

No. 615,358.

Patented Dec. 6, 1898.

J. W. LYNCH.  
ADVERTISING DEVICE.

(Application filed Jan. 3, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1

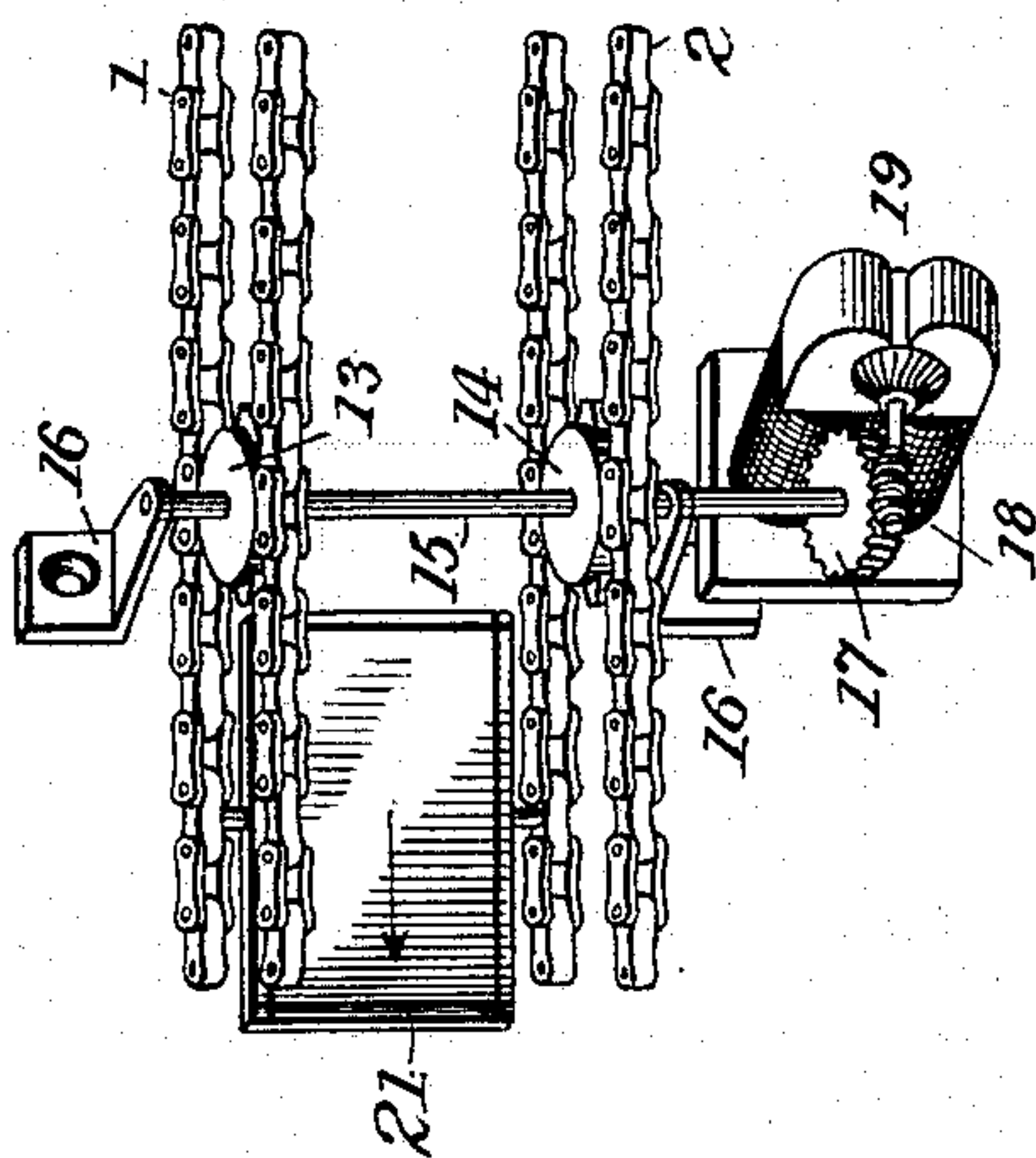


Fig. 9.

