

H. HAKE.
 AUTOMATIC DISPLAY ADVERTISING DEVICE.
 APPLICATION FILED DEC. 19, 1907.

917,594.

Patented Apr. 6, 1909.
 3 SHEETS—SHEET 1.

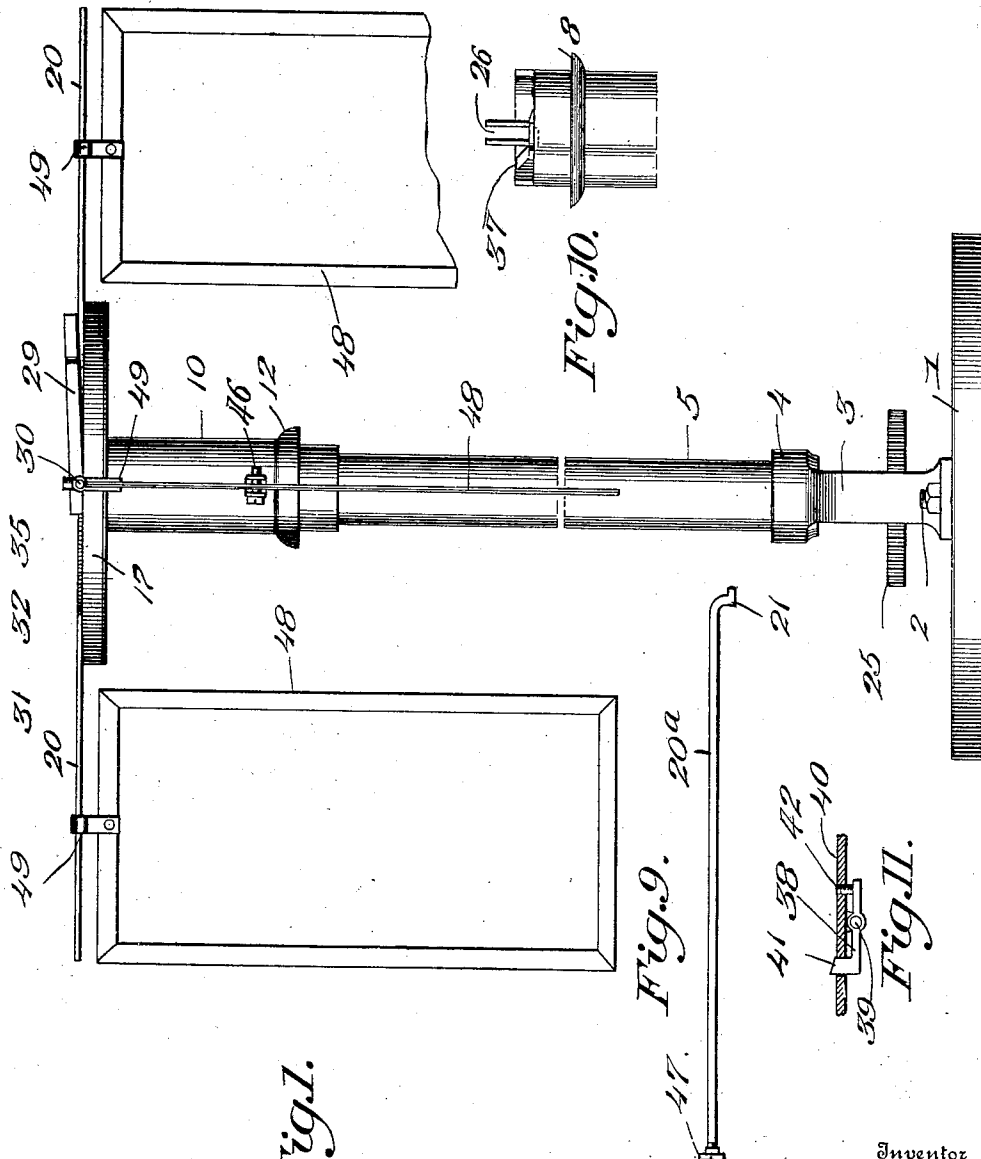


Fig. 1.

Fig. 9.

