

Jan. 15, 1929.

1,699,463

A. L. CRESCI

TURNTABLE

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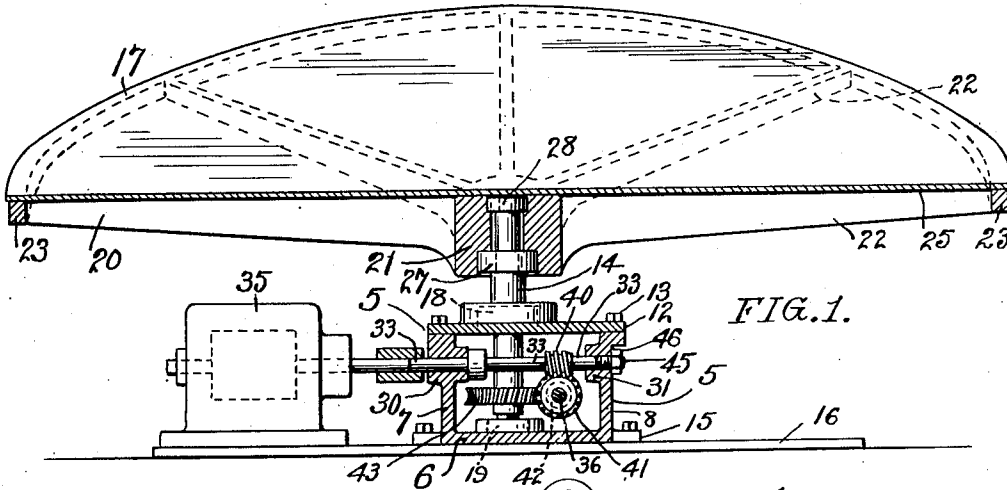


FIG. 2.

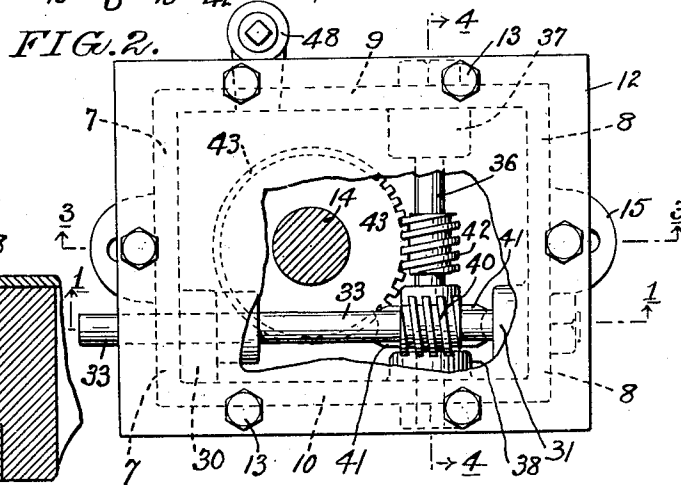


FIG. 3.

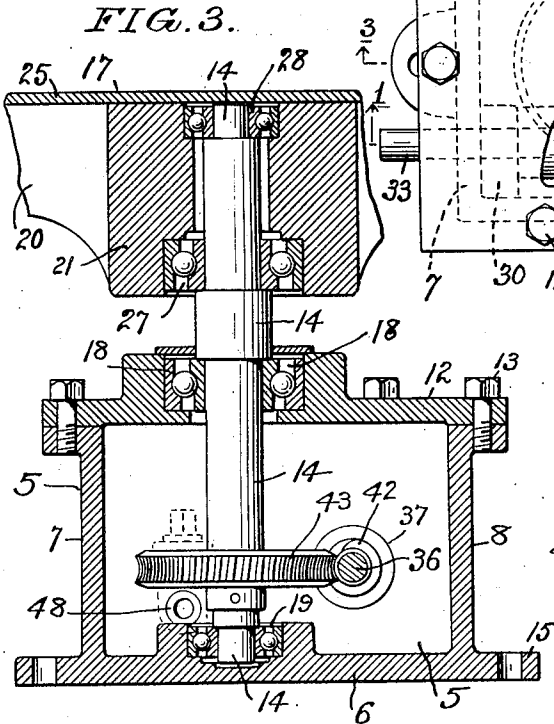
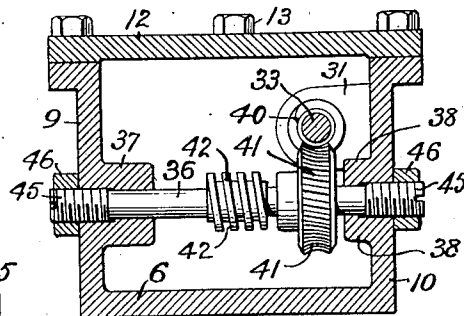


FIG. 4.



INVENTOR:
Anthony L. Cresci
By F. D'Witt Goodwin
ATTORNEY

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ANTHONY L. CRESCI, OF VINELAND, NEW JERSEY.

TURNTABLE.

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My invention relates to improvements in turn tables, particularly adapted for display purposes, for use in store windows and show rooms.

5 The object of my invention is to provide a turn table of small and compact form, making it portable, and adaptable for displaying articles in a small show window, and at the same time making it strong and
10 rigid for displaying a heavy article, such as a piano, which may be supported upon the small rotating platform by providing an extension platform which in turn will rest upon the small platform forming part of
15 the turn table; a still further object is to provide a housing of rigid construction having bearings therein for supporting the vertical shaft which carries the platform, arranged so as to prevent the platform from
20 tilting; a still further object is to enclose the gear mechanism, for rotating the vertical shaft, within the housing, which latter forms a chamber adapted for holding oil in which the gearing is immersed; and a still further
25 object is to mount the display platform loosely upon the vertical shaft and rotate the platform from the friction exerted between the parts; a further object is to reduce the friction between said parts by the
30 use of friction reducing bearings, thus providing a clutch for rotating the platform, which clutch is located immediately between the platform and the slowest one of the moving parts of the driving mechanism,
35 thus providing means permitting the platform to be held against rotation when desired, or, in case of an accident, without stopping the motor, and also allowing the motor to be started when the platform is
40 at rest without injuring the motor.

