

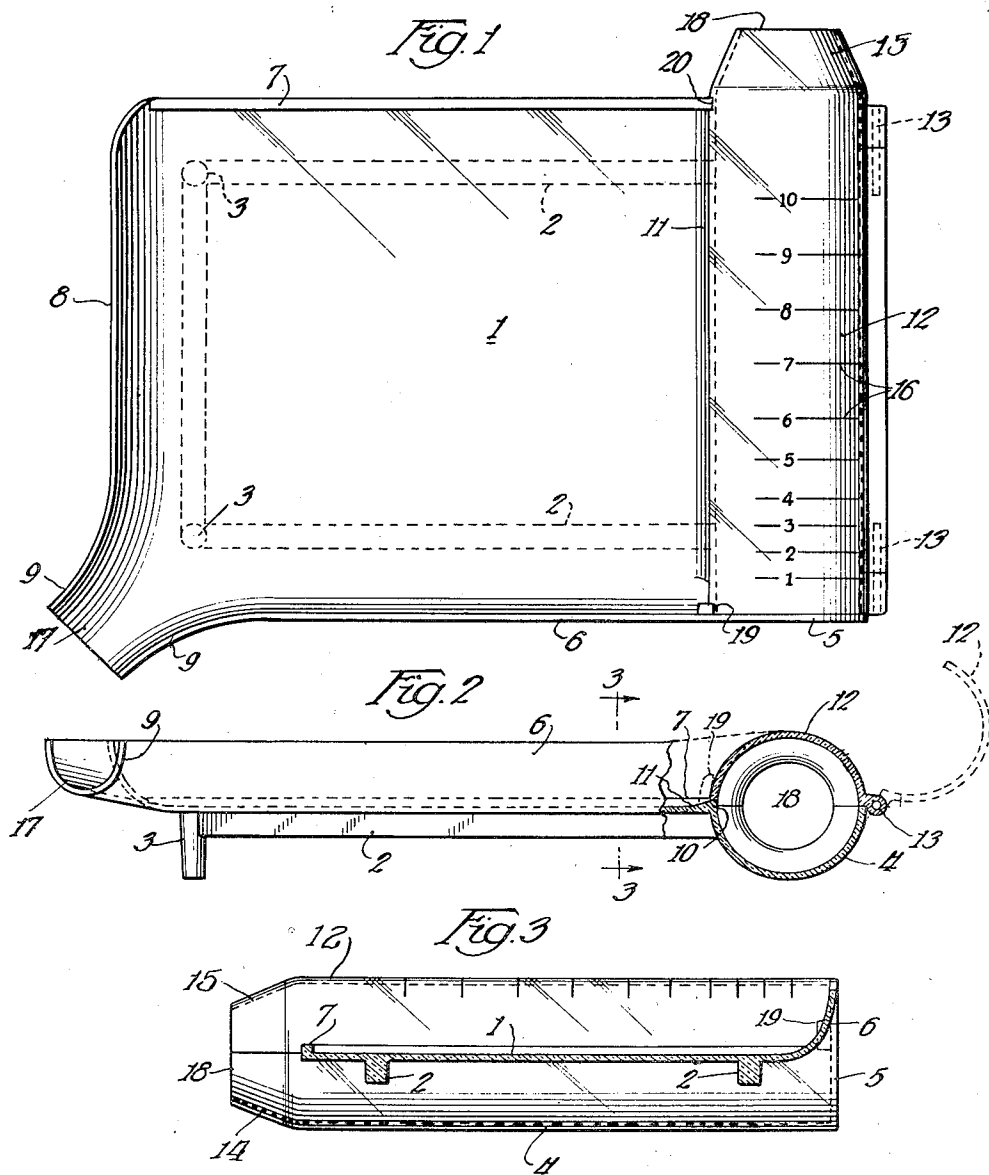
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2,530,009

TABLET COUNTING DEVICE

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## UNITED STATES PATENT OFFICE

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## TABLET COUNTING DEVICE

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7 Claims. (Cl. 222—158)

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This invention relates to a tablet counting device, and it has particular reference to a device adapted for use by pharmacists in filling prescriptions, which call for a specified number of tablets, pills, or the like, which are usually carried in stock in bulk form.

A common practice followed by pharmacists when filling a prescription calling for a specified number of tablets, is to pour an unmeasured quantity of the tablets on a paper, or other clean surface, and to separate from such quantity the required number of tablets by means of a spatula. After the required number are separated, then they are ordinarily moved over the edge of the table surface on which they were counted, and caught in the hand or other receptacle, from which they may be poured into another container in which they are to be dispensed to the customer.

