C. C. KELLEY.

ADVERTISING DEVICE.

APPLICATION FILED JAN. 4, 1912.

1,038,149.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 1.

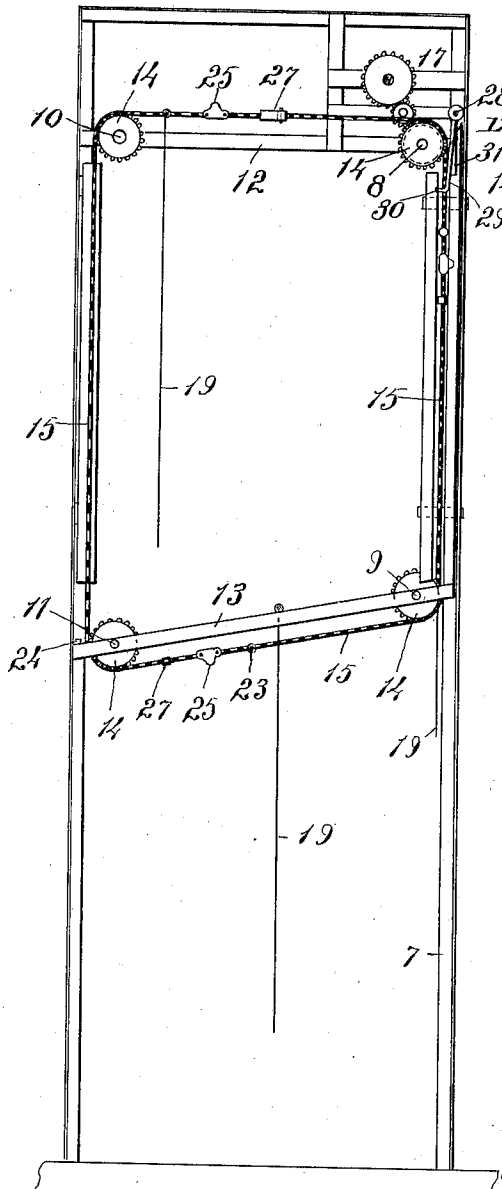


Fig. 1.

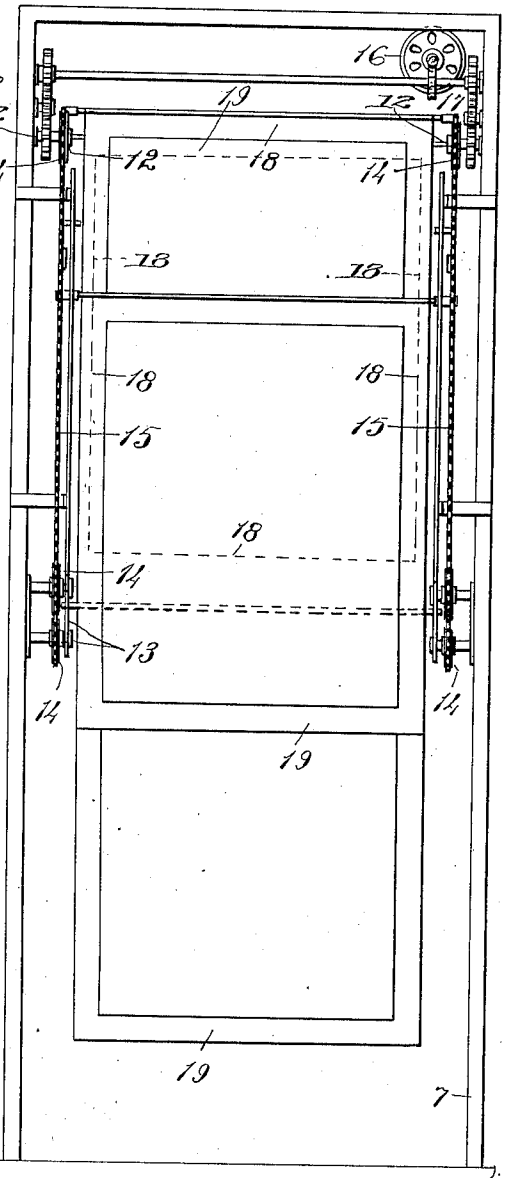


Fig. 2.

