

Aug. 23, 1932.

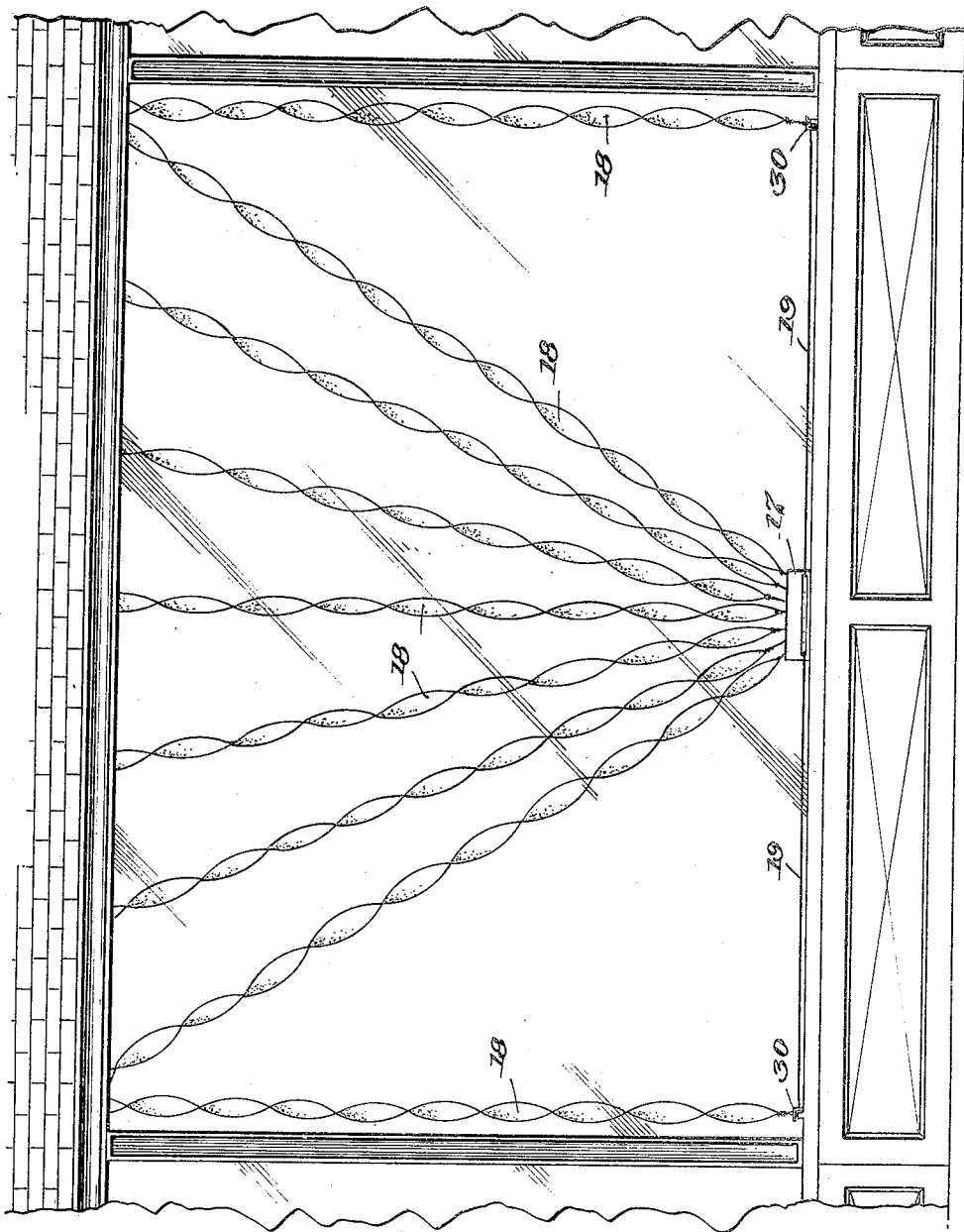
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1,872,661

DISPLAY DEVICE

Filed March 3, 1932

2 Sheets-Sheet 1



Inventor

Fig. 1.

