R. L. BEST.

FUNNEL.

APPLICATION FILED SEPT. 8, 1909.

954,161. Patented Apr. 5, 1910.

Fig. 1.

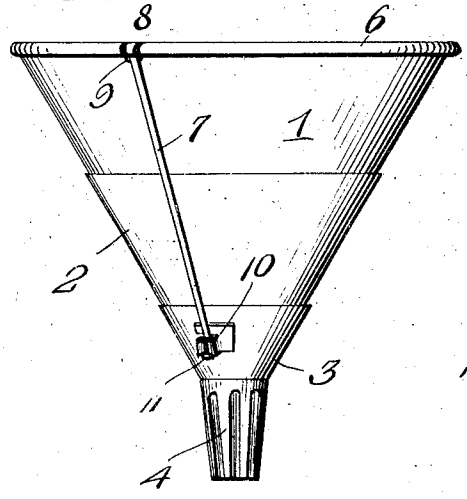


Fig. 2.

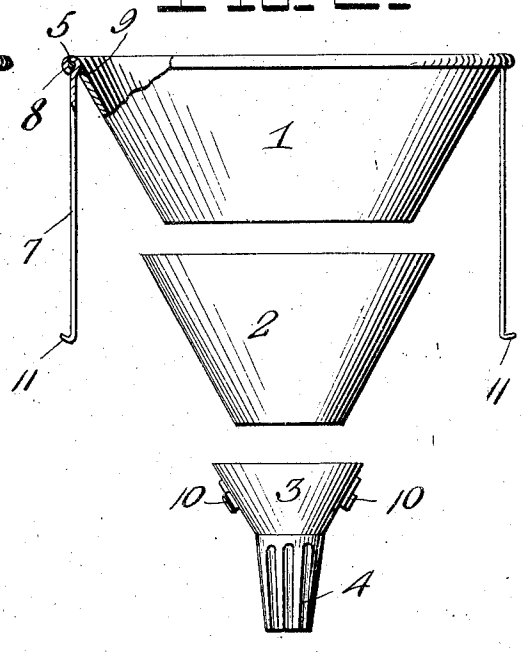


Fig. 3.

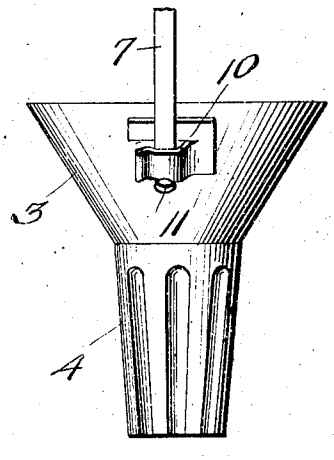
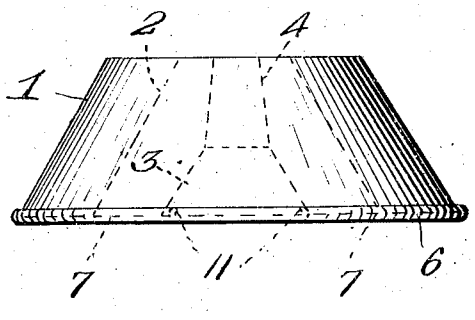


Fig. 4.



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FUNNEL.

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To all whom it may concern:

Be it known that I, ROBERT L. BEST, a citizen of the United States, residing at Bismarck, in the county of Burleigh and State of North Dakota, have invented certain new and useful Improvements in Funnels, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in funnels and more particularly to a knocked down funnel having detachable or separable sections adapted to be telescoped or nested when separated and to be rigidly secured in tight fitting engagement with each other by an improved fastening means, when it is desired to use the funnel.

With the above and other objects in view, the invention consists of the novel construction, combination and arrangements of parts, hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the improved funnel showing its sections assembled and fastened for use. Fig. 2 is a side elevation of the parts broken away and in section, and showing the sections detached or separated. Fig. 3 is an enlarged view showing the lower or smaller funnel section and the fastening device. Fig. 4 is a view indicating the manner in which the sections of the funnel may be telescoped or nested.

While my improved funnel may be composed of any number of detachable or separable sections, the embodiment illustrated consists of a large upper section 1, an intermediate section 2 and a small lower section 3, the latter terminating in the tapered spout 4 which may be corrugated longitudinally if desired. Each of said sections is frustro-coned-shaped, the large upper end of the bottom section receiving the small lower end of the intermediate section, and the large end of the latter receiving the small end of the upper section. These sections when assembled as shown in Fig. 1 fit snugly into engagement with each other so that a substantially rigid funnel is provided. The upper edge of the top section 1 is preferably reinforced by a surrounding wire 5, around which said edge of the section is bent or rolled as shown at 6.

My improved means for detachably uniting the several sections in assembled or telescoped position comprises a pair of fastening rods 7 arranged at opposite points and pivotally connected at one end to one of the end sections of the funnel and adapted to detachably engage lateral hook shaped keepers on the opposite end section. As illustrated said fastening rods 7 are pivoted at opposite points to the upper section 1 by bending their upper extremities upon themselves to provide pivot or hinged eyes 8 arranged upon the reinforcing wire 5 and in notches or recesses 9 formed in the upper edge of said section 1 as clearly shown in Fig. 2. This hinged or pivotal connection for said fastening rod permits its free lower end to be swung into and out of engagement with a laterally projecting keeper hook 10 provided upon the lower section 3. Said keeper hook is preferably in the form of a metal plate soldered or otherwise secured to the section 3 and having one side cut and bent to provide a laterally projecting outwardly offset hook, under which the co-acting fastening rods 7 may be sprung. The lower extremity of the rod 7 is bent or hook-shaped as shown at 11 so that it engages the bottom edge of the keeper hook 10 to prevent a separation of the funnel sections. I preferably employ two of the fastening rods 7 and by arranging them at diametrically opposite points on the device, it will be understood that a greater or less number of said rods may be employed.

By constructing the funnel sections so that they provide a rigid funnel when assembled, and by providing the detachable connecting means whereby the funnel sections are detached or separated from each other, said funnel sections may be telescoped or nested as shown in Fig. 4 when the funnel is not needed. On referring to this figure it will be noted that the intermediate section 2 fits within the upper section 1 and that the lower section 3 fits within the intermediate section 2, the fastening rod 7 folding across and within the large end of the section 1. This construction permits the device to be compactly folded so that it occupies but little space.

Having thus described the invention what is claimed is:

1. A knock-down funnel comprising a plurality of detachably engaged sections adapted to snugly fit each other when assembled to provide a rigid funnel and adapted to be nested one within the other when separated, fastening rods pivotally united

to one of the endmost sections and having hook shaped free ends, and laterally projecting keeper hooks upon the other endmost section to receive the hook shaped extremities of the fastening rods whereby the funnel sections will be detachably retained in engaged position.

2. A knock-down funnel comprising a plurality of detachably engaged sections adapted to snugly fit each other when assembled to provide a rigid funnel and adapted to be nested one within the other when separated, a reinforcing wire arranged around the upper edge of the large upper section and having said edge of the latter rolled around it, portions of said rolled edge of the upper section being removed, fastening rods having their upper ends bent to form eyes and engaged with said reinforcing wire and arranged in the removed or recessed portions of the rolled upper edge of the upper section, the lower ends of said rods being bent to form hooks, and keeper plates arranged on the lower section and having laterally projecting hooks to receive the hook shaped lower ends of the fastening rods.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ROBERT L. BEST.

Witnesses:
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H. C. BRADLEY.