Fig. 10.

Fig. 11.

Witnesses
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Fig. 3.

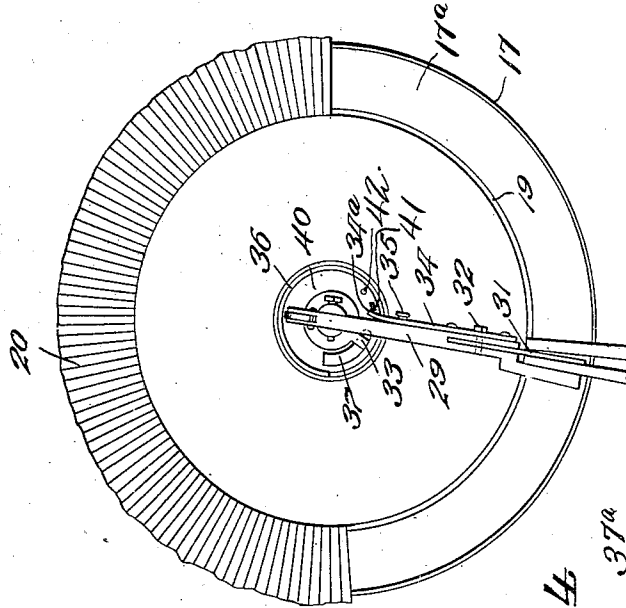


Fig. 2.

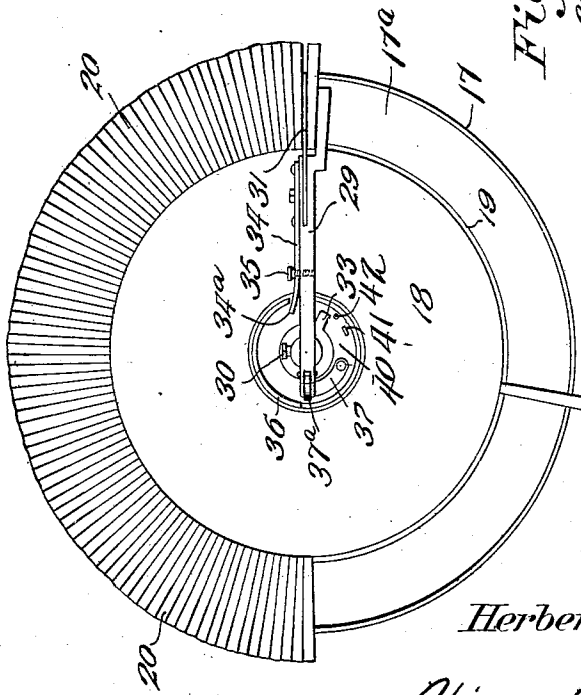
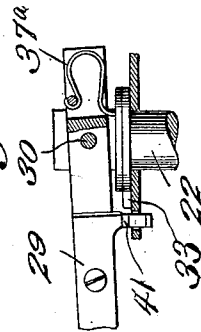


Fig. 4.



