(No Model.)

P. C. SMITH.

COMBINED FUNNEL, STRAINER., &c.

No. 590,243. Patented Sept. 21, 1897.

Fig. 1.

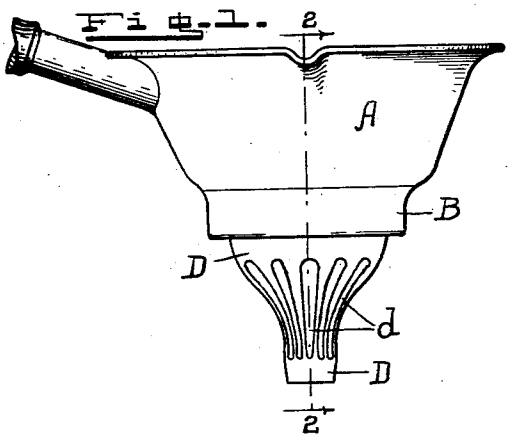


Fig. 2.

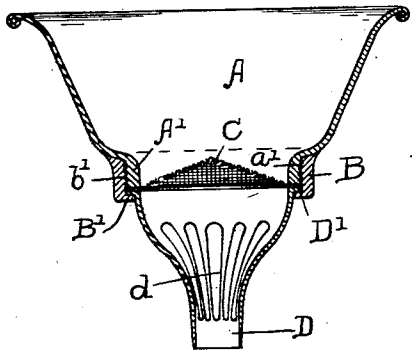


Fig. 3.

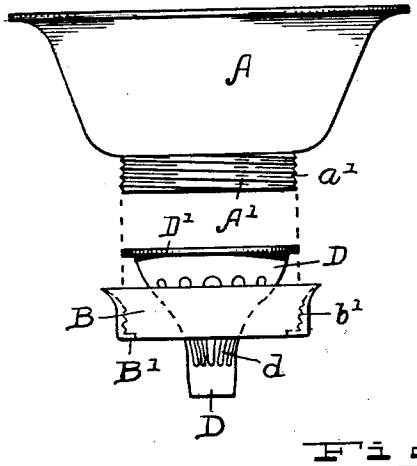


Fig. 4.

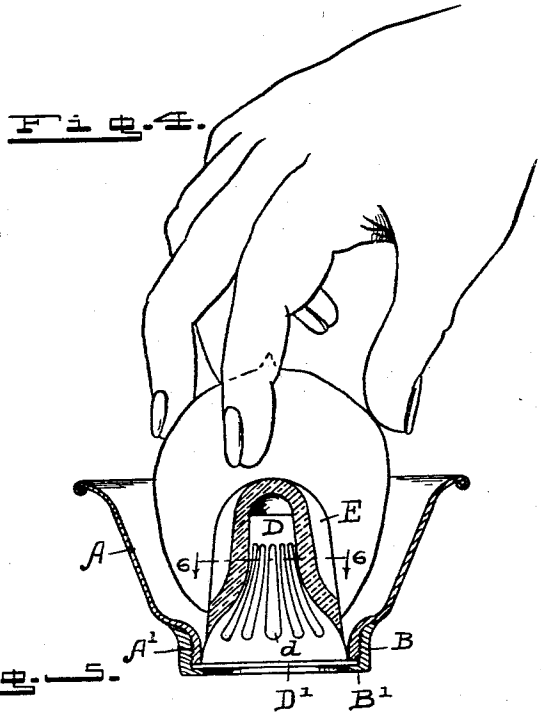


Fig. 5.

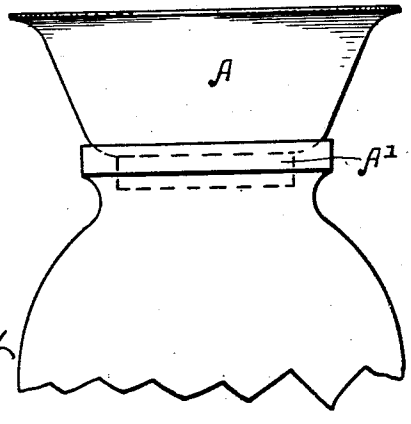
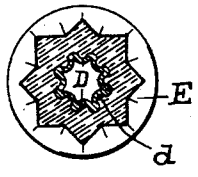


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

PERRY C. SMITH, OF INDIANAPOLIS, INDIANA.

COMBINED FUNNEL, STRAINER, &c.

SPECIFICATION forming part of Letters Patent No. 590,243, dated September 21, 1897.

Application filed January 14, 1897. Serial No. 619,269. (No model.)

To all whom it may concern:

Be it known that I, PERRY C. SMITH, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in a Combined Funnel, Strainer, &c., of which the following is a specification.

The object of this invention is to provide a combined funnel, strainer, fruit-can filler, and lemon-squeezer, and to form a neat, simple, compact, and inexpensive device of great utility for household purposes which can be easily taken apart and is readily adapted to either of the above-named purposes, all of which will be more clearly hereinafter described and set forth.

