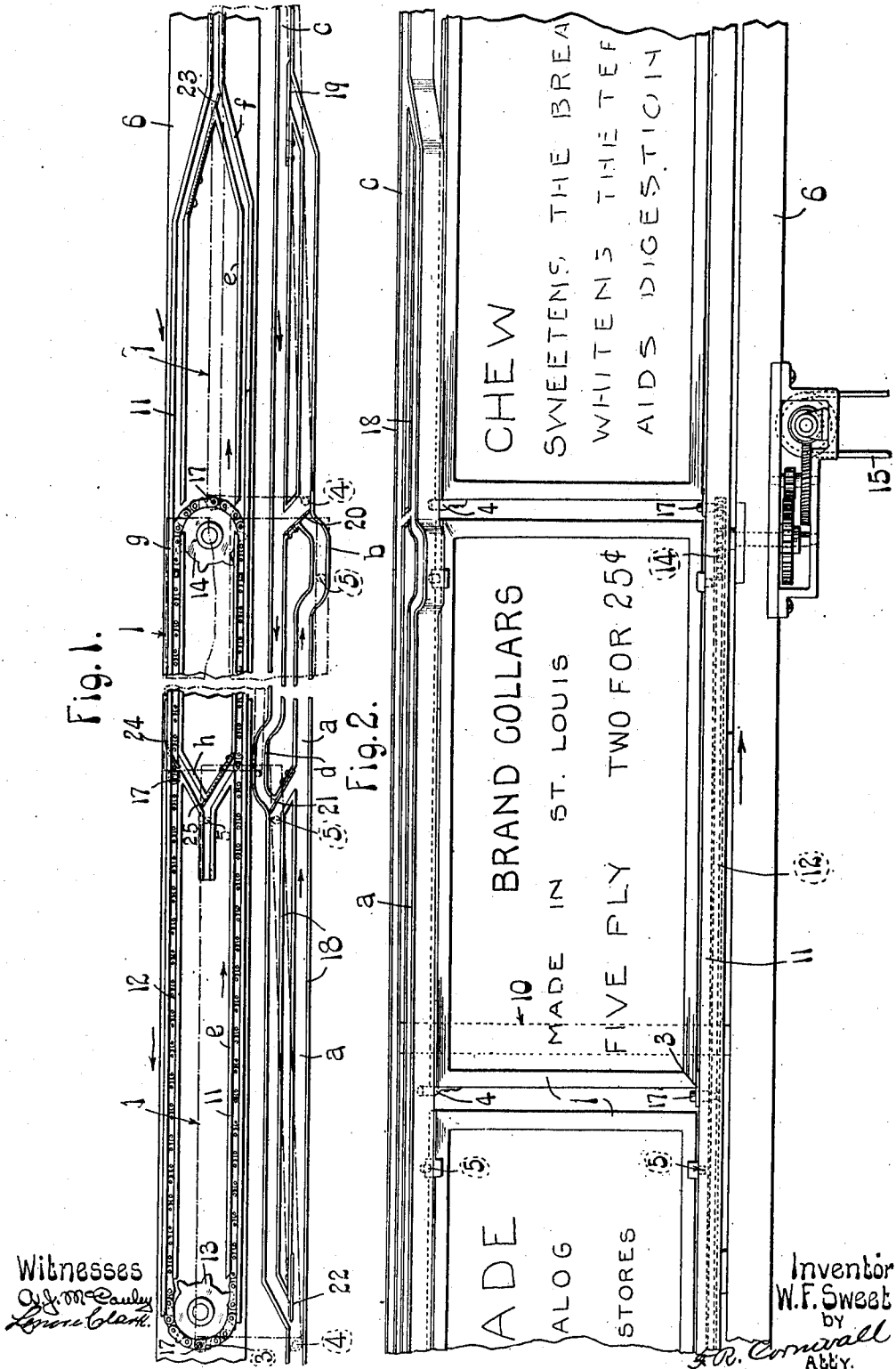


W. F. SWEET.
STREET CAR ADVERTISING DEVICE.
APPLICATION FILED JAN. 22, 1909.

974,307.

Patented Nov. 1, 1910.

3 SHEETS-SHEET 1.



Witnesses
J. M. Pauley
L. M. Clark.

Inventor
W. F. Sweet
by
J. M. Cornell
Att'y.