Witnesses

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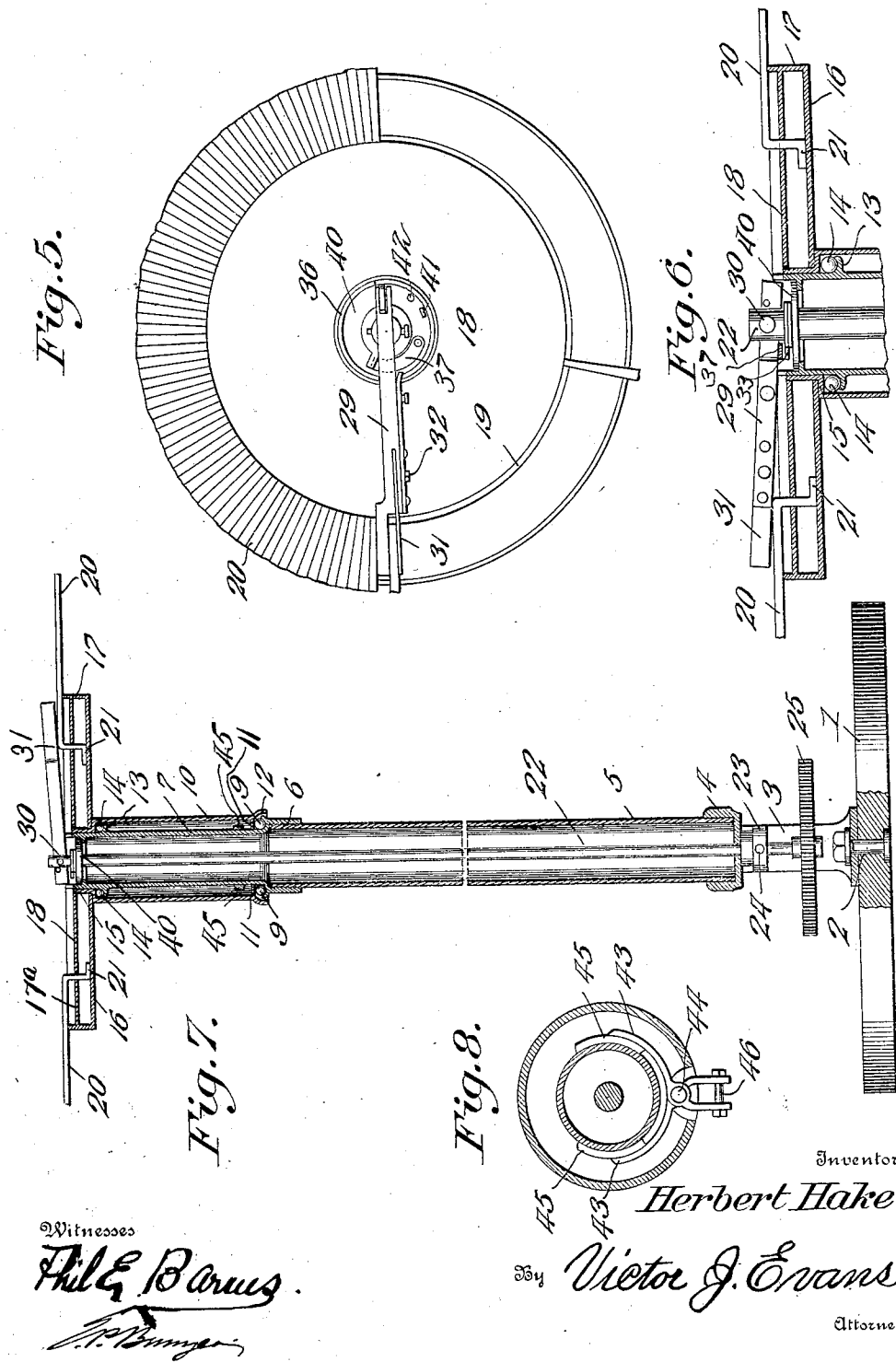
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Witnesses

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UNITED STATES PATENT OFFICE.

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AUTOMATIC DISPLAY ADVERTISING DEVICE.

No. 917,594.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed December 19, 1907. Serial No. 407,213.

To all whom it may concern:

Be it known that I, HERBERT HAKE, a citizen of the United States of America, residing at Council Bluffs, in the county of Pottawattamie and State of Iowa, have invented new and useful Improvements in Automatic Display Advertising Devices, of which the following is a specification.

This invention relates to automatic display advertising devices, and one of the principal objects of the same is to provide a sample and display device for various classes of articles or goods, and to provide means whereby said articles or goods may be brought to view serially, one after the other.