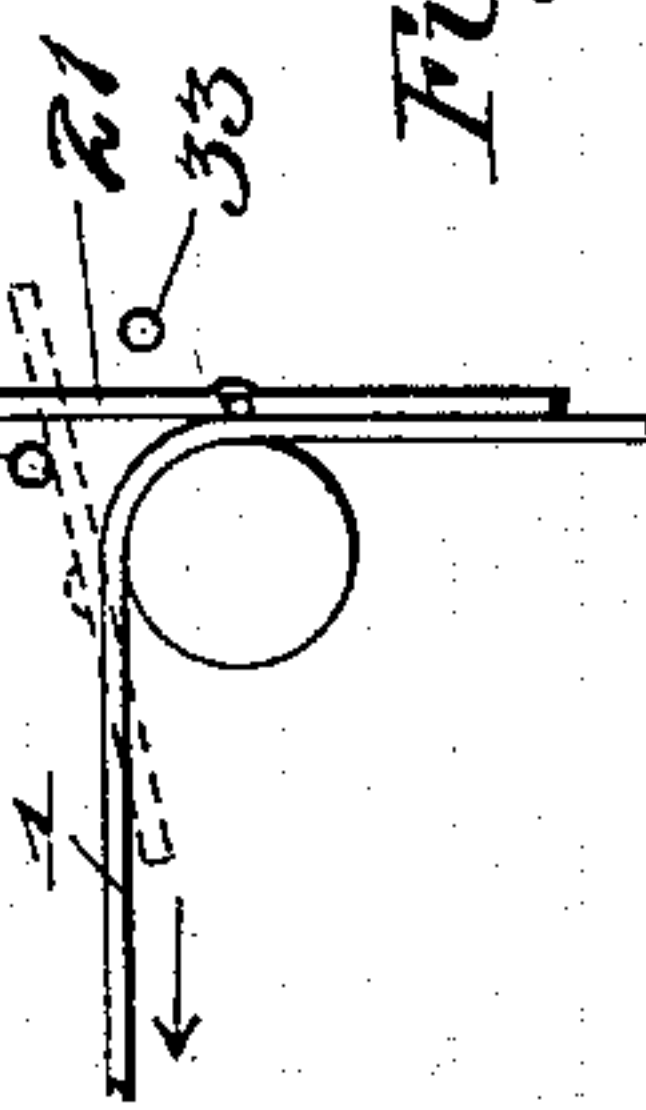


Fig. 4

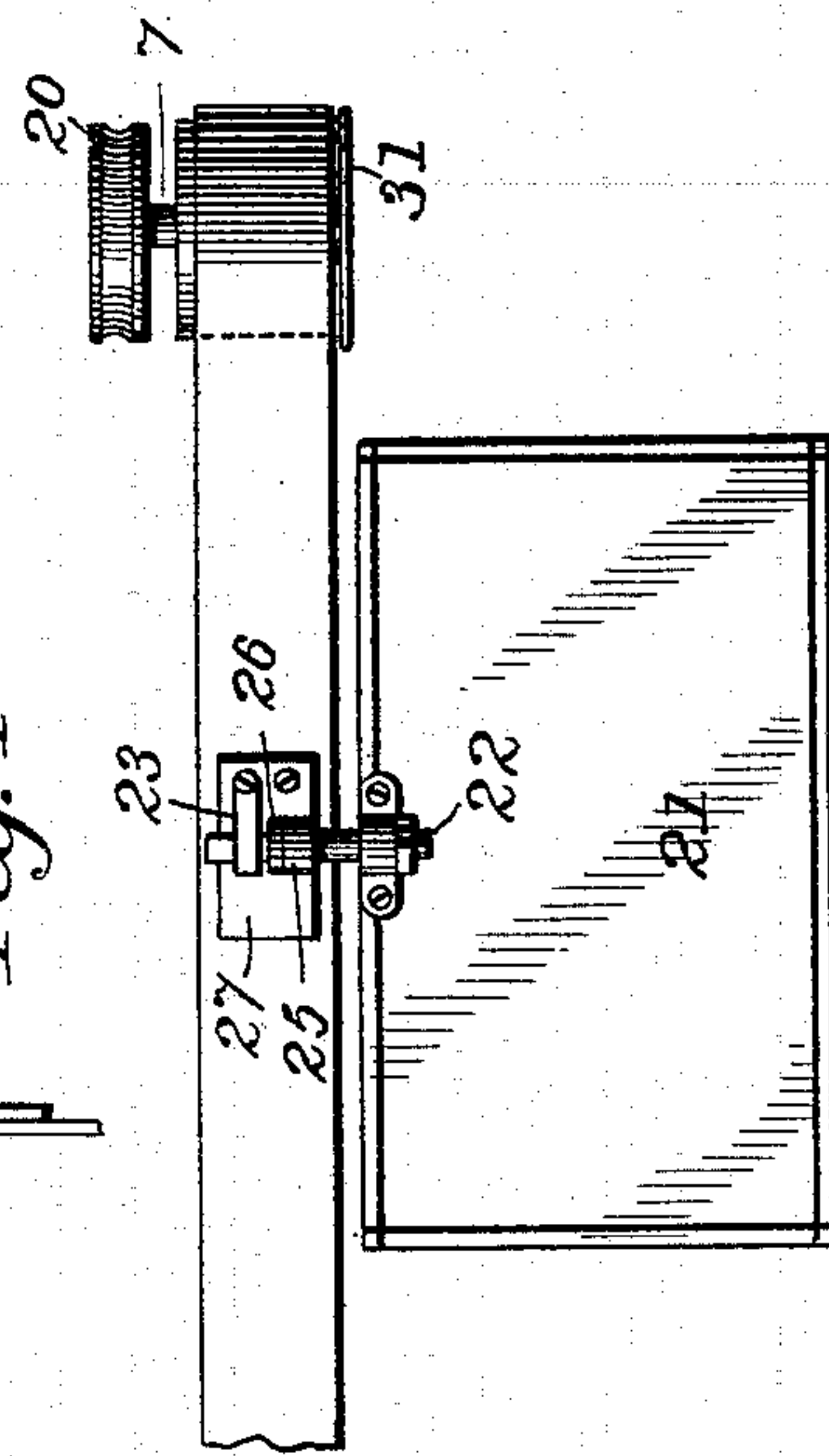


Fig. 2.

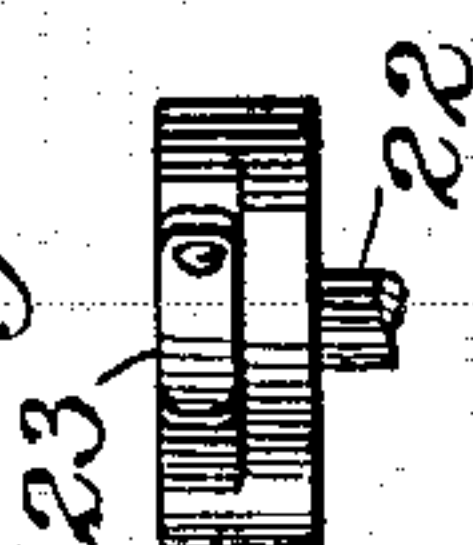


Fig. 3.

