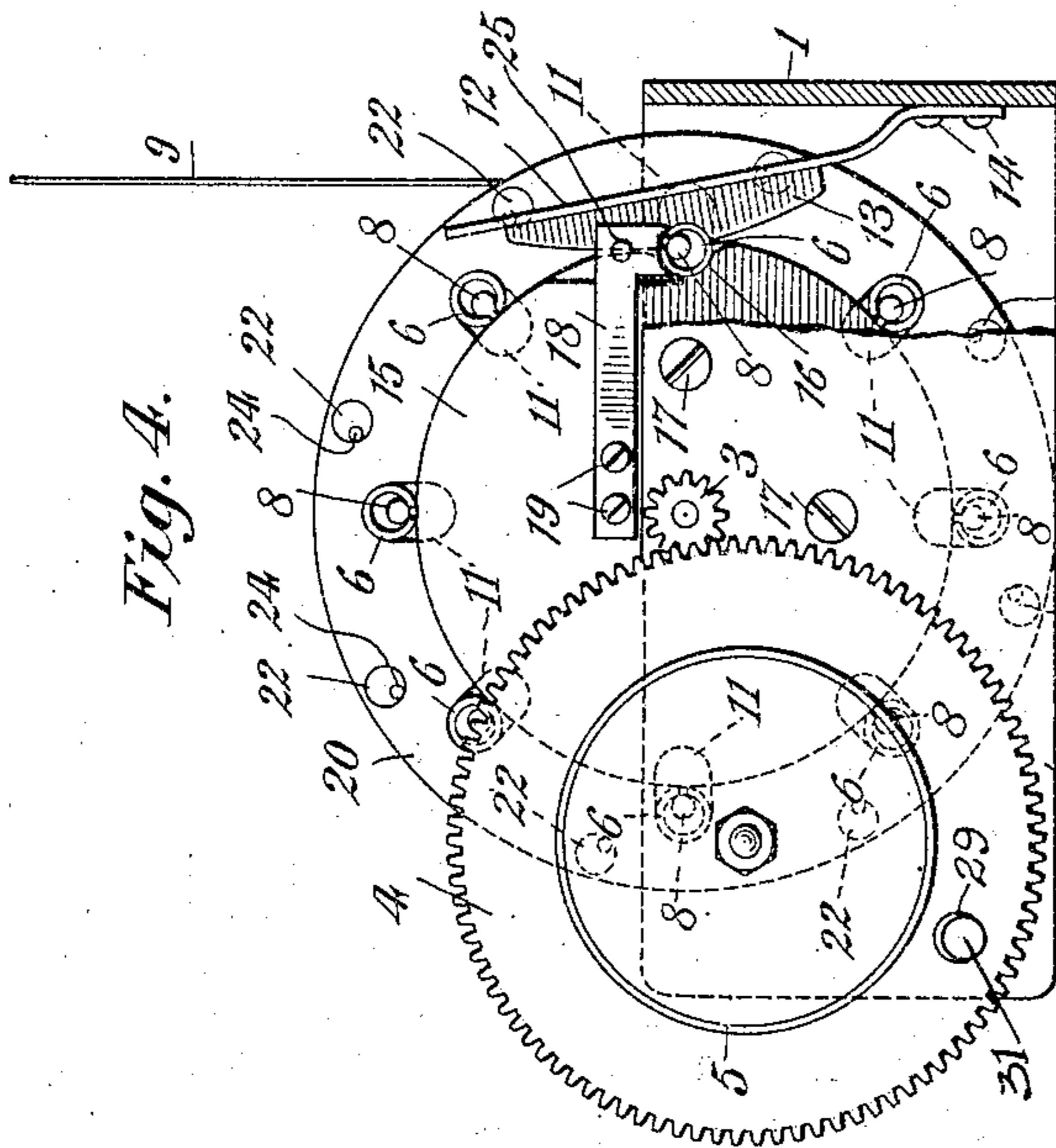


Fig. 4.