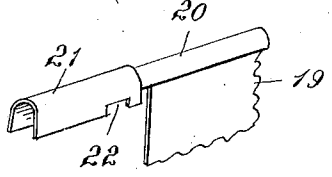


Fig. 3.

Witnesses:
F. O. Shaffer
W. C. Weber.

Inventor:
C. C. Kelley
By: O. E. Smith
Atty.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

C. C. KELLEY.

ADVERTISING DEVICE.

APPLICATION FILED JAN. 4, 1912.

1,038,149.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 2.

Fig. 4.

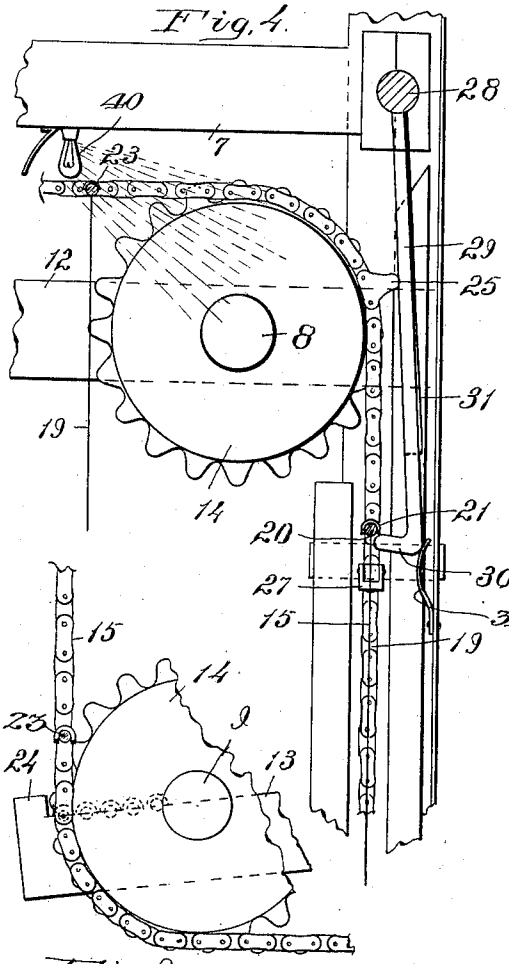


Fig. 5.

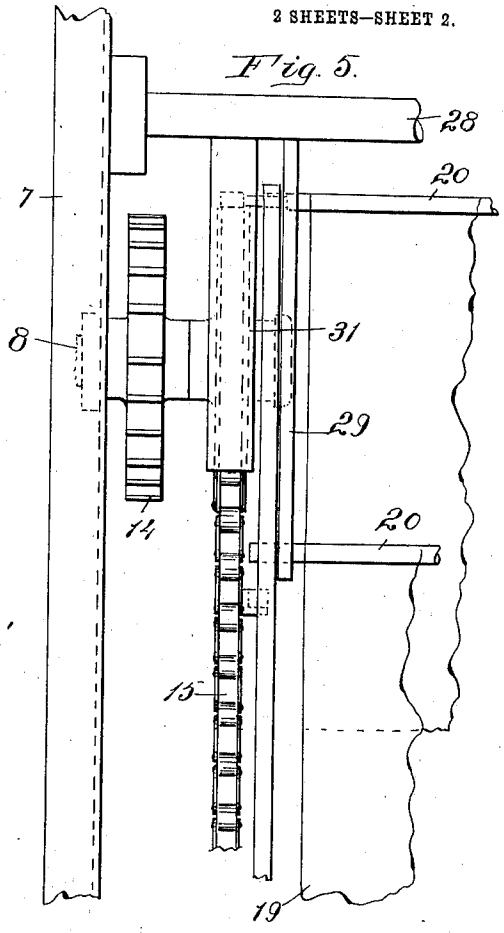


Fig. 9.

Fig. 6.

