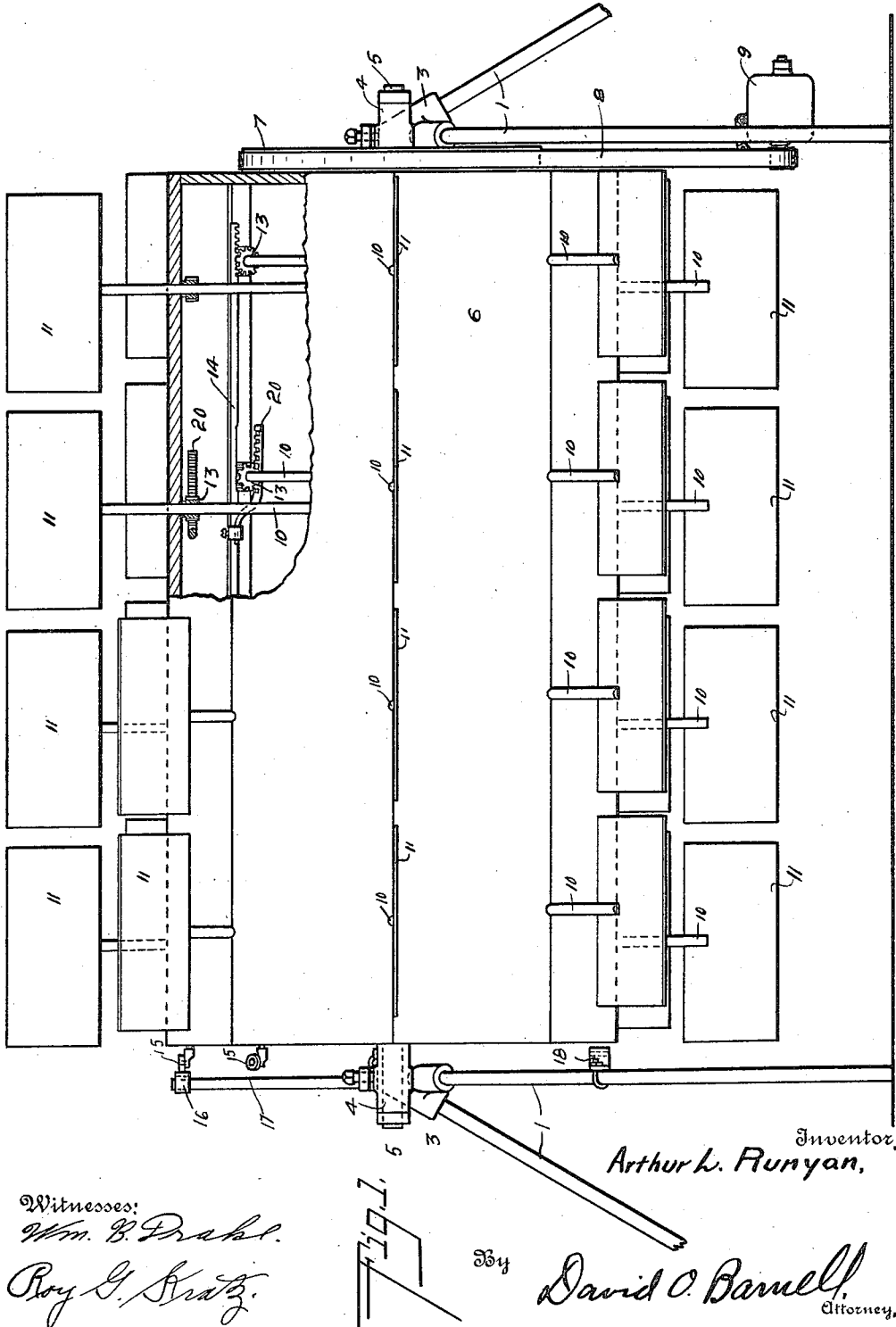


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 ADVERTISING DISPLAY MECHANISM.
 APPLICATION FILED JAN. 24, 1912.

1,045,750.

Patented Nov. 26, 1912.
 2 SHEETS—SHEET 1.