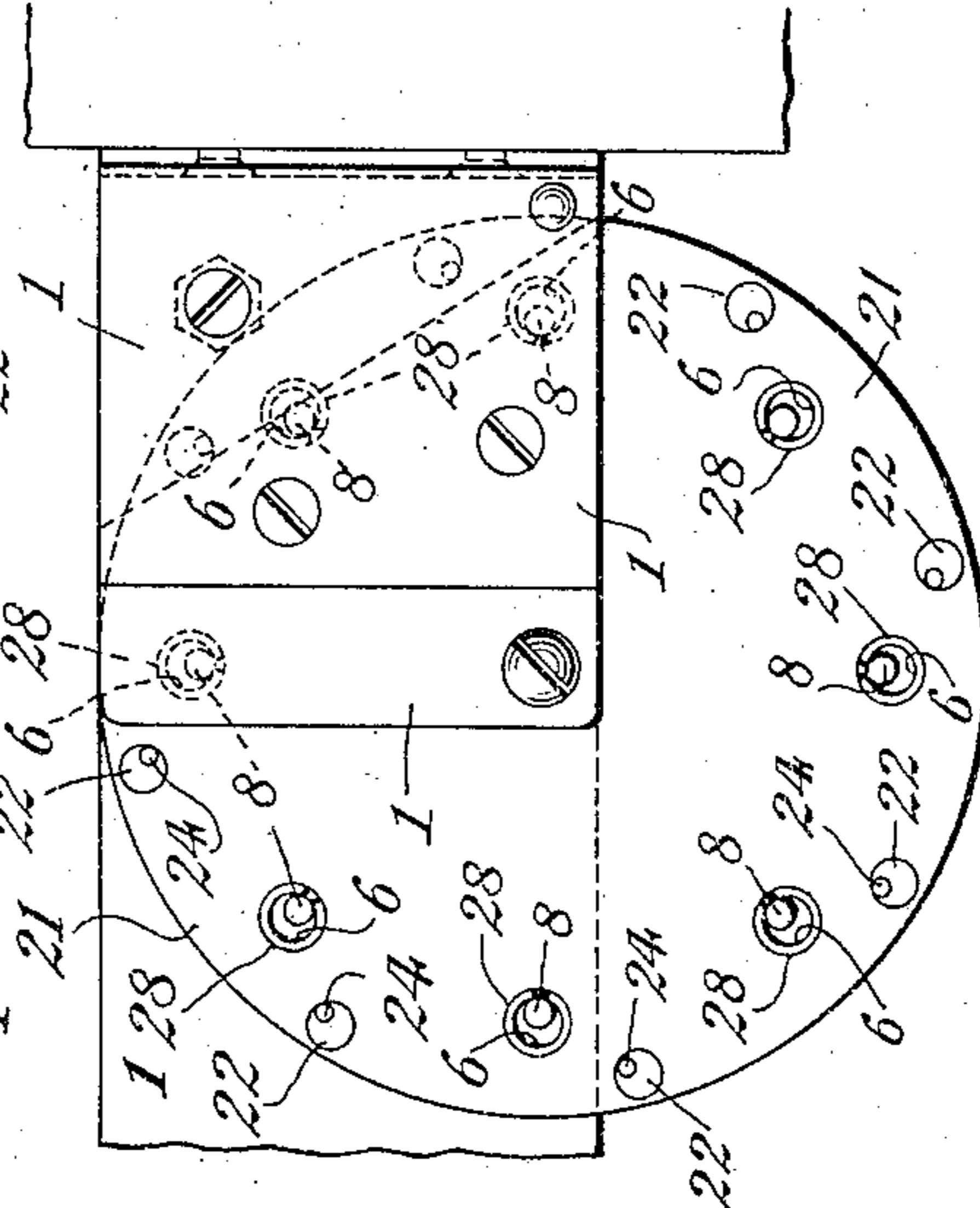


Fig. 5.

