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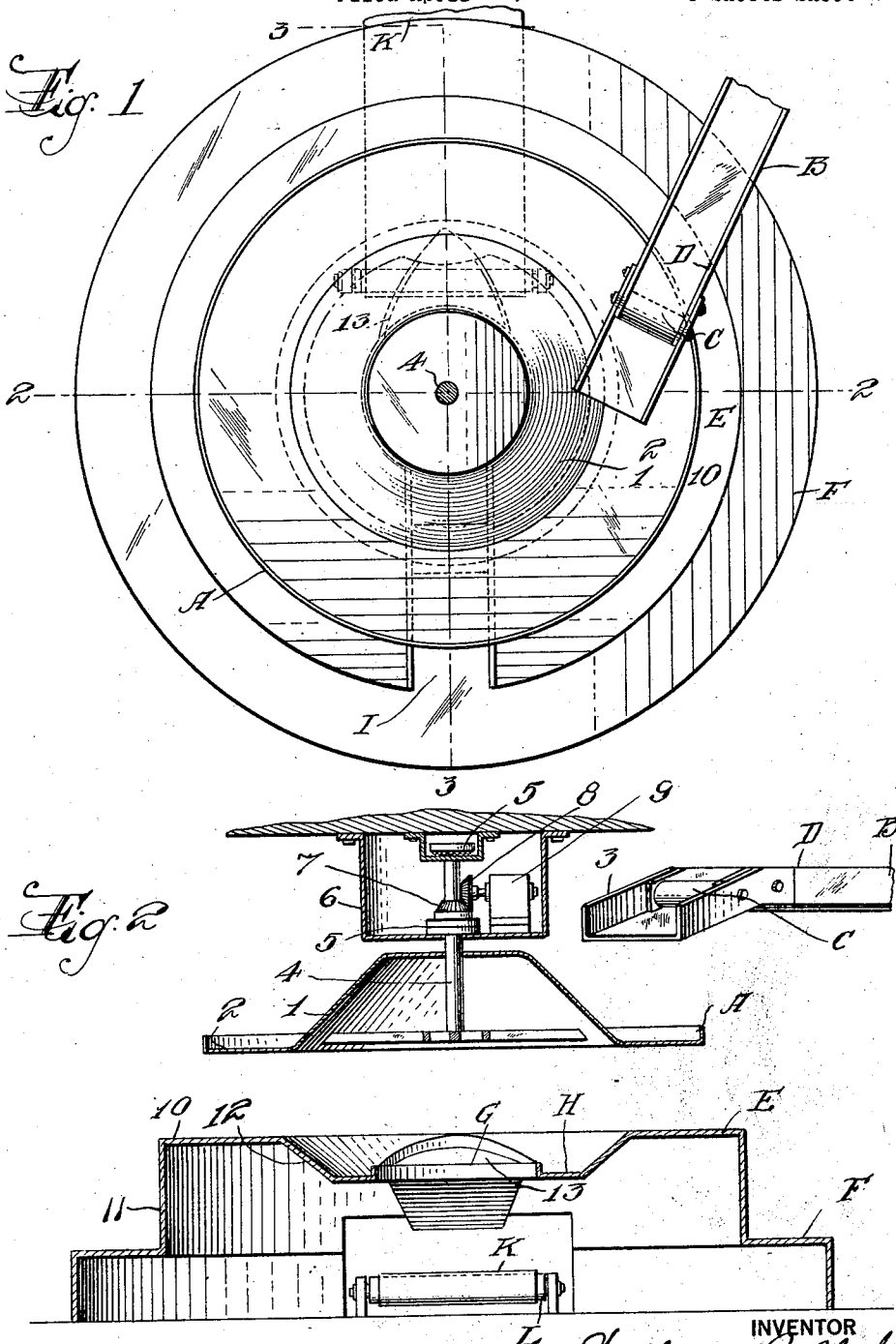
1,644,342

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CENTRAL PACKAGE WRAPPING STATION