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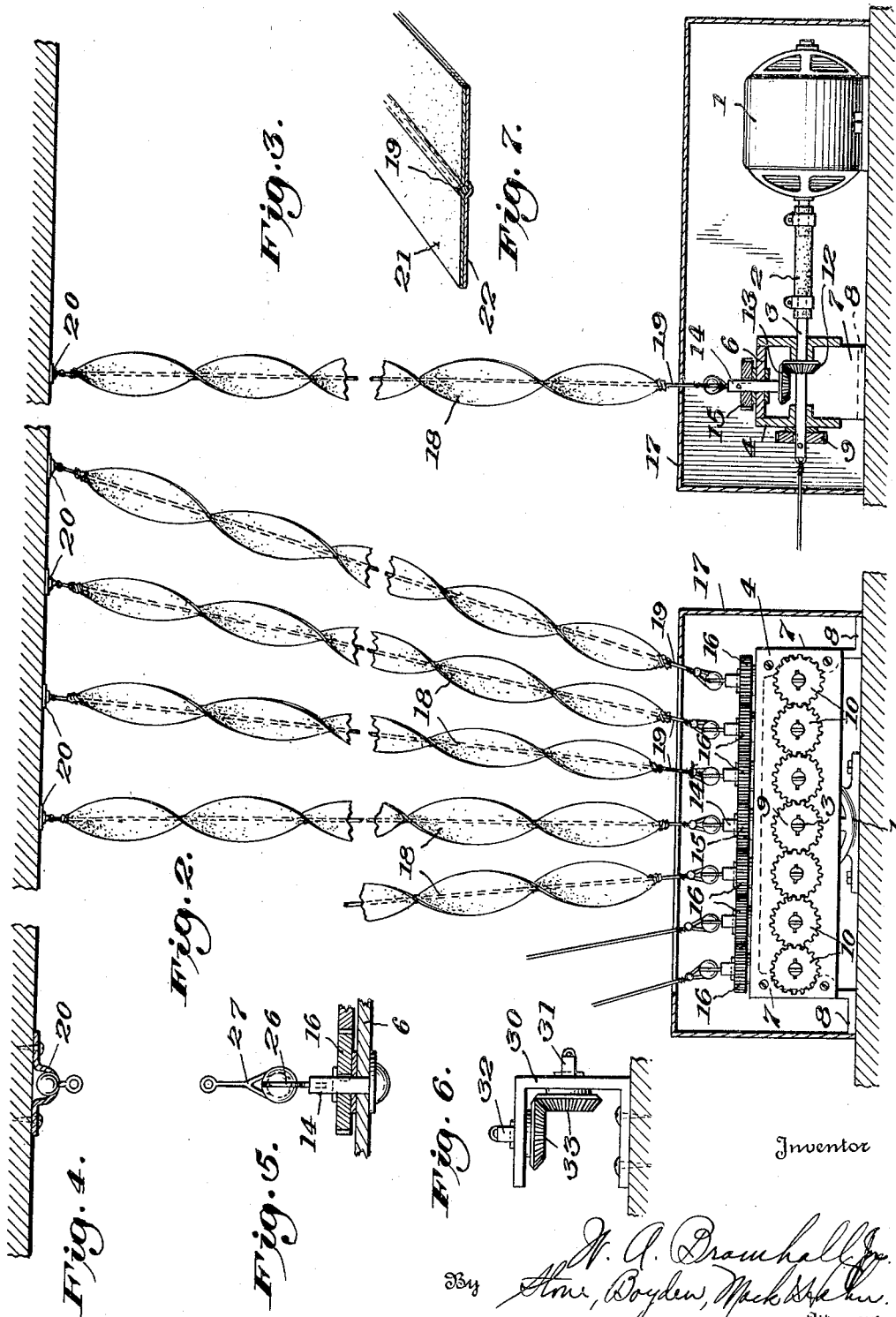
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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DISPLAY DEVICE

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This invention relates to display devices and has particular reference to advertising display devices for use in show windows or cases.

It is well known that articles that remain stationary, when displayed in a show case or window must be attractively arranged and some unusual feature must be incorporated in order to attract the attention of the public. In some instances bright colors are used to attract attention while in other instances one or more of the articles are operated to create interest. In many instances however, the articles displayed are not capable of operation, or for various reasons it is impractical to operate them and hence the display lacks interest and does not catch the eyes of the public.

It is the primary object of the present invention to provide a moving display device for use in show cases or windows which will serve to attract attention to the articles displayed and thus create interest.

Another object of this invention is to provide a moving display device which, while capable of arresting attention, shall be of a simple nature and shall be auxiliary or subordinate to the main display so as not to detract therefrom.

Another object is to provide a display device of this character which may be readily adapted to various sized and shaped cases or windows and which may be arranged in a plurality of forms to suit various type displays.

A further object is to provide a display device of the aforesaid character which shall consist of few parts that are simple in construction and inexpensive to manufacture and which may be easily and quickly assembled.

With the foregoing and other objects in view, the invention may be stated to consist in the various novel features of construction and arrangement or combination, all of which will

be fully described hereinafter and pointed out in the appended claims.

In the drawings accompanying and forming a part of this application,

Fig. 1 is a front elevation of a show window, showing one arrangement of my display device positioned therein;

Fig. 2 is a fragmentary vertical sectional view through the device;

Fig. 3 is a similar view taken at right angles to Fig. 2;

Fig. 4 is a detail sectional view through one of the ceiling swivel supports;

Fig. 5 is a vertical sectional view through one of the driving elements for the movable members;

Fig. 6 is a detail view in elevation of one of the devices for turning the movable members through 90°; and,

Fig. 7 is a detail perspective view partly in section of one of the movable members.

Briefly stated, the invention consists in arranging one or more ribbons, streamers or similar devices within a show case or window and then driving the same to cause them to rotate.