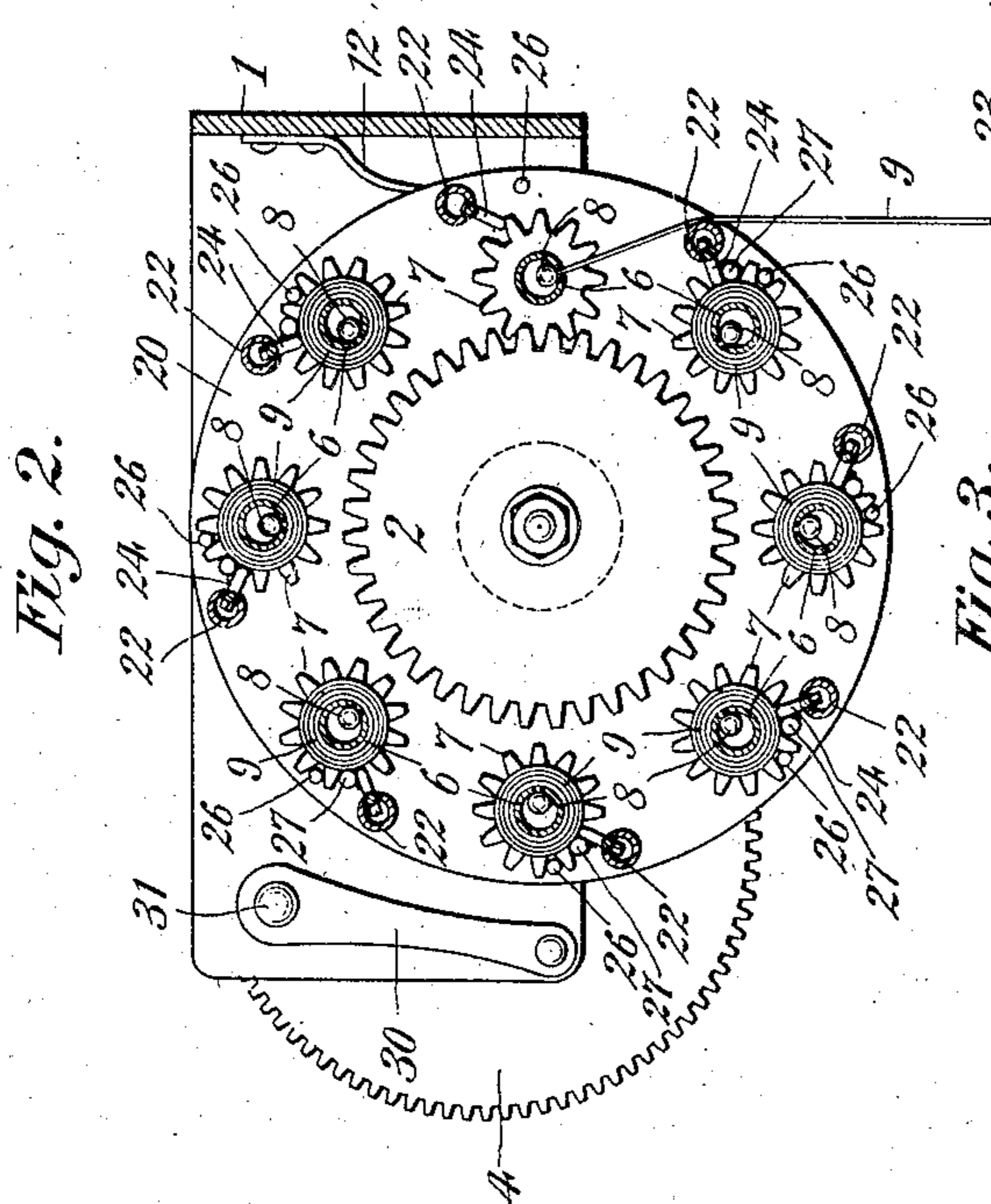


Fig. 2.

