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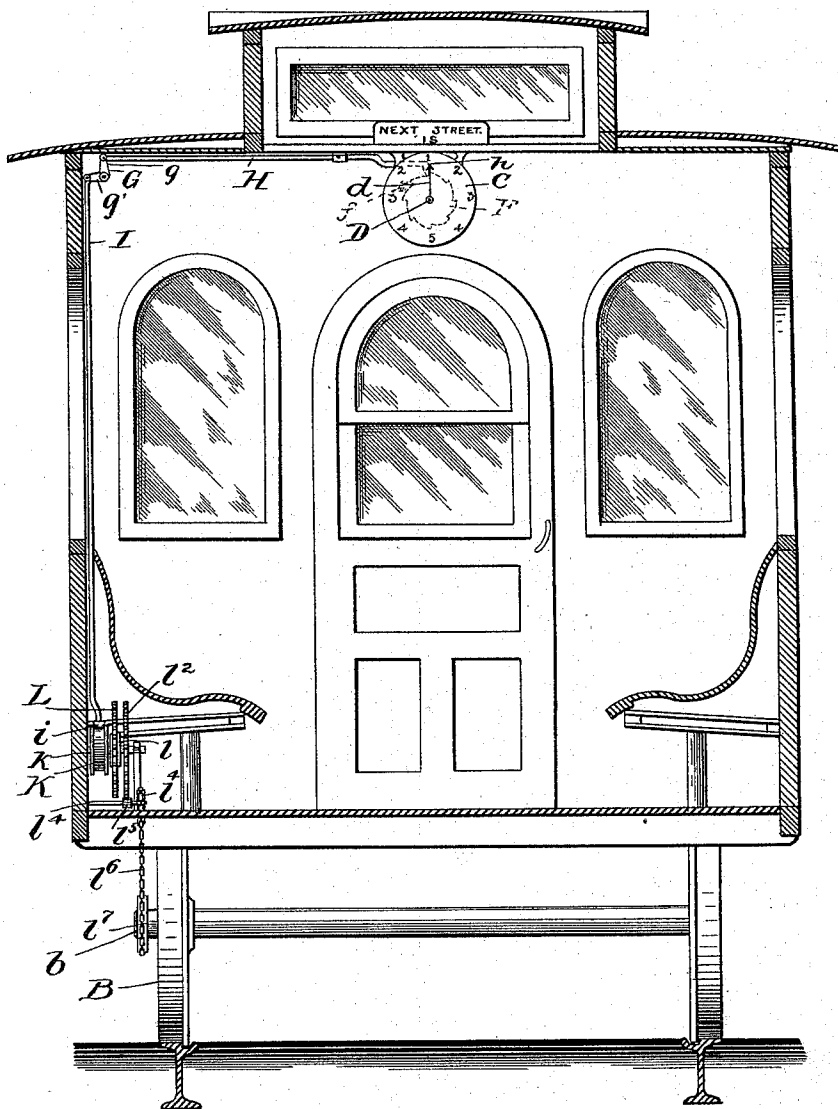
3 Sheets—Sheet 1.

H. FEDER.
STATION INDICATOR.

No. 571,518.

Patented Nov. 17, 1896.

Fig. 1



Witnesses:

Edmund A. Stanger.

George Barry Jr.

Inventor.