The containers employed for dispensing pharmaceuticals vary considerably, each pharmacist having his own selection of various sizes and forms or kinds of containers, such as hinged or slip cover boxes, tubular paper board receptacles, glass vials, bottles, etc., etc. The selection of a container of the right size for a given number of tablets has heretofore been a matter of guess work since no standards are available which indicate the number of tablets of a given size which can be placed in a given container. The erroneous selection of a too small container causes trouble in that the too small container must be emptied thoroughly, cleaned, and returned to stock and a larger container substituted.

The main objects of the invention are to provide a device whereby the counting out of a specified number of tablets, pills or the like, is facilitated, and whereby the selection of the proper size of receptacle in which to dispense the tablets, etc., is also facilitated.

Another object of the invention is to provide a device for the purpose indicated, which will encourage the exercise of proper precautions for maintaining sterility of the product handled, and, in general, it is the object of the invention to provide an improved device of the character indicated.

A device embodying a selected form of the invention is illustrated in the accompanying drawing, wherein

Fig. 1 is a plan;

Fig. 2 is an end elevation, certain portions being broken away and shown in section; and

Fig. 3 is a section on the line 3—3 of Fig. 2.

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The device shown comprises a main panel or tray-like part 1, which is reinforced by means of depending ribs 2 on its bottom and supported on a table surface by suitable legs or feet, such as indicated at 3. In this instance, legs 3 are provided only at one end of the device, the other end being supported by a semi-cylindrical receptacle portion 4 formed integrally with the tray 1.

The semi-cylindrical part 4 has one end closed by a wall 5, which is formed integrally with the tray and the tray is equipped with an upwardly extending side flange 6 of considerable depth at one side. The flange 6 is preferably of arcuate form, as shown, so as to avoid forming any corners into which a small tablet or the like can become more or less inaccessible.

At one end of the tray there is provided an arcuate upstanding flange 8 which is similar to the flange 6. The flanges 6 and 8 have adjacent ends curved outwardly, as shown at 9, to provide a spout, the tray 1 being suitably extended to form the bottom of the spout as shown.

At the other end of the tray, i. e., at the end having said semi-cylindrical part 4, there is provided a shallow upstanding rib 10 which has its upper surface joined to the surface of the tray 1 by means of a curved or inclined surface 11, merging gradually into the top surface of the tray. Said gradually merging surface 11 will permit tablets or the like, to be moved across the surface of the tray and over the rib 10 into the semi-cylindrical chamber 4.

A cover is provided for the semi-cylindrical chamber 4, said cover being in the form of a semi-cylindrical member 12, which is hinged at one side as indicated at 13—13 to the wall of the semi-cylindrical chamber 4. The free side of the cover 12 is adapted to rest on the top of the rib 10, the parts 4 and 12 being so formed as to cooperate to form a more or less cylindrical receptacle closed by the end closure 5, which is extended upwardly sufficiently for that purpose.

The opposite end of the receptacle forming elements 4 and 12 are provided with tapered spout forming portions 14 and 15 respectively, which cooperate to form a reduced diameter spout through which tablets or the like in the receptacle can be poured into a bottle or other container.

The cover 12 is also provided with a series of graduation marks 1 to 10 inclusive, as shown in Fig. 1, such graduations being designated by the reference numeral 16. These graduations are designed to indicate to the user of the device the

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proper size of container in which the combined tablets should be packaged.

A pharmacist uses the described device in the following manner: An unmeasured quantity of tablets is poured from a bulk container on to the tray 1. With a suitable instrument, such as a spatula, the required number of tablets is separated from the unmeasured quantity and moved across the tray 1 and over the rib 10 into the lower half 4 of the tubular chamber. The cover 12 is, of course, held in an open position during the counting of the tablets so that they may be readily moved into the chamber.

When the required number has been deposited in the lower half of the chamber, the cover thereof is closed and any remaining over-supply of tablets on the tray 1 is poured through the spout 17 back into the bulk stock container. This may, of course, be done without losing any of the tablets in the chamber, which is turned to a more or less upright position as an incident to the pouring of the over-supply of tablets back into the bulk container.

The cylindrical chamber is then held in a substantially vertical position, and the tablet content thereof leveled off as accurately as possible, and the depth of tablets, as measured by the graduation 16, is noted and recorded on a suitable chart. Then when the proper size of container for packaging the specific number of tablets has been determined, the identifying number or other data of such container is noted on the chart in association with the depth graduation for the tablets. Then, whenever a prescribed quantity of the same or other products fill the measuring chamber to the same depth mark, the pharmacist can readily determine from the chart, the proper size of container for packaging the product. For each size of container carried in stock by the pharmacist, his chart may be completed to show which size of container (of each kind employed if more than one) should be selected for packaging a quantity of tablets, pills, and the like, which fill the measuring chamber to one of the depth graduations thereon.