Filed April 27, 1926

3 Sheets-Sheet 1



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Fig. 3

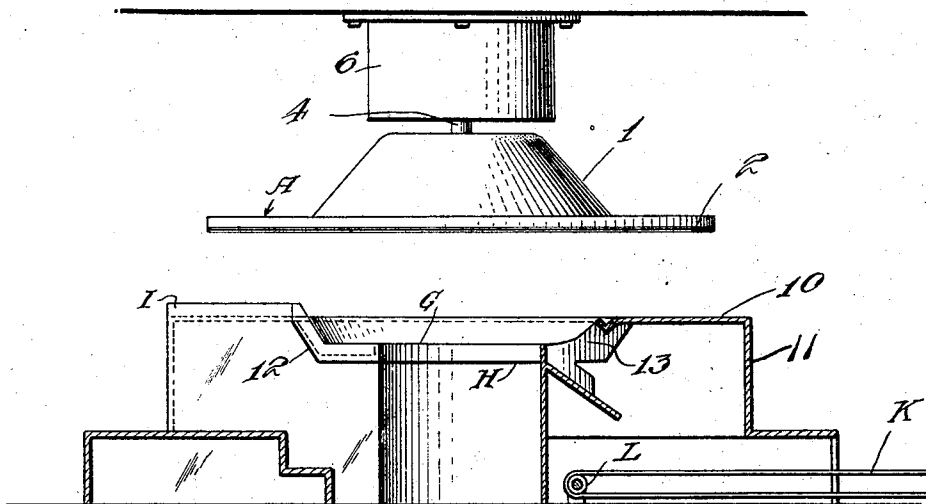
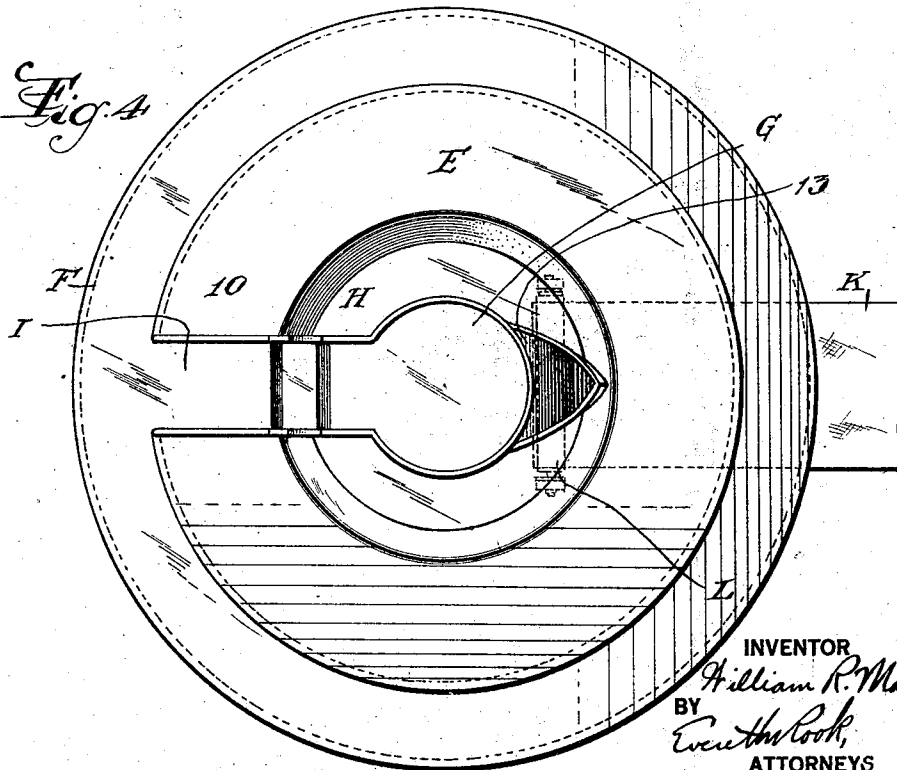


Fig. 4



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Fig. 6.