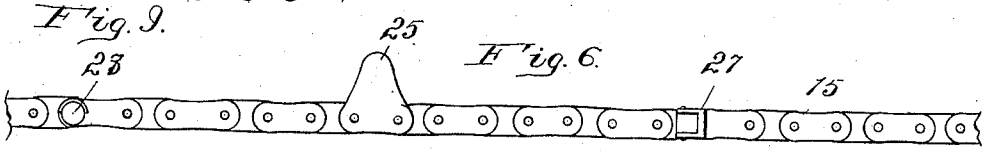


Fig. 7.

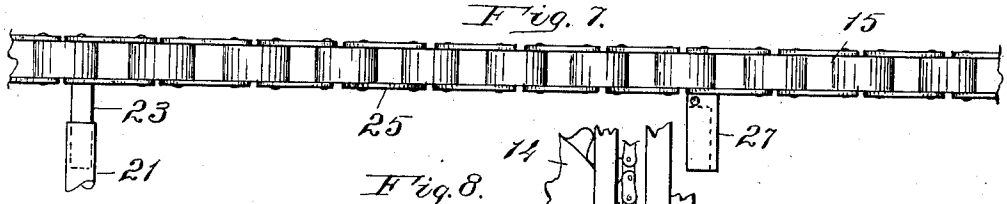
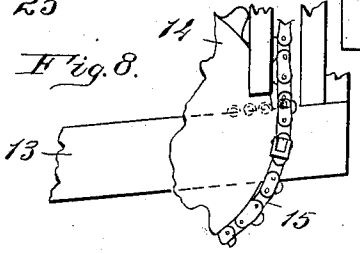


Fig. 8.



Witnesses:
F. O. Chaffee
W. C. Weber.

Inventor:
C. C. Kelley
By: J. L. Zirk
Atty.

UNITED STATES PATENT OFFICE.

CHARLES C. KELLEY, OF LOS ANGELES, CALIFORNIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO GEORGE H. ALLEN, OF LOS ANGELES, CALIFORNIA.

ADVERTISING DEVICE.

1,038,149. Specification of Letters Patent. Patented Sept. 10, 1912.

Application filed January 4, 1912. Serial No. 669,506.

To all whom it may concern:

Be it known that I, CHARLES C. KELLEY, a citizen of the United States, and resident of Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Advertising Devices, of which the following is a specification.

My invention pertains to advertising signs and it has special reference to automatically-operated mechanism which presents a plurality of advertising signs successively, and which may or may not be illuminated.

The object, primarily, is to construct mechanism of such character that a large number of these signs may be operated by a single exposure frame without interference.

It also further provides a means whereby the mechanism will positively carry the sheet containing the advertisement into position and hold it there a suitable period of time, and again carry it forward in a positive manner, as will now be set forth in detail.

In the accompanying drawing, Figure 1 is a side elevation of the frame and mechanism of the automatic advertising device. Fig. 2 is a front view of the same. Fig. 3 is a perspective view of one end of the sheet carrying rod showing a carrier loop thereon. Fig. 4 is a side view, enlarged of the upper end of one of the advertising screens, showing the method of detaching the same from its exposure position. Fig. 5 is a front view of a portion of the screen showing the mechanism for tripping and catching the screen. Fig. 6 is a side view of a carrier chain showing the holding, tripping and catching mechanism for the screens. Fig. 7 is a top view of the carrier chain, equipped with the holding, tripping and catching mechanism. Fig. 8 is a view of one of the lower sprocket wheels, showing means for disengaging the carrier rod, and Fig. 9 is a side view of the rear sprocket wheel showing manner of picking up the carrier rod.

In constructing my invention I provide a frame 7 of any suitable size, in the upper part of which I mount four cross horizontal shafts, two of the shafts 8, 9, being at the front, and shafts 10, 11 at the rear side of the frame.

The upper shafts 8, 10, are journaled at each of their ends to a horizontal bar 12, which extends from front to rear in the frame, and the lower shafts 9, 11, are journaled in fore and aft bars 13, these bars having their rear ends lower than their forward ends, for purposes which will be hereinafter explained. At each end of each of these shafts is a sprocket wheel 14, and an endless sprocket chain 15 passes over each set of wheels thus arranged.

