

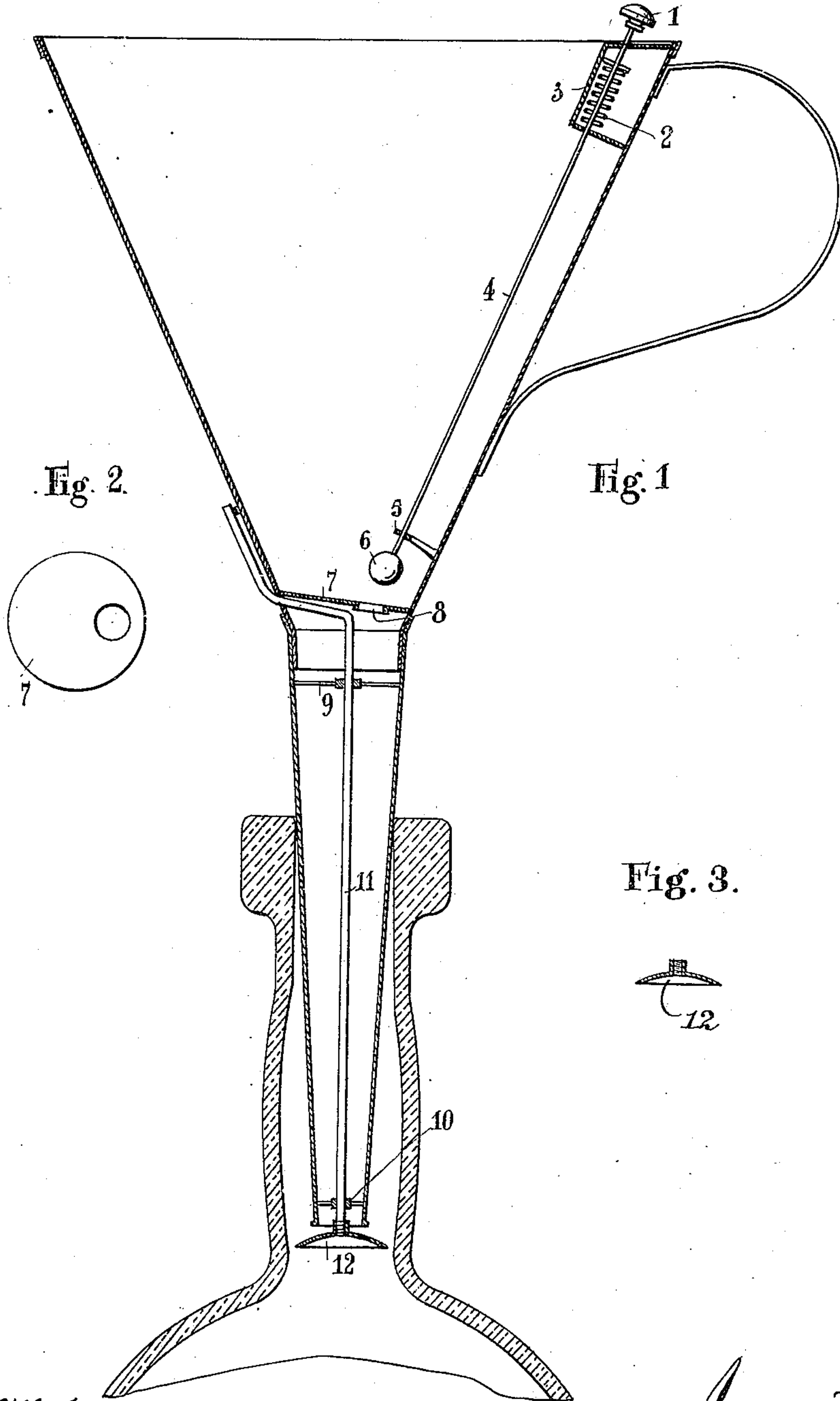
A. K. HAMPEL.

FUNNEL.

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990,549.

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UNITED STATES PATENT OFFICE.

ALFRED K. HAMPEL, OF RUDA-ROZANIECKA, AUSTRIA-HUNGARY.