Witnesses:
 Wm. B. Drakl.
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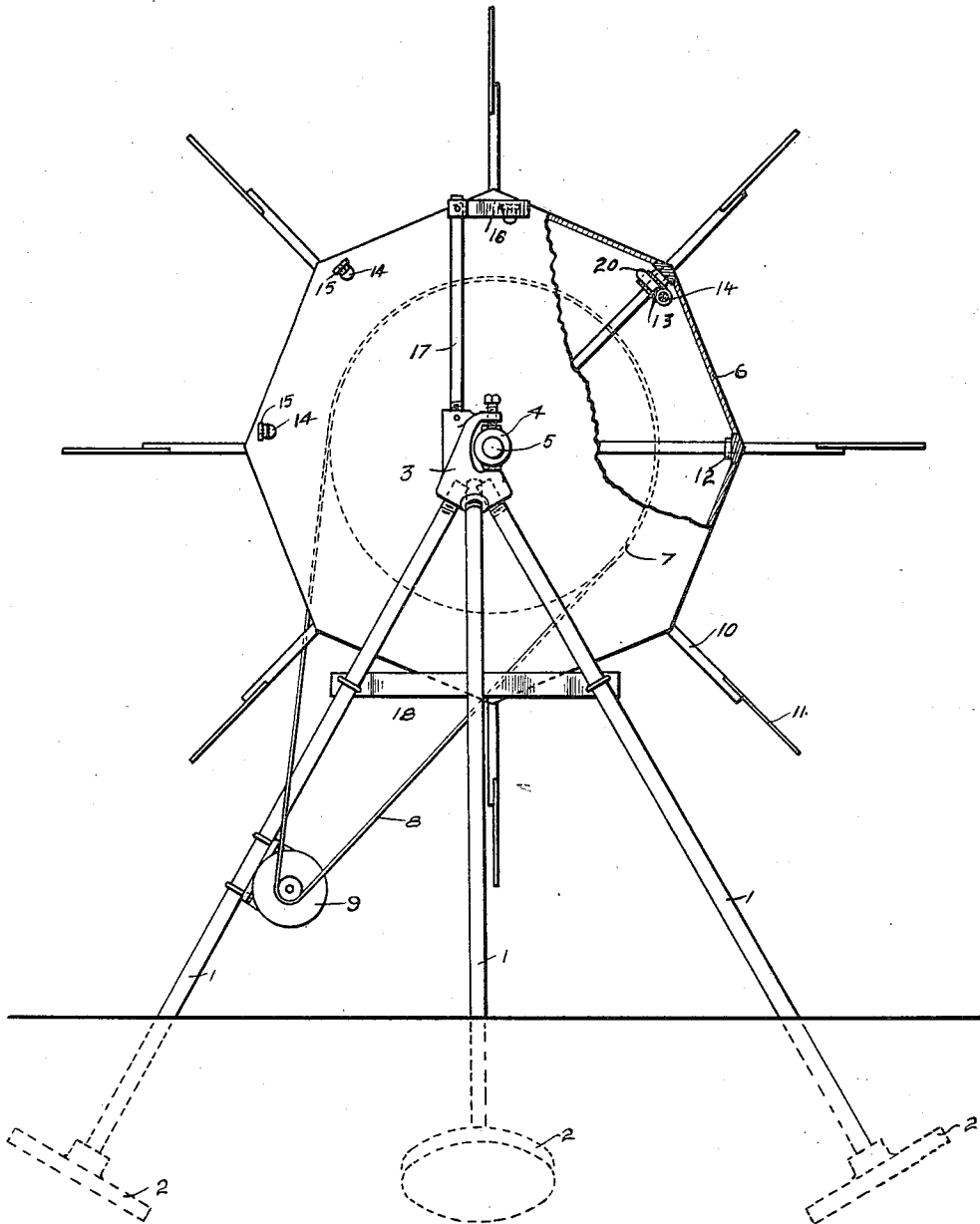
Inventor,
 Arthur L. Runyan,

By David O. Barnell,
 Attorney,

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UNITED STATES PATENT OFFICE.

ARTHUR L. RUNYAN, OF HURON, SOUTH DAKOTA.

ADVERTISING DISPLAY MECHANISM.

1,045,750.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed January 24, 1912. Serial No. 673,265.

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 advertising display mechanism and it is the object thereof to provide a machine for displaying advertising matter in an attractive and novel manner.

Constructions embodying my invention are illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the machine, partly in longitudinal vertical section, and Fig. 2 is an end elevation of the same, partly in transverse vertical section.