Referring to the accompanying drawing, Figure 1 is a diagram showing a vertical sectional view of the housing as on line 1—1 Figure 2, and showing the revolving
45 platform in sectional perspective; Figure 2 is a plan view of the housing partly in section; Figure 3 is a vertical sectional view on line 3—3 Figure 2 showing a portion of the revolving platform; and Figure 4 is a
50 vertical sectional view on line 4—4 Figure 2.

In the drawing, in which like reference characters refer to like parts, 5 represents a housing of rigid construction, having a bottom wall 6 and integral side walls 7, 8, 9
55 and 10, and a removable top wall or cover 12 adapted to be secured upon said side walls

by bolts 13. The housing 5 forms a bearing and rigid support for the vertical shaft 14 carrying the rotating platform 17, which latter is loosely mounted upon the shaft 14, 60 and rotated by friction of the parts when the shaft 14 is rotated. The housing 5 is provided with lugs 15 adapted for detachably securing the same to a base plate 16, which rests upon a floor and supports the 65 housing 5 without its being fastened to the floor.

The shaft 14 extends through an opening formed in the top wall 12 of the housing 5 and is supported upon the ball thrust bearing 18, and said shaft is supported laterally 70 by a ball-bearing 19 located in the bottom wall 6 of the housing.

The platform 17 consists of a wheel 20 having a hub 21 carrying radial spokes 22, 75 terminating in a rim 23, and a top plate 25, of sheet metal, which is mounted upon said wheel for supporting an article to be displayed upon the slowly revolving platform.

The hub 21 of the platform surrounds the 80 upper end of the shaft 14 and is supported upon said shaft by a thrust ball-bearing 27 and held by a ball-bearing 28, located at the upper end of the shaft, against tilting 85 movement.

The housing 5 is provided with bearings 30 and 31 located in the side walls 7 and 8, in which bearings is mounted a drive shaft 33 which extends through the bearing 30 without the housing and is operatively con- 90 nected with a source of power, such as an electric motor 35, for rotating the shaft 33. A driven shaft 36 is mounted in bearings 37 and 38 formed in the walls 9 and 10 of the housing. Said shaft 36 is positioned at 95 right angles to the drive shaft 33. A worm 40 is secured upon the drive shaft 33 and meshes with a worm wheel 41, secured upon the driven shaft 36. Said shaft 36 has secured thereon a worm 42 which meshes with 100 a worm-wheel 43 secured upon the shaft 14. Said shafts 33 and 36 are adjustable longitudinally in their respective bearings by means of screws 45 which enter threaded apertures, formed in the bearings in align- 105 ment with said shafts. Said screws 45 are provided with lock nuts 46 for the double purpose of holding the screws tight and for preventing oil leaking from the housing through said bearings from the interior of 110 the housing which forms a chamber for oil in which the gears are immersed. The

housing 5 is provided with a pipe fitting 48 through which oil may be readily inserted into the oil chamber formed in the housing.

- 5 When power is supplied to operate the motor 35 the drive shaft 33 will be rotated at a high speed and the worm 40 on said shaft will drive the worm wheel 41 and the shaft 36 at a reduced speed; the worm 42
10 on the shaft 36 will drive the large worm wheel 43 at a further reduction in speed, thus turning the shaft 14 and the platform 17 at about two revolutions per minute. By loosely mounting the revolving platform
15 upon the shaft 14 the platform may be held against rotation without stopping the motor; the ball-bearings 27 and 28 form means for further reducing the friction between the shaft 14 and the platform, thus
20 forming a clutch which is located between the revolving platform and the shaft 14 which is the slowest moving driving member of the mechanism. The ball-bearings 27 and 28 will permit the motor to be started
25 without injuring the motor when there is a heavy load on the platform 17, and the latter will gradually pick up speed until it rotates at the same speed as the shaft 14.

I claim:—

- 30 1. A display turn table comprising a housing having integral bottom and side walls forming an oil receptacle, a top wall detachably secured upon the side walls, a bearing located upon the bottom wall, a
35 bearing located upon the top wall in vertical

alignment with the bearing upon the bottom wall, a shaft rotatably mounted in the bearing on the top wall and removable with the latter from the side walls, a gear wheel secured upon the shaft below the top wall 40 and within said chamber, means for operating said gear wheel, and a platform mounted upon said shaft above said top wall and rotatable by said shaft.

2. A display turn table comprising a vertically positioned shaft, a bearing in which said shaft is rotatably mounted, means for rotating said shaft, a shoulder upon the upper portion of said shaft and a platform loosely mounted upon the upper end of said shaft and supported upon said shoulder whereby the platform may be rotated by friction between the platform and said shoulder or retarded in its speed of revolution relatively to the shaft. 55

3. A display turn table comprising a housing, a shaft mounted vertically in said housing, means for rotating said shaft, a platform, a hub upon said platform adapted to embrace the upper end of said shaft, a shoulder secured upon said shaft located above said housing upon which said hub is supported, and a friction reducing bearing mounted between said hub and said shoulder whereby said shaft may rotate freely when the platform is held against rotation with said shaft. 65

In testimony whereof I affix my signature.

ANTHONY L. CRESCI.