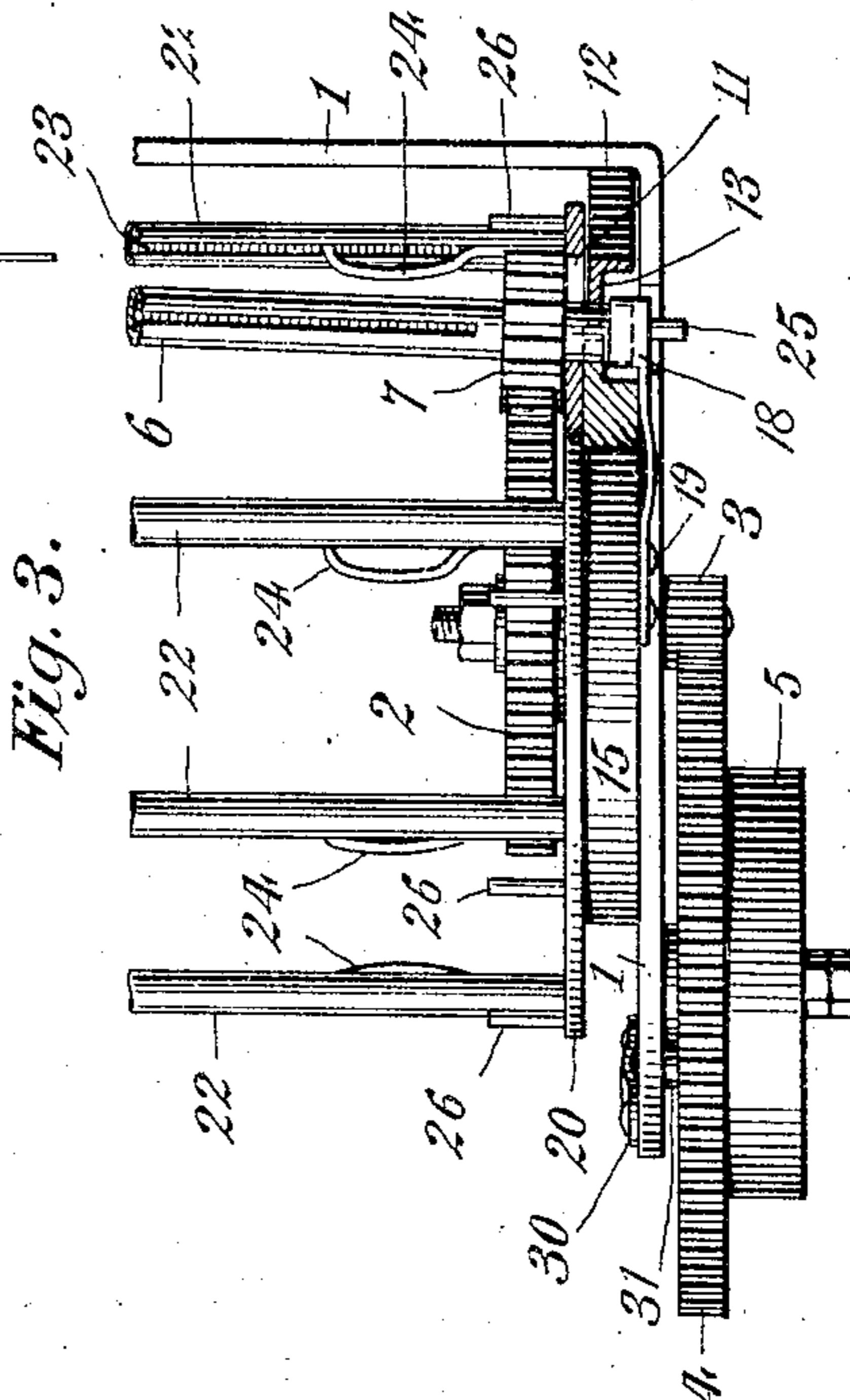


Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE W. PEIRCE, OF STAMFORD, CONNECTICUT.