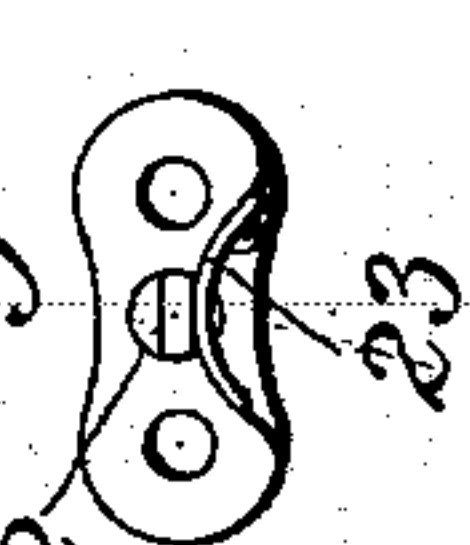
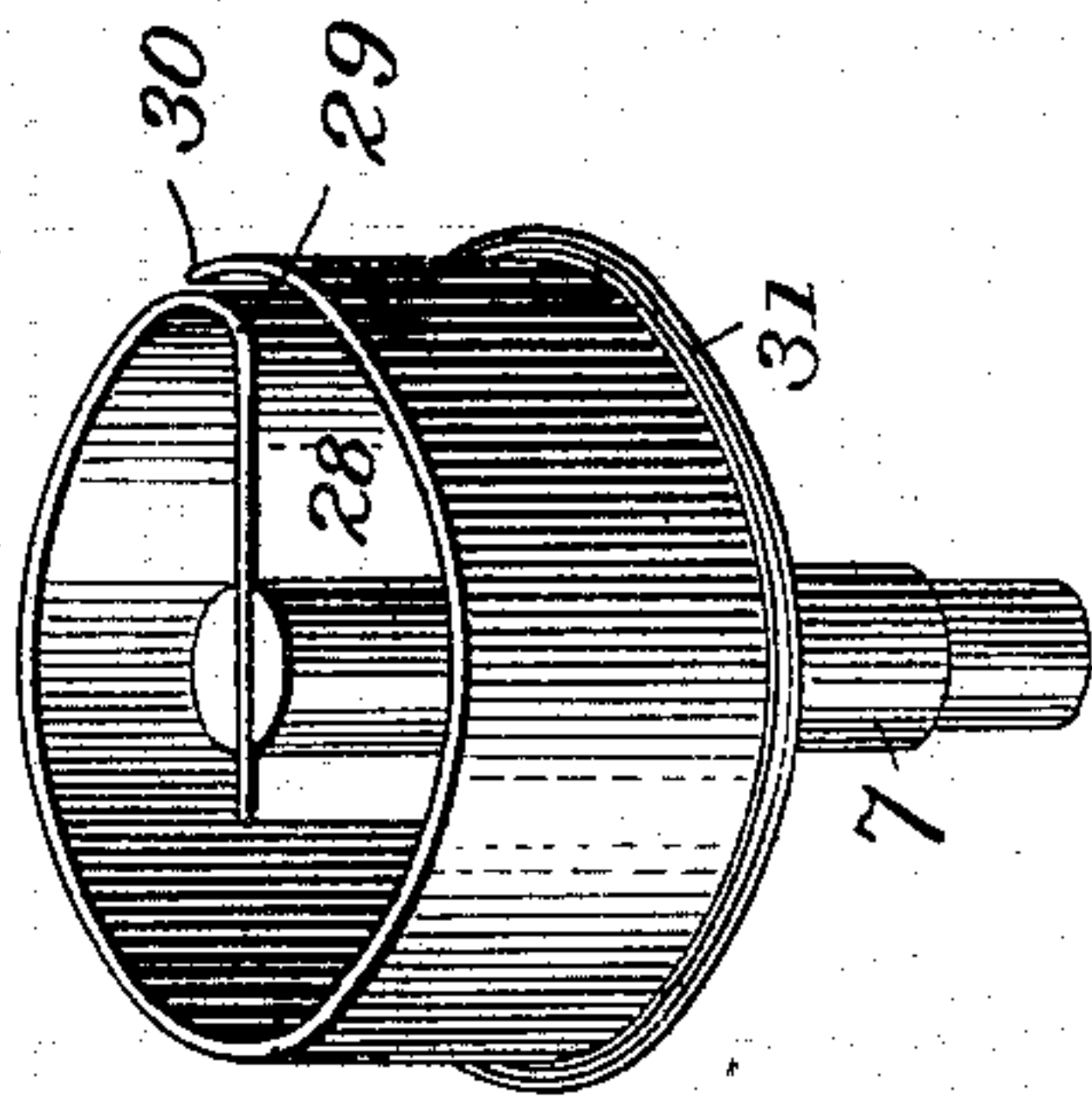


Fig. 5.