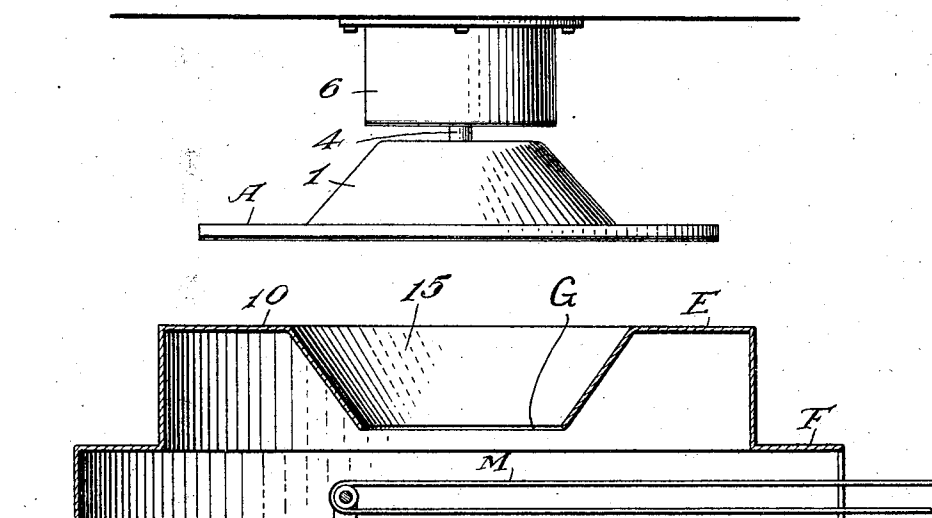
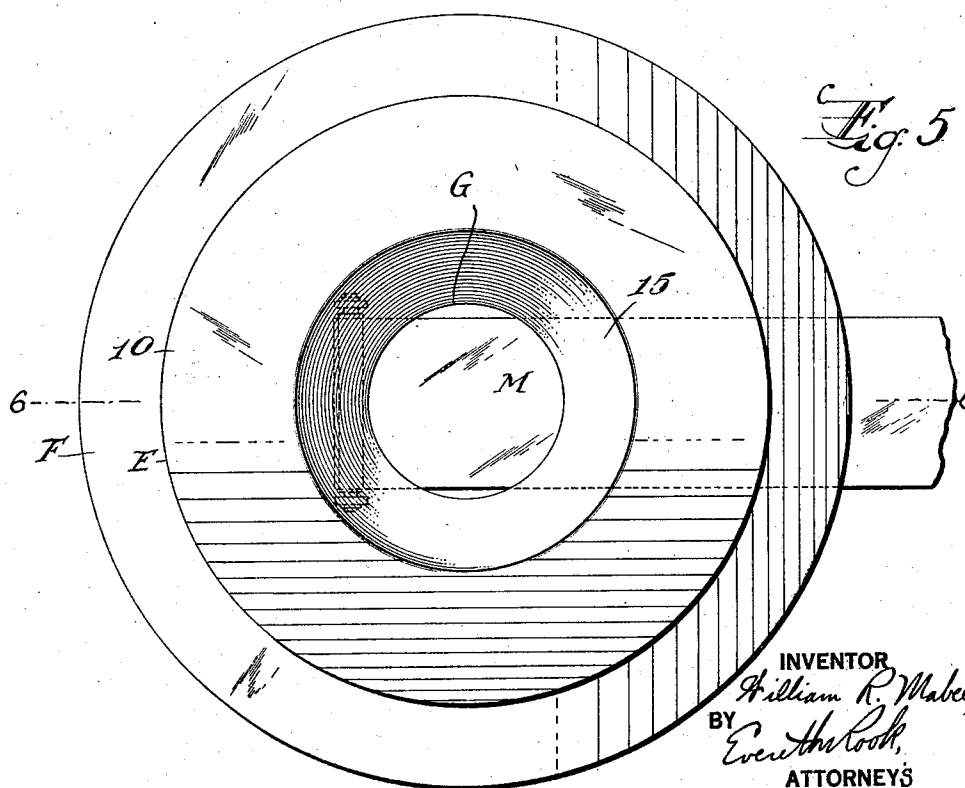


Fig. 5



UNITED STATES PATENT OFFICE.

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CENTRAL PACKAGE-WRAPPING STATION.

Application filed April 27, 1926. Serial No. 104,926.

This invention relates in general to a combination and arrangement of a plurality of conveyors to facilitate the handling of articles or packages whereby a large number of packages from different sources may be wrapped or otherwise attended to at one place by a number of operators. The invention is particularly directed toward providing a central station at which all articles from various counters in a department store may be wrapped, labelled and sorted for delivery to the customers.

One object of the invention is to provide a central station of the character described including a novel and improved combination and arrangement of a conveyor to receive all articles from various sources or counters arranged in convenient relation to a wrapping table about which may be positioned a number of package wrapping clerks so that the articles to be wrapped successively move past the wrapping clerks and can be removed from the conveyor whenever any clerk is ready to wrap an article, the station also including a centrally disposed opening or space to which all wrapped packages may be conveniently directed by all of the wrapping operators, and a conveyor conveniently arranged with respect to said opening or space whereby the wrapped packages may be automatically conveyed to a desired destination, for instance the loading platform or a routing counter.