Harry Feder
by attorneys.
Brown & Sewall

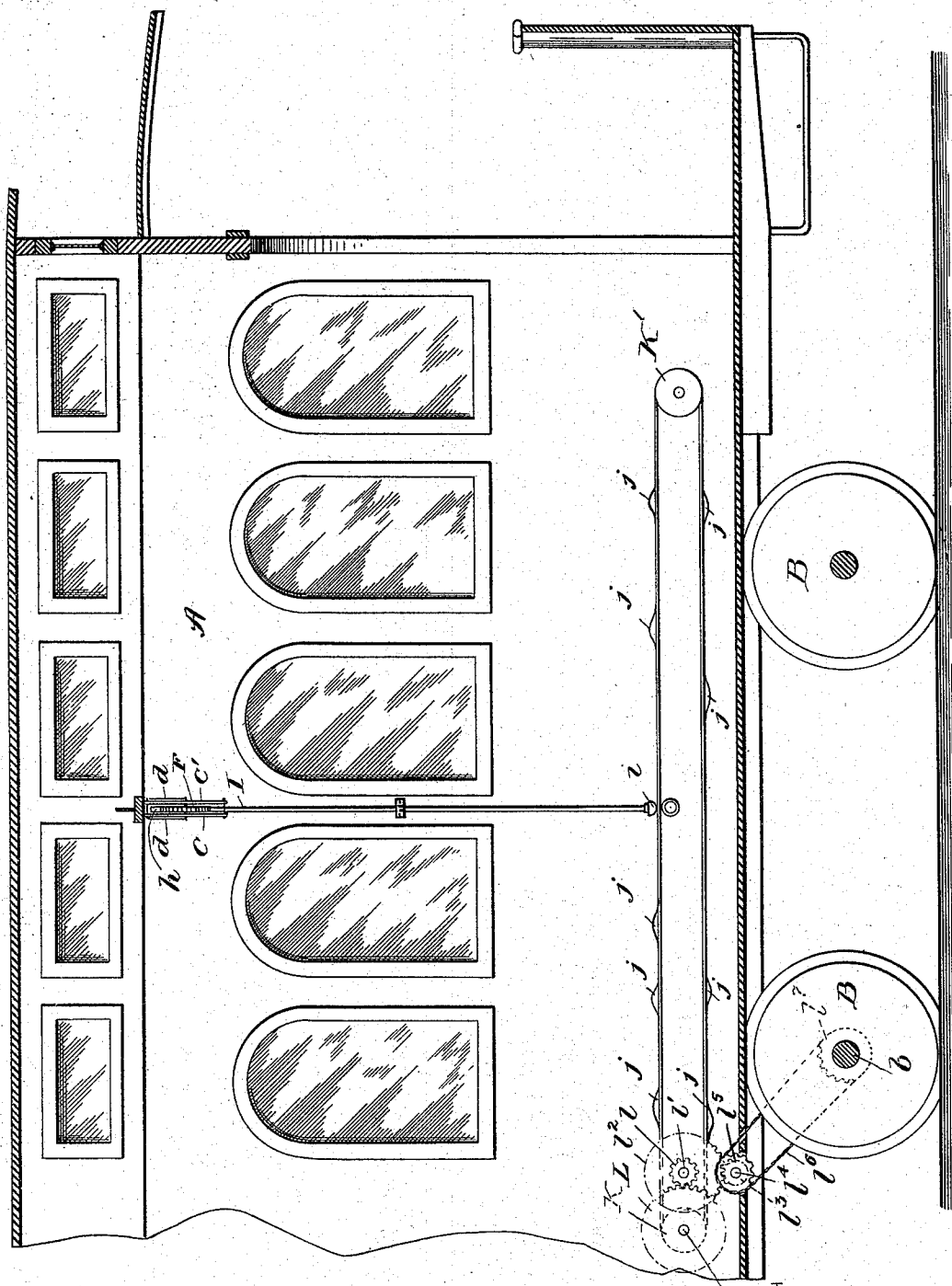
(No Model.)

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H. FEDER.
STATION INDICATOR.

No. 571,518.

Patented Nov. 17, 1896.



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Fig. 2

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(No Model.)