A motor 16 mounted in the upper part of the frame is suitably geared through the train of mechanism, 17, to turn the upper set of sprocket wheels and thereby impart motion to the two chains in unison. Instead of the motor, spring mechanism may be substituted.

The front of the case is entirely closed, having an opening only large enough to expose a single sheet. This opening is indicated in Fig. 2 by the dotted lines 18 and each advertising sheet 19 is of such size that the advertisement printed thereon will be exposed through this opening.

Each sheet 19, has at its upper end a carrier rod 20 to which the sheet is attached, this carrier rod having at each end a projection 21, U-shaped in cross section, and this projection extends beyond the edge of the sheet 19, and abuts the side of the sprocket chain 15. The lower side of this U-shaped projection 21, has notches 22, to ride on the inclined bar 13, heretofore referred to, the notches thus serving as guides to keep the rods in alinement while they slide down the incline.

In order to successively carry the sheets 19 to the exposure position at the front of the case, each sprocket chain 15 is provided with three adjuncts, the first of which is a projecting pin 23, the pin on each chain projecting inwardly, and this pin is of such size that it will loosely fit within the U-shaped projection 21, Fig. 3.

In practice each of the inclined bars 13 has at its rear end, a stop 24, on its upper surface, so that when the carrier rod 20 slides down on the inclined bars, the projecting member 21 will be arrested by the stop, and this stop is in such a position that the pin 23 on the chain will, in its upward movement, enter the U-shaped member, and thus carry up the rod 20 and suspended sheet 19. Forward of this pin 23 one or

both chains has a tripping finger 25 which projects out a suitable distance beyond the chain, and forward of this tripping finger is a receiving finger 27, U-shaped in cross section, and hinged to the chain in such a manner, and in such a position, relative to the projecting end 21 of the rod 19, that this hinged receiving finger will receive and hold the U-shaped projection after it is disengaged from the member 30.

It will be observed that above the shaft 14, and slightly forward of the same, is a cross rock shaft 28, parallel with the shaft 14, which carries alongside of each chain a downwardly projecting arm 29, the lower end of which has an inturned right-angled bend 30, which is in such a position relative to the supporting rod 20 of the sheet 19, that it will catch and hold the ends of the supporting rod.

Directly in front of each sprocket chain is an arm 31, the end of which is also attached to the cross rod 28, and this arm normally rests close to the chain, so that when the tripping finger 25 on the chain engages with the arm 31 it will force the arm out, causing the shaft 28 to rock, and thereby disengage the rod from the lower hooked end 30 of the arm 29, and a spring 31′, not shown, may be provided to normally keep the arm 31 normally close up to the chain.

By reference to Fig. 1 it will be seen the hinged U-shaped receiving finger 27 precedes the tripping finger 25, and the carrying pin 23 is behind the tripping finger. In this position the sheet 19 is carried forward, the rod 21 passing around the sprocket wheel and proceeding downwardly, until the projecting ends 21 of the rod 20 engage with the hooked ends 30 of the arms 29, so that the sheet is thus held in suspension on the hooked ends until the next tripping finger 25 turns down over the sprocket wheel and through the mechanism described disconnects the hooked ends 30 from the rod 20, so that when the rod is disconnected it drops down, carrying the sheet with it, until it is caught by the hinged receiving finger 27, which is at that moment only a short distance below, and the disengaged sheet is then carried down by the chain, until it reaches the lower inclined bar 13, when the projecting member 21 has its notch 22 engaged with the bar 13, thus freeing it of the finger 27, and permitting the rod and sheet to slide down and again take up position at the lower ends of the inclined bars 13.

It is obvious that instead of having the U-shaped loop or projection on the ends of the supporting rod, I may place a loop on the chain, and thus accomplish the same purpose, but as that is a mere detail of construction it is no departure from my invention.