VEHICLE DESTINATION-SIGN.

SPECIFICATION forming part of Letters Patent No. 768,193, dated August 23, 1904.

Application filed April 16, 1904. Serial No. 203,460. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PEIRCE, a citizen of the United States, residing at Stamford, county of Fairfield, and State of Connecticut, have made a new and useful Invention in Vehicle Destination-Signs, of which the following is a specification.

My invention is directed to improvements in destination-signs such as are ordinarily used in connection with street-railway cars, omnibuses, or similar public conveyances, the same being interchangeable for the purpose of conveying to the public information as to the destination of the vehicle, and especially to an improvement upon a sign of this type disclosed in a prior application filed by me in the United States Patent Office on the 3d day of November, 1903, bearing Serial No. 179,677.

In using the destination-signs disclosed in the before-mentioned application only one sign could be utilized at a time, and if it were desirable to utilize other signs the conductor or motorman was required to carry a supply of the same either on his person or about the car and substitute such as might be desired at the required time.

My present improvement contemplates the use of an indefinite number of such signs carried on board the car and in position ready for use when desired, the same being so arranged that the motorman or conductor is only required to so actuate the device as to automatically wind up any sign which has been in use and to substitute the desired sign therefor.

For a full and clear understanding of my invention, such as will enable others skilled in the art to construct and use the same, reference is had to the accompanying drawings, in which—

Figure 1 is a rear elevational view of the complete device, showing one of the signs partly withdrawn. Fig. 2 is a sectional view taken on the line X X, Fig. 1, and as seen looking thereat from the top toward the bottom of the drawing. Fig. 3 is a side elevational view of the lower part of the operating mechanism as seen looking at Fig. 1 from right to left. Fig. 4 is a bottom plan view as seen looking at Fig. 3 from the bottom toward the top of the drawing, a part of the frame being broken

away to illustrate the means for locking the lower end of that one of the sign-supporting tubes or rods in use. Fig. 5 is a top plan view as seen looking at Fig. 1 from the top toward the bottom of the drawing.

In all of the figures of the drawings like numerals represent like or equivalent parts wherever used.

1 represents the frame of the sign supporting and operating device, the same being constructed of a flat piece of iron or brass bent at right angles at its opposite ends, so as to constitute a support for a rotary sign-sustaining device having the general structural form of a "lantern-wheel" and provided with heads 20 21 and hollow interconnecting rods 22 22, preferably eight in number, 15 being a stationary disk-shaped support for the same, resting directly upon and secured directly to the lower portion of the frame by screws 17. This rotary sign supporting and operating device is journaled at its opposite ends in the rectangular extensions of the frame, and to the lower journal-bearing is secured a gear-wheel 2 upon a short shaft extending through the disk-shaped support 15 and frame 1, to the lower end of which shaft is attached a pinion 3, meshing with a main driving gear-wheel 4, journaled directly upon a short shaft secured beneath the frame and having attached to it one end of a strong spiral driving-spring, located in a surrounding casing 5.

6 is a sign-supporting tube or rod slitted on one side for the reception of the supporting-rod 8, to which is attached the flexible sign 9, having at its outer end a rigid metallic edging-strip 27 and a catch 10, 7 being a pinion secured to the lower end of the sign-supporting tube or rod and adapted to mesh with the gear-wheel 2, these parts being identically like the corresponding parts disclosed in my prior application above referred to.

In Fig. 3 of the drawings all of the sign-supporting tubes but the one in actual use are removed for the purpose of avoiding confusion.

11 11 11 are radially-disposed oblong slots in the lower head 20 of the sign supporting and operating device, said slots being oblong for the purpose of permitting all of the pin-

ions 7 at the lower ends of the slotted tubes or rods to be locked out of mesh with the gear-wheel 2 or individually in mesh therewith, as desired. (See Fig. 2.) Corresponding circular openings 28 of the same diameter as the upper ends of the slotted sign-supporting tubes or rods 6 are provided in the upper head 21.

