Nov. 14, 1950 G. D. WIEPERT 2,529,581

ROTARY PACKAGE HOLDER FOR ATTACHMENT TO SHELVES

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Fig. 1.

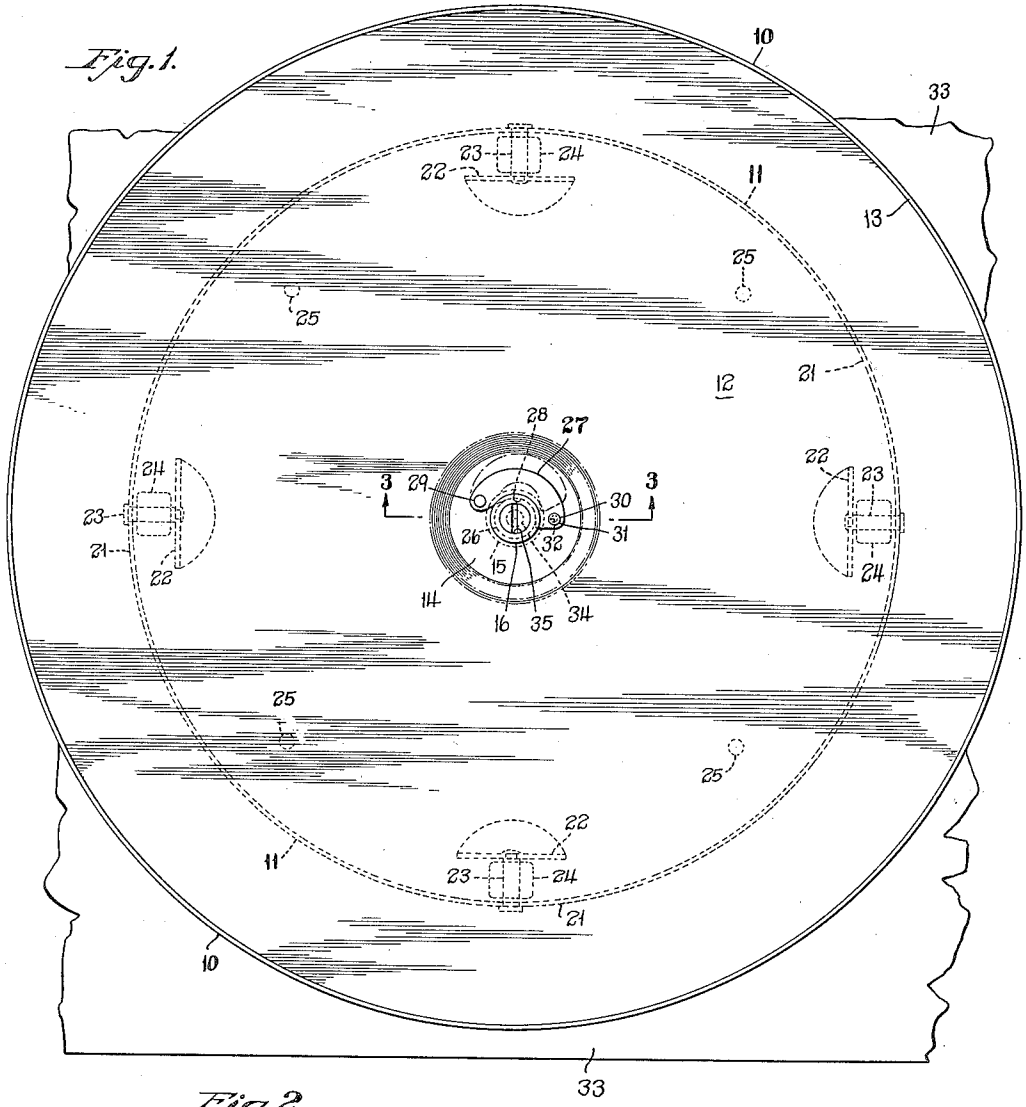
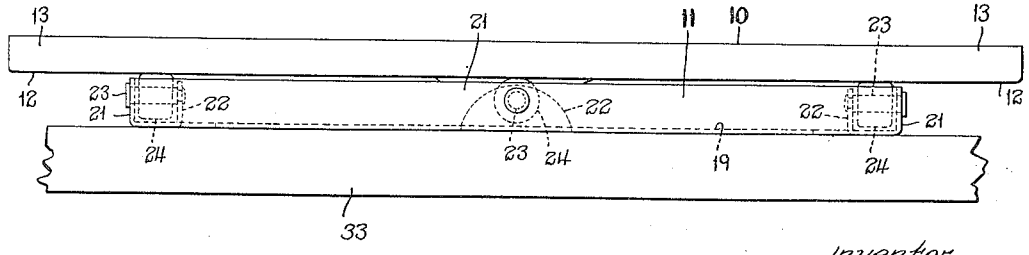


Fig. 2.