Another object is to provide a central station of this character which shall occupy a minimum amount of space and accommodate a maximum number of operators so that the wrapping or other handling of the articles or packages is greatly facilitated and loss of time incident to wrapping operators waiting for articles to be wrapped is eliminated.

Further objects are to provide apparatus of the character described which is simple in construction and which can be economically installed; to provide a central package handling station which can be adapted to many different locations with a minimum of modifications or changes in construction, and to obtain other results and advantages as may be brought out by the following description.

Referring to the accompanying drawings, in which corresponding and like parts are designated throughout the several views by the same reference characters,

Figure 1 is a top plan view of apparatus embodying the invention;

Figure 2 is a transverse vertical sectional view, taken on the line 2—2 of Figure 1;

Figure 3 is a view partially in section and partially in side elevation, taken on the line 3—3 of Figure 1;

Figure 4 is a top plan view of the wrapping and labelling table;

Figure 5 is a view similar to Figure 4 showing a modified form of the invention, and

Figure 6 is a transverse vertical sectional view, taken on the line 6—6 of Figure 5.

Specifically describing the embodiment of the invention illustrated by Figures 1 to 4 of the drawings, the reference character A designates a rotatable structure or turntable to which articles to be wrapped or otherwise handled are brought by means of a suitable conveyor mechanism such as a belt B passing over a roller C mounted in a suitable frame D. The turntable A is disposed in substantially co-axial relation above a wrapping table E which is in turn surrounded by a wrapping operator's or clerk's platform F. The wrapping table E has a central opening G surrounded by an annular table or counter H, the opening G serving to accommodate operators such as labelling clerks, and access to the space provided by the opening being possible through a radial passageway I which opens through the side of the wrapping table E. A discharge conveyor mechanism which may be in the form of a belt K passing over a roller L is arranged beneath the wrapping table E and platform F with one end adjacent the opening G so that packages or articles may be deposited upon said conveyor mechanism K from the central table H.

The turntable A has a co-axial conical pyramidal or otherwise outwardly inclined portion 1, at the lower edge of which is provided an annular shelf-like flange 2, and the conveyor mechanism B preferably has a discharge chute 3 arranged above the turntable for directing the articles or packages upon the inclined portion 1 of the turntable, as clearly shown in Figures 1 and 2. The turntable may be constantly rotated by any suitable mechanism in the direction indicated by the arrow, but in the present instance the turntable is shown as driven by a co-axial vertical shaft 4 journaled in suit-

able thrust bearings 5 upon a bracket or housing 6 which may be secured to the ceiling of a building or to any other suitable support. The shaft 4 has fixed thereon a bevel pinion 7 meshing with a similar pinion 8 on the shaft of an electric motor 9 which may be mounted upon any suitable fixed support such as the bracket 6. The conveyor B is arranged with relation to the turntable A so that the articles are discharged from the conveyor in the direction of rotation of the turntable. The turntable is arranged above the wrapping table E such a distance as to enable wrapping operators standing on the platform F to conveniently remove the articles from the flange 2 of the turntable. The articles are deposited from the conveyor B upon the turntable A and by action of gravity downwardly over the inclined portion 1 onto the annular shelf 2.

The wrapping table E may be of any suitable construction, but preferably has a flat top 10 which corresponds in shape with the turntable 2 and is larger in diameter, and vertical sides 11. The platform F is positioned a distance below the top of the table so that the wrapping operators may stand upon the platform and conveniently wrap an article upon the top 10, it being understood that a plurality of operators may be positioned about the table. The articles are constantly moved by the turntable A past all of the operators at the wrapping table E, and each operator may remove an article to be wrapped from the turntable and place it upon the wrapping table where the article may be wrapped. A downwardly inclined annular slide 12 is arranged between the inner edge of the top 10 of the table and the central table or counter H, the counter H being disposed below the level of the top 10 of the wrapping table. After the articles have been wrapped, they may be pushed by the wrapping operators onto the inclined surface 12 upon which they will slide by action of gravity downwardly to the central table H. The operators stationed in the space provided by the opening G may then apply labels to the packages or otherwise operate thereon. The central table H and a portion of the inclined surface 12 are cut away as at 13 above the conveyor K so that packages may be deposited upon the conveyor by dropping them through the cut-away portion 13, and the conveyor will then automatically carry the packages away from the central wrapping station.