I accomplish the object of my said invention by the mechanism illustrated in the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, in which—

Figure 1 is a side elevation of my improved funnel, &c., showing a handle connected to one side thereof; Fig. 2, a central vertical section looking in the direction indicated by the arrows on the line 2 2 in Fig. 1, showing it as a sieve or strainer, the sieve being in place, Fig. 3 showing a side elevation of all parts detached or separated, Fig. 4 showing it used as a lemon-squeezer, Fig. 5 showing its position as when in filling fruit-cans, and Fig. 6 a cross-section looking in the direction indicated by the arrows on the line 6 6 in Fig. 4.

In the drawings, A represents the bowl or upper portion; A′, the downward projecting part thereof which has a screw-thread cut on its outer surface. *a′* represents said threads; B, a collar having an inner screw-threaded surface *b′*, said threads adapted to engage with the threads *a′*; B′, an annular flange on the lower inner edge of the collar B; C, the conical strainer or sieve. This sieve, as stated, is cone-shaped—that is, it is higher at its center than at its base. Several objects are thus obtained which are very essential. First, in all strainers where the sieve is on a horizontal plane the sieve after being used a short time becomes depressed at the center, which helps to concentrate the sediment instead of disseminating it, which is one of the features of my sieve. When a double sieve is desired, as in straining milk, the common way of doing this is to lay a cloth over the sieve, and after the cloth has become saturated with the weight of the liquid on the top the cloth adheres to the sieve and thereby decreases the efficiency of the strainer, as actual demonstrations have proven that where the two surfaces come together it tends to aid instead of retard the small particles getting through the sieve. This is wholly obviated by the use of my construction, for instead of placing a cloth over the sieve I place the cloth over the collar B, and then force the conical sieve down in the collar on top the cloth. When the bowl A is screwed in place, the cloth is stretched on a horizontal plane and the sieve with its conical faces rising above this plane, thus leaving a clear space between and thereby increasing the efficiency of the strainer.

D is the lower cone-shaped portion forming the funnel; *d*, a series of inwardly-crimped grooves in the surrounding face of the funnel D; D′, an annular outwardly-projecting flange on the upper end of the part D; E, a glass or metal hood adapted to be slipped over the lesser end of the cone-shaped part D, which is used when it is desired to convert the funnel into a lemon-squeezer, as shown in Fig. 4. The hood E has outwardly and inwardly projecting corrugations, as shown. The outer projections serve as a grater, while the inner ones are adapted to engage with the inwardly-crimped grooves *d* in the surface of the part D, thus preventing the one from turning on the other when the lemon is forced down over the hood E and turned, which operation forces the juice from the lemon.

The operation of the different parts is as follows: When a funnel is desired, as shown in Fig. 1, the cone-shaped part D, with its projecting flange D′, is inserted through the collar B, which collar has an inner flange B′ at its lower end, when the flange D′ rests on the flange B′. The bowl A, with its downwardly-projecting end A′, which has screw-threads cut on its outer surface *a′*, is screwed into the collar B, which has corresponding screw-threads *b′* cut on its inner surface, said threads adapted to engage with the threads *a′*, thus forcing the part A′ down in the collar until the end presses on the flange D′, and

said flange D′ resting on the flange B′ of the collar B, thus holding all the parts rigidly together. It will be seen by examining Fig. 2 that the inner surfaces of the parts A and D, forming the funnel through which the liquids pass, is left perfectly smooth and unobstructed, thereby preventing the forming of any sediment, which would eventually find its way into other liquids during its subsequent use. This has been found an important feature over funnels in which the threads are allowed to project into the passage. When a strainer is desired, as when straining liquids, a sieve is laid on the flange D′ before the part A′ is screwed down. When it is desired to strain into anything that has a large opening, the part D can be left out altogether. When it is desired to fill fruit-cans, &c., having large necks, only the upper part A is used, as shown in Fig. 5. Fig. 6 illustrates it as used as a lemon-squeezer. The cone-shaped part D is just reversed before it is placed in the collar B, and the bowl A is screwed into place, as before, thus forming a receptacle for holding the lemon-juice. A hood E, substantially as shown, is slipped over the top end of the cone-shaped part D, which has the series of inwardly-crimped grooves *d*, the hood having inwardly-projecting corrugations adapted to engage with the grooves *d*, thus preventing the turning of the hood on the part D. The bowl A has a handle connected therewith and has also a small spout cut in the upper edge thereof, as shown in Fig. 1. It is readily understood that this spout comes into use when there are liquids to be poured off, as when the article is used as a lemon-squeezer.

Having thus fully described my said invention, what I desire to secure by Letters Patent of the United States is—

The combination, in an article adapted to be used as a funnel &c., of a bowl having a downwardly-projecting part, said part having an outer screw-faced surface, but a smooth inner surface, said screw-threaded part adapted to be screwed into a collar, and engaging with threads in said collar, said collar having the threads cut on its inner surface, but having a smooth outer surface, and said collar having at its bottom on the inner edge a projecting flange, and a cone-shaped part, having an extended flange on its outer and upper end, said cone-shaped part adapted to be inserted in said collar, the flange on the upper end thereof, resting on the flange in the lower end of the collar, and the threaded part of the bowl screwed into the collar, thereby forcing the flanges together, and firmly holding the same, substantially as shown and described.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 11th day of January, A. D. 1897.

PERRY C. SMITH. [L. S.]

Witnesses:

ORLANDO B. ITES,

JOHN L. BENEDICT.