In operation, therefore, the advertising sheets are held in suspension on the supporting rods 20, and as fast as they are deposited on the inclined bars at their forward ends they slide back to the rear side of the case of frame to be taken up successively by the carrier pins, and elevated to the top, and then, after being carried forward, held suspended in an exposed position for a short period, after which the sheet is moved downwardly to be again taken up and exposed. It will thus be seen that I may have two or more sets of carrying and tripping fingers on each chain. I show three such sets in Fig. 4, and if a longer exposure is desired for each sign I would have only two sets or a single set on the chains. It will also be noted that the capacity of the apparatus depends on the distance of the frame from front to rear, since the number of signs is limited by the length of the inclined bars 13, so that the greater the length of the bars the greater will be the number of carrying rods which can be held thereon.

In order to illuminate the signs I may use electric lamps, of various colors such as I have indicated at 40, in Fig. 1, whereby the rays from the lamp of the lamps so located will pass down, and light up the signs exposed in the opening 18.

What I claim as new, is:

1. A case, provided with an exposure opening, an endless sprocket chain within the case vertically movable along each vertical edge of the opening, a plurality of carrier rods having sign sheets suspended therefrom, means for supporting said carrier rods adjacent the path of the chains, means carried by said chains for engaging said carrier rods and moving them to the exposure opening, a cross shaft above the exposure opening, having depending arms with hooks at their lower ends normally resting alongside of the chains, means for holding said hooks in position to arrest and hold the ends of the carrier rods, an arm on the cross shaft projecting down and normally resting against the sprocket chain, and a tripping finger on the sprocket chain to engage with the downwardly-projecting arm to disengage the hooked end of the tripping lever from the ends of the carrier rod.

2. In an advertising device the combination with a case of a pair of spaced sprocket chains located therein, upper and lower sprocket wheels over which said chains travel, downwardly and rearwardly inclined bars in which the lowermost of said sprocket wheels are journaled, a plurality of sign carrying rods supported on said bars, carrier pins on the chains for engaging and supporting said rods and moving them to view position, suspension hooks for engaging said rods and holding them in view position, a release member carried by one of

said chains for releasing the suspension hooks and a receiving means on said chains for receiving the rods after they are released.

3. In a device of the character described, the combination with a pair of carrier chains of a casing within which said chains are mounted to travel, a plurality of sign carrying rods, a pair of rearwardly inclined bars supported in said casing, members carried by said rods having end portions recessed for the reception of said bars, and means carried by said chains for picking up said rods from said bars, means for arresting and suspending said rods in their travel and means carried by the chains for actuating said arresting and suspending means, and rod receiving members carried by the chains for receiving said rods when said rods are released by the arresting and suspending means.

4. A device of the character described comprising a display card having projections at each end of its upper edge, a trip shaft, hooks depending therefrom and engaging the display card projections to support the card, an endless chain adjacent each side of the display card supported on said hooks and traveling downwardly, a support secured to each of the chains and adapted to support the display card by engagement with its projections, an arm on the trip shaft, and a lug on one of the chains engageable with the arm to rotate said shaft and disengage the supporting hooks from the display card projections.

5. A device of the character described, comprising a frame, downwardly and rearwardly sloping ways therein, display cards having projections at each end of their upper edges, said projections adapted to move on said ways, a pair of endless chains one adjacent each of said ways and traveling upwardly near the rear end thereof and traveling downwardly near the forward end thereof, means on said chains to engage said projections and to thereby lift a display card from the rear end of the ways, a trip shaft journaled in the frame adjacent the chains where they are traveling downwardly, a pair of hooks depending from said shaft and adapted to engage the projections of a display card, an arm, mounted on the trip shaft, a lug on one of the chains adapted to engage and move said arm to rotate the trip shaft and disengage the hooks from the display card, and members on the chains adapted to receive the projections of the display card when disengaged by said hooks.

Signed at the city of Los Angeles, county of Los Angeles, State of California, this 9th day of December 1911, in the presence of witnesses.

CHARLES C. KELLEY.

Witnesses:
GEORGE H. ALLEN,
C. T. ZERBE.