3 Sheets—Sheet 3.

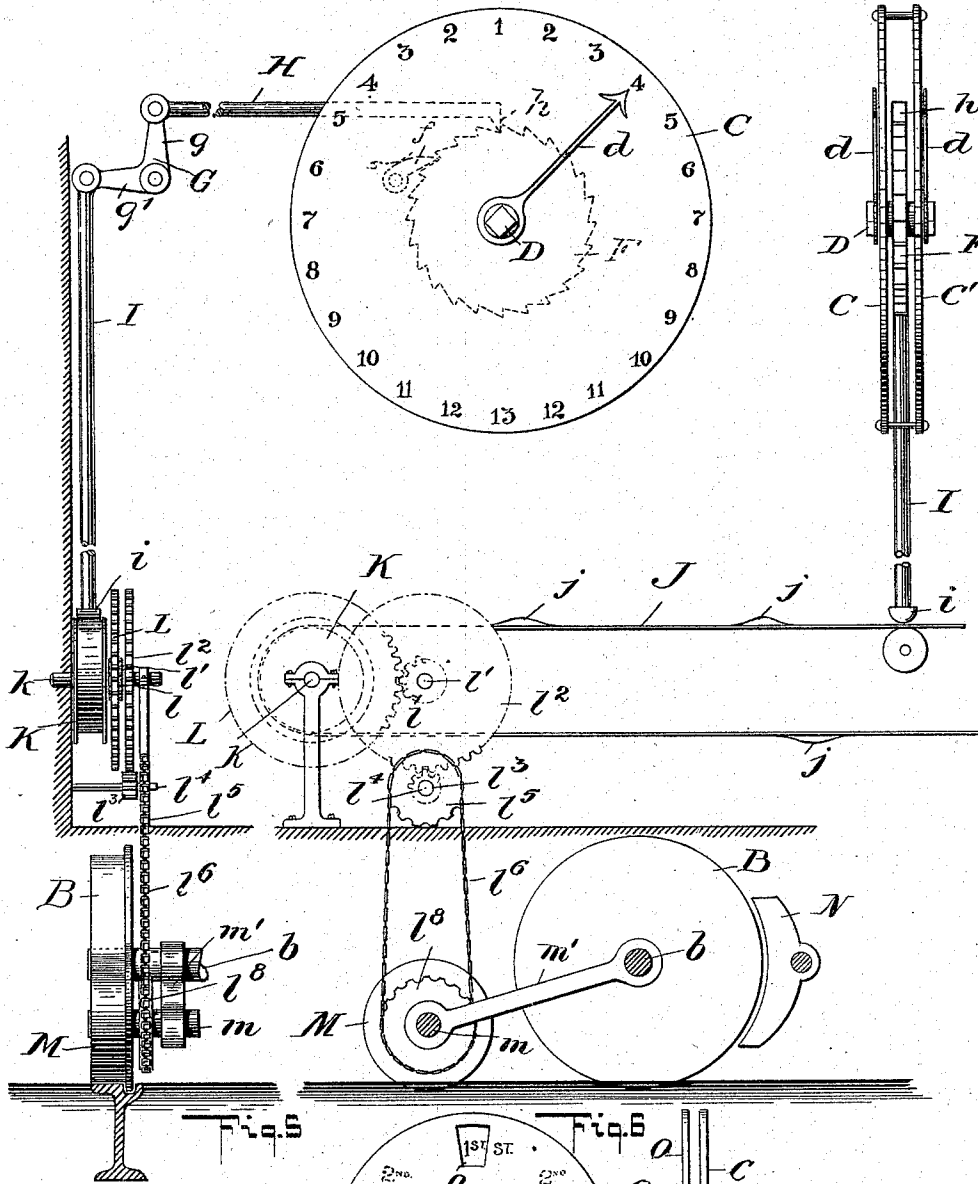
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Fig. 3

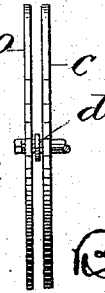
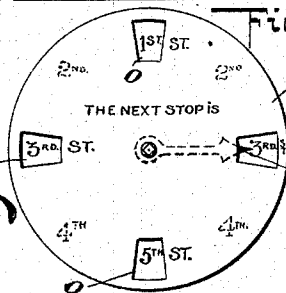
Fig. 4



Witnesses:

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George Barry Jr.



Inventor

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UNITED STATES PATENT OFFICE.

HARRY FEDER, OF NEW YORK, N. Y.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 571,518, dated November 17, 1896.

Application filed March 11, 1896. Serial No. 582,716. (No model.)

To all whom it may concern:

Be it known that I, HARRY FEDER, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Automatic Street or Station Indicators for Cars, of which the following is a specification.

My invention relates to an improvement in automatic street or station indicators for cars, the object being to provide a mechanism which will accurately and automatically indicate to the occupants of the car the next street or, in the case of stations, the next station at which the car will stop.

A further object is to provide a mechanism of the above character which will be operated by the traction-wheels of the car or by a friction-wheel engaged with the track-rails.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a transverse section through a car, showing my improved indicator applied thereto. Fig. 2 is a longitudinal section through a portion of a car, the car-seat being removed. Fig. 3 is an enlarged view of a modified form of the mechanism, the view being taken transversely to the car. Fig. 4 is a view of the mechanism, taken longitudinally with respect to the car; and Figs. 5 and 6 are detail views of a modified form of indicating-disk for the mechanism.

The car is denoted by A and its traction-wheels by B.

The disks upon which the numbers or names of the streets are to be placed are denoted by C C'. These disks are preferably secured within the car about midway of its length, the disks being so located that the occupants can readily see the same. A shaft D extends through the center of the two disks, and upon the ends of the shaft exterior to the disks I secure pointers d, which pointers revolve with the said shaft. A ratchet-wheel F is mounted to rotate with the shaft D and is located between the two disks C C'. The teeth upon the ratchet-wheel F correspond in number to the number of streets or stations that are indicated upon the two disks. A spring-actuated pawl f is secured between the two disks in position to engage the teeth on the ratchet-wheel F, the said pawl permitting the ratchet-

wheel to be rotated in one direction, but holding it against rotation in the opposite direction.

