A. L. RUNYAN.

ADVERTISING DISPLAY MECHANISM.

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1,081,001. Patented Dec. 9, 1913.

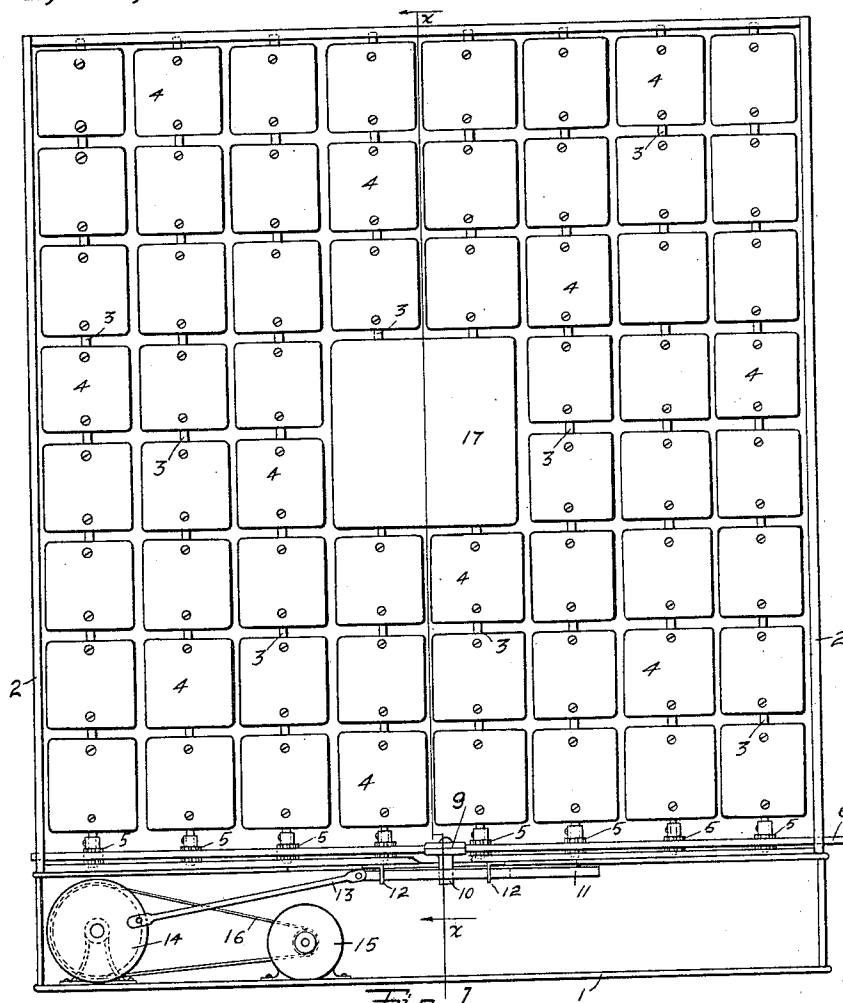


Fig. 1

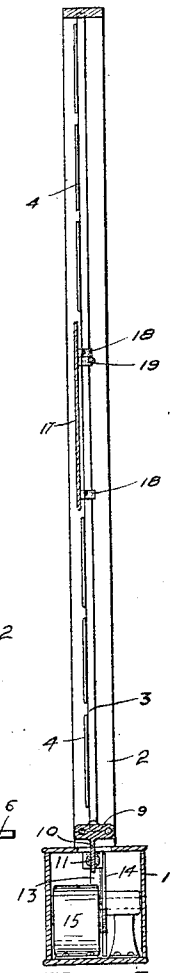


Fig. 2

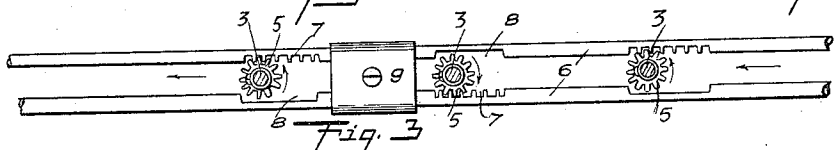


Fig. 3

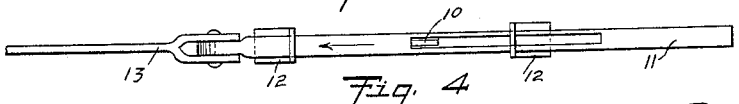


Fig. 4

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ADVERTISING-DISPLAY MECHANISM.

1,081,001. Specification of Letters Patent. Patented Dec. 9, 1913.

Application filed January 20, 1912. Serial No. 672,512.

To all whom it may concern:

Be it known that I, ARTHUR L. RUNYAN, a citizen of the United States, and a resident of Huron, in the county of Beadle and State of South Dakota, have invented certain new and useful Improvements in Advertising-Display Mechanism, of which the following is a specification.

My invention relates to display devices, and it is the object thereof to provide an advertising display mechanism in which two sets of letters words or characters on the display surface may be alternately presented to view.