24 24 24 are spring-fingers having each one end only secured directly in the slot 23 of the hollow interconnecting rods 22, so that their other ends shall be free to move into and out of the slots and that said spring-fingers may act yieldingly against the outer surface of the flexible sign 9 as it is rolled upon and unrolled from the sign-supporting tube or rod 6, said fingers acting after the manner of the usual leaf-spring fingers found in connection with printing-presses and like devices which are designed to hold the paper snugly against the roll as it is unrolled therefrom and in the present instance to prevent the sign from rolling up unevenly should the catch 10 be suddenly liberated or released. There is one pair of these fingers secured in the manner described to each of the hollow interconnecting rods 22, and their operation will be readily understood, in view of what has been said, on inspection of Fig. 1 of the drawings.

26 26 26 are locking-pins for locking the pinions 7 against rotation after the slotted sign-supporting tube or rod is slipped in position and before it is locked in operative relation with the gear-wheel. (See Fig. 2.)

16 constitutes one-half of the journal-bearing of that particular sign which is at any time in use, said semi journal-bearing being cut in the lateral edge of the stationary disk-shaped support 15, and 13 is another semi journal-bearing supported by a strong leaf-spring 12, connected by rivets or screws 14 to the frame 1 and in such manner that when the two portions of the journal-bearing are in the position shown in Fig. 4 they constitute a complete journal-bearing for the lower end of the slotted sign-supporting tube or rod with its pinion 7 meshing with the gear-wheel 2.

18 is a spring-supported lock or latch secured directly to the lower face of the disk-shaped support 15 by screws 19 19 and designed to lock the lower end of the sign-supporting tube or rod and in such manner that the pinion 7 will remain firmly in mesh with the gear-wheel 2 when the sign is being drawn out, 25 being an operating-pin for enabling one to easily release said lock by pulling it downward.

29 is a locking-hole in the driving-wheel 4, adapted to receive a locking-pin 31, secured to the free end of a spring 30, the fixed end of which is attached directly to the frame, (see Fig. 1,) the function of these parts being to lock the driving-gear with the driving-spring under tension.

The operation is as follows: Each one of the

sign-supporting tubes or rods, here shown as eight in number, is provided with a different street-sign, and the same is wound thereon and slipped into position with its upper end resting in one of the circular journal-bearings in the head 21. Its lower end is then slipped into position in the corresponding oblong slot 11 in the lower head 20, each of said tubes or rods but one being locked against rotation by its corresponding locking-pin 26, located closely adjacent to the companion interconnecting rod 22. The operating driving-spring in the casing 5 is then put under strong tension by rotating the main driving gear-wheel 4 in the proper direction the desired number of times until the locking-pin 31 falls into the hole 29 in the main driving gear-wheel 4. The sign-sustaining lantern-wheel, with the supported sign, is then rotated to the position of the sign it is desired to expose, with the lower end of the slotted tube between the two-part journal-bearing 13 and 16, so that the strong spring 12, which supports the latter, will force the slotted tube into the position shown in Fig. 4, so that the pinion 7 meshes firmly with the gear-wheel 2. (See Fig. 2.) When in this position, the upper end of this particular sign-supporting tube is located beneath the lower surface of the upper angular extension of the frame, so that it is locked against upward movement, thereby assuring positive connection between the spring-driven gearing and the slotted sign-supporting tube or rod to such an extent that the same will always remain wound by reason of this source of applied power. To expose the sign, the attendant now takes hold of the rigid metallic edging-strip 27 at the outer end of the sign 9 and draws it out to its extreme limit, ultimately locking the catch 10 over a stationary hook (not shown) at the distant end of the transom-window. As the sign is drawn to its extreme limit the driving-wheel 4 is rotated in the proper direction to allow the locking-pin 31 to be forced into the locking-hole 29 in one edge thereof, so as to take the strain off of the catch 10 and latch which supports it.