The mechanism for advancing the ratchet-wheel F step by step and thereby moving the pointers d as required is as follows: A two-armed lever G is preferably secured at the side of the car adjacent to the indicating-disks C C', and from the upper arm g of the lever extends a pawl H, the nose h of which is adapted to rest upon the ratchet-wheel F in position to advance the wheel one tooth when the lever G is rocked. The said pawl H is operated by a downwardly-extending bar I, the upper end of which is secured to the horizontal arm g' of the lever G. The lower end of this bar or rod I is provided with a suitable dog i, which is adapted to be engaged by abutments on the operating-chain, to be hereinafter described.

The chain which carries the abutments for raising the bar I is denoted by J, and its abutments by j. This chain J is endless and passes over two drums K K'. The abutments j upon the endless belt J correspond in number to the number of streets or stations at which the car is designed to stop, the successive distances between the abutments bearing the same relation to each other as the successive distances between the successive streets or stations bear to each other.

One of the chain-carrying drums, in the present instance the drum K, is driven by the friction-wheel B by gearing, the train of gearing in the present instance consisting of a gear-wheel L on the drum-carrying shaft k, which meshes with a pinion l, carried by a shaft l', the said shaft l' also carrying a gear-wheel l² and intermeshing with a pinion l³ upon a shaft l⁴, the said shaft l⁴ carrying a sprocket-wheel l⁵, which has a sprocket-chain connection l⁶ with a sprocket wheel l⁷ on one of the axles b of the traction-wheels B. This reducing-gear between the traction-wheel and the drum K may be so arranged that the proper speed may be imparted to the chain J to present the several abutments j in position to raise the rod I at the proper moment to advance the pointers upon the disks C C' to indicate the proper street or station.

In the modified form shown in Figs. 3 and 4, instead of connecting the sprocket-wheel l⁵ with the axle of the traction-wheel B, I

connect the said sprocket-wheel with a sprocket-wheel ℓ , carried by the axle m of a friction-wheel M , which is adapted to run along the track in advance or to the rear of the traction-wheel B , said friction-wheel being preferably connected to the axle b of the traction-wheels by a swinging bar m' . This latter is the construction which is preferably employed when a brake, such as N , is utilized for engaging the traction-wheel B for stopping the car. This feature insures the accurate timing of the advance movement of the pointers upon the disks.

It is preferable that the indicating mechanism be so arranged that the abutments upon the endless chain and the streets indicated upon the disks shall cover all of the streets or stations passed by the car during a complete circuit of its route; but of course, if so desired, the mechanism may be arranged for simply one-half the route of the car, if a car simply travels up and down a certain route, rather than traveling around a circuitous route.

In Figs. 5 and 6 is shown a device for use in connection with the disks upon cars which are intended to stop at certain streets only, rather than at every street upon the route of the car. It consists of a supplemental disk O , which is adapted to be secured in front of each of the disks C C' , each of the pointers d being between the main disk and the supplemental disk. The supplemental disk O is provided with openings o opposite those streets or stations at which the car is to stop, so that the occupants of the car are notified a short time before each station or street is reached by seeing the pointer through the said opening in the disk O .

It will be seen that the mechanism as thus described is adapted for use in connection with street or elevated railways, and that by applying the supplemental disks O the car may be easily changed from a local to an express car without changing the abutments on the endless chain. It will also be seen that any little slip on the part of the traction or friction wheel, whichever may be utilized, will not affect in any material degree the accuracy of the indicator, as the pointer may be advanced at any time between any two successive streets or stations. At the end of the route the proper person may advance the belt

to bring the abutments up to the proper point to accurately begin the indicating for the next time over the route. It will thus be seen that the indicator and its mechanism is entirely independent of any projections upon the track or street.

It is evident that slight changes in the construction and operation of the several parts herein described might be resorted to without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set forth, but

What I claim is—

1. A street or station indicator for cars, comprising a disk, a pointer arranged to move around the face of the disk, a belt driven by the movement of the car provided with abutments spaced apart with relation to the distances between the streets or stations, a pointer-advancing means in position to be successively operated by the abutments on the belt for advancing the pointer one step for each of the abutments, substantially as set forth.

2. In a street or station indicator for cars, a disk, a pointer adapted to move around the face of the disk, and means under the control of the movement of the car for advancing the pointer step by step, the said means comprising an endless belt, a friction-wheel engaging the track and connected to the belt for driving it, the said belt having abutments spaced along the same, and pointer-advancing means adapted to be engaged by the abutments, substantially as set forth.

3. In combination, a stationary disk upon which the names of the streets or stations are indicated, a supplemental stationary disk in front of and spaced from the first-named disk, a pointer located between the two disks, and means for imparting to the pointer a step-by-step movement around between the said disks, the said supplemental disk having openings through which the names of certain of the streets or stations are permanently exposed and the pointer is exposed at intervals, substantially as set forth.

HARRY FEDER.

Witnesses:

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IRENE B. DECKER.