March 13, 1928. 1,662,147

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FUNNEL

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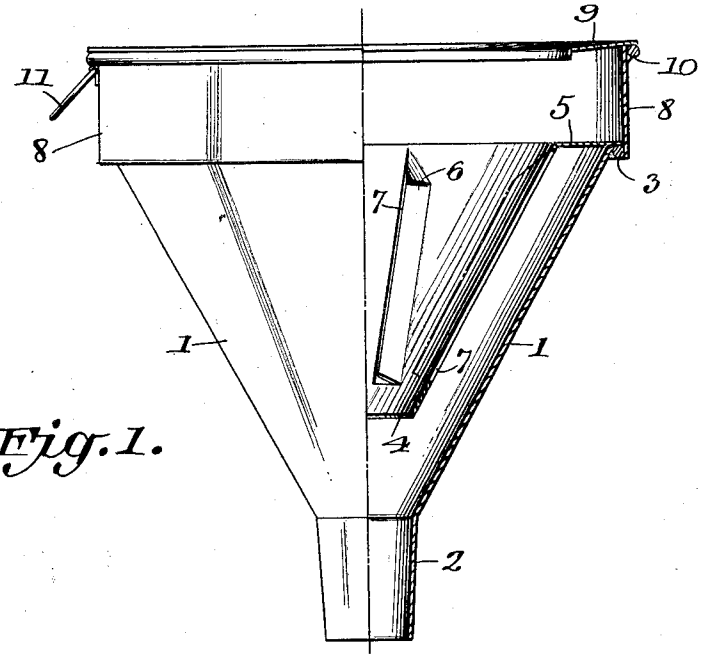

Fig. 1.

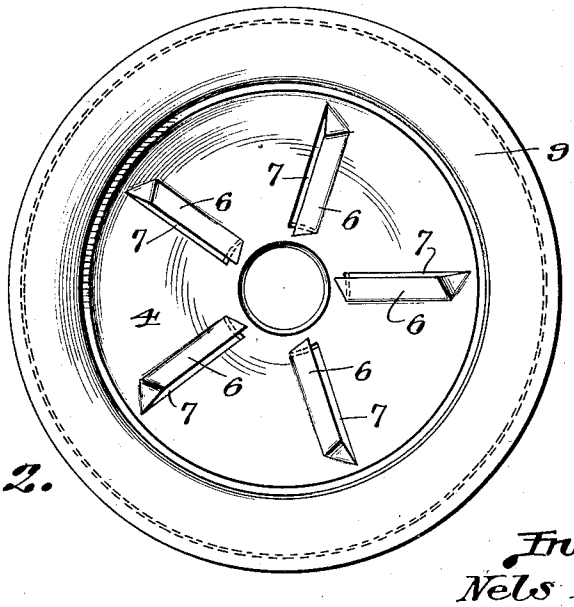

Fig. 2.

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UNITED STATES PATENT OFFICE.

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FUNNEL.

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It is well known that when a liquid is poured through a funnel or when it is allowed to run out of a large vessel through a relatively small opening, a whirling motion is always set up and may be carried to such an extent that a hole will be formed through the body of the liquid which escapes in the form of an annular layer adjacent the wall of the exit opening. It is obvious that this causes the liquid to flow through the funnel or from the vessel much more slowly than it would if the entire exit opening were constantly filled with liquid.

An object of my invention is to provide a simple funnel which may be readily stamped from sheet metal and which will prevent the above described whirling action of the liquid passing therethrough and thereby greatly reduce the amount of time necessary for the passage of a given amount of liquid.

Other objects of the invention will be apparent from the following detailed description and set forth in the appended claim.

In the drawings:

Figure 1 is a side view, one half of the funnel being shown in elevation and the other half in longitudinal section.

Figure 2 is a top plan view.

The funnel comprises the ordinary frustoconical body 1 which usually terminates in a relatively short and much smaller generally cylindrical extension 2. The upper edge of the body member 1 is or may be formed with a rolled or beaded edge 3. A second smaller and shorter frustoconical member 4 is provided with an annular flat rim or margin 5 at its larger end, which rests at its outer periphery upon the edge 3 of the body member 1, and is suitably fastened thereto. This small portion 4 is provided with a plurality of longitudinally extending portions 6 caused by slitting the metal and pressing out the portion at one side of the slit to form the flanges 6 and corresponding openings 7.

A generally cylindrical member 8 is fastened at its lower end to the bead 3 and edge of the rim 5 and has at its top an annular rim 9 projecting inwardly a short distance from the edge of the member 8 and sloping slightly toward the center. At the junction of the members 8 and 9, there may be provided a rolled edge 10. The various members are preferably soldered together, although other means of fastening may be employed. The funnel may be provided with the usual ring 11 for lifting or hanging the same.

When a liquid is poured into the funnel, a portion of the same will run through the opening 7 into contact with the wall 1, while another part will be discharged from the lower end of the portion 4 into the extreme lower portion of the body 1 and the spout 2. Any whirling tendency which may be set up by the flow of liquid to the inner funnel 4 will be counteracted by the flanges 7 which prevent such tendency from producing the usual whirlpool effect in the funnel. The liquid which passes through the opening 7 and comes in contact with the wall of the main funnel, is prevented from setting up any such whirling action because of the relatively short distance through which it travels in contact with said wall and because fresh amounts of liquid are constantly pouring through said opening 7 and thus breaking up any tendency to whirl which might otherwise arise in the liquid in contact with the main portion 1.

The rim 5 in connection with the rim 9 forms what might be termed an annular chamber at the top of the funnel which will hold excess liquid if it is poured in too rapidly and the flange 9 will also prevent tendency to splashing and overflow. It is sloped inwardly slightly in order that any liquid falling thereon will run normally into the funnel.

It will be seen that the invention provides a simple device, practically all parts of which may be stamped of sheet metal and produced at a low cost. It is also apparent that liquid will pass through said funnel much more rapidly and evenly than in the ordinary funnel, thus saving a large amount of time, where it is found necessary to use a funnel frequently. It is obvious that the precise form and proportions may be varied as well as minor details without in any way departing from the spirit of the invention,

which is to be regarded as limited only by the scope of the appended claim.

I claim:

A funnel comprising the usual frustoconical body terminating in a relatively small substantially cylindrical spout, and a second frustoconical portion of lesser diameter having its walls substantially parallel with the said body and having a flat rim at its top, said second portion provided with a plurality of passages therethrough each having at one margin an inwardly extending flange.

In testimony whereof, I have hereunto subscribed my name.

NELS FARDEN.