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Fig. 3.

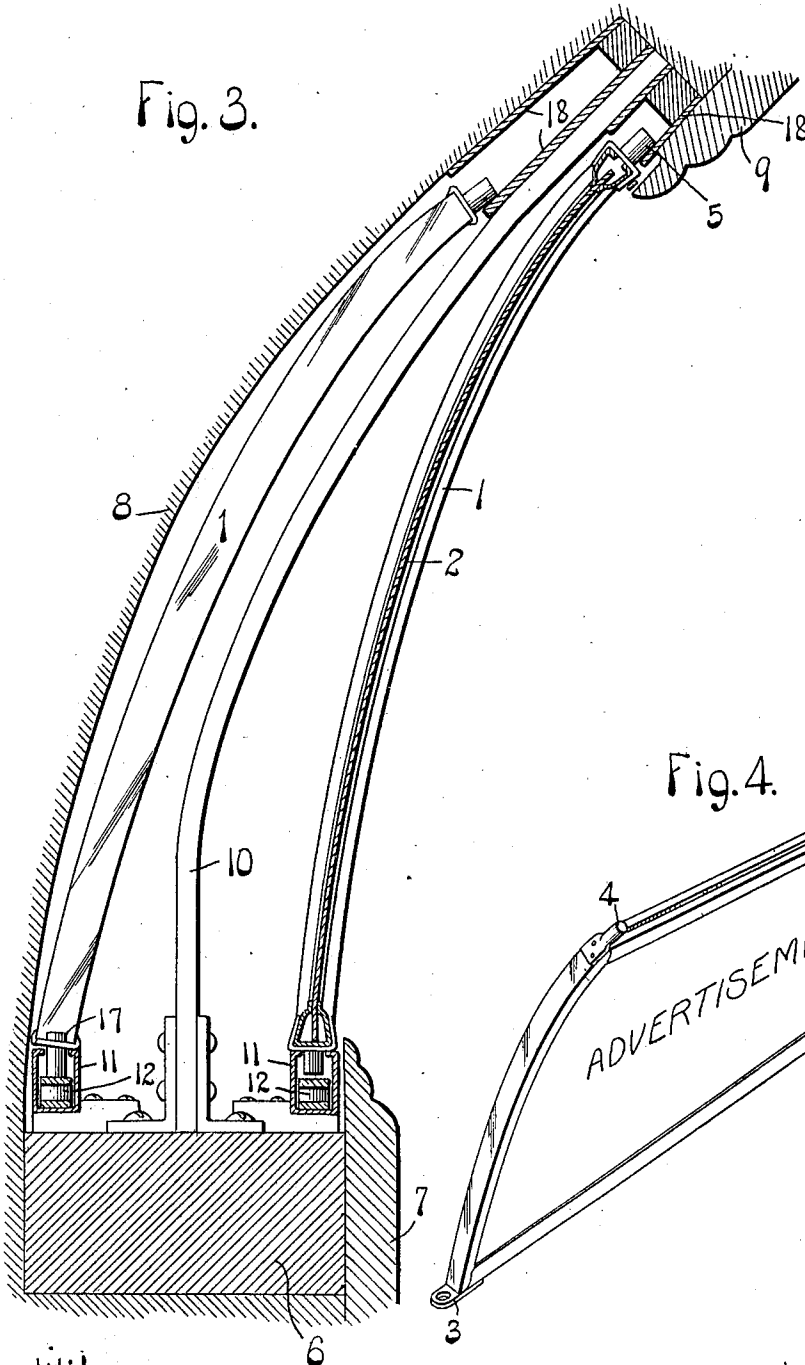
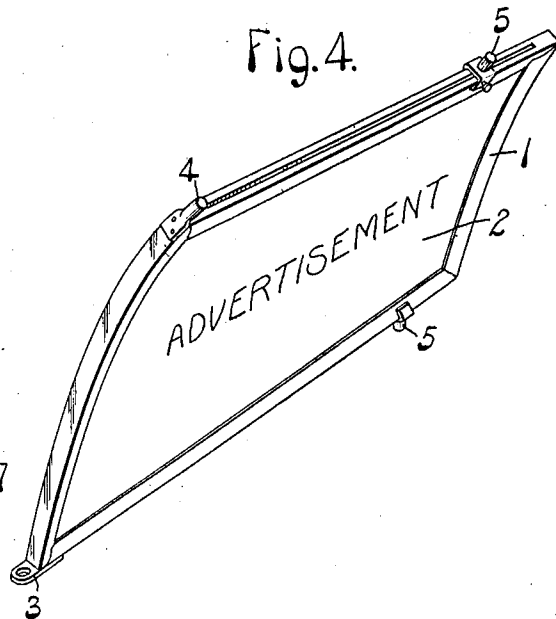


Fig. 4.