The tablets in the chamber may be poured into a bottle or other receptacle in which they are to be dispensed through the reduced diameter mouth 18.

To more or less lock the cover 12 in closed position, a lug or boss 19 may be formed on the inside of the flange 6 and end closure 5, the boss being so formed as to overhang a portion of the semi-cylindrical cover 12, as best shown in Fig. 2. Similarly, the rib 7 may have its end portion 20 extended so as to slightly overhang the adjacent edge of the cover 12.

The material from which the device is made may be a so-called plastic, metal or other material, having sufficient resiliency to permit the cover to be disengaged from the locking overhangs when the cover is to be opened. Stop means may be provided in connection with the hinged structure as shown at 21, or otherwise for supporting the cover at any desired open position.

Various changes in the described structure may be made without departing from the spirit of the invention.

I claim:

1. A device of the class described, comprising a tray having a receptacle at one side thereof, said receptacle extending downwardly from the surface of said tray, a cover for said receptacle, said cover being hinged to said receptacle so as to be

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capable of being opened and closed, an end closure for one end of said receptacle, the other end thereof being open, and flanges extending upwardly from the side of said tray opposite to the side having said receptacle and from one of the sides of the tray extending between said receptacle and said first-mentioned flange, said flanges being extended in cooperative relation from the tray to form a spout.

2. A device of the class described, comprising a tray having a receptacle at one side thereof, said receptacle extending downwardly from the surface of said tray, a cover for said receptacle, said cover being hinged to said receptacle so as to be capable of being opened and closed, an end closure for one end of said receptacle, the other end thereof being open, flanges extending upwardly from the side of said tray opposite to the side having said receptacle and from one of the sides of the tray extending between said receptacle and said first-mentioned flange, said flanges being extended in cooperative relation from the tray to form a spout, and a shallow rib extending upwardly from said tray on the other side thereof between said receptacle and the first-mentioned flange.

3. A device of the class described, comprising a tray having a receptacle at one side thereof, said receptacle extending downwardly from the surface of said tray, a cover for said receptacle, said cover being hinged to said receptacle so as to be capable of being opened and closed, an end closure for one end of said receptacle, the other end thereof being open, flanges extending upwardly from the side of said tray opposite to the side having said receptacle and from one of the sides of the tray extending between said receptacle and said first-mentioned flange, said flanges being extended in cooperative relation from the tray to form a spout, and a shallow rib extending upwardly from the edge of the tray adjacent said receptacle, said rib having its top surface merging gradually into the top surface of the tray.

4. A device of the class described, comprising a tray having a receptacle at one side thereof, said receptacle extending downwardly from the surface of said tray, a cover for said receptacle, said cover being hinged to said receptacle so as to be capable of being opened and closed, an end closure for one end of said receptacle, the other end thereof being open, flanges extending upwardly from the side of said tray opposite to the side having said receptacle and from one of the sides of the tray extending between said receptacle and said first-mentioned flange, said flanges being extended in cooperative relation from the tray to form a spout, and said receptacle and cover having at their ends opposite to the closed end of the receptacle, mouth portions tapered to form a reduced area dispensing spout for said receptacle.

5. A device, according to claim 4, wherein the tray is also provided with shallow ribs extending upwardly therefrom adjacent its edges opposite to its said flanged edges, the rib adjacent said receptacle edge having its top surface gradually merged with the surface of the tray.

6. A device, according to claim 1, wherein graduated marking is applied to the device in such a manner as to facilitate recording the depth to which said receptacle is filled.

7. A device, according to claim 1, wherein said receptacle cover is made of transparent material

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and is provided with a graduated scale for facilitating recording of the extent to which said receptacle is filled.

MACK R. FIELDS.

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#### REFERENCES CITED

The following references are of record in the file of this patent:

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#### UNITED STATES PATENTS

Number	Name	Date
1,273,729	Burgett	July 23, 1918
1,618,390	Smith	Feb. 22, 1927

#### FOREIGN PATENTS

Number	Country	Date
19,326	Great Britain	Sept. 15, 1908
528,701	Germany	July 3, 1931

**Certificate of Correction**

**Patent No. 2,530,009**

**November 14, 1950**

**MACK R. FIELDS**

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows:

Column 6, list of references cited, under "UNITED STATES PATENTS" add the following:

2,165,822	Vaclavik -----	July 11, 1939
2,362,609	Blackman -----	Nov. 14, 1944

and that the said Letters Patent should be read as corrected above, so that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 23rd day of January, A. D. 1951.

[SEAL]

**THOMAS F. MURPHY,**  
*Assistant Commissioner of Patents.*