Inventor
By George D. Wiepert
Seymour, Earle & Nichols
Attorneys

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Fig. 3.

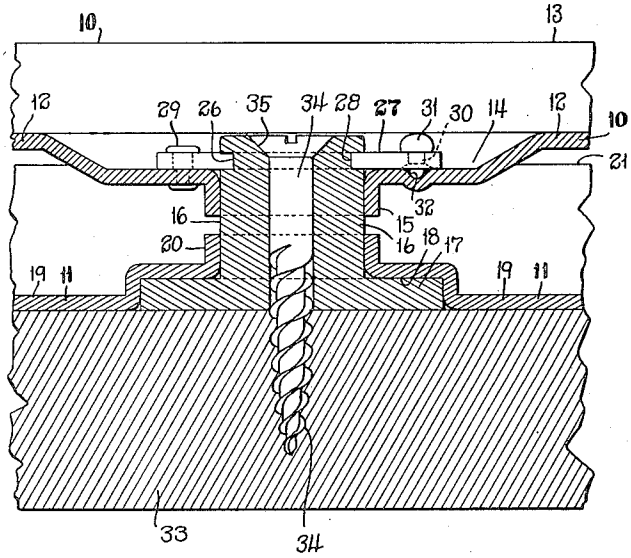


Fig. 5.

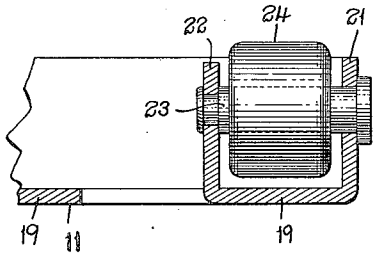
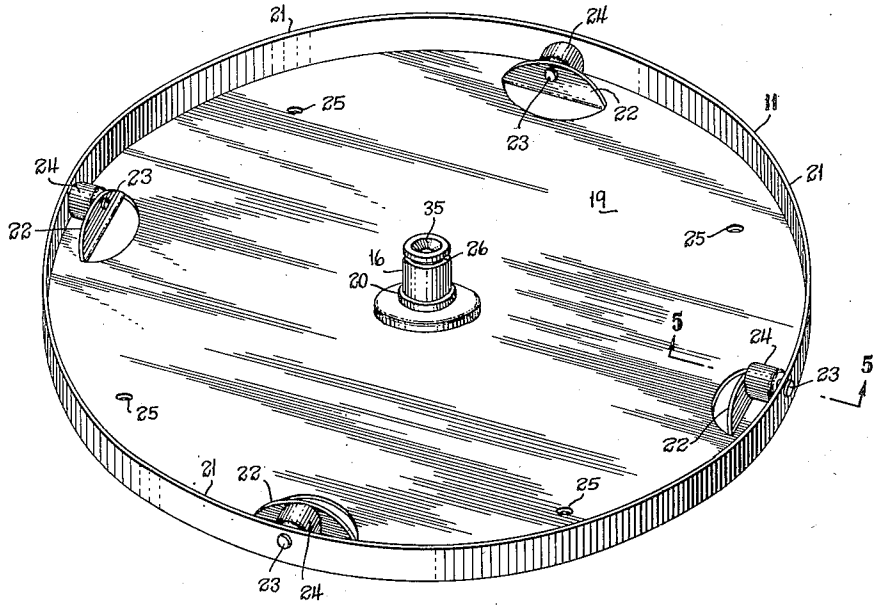


Fig. 4.



Inventor
George D. Wiepert
By Seymour, Earle & Nichols
Attorneys

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UNITED STATES PATENT OFFICE

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ROTARY PACKAGE HOLDER FOR ATTACHMENT TO SHELVES

George D. Wiepert, Branford, Conn., assignor to The Merriam Manufacturing Company, Durham, Conn., a corporation of Connecticut

Application May 27, 1947, Serial No. 750,763

2 Claims. (Cl. 311—17)

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The present invention relates to improvements in package-holders and relates more particularly to improvements in rotary package-holding assemblies which are adapted for attachment to shelves or the like in order to make packages or other materials more readily available for observation and selection.

The rotary package-holding assembly of the present invention constitutes an improvement of the structure disclosed in U. S. Patent No. 2,235,660 dated March 18, 1941.

One of the main objects of the present invention is to provide a superior rotary package-holding assembly which may be readily secured to a shelf or the like by relatively-unskilled persons and with easily ascertained clearances to permit free rotation.