Witnesses
A. J. M. Cauley
Lemon Clark

Inventor:
W. F. Sweet
by F. R. Cornwall
ATTY.

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3 SHEETS-SHEET 3.

Fig. 5.

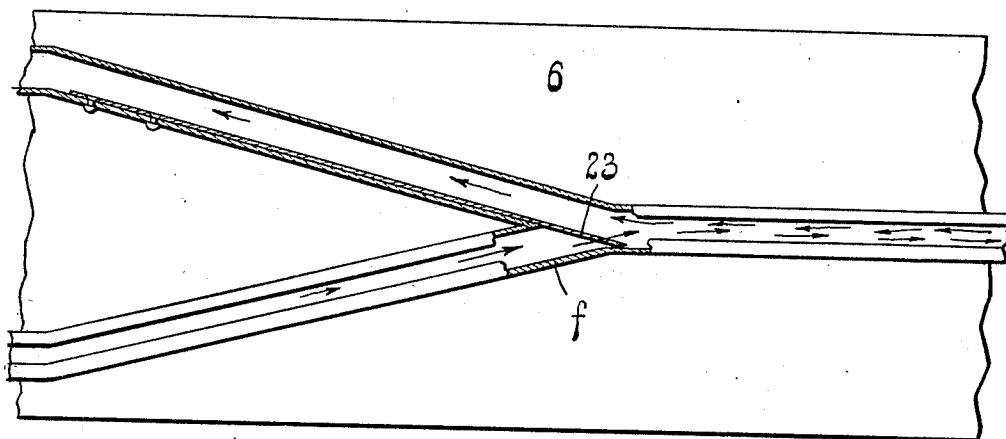


Fig. 6.

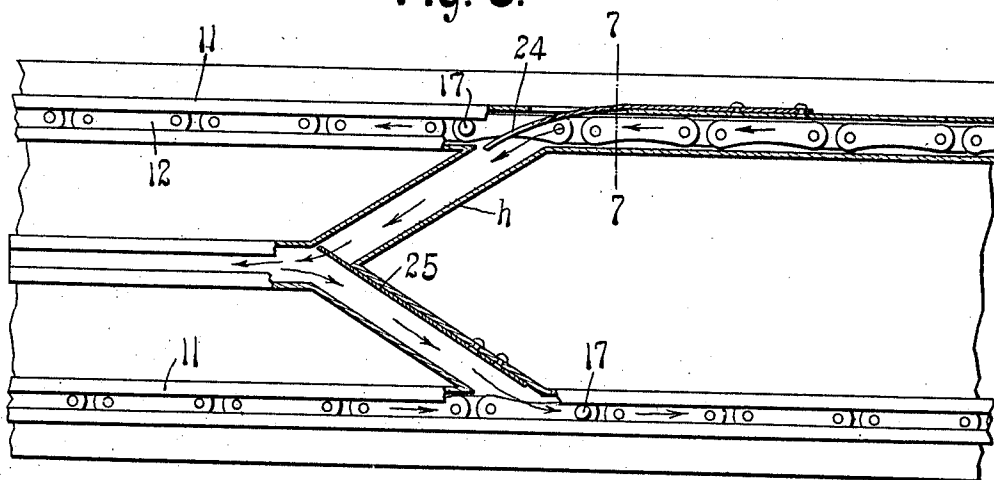
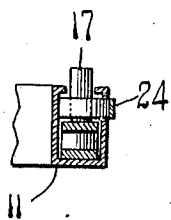


Fig. 7.



Witnesses
A. J. McCauley
Lenore Clark.

Inventor:
W. F. Sweet
by J. R. Conway
ATTY.

UNITED STATES PATENT OFFICE.

WELCOME F. SWEET, OF ST. LOUIS, MISSOURI.

STREET-CAR ADVERTISING DEVICE.