The sign supporting and operating device is prevented from rotating when the sign 9 is being drawn forward, as shown in Fig. 4, by reason of the locking action of the outer end of the locking-latch 18 against the lower end of the slitted tube or rod 6, and the action of the strong spring 12 is such as to form a good journal-bearing for said tube or rod 6 between the semi journal-bearing 13 and the corresponding semi journal-bearing 16 in the edge of the disk-shaped support 15.

When it is desired to change the sign, the attendant simply releases the catch 10, withdraws the locking-pin 31 from the locking-hole 29, and allows that particular sign to be wound up, as it will be by the resilient action of the driving-spring, after which the sign supporting and operating device is rotated to

the desired position to expose and lock in operative relation the particular sign it is intended to display. It will be appreciated that with such a device I am enabled to supply a car, omnibus, or other moving vehicle with an indefinite number of interchangeable street-signs which may be quickly substituted the one for the other.

I do not limit my invention to the specific structural arrangement of parts hereinbefore described, and illustrated in the accompanying drawings, as I believe it is broadly new with me to provide means for displaying interchangeable flexible signs so arranged that one may be substituted for another when desired by simply providing a supply of such signs rolled up on standards or supports and so interconnected with spring-actuated controlling mechanism that the same may be restored to inoperative position by simply releasing them in the manner hereinbefore described. Nor do I limit the use of my invention to vehicles, as obviously the same may be utilized in stores or places generally where it is desired to give different indications in the nature of flexible signs which may be substituted the one for the other at will, and I contemplate generally such uses for my novel sign-displaying devices.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A series of interchangeable flexible signs carried by a rotary sign-sustaining device; in combination with means for connecting any one of said signs to a source of power, the arrangement being such that when a sign is drawn out or exposed the source of power is applied thereto and adapted to return it to its normal or concealed position when released.

2. A series of flexible signs each normally rolled upon a supporting tube or rod and all carried by a rotary sign-sustaining device; in combination with power-impelled gearing and means for connecting any one of said sign-supporting tubes thereto; together with means for maintaining any sign exposed against the stress of the power-impelled gearing.

3. A rotary sign-sustaining device of "lantern-wheel" construction provided with journal-bearings in the upper head thereof; in

combination with a series of sign-supporting tubes or rods provided with flexible signs wound therearound; spring-impelled gearing and means for locking all of said tubes out of operative relation with said gearing; together with means for locking any one of the same in operative relation therewith.

4. A series of flexible signs supported by tubes or rods provided each with a pinion at one end, said signs being carried by a rotary sustaining device; in combination with power-impelled gearing and means for locking the pinion of any one of the signs in mesh therewith, the arrangement being such that when that particular sign is drawn out or exposed sufficient stress is imparted thereto to rewind it when released.

5. A series of flexible signs supported each by a tube or rod and all carried by a rotary sign-sustaining device; spring-impelled gearing and means for connecting said gearing to any one of said tubes; together with a catch at the outer end of said sign for holding it in an exposed position and against the stress of the power-impelled gearing.

6. A rotary sign-sustaining device of "lantern-wheel" construction having journal-bearings in its upper head and oblong slots in its lower head corresponding thereto; in combination with a series of sign-supporting tubes or rods adapted to be journaled at their upper ends in the journal-bearings and provided with means adjacent to the slots for locking them against rotation.

7. A rotary sign-sustaining device having two heads; in combination with a series of flexible signs rolled each upon a tube or rod; together with journal-bearings in one of the heads for the tubes or rods and corresponding oblong slots in the other head for receiving the other ends of said tubes or rods; and means for locking all of the tubes or rods against rotation, the arrangement being such that any one of the signs may be unrolled and exposed.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. PEIRCE.

Witnesses:

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M. F. KEATING.