In the construction shown I provide a frame consisting of two tripods each comprising three tubular members 1 which are provided at their lower ends with anchor-plates 2 and of which their upper ends are secured in the head-blocks 3. The anchor-plates and the lower ends of the members 1 are set in the ground so that the head-blocks will be at equal levels. Mounted upon the head-blocks are suitable bearings 4 in which are journaled the trunnions 5 of a drum 6, which is preferably of the octagonal form shown. At one end of the drum the same is provided with a pulley 7 which may be connected by means of a belt 8 with a small electric motor 9, mounted as shown on the leg of one of the tripods, and which may be supplied with electrical energy when it is desired to revolve the drum. Passing radially through the drum are a number of shafts 10 arranged so that a like number of the ends thereof emerge from the drum at each corner of the octagonal surface. The shafts are arranged circumferentially of the drum in groups in each of which the shafts are placed as nearly as possible equidistant from the ends of the drum, the variation in longitudinal position of the shafts of any group being merely such as to enable them to pass each other at the center of the drum. On the ends of each shaft are secured rectangular plates 11, the same being arranged so that at each corner of the drum there will be a row of the plates extending longitudinally and

radially to the drum. On the portions of the shafts inside the drum each is provided at one end with a collar 12 and at the other end has secured thereon a pinion 13. For each longitudinally alined set of shafts the pinions are at the ends thereof adjoining the same side of the drum, and for each of said sets of shafts there is a longitudinally extending rack-bar 14 of which one end extends through the end of the drum and is provided with a roller 15. Adjoining one end of the drum there is an upper fixed cam-plate 16 carried by a rod 17 extending up from one of the head-blocks 3, and a lower fixed cam-plate 18 secured to the legs of the tripod. During the rotation of the drum the rollers 15 engage the cam-plates 16 and 18 alternately, being pushed inwardly by the upper cam-plate and pulled outwardly by the lower cam-plate, so that an intermittent longitudinal reciprocating movement is imparted to the rack-bars.

With reference to the cam-plate 18 it should be noted that the same is a bar arranged tangentially to the circular path of movement of the rollers 15, the ends of the bar extending outside said circular path and the central part of the bar extending inside said circular path, when viewed as in Fig. 2. As the rollers pass the bar they engage only the outer side of the central part of the bar so that said part of the bar lies between them and the end of the drum.

Each rack-bar is provided with rack-teeth meshing with the pinions on alternate shafts, and adjoining the other or intermediate shafts there are secured to the rack-bars the rack-fingers 20 which have teeth meshing with the pinions on said intermediate shafts, but on the sides of said pinions opposite to the rack-bars themselves. Thus, at each longitudinal movement of one of the rack-bars the alternate shafts of the longitudinal set are turned in like directions while the other or intermediate shafts are turned in the opposite direction. The amount of longitudinal movement given to the rack-bars by the cam-plates 16 and 18 is such that at each movement the shafts will be turned one-half a revolution so as to present to the observer the reverse sides of the plates 11 carried by the shafts.

From the foregoing the operation of the mechanism will be apparent. The drum being actuated by the motor so as to run at a

suitable speed, as each longitudinal set of the shafts reaches a vertical position the shafts will be turned half of a revolution, each adjoining pair of the shafts turning
5 in opposite directions. Advertising matter of any kind may be displayed upon the surfaces of the plates 11 and by suitable arrangements of coloring, or by alternation of printed and pictorial matter upon the
10 various plates the same may be made to present to the observer a novel and attractive appearance, such that he will be led to continue his observation at least until all of the plates have been presented to view. An
15 observer looking only at the uppermost row of plates during one revolution of the drum will see both sides of each of the plates on the machine, since when a set of the plates approaches the vertical position one side of
20 them will be presented to view, and while passing the vertical position the plates of the set will be turned so as to present to view the opposite sides thereof.

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

1. In an advertising display mechanism, a drum revolubly mounted on a horizontal axis, driving means for rotating the drum,
30 series of shafts extending radially through the drum, the shafts of each series lying in a plane extending longitudinally of the drum, means connected with the shafts of

each series for rotating them, and means for actuating said connecting rotating means. 35

2. In an advertising display mechanism, a revoluble drum, means for rotating the same continuously, revoluble shafts extending radially from the drum, the shafts being in longitudinally alined sets, plates carried
40 at the ends of the shafts, the plates of each set being alined longitudinally of the drum, a rack-bar for each set of shafts, and stationary cam-plates arranged to intermittently move the rack-bars longitudinally
45 during rotation of the drum.

3. In an advertising display mechanism, a rotary drum, series of shafts revolubly mounted therein on axes radial thereto, plates carried on the ends of the shafts, the
50 shafts being arranged in sets alined longitudinally of the drum, actuating means for rotating the alternate shafts in like directions and the adjoining shafts in opposite
55 directions, and means controlling said actuating means whereby each set of shafts will be rotated while passing through a certain fixed plane.

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

ARTHUR L. RUNYAN.

Witnesses:

D. O. BARNELL,

B. H. DOUGLASS.