974,307.

Specification of Letters Patent.

Patented Nov. 1, 1910.

Application filed January 22, 1909. Serial No. 473,776.

To all whom it may concern:

Be it known that I, WELCOME F. SWEET, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Street-Car Advertising Devices, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of my improved device. Fig. 2 is an elevational view. Fig. 3 is an enlarged sectional view. Fig. 4 is a detailed view of one of the frames. Fig. 5 is a detailed plan of one end of the bottom track. Fig. 6 is a similar view of an intermediate portion of the bottom track. Fig. 7 is a cross sectional view illustrating the chain in position in the bottom track.

This invention relates to a new and useful improvement in advertising devices, designed particularly for use in street-cars.

The object of my present invention is to arrange a series of advertising cards in frames connected at intervals to an endless chain, which chain causes the travel of said frames lengthwise the car.

My invention consists in mounting card frames at intervals upon an endless chain and providing guide-ways, constituting tracks, in which the frame moves, and suitable switches for shifting the card frames from the rear or hidden track, to the front or exposed track, and vice versa.

In the drawings 1, indicates the frame, preferably made of sheet metal, in which an advertising card 2 is arranged. This frame has a perforated lug 3 at one corner for connection to the endless chain, and guiding lugs 4 and 5 for coöperation with the guide-ways, the lugs 5 being adjustable on the frame 1.

In the accompanying drawings, I have illustrated a well known form of street-car construction, in which 6 represents the top chord of the side framing, 7 the inside face molding, 8 the inside crown roof sheeting, and 9 the inside deck molding. On the timber 6 is arranged a series of supports 10, for the upper track. On each side of these supports are channel guide ways 11, in which is arranged an endless chain 12, said chain passing over sprockets 13 and 14, the lat-

ter of which is driven by suitable power, in the form of a directly connected motor, or through a belt 15. At intervals along its length, chain 12 is provided with posts 17 which extend up through the channel of the guideways 11, for engagement with the lugs 3 on the frames. The adjustable lug 5 on the bottom of the frame fits in the channels of the guide-ways 11, and thus the lower edge of the frame is not only guided in its movement, but prevented from lateral displacement. The upper lugs 4 and 5 rest upon wear plates 18, constituting channeled guide-ways. The frames can be removed at any time, by lifting them up into the guideways 18, and disconnecting the lugs 3 from their posts 17. This permits the lower edge of the frame to be swung inwardly past the face molding 7.

Assuming that the frames are in proper position on the chain and the chain is being driven at the desired speed, the operation of the device is as follows: Referring to Fig. 2, it will be observed that the several frames on view are pivotally connected to the posts 17, at their lower left hand corners. These frames are intended to move in the direction of the arrow. I will describe the travel of one of these frames with reference particularly to the top tracks, beginning with the position shown by dotted lines at the left in Fig. 1. The first movement of the lug 5 is to pass from the rear track, by way of a connection channel, onto the front track *a*. The frame is now carried the length of the car in a straight line, until a jog or bend in the track is encountered, which jog is provided for the purpose of throwing the rear end of the frame to one side to enable the opposite moving adjacent frame to clear properly. When the lug 4 reaches this portion of the track, the exposed frame will be moving to the right and the hidden or back frame will be moving to the left. The former will be thrown forwardly, and the latter rearwardly, and their contiguous edges will clear each other, thus permitting a reversal of movement without interference. Just before reaching the right hand end of the track, the forward lug 5 passes a yielding switch tongue 19 and enters the rear track *c*, and at the same time the rear lug 4 passes a yielding switch tongue 20 at the end of the jog or bend *b*. The frame having been brought to a position of rest, now

starts to travel leftwardly, the lug 4 riding the switch tongue 20, and being guided into the rear track *c*, and the lug 5, now the rear lug, with respect to its direction of travel, is located in the rear track *c*, and is prevented from again entering the front track *a* by the yielding switch tongue 19. The plates now travel to their starting position in a straight line, being practically hidden all the way until they approach the extremity of their leftward movement, at which the lugs traverse the bend *d* in the rear track, and successively pass the switch tongue 21, at the end thereof. At the time that the lug 5 is passing the switch tongue 21, the lug 4 is passing a yielding switch tongue 22, and entering the front track *a*. When the frame reaches this position it has made a complete cycle, and is in the position from which it started. When the frame starts to move to the right, the top lug 5 will ride along the switch-tongue 21, and enter the track *a*, in position to travel in a straight line throughout the length of the car. The jog or bend *d* is for the same purpose as the jog or bend *b*. The bend *d* throws the rear end of the frame traveling leftwardly to the rear, or outwardly with respect to the car, so as to clear the adjacent frame, as before described. By these jogs or bends it is possible to reduce the space between the frames to a minimum, as it is only necessary for them to clear each other in passing from the rear track onto the front, and vice versa.