Witnesses

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*William E. Keff*

*John W. Lynch* Inventor  
*Watson & Watson* Attorneys

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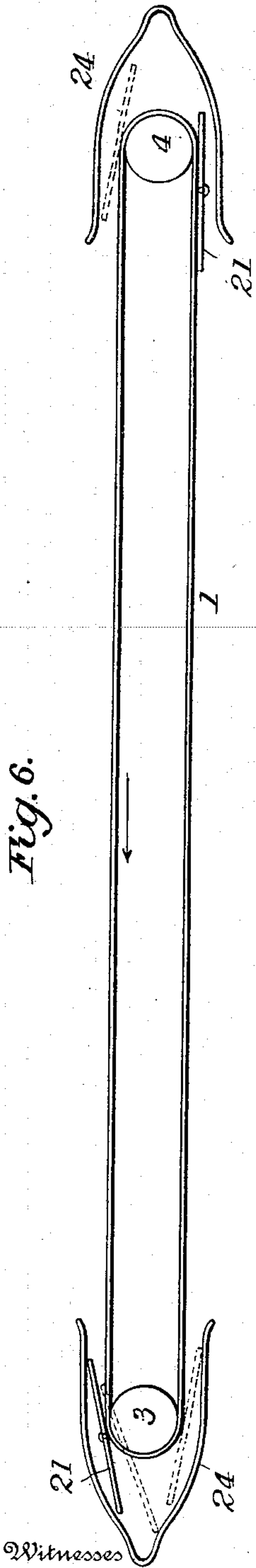
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2 Sheets—Sheet 2.

Fig. 6.



Witnesses

J. Hinkel

William E. Keff

Fig. 7.