Further objects of my invention are to provide a simple, durable and inexpensive mechanism capable of various novel uses in the art of advertising.

In the accompanying drawings, Figure 1 is a front view, partly in section, of a display mechanism embodying my invention, Fig. 2 is a vertical transverse sectional view thereof on the plane of the line *x*—*x* of Fig. 1, Fig. 3 is a detail plan view of a part of the actuating mechanism, and Fig. 4 is a detail bottom view of the slotted drive-rod and its connections.

In the construction shown I provide a suitable base 1 which forms a casing for the driving mechanism and which supports a vertical rectangular frame 2. In the upper and lower members of the frame 2 are journaled the respective ends of a series of vertically extending shafts 3 upon each of which are secured a plurality of rectangular plates 4. Near the lower end of each of the shafts 3 a pinion 5 is secured thereon and adjoining said pinions are the horizontally extending rods 6 of which the ends are slidably supported in the end members of the frame 2. Adjoining each of the pinions 5 rack-teeth 7, meshing with the pinions, are formed on one of the rods 6 and the other rod has a recess 8 made in the inner side thereof so that it will not engage the pinion. The racks and notches are preferably formed alternately on each of the rods 6, as shown in Fig. 3, so that when the pinions are actuated by longitudinal movements of the rack-rods each adjoining pair of the shafts 3 will be revolved in opposite directions. At the central parts of the rods 6 the same are secured together by a clamp-piece 9 and from said clamp-piece a flat finger 10 extends downwardly through slots in the lower member of the frame 2 and the top of the base 1. The lower end of said finger 10 extends through the slotted drive-rod 11 which is slidably supported in guides 12, as shown. The drive-rod 11 is given a longitudinal reciprocating movement by means of a connecting-rod 13 which extends from the drive-rod to a crank-disk 14 arranged in the base 1. The crank-disk is given a continuous rotary movement by suitable means such as a small electric motor 15 connected by a belt 16 with a pulley formed on the side of the crank-disk. The stroke of the drive-rod and the length of the slot therein are so proportioned that the finger 10 and rack-rods will be intermittently actuated in alternating directions for distances such as to cause a half-revolution of each of the pinions 5 and shafts 3.

There being presented to view one side of each of the plates 4 which form the display surface, as shown in Fig. 1, and the drive-rod being in the position shown in Fig. 4 and moving in the direction of the arrow, the action during one revolution of the crank-disk will be as follows: The plates will remain stationary until the end of the slot in the drive-rod engages the finger 10, whereupon the rack-rods will be actuated so as to quickly turn the shafts 3 and present to view the opposite or rearward side of each of the plates 4. Then the direction of movement of the drive-rod will be reversed and, after a time during which the rearward sides of the plates 4 are exposed, the shafts 3 will again be quickly turned to present to view the sides of the plates first exposed.

In addition to the reversible display surfaces formed by the plates 4 there may be provided a fixed or stationary display surface surrounded by the reversible surface units. For this purpose a plate 17 is provided having on one side thereof lugs 18 through which two or more of the shafts 3 pass freely so as to be rotatable therein, and collars 19 are secured upon the shafts so as to support the plate thereon.

Various ways in which the described mechanism may be employed in advertising display will be obvious. The reversible surface units formed by the plates 4 may be of different colors so that changing geometrical figures will be formed as the plates are reversed in position. The central stationary surface presented by the plate 17 may have represented thereon a store or mercantile establishment, while the surrounding reversi-

ble surface units may have upon one side the representation of people going to the store and upon the other side people leaving the store with merchandise. An almost endless variety of ways in which the reversible surfaces may be used to produce sudden, startling and attractive changes of appearance, will present themselves to the mind, but since these are all but varying results and not structural elements of my invention, it is unnecessary to present them in further detail.

Now, having described my invention, what I claim and desire to secure by Letters Patent, is:

1. In a mechanism of the class described, a frame, a plurality of parallel shafts revolubly mounted therein, a series of plates secured to each of the shafts, the shafts being normally in such positions that all of the plates lie in the same plane, means for intermittently rotating the shafts to alternately present to view the opposite sides of the plates, and a stationary plate supported upon more than one of the revoluble shafts so as to be retained thereby in a fixed plane parallel to the axes of said shafts and to the normal plane of the plates secured to the shafts.

2. In a mechanism of the class described, a frame, a series of vertically extending shafts journaled therein, means for intermittently rotating said shafts so that adjoining ones are turned in opposite directions, plates secured to the shafts so that all the plates lie normally in the same plane, and a fixed plate supported upon two of the shafts, said plate being arranged in the normal plane of the movable plates so that some of the movable plates adjoin each side thereof, and the movement of the shafts being such that opposite sides of the movable plates are alternately presented to view coincidently with the one side of the fixed plate.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses.

ARTHUR L. RUNYAN.

Witnesses:
M. A. MURAINE,
C. C. BRAWNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."