The travel of the frames with respect to the bottom track, is as follows: The endless chain does not extend the full length of the car, a space being provided at the right, as shown in Fig. 1. Assuming that the frame is in the position shown by dotted lines at the left in Fig. 1, the lug 3 will, following the path of the chain, enter upon the front guide-way *e*, and at the same time the bottom lug 5 will be deflected by a switch, into said front track *e*. The lower portion of the frame will thus be caused to travel in a straight path until the lug 5 is deflected outwardly by the bent portion *f* of the track and past a yielding switch tongue 23. The lug 3 will be carried around the sprocket 14 by the chain, and this corner of the frame will be moved from its forward to its rear position, the lug 3 eventually entering upon the straight portion of the rear track *g*.

The frame before starting on its leftward movement, will have its bottom lug 5 deflected onto the rear track *g* by the switch 23, and said frame will travel, hidden from view, on said rear track in a straight line to its starting position. In traveling back to its starting position, the post 17, to which the lug 3 is connected, forces a spring switch tongue 24 to one side, and passes without interruption to and around the sprocket 13.

When, however the bottom lug 15 comes in

contact with said switch tongue, it is deflected into one branch of the Y shape track *h*, and past a switch tongue 25. Before starting to move to the right, the bottom lug 5 passes along the other branch of the Y shape track *h* onto the front track *f*.

I am aware that minor changes in the construction and arrangement of the several parts of my device can be made without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim is:

1. In an advertising device, the combination with an endless carrier, frames pivotally connected thereto, guide ways in which said frames are mounted, switches in said guide ways, and jogs or bends in said guide ways for effecting a clearance between the frames at the point of reversal.

2. In an advertising device, the combination with an endless carrier, frames pivotally connected thereto, guide ways constituting tracks with which said frames cooperate, there being substantially parallel tracks at the top and bottom edges of said frames, cross-overs connecting the parallel tracks and spring switches arranged at the cross-over points for properly directing the frames.

3. In an advertising device, the combination with an endless carrier, of frames connected to said carrier, guideways constituting tracks in which said frames travel, jogs in said guide-ways for effecting a clearance between the frames at the points of reversal and adjustable lugs on said frames engaging in said guideways.

4. In an advertising device for street cars, the combination with upper and lower guide-ways arranged above the car windows, of an endless carrier operating in the lower one of the guide-ways, a series of card carrying frames arranged to move longitudinally between the guide-ways, which frames are curved transversely to conform to the curvature of that portion of the car between the guide-ways, means whereby each frame is connected to the endless carrier at one end and guide lugs on the frame, which lugs engage in the guide-ways, and there being jogs or bends formed in the lower guide-way adjacent its ends for effecting a clearance between the frames at the points of reversal.

5. In an advertising device for street cars, the combination with upper and lower guide-ways arranged above the windows in a car, of an endless carrier operating on the lower one of the guide-ways, a series of card carrying frames, each connected at one corner to the endless carrier, guide lugs on the remaining corners of the frame, which guide lugs engage in the guide-ways, and there being jogs or bends formed in the

lower guide-way adjacent its ends for effecting a clearance between the frames at the points of reversal.

6. In an advertising device for street cars, the combination with upper and lower guide-ways arranged above the windows in the car, of an endless carrier operating on the lower one of the guide-ways, a series of card carrying frames arranged to move longitudinally between the guide-ways, one corner of each frame being connected to the endless carrier, guide lugs on the remaining

three corners of each frame, a pair of which guide lugs are adjustable, and there being jogs or bends formed in the lower guide-way adjacent its ends for effecting a clearance between the frames at the points of reversal. 15

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 19th day of January 1909.

WELCOME F. SWEET.

Witnesses:

F. R. CORNWALL,
LENORE CLARK.