Another object of the present invention is to provide a highly-useful and convenient rotary package-holding assembly which may be produced at a low cost for manufacture.

With the above and other objects in view, as will appear to those skilled in the art from the present disclosure, this invention includes all features in the said disclosure which are novel over the prior art.

In the accompanying drawings, in which certain modes of carrying out the present invention are shown for illustrative purposes:

Fig. 1 is a top or plan view of a rotary package-holding assembly embodying the present invention and shown as mounted upon a shelf, which latter is broken away;

Fig. 2 is an edge view thereof;

Fig. 3 is a broken transverse sectional view taken on the line 33 of Fig. 1 but on a larger scale;

Fig. 4 is a perspective view of the mounting-member detached; and

Fig. 5 is a broken detail sectional view taken on the line 5—5 of Fig. 4 but on a larger scale.

The rotary package-holding assembly illustrated in the accompanying drawings for purposes of making clear a preferred form of the present invention, includes two main elements, namely, a pan-shaped mounting-member 11 which is normally stationary and a pan-shaped package-tray 10 which is rotatable with respect to the said mounting-member, in the manner as will hereinafter appear.

In the instance shown, the package-tray 10 is of circular outline and includes a bottom wall 12 and a shallow guard-flange 13 integral with and projecting upwardly from the peripheral portion of the said bottom wall 12.

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The package-tray 10 is preferably formed of sheet metal or other suitable resilient material and has the central portion of its bottom wall 12 depressed to provide a shallow upwardly-opening recess 14 for purposes as will hereinafter appear. The central portion of the recess 14 just referred to is deflected downwardly to provide a bearing-sleeve 15 which fits over and turns upon the upper portion of a tubular stud 16 having its upper surface located slightly below the plane of the main portion of the bottom wall 12 of the package-tray 10. The said stud 16 is formed at its lower end with a relatively-large head 17 which is seated in a downwardly-opening recess 18 formed by upwardly deflecting the central portion of the bottom wall 19 of the mounting-member 11. Preferably and as shown in Fig. 3, the recess 18 is just a sufficient depth to enable the lower face of the head 17 of the stud 16 to lie flush with the under face of the bottom wall 19. The central portion of the material of the recess 18 is deflected upwardly to provide a sleeve 20 embracing the main portion of the stud 16 proper.

The stud 16 may be rigidly coupled to the mounting-member 11 in any suitable manner such, for instance, as by spot welding, riveting or force fitting.

In addition to its bottom wall 19, the mounting-member 11 includes a shallow guard-flange 21 integral with and projecting upwardly from the peripheral portion of the said bottom wall 19.

Preferably, the mounting-member 11 like the package-tray 10, is formed of sheet metal or other suitable material.

At four (more or less) equidistant points adjacent the guard-flange 21, the bottom wall 19 of the mounting-member 11 is slitted along a curved line and the adjacent material is deflected upwardly into parallelism with the guard-flange 21 to provide at each of the said locations one of four supporting-fingers 22. Mounted in and extending radially between each of the supporting fingers 22 and the adjacent portion of the guard-flange 21 is one of four similar shafts 23 located well above the bottom wall 19 and each having one of four similar rollers 24 turning thereon. The rollers 24 just referred to are preferably made of rubber or similar composition, though they may be made of other materials such, for instance, as metal.

The bottom wall 19 of the mounting-member 11 is preferably formed at equidistant points with four (more or less) holes 25 which, under certain conditions, may receive screws or other fas-

tening-means in a manner as will more fully hereinafter appear.

Normally, the bottom wall 12 of the package-tray 10 rests upon the rollers 24 of the mounting-member 11 and is centralized for rotation thereon by means of its bearing-sleeve 15 which embraces the upper portion of the tubular stud 16.

Slightly below its upper end, the tubular stud is formed in its periphery with an annular retaining-groove 26 which is adapted to receive the portion of a latch-member 27 immediately surrounding an arcuate notch 28 therein.

The latch-member 27 above referred to may be conveniently formed of springy sheet metal and as shown, is mounted for pivotal movement against the upper face of the bottom wall of the recess 14 by means of a stud 29 or other suitable pivot-means. At its free end the latch-member 27 has riveted therein a short stud 30 providing a finger-piece 31 by means of which the latch-member may be swung back and forth between the positions in which it is indicated by full lines and by broken lines respectively in Fig. 1.

For the purpose of releasably holding the latch-member 27 in its latching position (full lines in Fig. 1), the bottom wall of the recess 14 in the package-tray 10 is depressed to form a detent recess 32 which is adapted to receive the projecting rounded lower end of the finger-piece stud 30.