Another object of my invention is to provide a display device in which a series of arms for supporting pictures, postal cards, commercial signs or other classes of goods in position to display one side of said pictures, etc., may be rotated about a common center and brought to a position to display the other side of said pictures, etc., by means of a sweeping arm so arranged as to carry the supporting arms in position to display the articles suspended therefrom serially, one after another.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which:—

Figure 1 is a side elevation of a display device made in accordance with my invention. Fig. 2 is a top plan view of the same with the sweeping arm in one position. Fig. 3 is a similar view, with the sweeping arm in another position. Fig. 4 is a detail view illustrating a spring for throwing the sweeping arm downward to engage one of the supporting arms. Fig. 5 is a top plan view of the device showing the sweeping arm engaging one of the supporting arms to move it around to a position to display the opposite side of the picture suspended from said arm. Fig. 6 is a vertical section of the upper end of the table or stand. Fig. 7 is a vertical section taken through the table and the standard for supporting the same. Fig. 8 is a transverse section of the same. Fig. 9 is a side elevation of one of the supporting arms. Fig. 10 is a detail side elevation of one of the raceways for the ball bearing balls. Fig. 11 is a detail view, showing a pawl or detent.

Referring to the drawing for a more specific description of my invention, the nu-

meral 1 designates a base to which is secured by means of a bolt 2 a yoke 3. The yoke 3 is provided with a socket 4, and seated in this socket is the lower end of a tube 5 which is screw-threaded at its lower end to fit the socket 4, and is also exteriorly threaded at its upper end, as at 6. Fitted to the upper threaded portion of the tube 5 is an inner tube 7 provided with a raceway for anti-friction balls 9, said balls supporting an outer tube 10, and said tube being supported upon an internal flange 11 which rests upon the balls. The tube 10 is provided with a downwardly extending guard 12. Near the upper end of the inner tube 7 an external flange 13 is provided, and supported upon said flange is a series of anti-friction balls 14, said balls supporting a flanged collar 15 to which is secured the circular top 16 of the display-stand. The collar 15 is provided with a flange and is formed integral with the outer tube 10. The stand 16 consists of a bottom having an annular flange 17 provided with an inwardly extending ring 17^a. The top 18 of the stand is provided with a central opening, and said top is secured to the collar 15. The top 18 is spaced from the ring 17^a to form an annular slot 19. Each of the supporting arms 20 is provided with a suitable head 21 designed to be detachably connected to the top of the display stand by inserting the end in the slot 19 and permitting the arm to assume a horizontal position resting upon the flange 17.

A vertically disposed central operating rod or shaft 22 extends through the tubular standard, the lower end of said shaft extending through the socket 4 of the yoke 3. Secured to the shaft 22 is a stop collar 23 provided with a set screw 24. On the lower end of the shaft 22 is a gear wheel 25 designed for the purpose of connecting a motor for rotating the shaft 22. The upper end of the shaft 22 is slotted, as at 26, Fig. 10, and pivotally mounted in said slot is a sweeping arm 29 pivoted upon a pin 30 extending through the shaft 22 and through said arm. The arm 29 is provided with a recess at one end, and connected to the arm in said recess is a finger 31 designed for the purpose of engaging the supporting arms 20 and moving them in position to display the signs and goods supported upon said arm. The finger 31 is adjustable vertically within the sweeping arm 29 by means of a suitable set screw 32 which forms the pivotal point of the

finger 31. At the slotted end of shaft 22 is a lug 33 for the purpose of pressing down and releasing the spring 37 which releases the finger from the arms 20 on the instant.

5 Secured to the side of the sweeping arm 29 is a spring 34, said spring normally extending away from the arm 29, as at 34^a. A set screw 35 is provided, and this set screw serves to adjust the spring 34 toward and

10 away from the arm 29 for a purpose which will readily appear. The set screw 35 is provided with an enlarged head and shoulder which bears against the spring 34. The normal curvature of the spring 34 at its

15 outer end is such that the space between the spring and the arm 29 can be increased by unscrewing the set screw. Upon the upper edge of the tube 7 is formed a substantially semi-circular projecting rim 36 upon which

20 the sweeping arm 29 is designed to bear during a portion of its rotation. The curved spring 37 over which the arm 29 travels serves to lift said arm to a position to travel over the rim 36. The inner end of the arm

25 29 is slotted, and secured in said slot is a spring 37^a having a downwardly extending finger which bears upon a disk on the shaft 22, as shown in Fig. 4. This spring holds the outer end of the arm 29 down after it

30 passes the rim 36.

As shown in Fig. 11 a lever 38 is pivoted at 39 under the disk or cover 40, said lever having an upwardly projecting lug 41 which projects through an aperture in the disk 40.