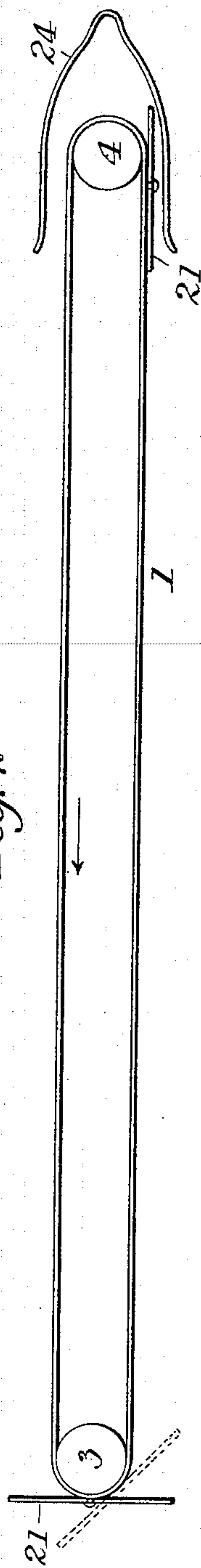
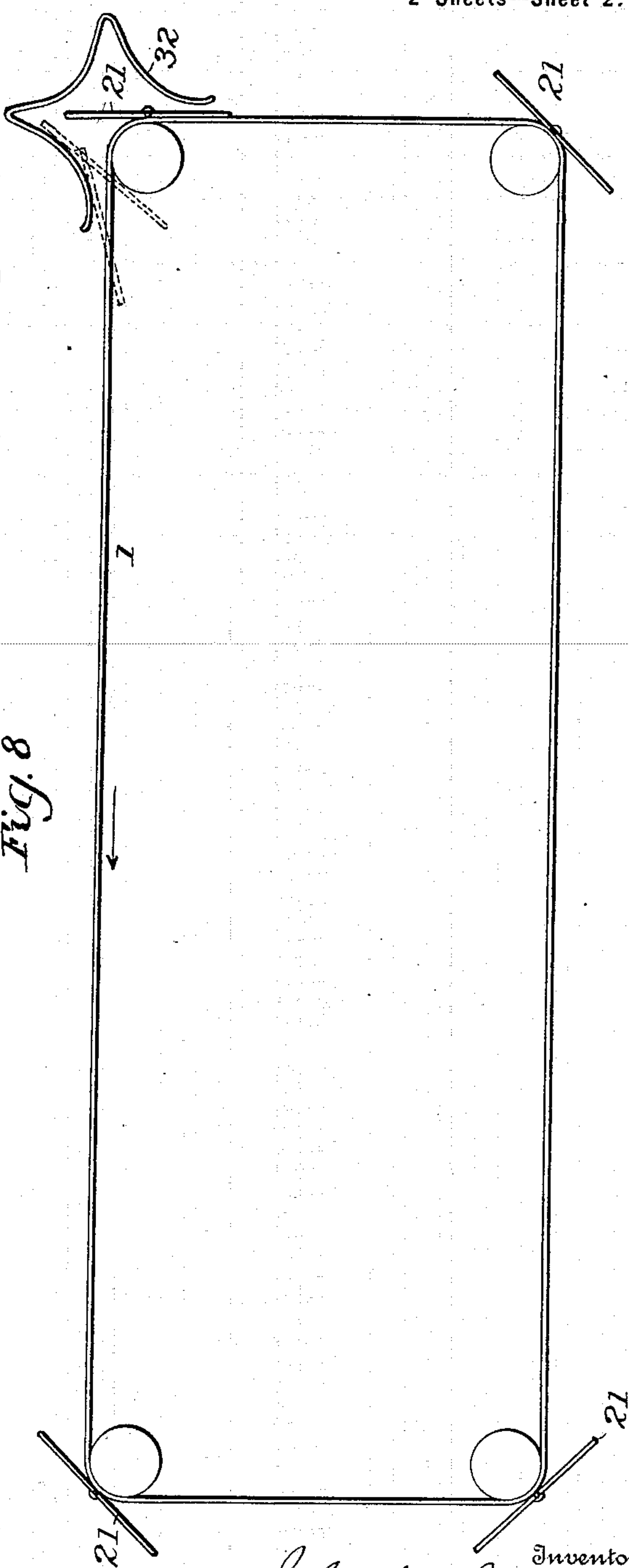


Fig. 8.



Inventor  
John W. Lynch  
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# UNITED STATES PATENT OFFICE.

JOHN WHEATON LYNCH, OF PHILADELPHIA, PENNSYLVANIA.

## ADVERTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 615,358, dated December 6, 1898.

Application filed January 3, 1898. Serial No. 665,431. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN WHEATON LYNCH, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Advertising Systems, of which the following is a specification.

My invention has for its object certain improvements in movable advertising systems whereby a large number of cards may be successively brought to view in a very simple manner and with great economy of space. It is particularly adapted to street-car advertising, where the available space is limited; but it may also be used in other places and on a larger scale.

The invention consists, essentially, in an endless traveling belt, to which are pivoted a series of cards or card-frames, which are normally maintained parallel with the belt, and in providing at one or more of the turning-points in the belt a suitable device for reversing the cards or frames upon the belt.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view, partly broken away, of an advertising system embodying my invention, two chains being employed to carry the card-frames. Fig. 2 is a side view of one of the links which form bearings for the card-frame axis. Fig. 3 is a top plan view of the link shown in Fig. 2. Fig. 4 is a side view of part of a system wherein a single belt is employed. Fig. 5 is a perspective view of a spring-pulley which may be used in some instances where belts are employed. Fig. 6 is a diagram indicating the operation of the system shown in Fig. 1, and Figs. 7, 8, and 9 are diagrams of modified arrangements.

