Sept. 3, 1929. F. W. KRAMER 1,726,990

DISPLAY STAND

Filed Nov. 5, 1928

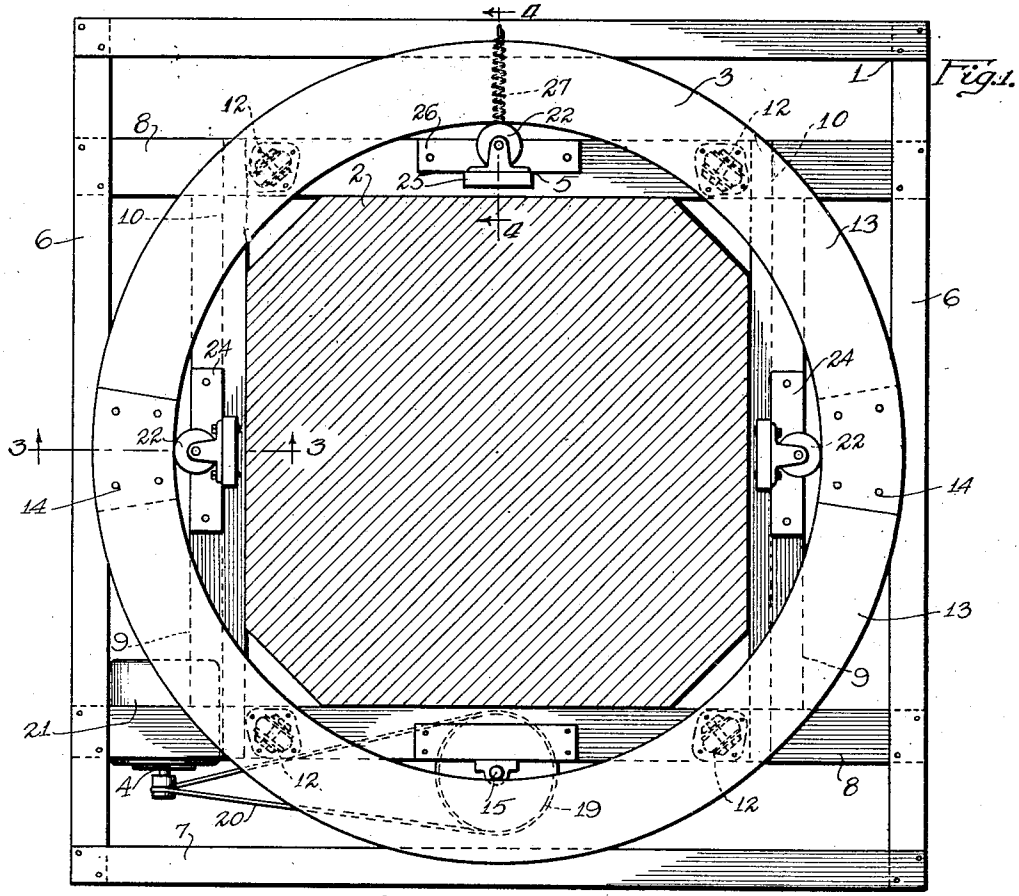


Fig. 1.

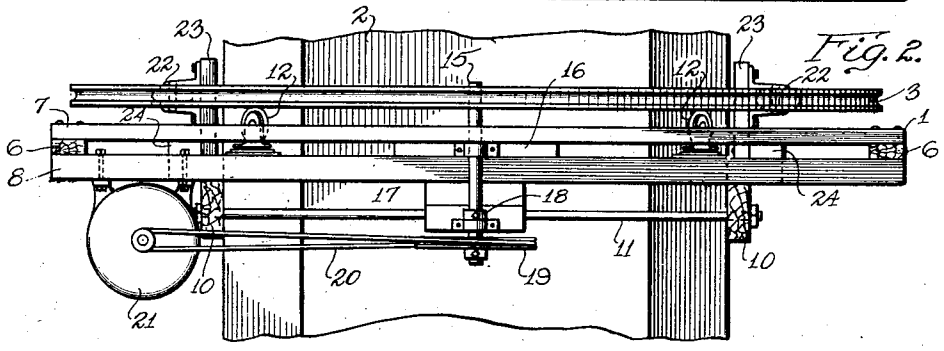


Fig. 2.

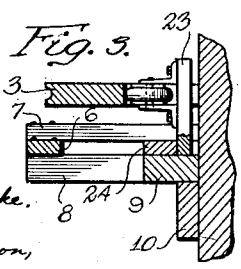


Fig. 3.

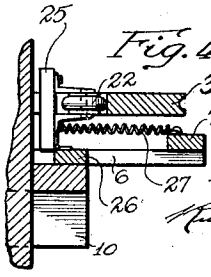


Fig. 4.

Witnesses.

Arthur M. Franke.

Wm. E. Anderson,

Inventor.

Francis W. Kramer,

By Hummler & Hummler,

Attys.

Patented Sept. 3, 1929. 1,726,990

UNITED STATES PATENT OFFICE.

FRANCIS W. KRAMER, OF CHICAGO, ILLINOIS.

DISPLAY STAND.

Application filed November 5, 1928. Serial No. 317,320.