In some cases, a labelling clerk may not be required as hereinbefore described and it may be desirable to deposit the wrapped packages directly from the table upon a conveyor which will carry the packages away from the table. In Figures 5 and 6 of the drawings the apparatus is shown as modified accordingly. The table H is omitted

and the conveyor M similar to conveyor K, L is located directly beneath the opening G. The inclined slide 15 similar to the slide 12 extends inwardly and downwardly from the inner edge of the table E above the conveyor M. With this construction, when an article has been wrapped on table E, the package is pushed by the wrapping clerk to the slide 15 and the package then falls by action of gravity directly upon the conveyor M.

While I have shown and described the apparatus as particularly designed for wrapping articles, it will be understood that the invention is susceptible of use for other purposes, the main features of the invention being the provision of means whereby a large number of articles may be received from a plurality of sources and handled at one location by a plurality of operators, the invention also enabling locating of operators in most effective relations to each other as to permit efficient handling of the articles in a minimum amount of space and with an expenditure of a minimum amount of time.

I am aware of such devices as shown in Patents Nos. 1,444,359, 1,204,428 and 1,046,853 dated February 6, 1923, November 14, 1916, and December 10, 1912, respectively, and accordingly do not desire to be understood as attempting to claim such constructions. However, while I have shown the invention as embodied in the certain details of construction, it will be understood that these details may be modified or changed without departing from the spirit or scope of the invention.

Having thus described the invention, what I claim is:

1. An article handling station comprising an annular table around the outside of which operators may be located and having a space for operators at its center, a rotatable table arranged above said annular table and concentric therewith and having a diameter greater than said space and smaller than said annular table, and means for depositing articles upon said rotatable table, whereby articles may be removed from said rotatable table and operated upon by the operators at the outside of said annular table and passed to the operators in said space.

2. An article handling station comprising two annular concentric tables or supports disposed at different levels and arranged to accommodate operators inside and outside them respectively, whereby articles may be operated upon on one of said tables and deposited by action of gravity upon the other and there again operated upon, a rotatable table arranged above the planes of both said annular tables and concentric therewith and having a greater diameter than the inner table and a smaller diameter than the outer

table, and means for depositing articles upon said rotatable table.

3. An article handling station comprising an annular table having a space for operators at its center, a second annular table surrounding the first-mentioned table and at a different level, an annular inclined surface connecting said two tables so that articles may be pushed from one table and deposited by action of gravity upon the other, a rotatable table arranged above the planes of both said annular tables and concentric therewith, and means for automatically depositing articles upon said rotatable table.

4. An article handling station comprising an annular table having a space for operators at its center, a second annular table surrounding the first-mentioned table and at a higher level, an annular inclined surface connecting said two tables so that articles may be pushed from one table and deposited by action of gravity upon the other, a rotatable table arranged above the planes of both said tables concentric therewith and having a greater diameter than the inner table and a smaller diameter than the outer table, and means for depositing articles upon said rotatable table.

5. An article handling station comprising an annular table having a space for operators at its center, a second annular table surrounding the first-mentioned table and at a different level, an annular inclined surface connecting said two tables so that articles may be pushed from one table and deposited by action of gravity upon the other, one of said tables having an opening, and a conveyor mechanism arranged below said annular tables to receive articles through said opening.

6. An article handling station comprising an annular table having a space for operators at its center, a second annular table

surrounding the first-mentioned table and at a higher level, an annular inclined surface connecting said two tables so that articles may be pushed from one table and deposited by action of gravity upon the other, and a conveyor mechanism arranged below said tables to receive articles from the first-mentioned table.

7. An article handling station comprising an annular table having a space for operators at its center, a second annular table surrounding the first-mentioned table and at a higher level, an annular inclined surface connecting said two tables so that articles may be pushed from one table and deposited by action of gravity upon the other, a conveyor mechanism arranged below said annular tables to receive articles from the first-mentioned table, a rotatable table arranged above and concentric with said annular tables, and means for depositing articles upon said rotatable table.

8. An article handling station comprising an annular table having a space for operators at its center, a second annular table surrounding the first-mentioned table and at a different level, an annular inclined surface connecting said two tables so that articles may be pushed from one table and deposited by action of gravity upon the other, the lower table having an opening, a conveyor mechanism arranged below said tables to receive articles through said opening, a rotatable table arranged above and concentric with said annular tables, and means for depositing articles upon said rotatable table.

9. An article handling station comprising an annular table having a space for operators at its center, a second annular table surrounding the first-mentioned table and at a different level, and a conveyor beneath said tables and leading into said space.

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