Referring to the drawings, Fig. 1, 1 and 2 represent endless chains of equal length, which are arranged parallel with each other, the former extending around a pair of sprocket-wheels 3 4 and the latter around an opposing pair of sprocket-wheels 5 6. The sprocket-wheels are mounted upon suitable studs 7, which extend outwardly from the chains, and these studs are journaled in the ends of brackets 8 and 9, which are attached in any convenient manner to the supporting-wall upon which the system is mounted. One of

the brackets may be made adjustable longitudinally of the chains in order to take up any slack due to wear or stretching. As shown in the drawings, the bracket 9 is provided with a pair of studs 10, which extend through bearings in the support 11. The studs 10 are screw-threaded and are provided with wing-nuts 12, by means of which the slack of the chains may be taken up in an obvious manner. Any other suitable adjusting device may be employed.

The chains 1 and 2 may be made to move in unison by means of sprocket-wheels 13 and 14 engaging the upper and lower chains, respectively. These sprocket-wheels, as shown, are secured to a shaft 15, arranged perpendicularly to the chains and journaled in suitable bearings in brackets 16. Upon the end of the shaft is mounted a screw-gear 17, which is engaged by a screw 18 upon the shaft of a small electric motor 19, by means of which the system is operated. Any other suitable means may be employed for effecting the movement of the chains or belts. For street-car purposes, for instance, it may sometimes be desirable to substitute a pulley for the gear 17 and connect the pulley to a car-axle by means of a belt, or, as shown in Fig. 4, each chain or belt may be driven by a pulley 20 or a gear secured to a stud 7 at one end of the system.

When two chains or belts are employed, as shown in Fig. 1, the card-frames 21 are supported between the chains 1 and 3 by studs 22, rigidly connected to opposite sides of each frame at or near the central point, the ends of the studs being pivoted in the chain-links. Suitable means may be employed for normally maintaining the cards parallel with the chains, such as shown in Figs. 2 and 3, wherein the ends of the studs 22 are flattened on opposite sides, and a spring 23, secured to the link, presses against one of the flattened sides. At each end of the system shown in Fig. 1 is arranged a V-shaped spring-guide 24, into which the forward end of the card-frame 21 projects as it approaches the turning-point, and while the axis of the frame describes a semicircle around the pulleys or sprockets the forward part of the frame will be held within the guide, and thereby prevented from turning, so that as the frame passes out of



the guide in the reverse direction on the opposite side of the pulley the card will still face the same way. When the frame reaches the opposite end of the system, a similar operation takes place, and the card is brought to the front without turning. The manner of passing the frames to the front and rear without turning them will be clear from an inspection of the diagram Fig. 6, wherein the successive positions of a frame are shown in dotted lines.

It will be seen that by means of the apparatus thus far described a large number of stiff cards or frames of any length may be operated within a narrow space, as the cards do not invert, and consequently do not require lateral space at the turning-points of the chains or belts. As the cards project only one-half their length longitudinally beyond the pulleys it will also be seen that space is economized in this direction. These are particularly desirable features for street-car advertising, as the apparatus may be located above the windows, where advertisements are usually carried, and about double the number of cards may be exhibited without requiring more than a few inches of lateral space.

In Fig. 4 I have shown part of a system employing a single belt. The general arrangement of such a system is the same as that wherein two chains or belts are employed, except that in this instance pulleys are employed instead of sprocket-wheels, and the card-frames are supported by single studs 22. As shown in the drawings, each stud 22 is journaled in a bearing 25, and is provided with a collar 26, resting upon the bearing, so as to support the frame. The end of the stud is flattened, as shown, on opposite sides, and a flat spring 23, cooperating therewith, normally holds the frame parallel with the belt. The bearing and spring are secured to a plate 27, which is attached to the belt at one point only, so that the attachment may pass around the pulleys without straining the belt. To provide for any strain due to this cause, I may employ spring-pulleys such as shown in Fig. 5, constructed so as to yield slightly if any strain should be occasioned by the passage of the attachment 27 around it. This pulley consists, as shown, of a stud 7, slotted at one end, the stud forming the hub of the pulley, and the rim consisting of a flat piece of spring metal, one terminal 28 of which is secured within the slot in the stud, from whence it extends radially outward to a point 29, and thence extends in a circle around the stud as a center, the outer extremity 30 of the band overlapping the point 29. A circular disk 31 is secured to the stud 7 below the pulley-rim, and its outer edge forms a flange to support the belt. The separation of the flange from the rim allows free contraction and expansion of the latter. In Fig. 4, wherein the cards are suspended from the belt, the flange 31 is shown at the end of the stud. Instead

of suspending the cards, however, they may obviously be supported above the belt, and the flange will in that case be on the opposite side of the rim, as shown in Fig. 5.