The main objects of this invention are to provide an improved form of display stand of the type involving the use of a rotatable shelf on which articles are to be exhibited; to provide improved means for supporting the rotatable shelf; to provide improved mechanism for driving the shelf; to provide improved means for guiding the shelf in its rotation; and to provide a display stand of this kind having an unobstructed center so as to permit the shelf to rotate around a central post or column.

An illustrative embodiment of this invention is shown in the accompanying drawing, wherein:—

Figure 1 is a top plan of a display device built around a central post shown in section; certain parts of the display device being shown in dotted outline.

Fig. 2 is an end elevation of the same, with portions broken away.

Figs. 3 and 4 are sections taken on the lines 3—3 and 4—4 respectively of Fig. 1.

A common form of display device heretofore in use included an annular shelf mounted on a centrally located spider or similar bearing provided with a spindle or shaft and driven by suitable mechanism. Such prior devices were generally satisfactory for certain uses but they were not adapted to be built around a vertical column, because the centers of those display devices were obstructed by the bearing parts which supported the shelves.

The improved display device to which this invention is applied includes a rotatable shelf, which has a central unobstructed space adapted to receive a column or similar structure.

In the form shown, the improved display device comprises a supporting frame 1, adapted to be built around a central post or column 2, and having rotatably supported thereon a shelf 3 driven by driving mechanism 4 and guided in its rotation by guide means 5.

In the construction illustrated, the frame 1 is rectangular in form and comprises side rails 6 and 7, supported on a pair of substantially parallel rails 8, which are connected to cross braces 9.

The entire frame 1 is supported on a pair of substantially parallel horizontal rails 10, located on respectively opposite sides of the column 2, and to which they are clamped by a pair of bolts 11, secured to the ends of the rails 10.

Mounted on the rails 8, are four swiveled anti-friction rollers 12 on which the shelf 3 is loosely supported for rotation around the post 2.

In the embodiment illustrated, the shelf 3 is annual and comprises a pair of separable semi-circular sections 13, having their ends provided with lap joints and detachably secured together by bolts 14 or other suitable fastening means, so as to permit the shelf to be readily assembled around the post.

The driving mechanism 4 includes a vertical drive shaft 15, arranged to frictionally engage the inner periphery of the annular shelf 3. The shaft 15 is rotatably mounted in bearings 16 and 17 mounted on respectively opposite sides of one of the rails 8. A collar 18 is mounted on the shaft 15 for engaging the bearing 17 to secure the shaft in its operative position.

Mounted on the lower end of the shaft 15, is a pulley 19, connected by a belt 20 to an electric motor 21 suspended from the frame 1.

In the form illustrated, the guide means 5 includes three idlers 22 arranged to engage the inner periphery of the shelf for guiding the shelf in its rotation. Two of the idlers are located on the two sides of the post adjacent the drive shaft 15 and are mounted on vertical brackets 23, which are rigidly secured to cleats 24 mounted on the cross braces 9.

The third idler 22 is located diametrically opposed to the drive shaft 15 and is mounted on a hinged bracket 25, which is hinged to a cleat 26 secured to the adjacent rail 8. The bracket 25 is yieldingly urged outwardly by means of a spring 27, so as to cause its idler 22 to urge the shelf 3 into frictional contact with the drive shaft 15. One end of the spring 27 is secured to the bracket 25 and its other end is secured to the adjacent rail 7.

In operation, to assemble the device, the rails 10 are clamped to the post 2 by the bolts 11 and the frame 1 is then assembled around the post and placed on the rails 10.

The sections 13 of the shelf 3 are then placed on the rollers 12 and the ends thereof secured together by the bolts 14.

With this improved construction and arrangement of parts, the center of the device

is an obstructed space which will permit the parts to be readily assembled around a post.

The shelf is secured against wabbling by the idlers 22 and the shaft 15.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A display stand comprising a support, an annular shelf rotatably mounted on said support and having a centrally located unobstructed space for receiving a post, mechanism for driving said shelf, a plurality of rollers engaging the inner periphery of said shelf for guiding said shelf in its rotation, and means for yieldingly urging one of said rollers outwardly toward said shelf.

2. A display stand comprising a support, an annular shelf rotatably mounted on said support and having a centrally located unobstructed space for receiving a post, mechanism located on one side of said space for driving said shelf, and an idler located on the opposite side of said space and yieldingly urged into engagement with the inner periphery of said shelf.

3. A display stand comprising a support, an annular shelf rotatably mounted on said support and having a centrally located unobstructed space for receiving a post, a drive shaft located on one side of said space and frictionally engaging the inner periphery of said shelf, an idler located on the opposite side of said space and engaging the inner periphery of said shelf, and a spring urging said idler outwardly.

4. A display device comprising a supporting frame having a centrally located unobstructed space for receiving a post, rollers on said frame, an annular shelf rotatably supported on said rollers, said shelf including separable sections adapted to be assembled around the post, a drive shaft located on one side of said space and engaging the inner periphery of said shelf, a plurality of idlers on said frame engaging said inner periphery, and a spring urging one of said idlers outwardly.

Signed at Chicago this first day of November, 1928.

FRANCIS W. KRAMER.