A device constructed in accordance with my invention comprises a suitable source of power such as a motor 1 which is preferably connected through a rubber or other flexible coupling 2 to a driving shaft 3. This driving shaft is journaled in front and rear plates 4 and 5 respectively of a box-like structure which consists of a horizontal plate 6 having downwardly directed ends 7 and supporting feet 8. As shown in Figs. 2 and 3, the driving shaft 3 projects through plate 4 and is fitted with a drive pinion 9 which meshes with and drives a plurality of idler gears 10, each of which is mounted on a stub shaft journaled in plate 4.

Drive shaft 3 also carries intermediate its ends, a bevel pinion 12 which meshes with a similar pinion 13 that is mounted on a vertically disposed shaft 14. Shaft 14 is jour-

nalled in horizontal plate 6 and mounted on this shaft is a gear 15 which meshes with and drives a plurality of idler gears 16, each of which is mounted on a stub shaft that is journalled in horizontal plate 6.

From the foregoing description, it will be apparent that the motor 1 will drive the aforementioned pinions and stub shafts and while for purposes of illustration I have shown seven horizontally and seven vertically disposed shafts, it will be obvious that any desired number of gears and shafts may be provided. A suitable cover or box 17 preferably encloses the motor and drive gear assembly.

The drive gear assembly is adapted to drive a plurality of helically shaped ribbons or streamers 18. Each of these streamers preferably consists of a rod or a flexible element such as a wire 19 which is fastened at one end to one of the stub shafts through a universal joint to be referred to hereinafter, and at the opposite end to a suitable swivel joint 20 that is fastened to some stationary part of the show case or window. The streamers 18 may be made of any suitable material and I have found by experience that ordinary colored crepe paper produces a streamer that is pleasing to the eye and inexpensive. These streamers may be made by gluing together two strips of material, 21 and 22, between which is positioned the element 19. These streamers may be coiled during their formation or may be made flat, and if of a flexible material they will assume the helicoidal form when they are rotated. The strips 21 and 22 may be of the same or different colors and, if desired, suitable printing may be placed thereon so that such printing will be alternately visible as the streamers rotate.

The universal joint interposed between the end of the elements 19 and stub shafts may be of any suitable type and for purposes of simplicity and economy, I have illustrated a joint which consists of a ball 25 having grooves about its surface arranged at right angles to each other. A wire loop 26 is positioned in one groove and fastened to a stub shaft while a similar wire loop 27 is positioned in the other groove and is adapted to be connected with element 19.

Where it is desirable to drive a streamer through an angle of 90°, I provide a device such as shown in Fig. 6. This device consists of an angle support 30 having shafts 31 and 32 arranged at right angles and fitted with bevel gears 33 which mesh with each other. As illustrated in Fig. 1, one of these devices may be mounted in each corner of the show case or window and an element 19 connected with shaft 31 and one of the drive shafts of the gear assembly. A streamer 18 is connected with shaft 32 and a suitable swivel as previously described. If desired a streamer

could be substituted for the horizontal element 19.

It will be readily apparent that the group of ribbons or streamers 18 can be arranged in a variety of different arrangements and lengths and when made of different colored materials, the resultant display is very effective in arresting attention. The ribbons or streamers however, merely serve to attract the attention and do not detract from the objects on display in the show case or window.

What I claim is:—

1. An advertising display device of the character described comprising a plurality of flexible streamers pivotally connected at one end to a stationary support, a reinforcing and driving element carried by each streamer and means operatively connected to the opposite ends of the reinforcing and driving elements of said streamers for rotating the same.

2. An advertising display device of the character described comprising a plurality of flexible streamers, a reinforcing and driving element associated with each streamer, said elements being pivotally connected at one end to a stationary support, each of the elements of said streamers being connected at its opposite end to a rotating element, and means for rotating said elements.

3. An advertising display device of the character described comprising a plurality of rotatable elements, means for rotating said elements, and a streamer connected at one end to and rotatable with each element, said streamers each being adapted to have the opposite ends thereof pivotally connected to any one of several points to cause said streamers to define various display formations.

4. An advertising display device of the character described comprising a support, a plurality of vertically disposed shafts and a plurality of horizontally disposed shafts journalled on said support, means for driving said shafts, a group of streamers arranged in display formation and connected to and rotatable with said vertically disposed shafts, and a second group of streamers arranged in display formation and rotatable with said horizontally disposed shafts.

5. A streamer for a display device of the character described comprising an elongated strip of flexible material having a reinforcing and driving element extending longitudinally thereof, said element having means for connecting the same at one end to a rotatable device and means for rotatably connecting the opposite end to a stationary support.

6. A streamer for a display device of the character described comprising an elongated laminated strip of flexible material having a reinforcing and driving element extending longitudinally thereof and disposed between said laminations, said element having means for connecting the same at one end to a rotat-

able device and means for rotatably connecting the opposite end to a stationary support.

7. An advertising display device of the character described comprising a rotatable element and a streamer connected at one end to and rotatable with said element, and means for pivotally connecting the opposite end thereof to any one of several points to cause said streamer to assume various display positions.

In testimony whereof I affix my signature.

WILLIAM A. BRAMHALL, Jr.