The system which I have thus far described is particularly designed for places where lateral space is at a premium, such as street-cars. In such a system, while two rows of cards are employed, the same side of the card is always brought to the front. In some cases, however, where space will permit it may be desirable to reverse the cards on the belt only at one point in the system and allow them to pass around the pulley or pulleys at other points in the system without reversing, as indicated by the diagrams Figs. 7 and 8. In Fig. 7, for instance, the cards will be reversed on the belt in succession by the guide 24 as they pass around the pulley 4; but at the opposite end of the system they will not be reversed. Hence the opposite sides of the cards may be exhibited alternately, and twice as many advertisements may be exhibited as when the cards are reversed at each end.

In Fig. 8 the system shown in Fig. 7 is amplified to show its application to a rectangular room or space, a guide 32 being shown for reversing the cards at one point only. The opposite sides of the cards will therefore be presented to view alternately at each passage around the room or space. If desired, of course, a guide may be located at some other turning-point in the system, so that one side of the cards may always be exhibited between the guides at one part of the system and the other side at another part. The guide 32 is shown double, so that the cards may be reversed whether the belt runs one way or the other.

Any suitable means may be employed to impart movement to the system, and different devices may be employed for reversing the cards and attaching them to the belts. By substituting stop-pins 33, as indicated in Fig. 9, for the V-shaped guides it will be evident that the cards will be turned thereby in their passage around the pulley. It is immaterial whether the cards be attached directly to the pivots or whether they be inserted in frames, the latter being attached to the pivots. The cards may also be rectangular, as shown, oval, or any other suitable shape, and for street-car use they may be bowed longitudinally to conform to the outline of the curved space between the roof and sides of the car usually reserved for advertising purposes. I therefore do not care to limit myself to the precise construction shown in the drawings.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In an advertising device, the combination with an endless traveling belt, of a series of cards pivotally connected to said belt and normally maintained parallel with said belt while passing between its turning-points, and a device adjacent to the belt adapted to



engage the cards and to effect their reversal with reference to the belt, substantially as described.

2. In an advertising device the combination with an endless traveling belt, of a series of cards pivoted at their edges to said belt and normally maintained parallel with said belt while passing between its turning-points, and means for automatically reversing the cards with reference to the belt, substantially as described.

3. In an advertising device, the combination with an endless traveling belt, and rollers around which said belt passes, of a series of cards pivoted to said belt, and means adjacent to one or more of said rollers for deflecting the ends of said cards while their pivotal points pass around the rollers to effect the reversal of said cards with reference to the belt, substantially as described.

4. In an advertising device the combination with an endless traveling belt, of a series of cards pivoted centrally of their edges to said belt and normally maintained parallel with said belt while passing between its turning-points, and means for automatically reversing the cards with reference to the belt, substantially as described.

5. In an advertising device, the combination with a pair of parallel endless belts, rollers around which said belts pass and means for causing said belts to travel in unison, of a series of cards arranged between and pivoted to said belts and normally maintained parallel therewith while passing between said rollers, and means for automatically reversing the cards with reference to the belts, substantially as described.

6. In an advertising device, the combination with a pair of endless parallel belts arranged to travel in unison, and opposing rollers around which said belts pass, of a series of cards arranged between and pivoted centrally of their edges to said belts, and means adjacent to said rollers for deflecting the ends of the cards while their pivotal points pass around the rollers to effect the reversal of said cards with reference to the belts, substantially as described.

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

JOHN WHEATON LYNCH.

Witnesses:

LYDIA L. MUSTIN,  
THORNTON M. LYNCH.