Preferably, the retaining-groove 26 in the stud 16 is so located as to require the slight downward springing of the bottom wall 12 of the package-tray 10 in order to enable the latch-member to be swung into the said retaining-groove. In this manner, the package-tray 10 is firmly seated against the rollers 24 and objectionable noise is thus substantially obviated when the said package-tray is turned.

The assembly comprising the package-tray 10 and mounting-member 11 may be secured to a shelf such as 33 by means of a long screw 34 or other suitable fastening-device extending down through the central passage in the tubular stud 16, as is especially well shown in Fig. 3. Preferably and as shown, the upper end of the stud 16 is countersunk as at 35 to accommodate the head of the screw 34 which is preferably of the flat-head type.

If desired, additional screws (not shown) may be screwed downwardly through the holes 25 in the bottom wall 19 of the mounting-member 11.

The assembly above described may be installed with proper clearances to permit the rotation of the package-tray 10 by leaving the said package-tray and mounting-member assembled and held in such condition by the releasable latch-member 27. Thus, an unskilled person may locate the assembly upon a shelf 33 or the like with due reference to clearance between the back or side walls, if any, of a cabinet of which the shelf may form a part, whereupon the installer may then merely insert the screw 34 or its equivalent downwardly through the tubular stud 16 to thus lock the assembly in place. If the package-tray is to carry relatively-heavy packages, the installer may then retire the latch-member 27 into the position in which it is indicated by broken lines in Fig. 1 and then remove the package-tray 10 from the stud 16. This action will then make available the holes 25 in the bottom wall 19 of the mounting-member 11, through which holes additional screws may be inserted into the shelf 33 if desired.

The package-tray 10 may subsequently be remounted upon the stud 16 and when its bottom wall 12 is slightly flexed downwardly, the latch-member 27 may be re-engaged with the retaining-groove 26 in the stud 16.

The package-tray 10 may now be freely rotated with respect to the mounting-member 11 and the shelf 33 to bring desired packages into the most available position for observation and selection.

When it is desired to clean the package-tray 10 or to remove the same in order to transport its contents to another location, the latch-member 27 may be retired and the operation referred to effected.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and esssential characteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. A rotary package-holding assembly, including in combination: a plate-like mounting-member having a flat bottom surface arranged to engage on and to be attached to the upper surface of a shelf or the like and having an upwardly-projecting tubular stud, the said tubular stud being provided with a vertical passage extending therethrough from top to bottom and adapted to receive a headed screw or like fastening-member which is extendible downwardly into a shelf to secure the said mounting-member thereto, the head of said screw being of less diameter than the diameter of said stud; a plurality of rollers mounted for rotation about substantially-radial axes upon the said plate-like mounting-member in position to support the hereinafter-mentioned package-holder; a plate-like rotary package-holder located above the said mounting-member and resting upon the said plurality of rollers, the said package-holder having an apertured bearing-portion detachably engageable with and bearing, for rotation, upon the said tubular stud in a plane below the upper end thereof, the aperture in the said bearing-portion being sufficiently large to permit the package-holder to be moved vertically over the upper end of the said stud and the head of said vertical screw; and manually-operable latch-means pivotally mounted on said package-holder and engageable with the upper end of said stud to releasably hold the said rotary package-holder against vertical displacement with respect to the said tubular stud.

2. A rotary package-holding assembly, including in combination: a pan-like mounting member having a flat bottom surface arranged to engage on and to be attached to the upper surface of a shelf or the like and having a bottom wall and a peripheral flange extending upwardly from the outer edge thereof, the said bottom wall being pierced and bent upwardly at a plurality of circumferentially-spaced points to form a plurality of supporting-fingers each spaced inwardly of and extending in substantial parallelism with the said peripheral flange; the said mounting-member being provided centrally with an upwardly-projecting tubular stud having a vertical passage extending therethrough from top to bottom and adapted to receive a headed screw or like fastening-member which is extended downwardly into a shelf, the head of said screw being of less diameter than the diameter of said stud; a plurality

of rollers respectively mounted for rotation between the flange of the said mounting-member and one of the said supporting-fingers and being located in a position to support the hereinafter-mentioned package-holder; a plate-like rotary package-holder located above the said mounting-member and resting upon the said plurality of rollers, the said package-holder having an apertured bearing-portion detachably engageable with and bearing, for rotation, upon the said tubular stud in a plane below the upper end thereof, the aperture in the said bearing-portion being sufficiently large to permit the package-holder to be moved vertically over the upper end of the said stud and the head of said vertical fastening-member; and manually-operable latch-means pivotally mounted on said package-holder and engageable with the upper end of said stud to releasably hold the said rotary package-holder against vertical displacement with respect to the said tubular stud and the said plurality of rollers.

GEORGE D. WIEPERT.

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