35 This lug is adjustable to project more or less from the disk 40 by means of a set screw 42. A brake, as shown in Fig. 8, comprises arms 43 pivoted at 44 and provided with brake shoes 45 of leather, felt or other suitable material. The outer ends of the arms 43

40 are connected by an adjustable bolt 46 by means of which the brake shoes 45 may be tightened upon the tube 5 to prevent rotation of the tube 10 and the upper portion of the display stand, during the operation of the sweeping arm. I prefer to use short arms 20, and under certain conditions longer arms 20^a, said longer arms having a knob or head 47 secured thereto. Suspended from

50 the short arms are the frames 48 provided with a suitable clasp 49 which engages the arm 20. The long arms and frames are designed to have pictures or goods connected thereto by doubling the same over the arm or by means of suitable clips or clasps.

The operation of my invention may be briefly referred to as follows: Any suitable number of arms 20^a are connected to the

60 top of the display stand by placing the heads 21 in the slot 19. The gear wheel 25 now revolves. The sweeping arm 29 is carried around and lifted by the spring 37 until said arm rests upon the rim 36. In this

65 position the finger 31 is raised above the

arms 20 and 20^a. After the sweeping arm 29 reaches the opposite terminal portion of the rim 36 the spring 37 serves to throw the finger 31 down back of the first supporting arm. The further movement of the finger 31 will carry the arm around to the opposite

70 side of the table. In order to adjust said arm so that a single one of the arms 20 is moved at each operation the spring 34 is adjusted. Should the spring 34 be adjusted

75 to extend away from the arm 29 by the set screws 35 the drop of the arm 29 would be retarded in passing over the rim 36, and thus the finger 31 would drop between the

80 outer one of the arms 20 and the others and 80 would move but one arm. The regulator 38 serves to raise the arm 29 and the finger 31 at a point opposite the center of the rim 36. Thus the finger 31 may be raised out of contact with the arm 20 when it is desired to

85 separate one of the frames 48 from the others by means of this regulator before said arm reaches the spring 37 in its movement. It will be understood that the brake shoes 45 may be released and the tube 10 rotated by

90 hand to bring the arms 20 and 20^a in the proper positions at each revolution of the gear wheel 25, so that the finger 31 will drop down immediately back of the outer arm.

Various modifications may be made in the structure of my device without departing from the spirit and scope of the invention as defined in the following claims.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the character described, a standard, a shaft mounted therein, a sweeping arm pivoted to said shaft, a spring for raising said arm, a rim forming a bearing for said arm, a series of supporting arms connected to the top of the stand, and an adjustable regulating spring secured to the side of said sweeping arm.

2. A display stand comprising a central standard, a top secured to said standard and provided with a circular slot, a series of removable arms mounted in said slot, a rotating shaft, a sweeping arm connected to said shaft, means for rotating said shaft and moving said sweeping arm to slide the supporting arms from one side of the stand to the other to display the goods supported thereon.

3. In a device of the character described, a hollow standard, a tube mounted on the standard, a top secured to said tube, said top member provided with a circular slot, a series of supporting arms, each provided with an angular head mounted in said slot, a sweeping arm connected to said shaft, a rim for controlling said sweeping arm, and means for rotating said shaft.

4. In a device of the character described, a standard, a top secured to said standard, said top having a circular slot therein, a

series of arms mounted in said slot and projecting radially from said top, a shaft mounted in the standard, a sweeping arm connected to said shaft, means for rotating said shaft, a spring connected to said sweeping arm, a set screw for adjusting said spring toward and from said arm, and a rim for controlling the movements of said sweeping arm.

- 10 5. In a device of the character described, a hollow standard, a rotatable tube mounted on said standard, a top secured to said tube,

said top having a slot therein, a series of arms mounted in said slot, a shaft within said standard, a sweeping arm connected to said shaft, means for rotating said shaft, and a brake for said tube, said brake comprising pivoted arms connected by a set screw.

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

HERBERT HAKE.

Witnesses:

WILLIAM ARND,
OLIVE B. ARND.