FUNNEL.

990,549.

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To all whom it may concern:

Be it known that I, ALFRED KARL HAMPEL, a subject of the Austro-Hungarian Emperor, and resident of Ruda-Rozaniecka, Galicia, Austria-Hungary, have invented certain new and useful Improvements in Funnels.

The object of the present invention is a funnel enabling the filling of bottles and similar recipients without causing the liquid to effervesce. Another characteristic of this funnel is that the liquid can be prevented from running into the recipient at a given moment. The former effect is obtained by placing at the end of the funnel a disk on which the liquid falls after having run down the sides of the funnel, thus preventing all froth. The second point in question is obtained by placing in the head of the funnel a small plate with a hole in it, which can be opened or closed at will by means of a valve controlled by hand.

The annexed drawing, given as a sample, shows the invention in use.

Figure 1 gives a central vertical section of a funnel placed in the neck of a bottle. Fig. 2 shows plate in bottom of funnel head. Fig. 3 is a sectional view of a detail part of the funnel.

The funnel is shaped as usual:—a conical head and tubular extension enabling it to be placed in the neck of a bottle, etc.

Parallel with the head of funnel is placed a rod 4 provided with a button 1 and running through support 5. This rod is provided at the end with a ball 6 acting as a valve. This rod is controlled by a small spring 2 at the top placed in a box 3. This spring pushes the valve-rod 4 upward. The ball 6 of a suitable material is placed over a small hole 8 of plate 7. The head is fitted with a screw at the end thus permitting it to be screwed on to the shaft. This has been done to enable it to be easily taken to pieces and cleaned. Down the center of the shaft is fixed an air tube, attached at 9 and 10. This fine tube is threaded at the extreme end permitting the fixture of a small arched plate 12, leaving however sufficient space for the flow of the liquid poured into the funnel. Plate 12 is also threaded to fa-

cilitate replacement by others of different size according to the width of the neck of the bottle.

The use is as follows:—When filling a recipient; viz:—a bottle, firstly a suitable plate 12 is chosen which can be put in the neck of the bottle, this is fixed in its proper position and the funnel placed into the bottle as usual. The liquid is then poured into the funnel until it has reached the required quantity in the bottle. This done, press down button 1 thus forcing rod 4 downward with ball 6 closing hole 8 and preventing the further flow of liquid. While filling bottles, etc., the liquid runs onto the plate 12. This plate causes it to flow against the sides of the recipient. The running down the sides prevents the production of froth. The air in the bottle escapes through tube 11. To prevent the entrance of solid impurities or other matter a small gauze closely woven, can be placed in the head of funnel. When filling bottles having a large opening a rubber stopper should be used in form of a ring of which the interior diameter corresponds with size of funnel-shaft, and its outer diameter closely fits the opening in the bottle.

I claim:

1. A funnel for filling bottles or the like comprising in combination, an enlarged head portion and a tubular extension therefor adapted to be inserted into the bottle, a diaphragm at the juncture of said portion provided with an opening, a valve for closing said opening, a vent-tube in said extension projecting outwardly from said head portion at a point just below said diaphragm, and interchangeable liquid deflecting plates secured to said tube adjacent the mouth of said extension and adapted to project toward and closely adjacent the wall of the bottle to discharge the liquid there-against.

2. A funnel for filling bottles or the like comprising in combination, an enlarged head portion and a tubular extension projecting therefrom and adapted to be inserted into the bottle, an inclined diaphragm at the juncture of said portion provided with an opening, a ball valve for closing

said opening, a rod projecting upwardly from said valve to the top of said head portion, a casing surrounding said rod near the top of said head portion, a spring in said
5 casing for actuating said valve, a vent-tube in said extension projecting outwardly from said head portion, and a liquid deflecting plate secured to said tube adjacent the mouth of said extension and adapted to pro-

ject close to the inner wall of the bottle to 10 deflect the liquid thereagainst.

In testimony whereof I have hereunto set my hand in presence of two witnesses.

ALFRED K. HAMPEL.

Witnesses:

JAN LUKIASISSEIGER,
HUGO LINSCHIED.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
