(No Model.)

O. E. LAKE.

COMBINED STRAINER AND FUNNEL.

No. 436,666. Patented Sept. 16, 1890.

Fig. 1.

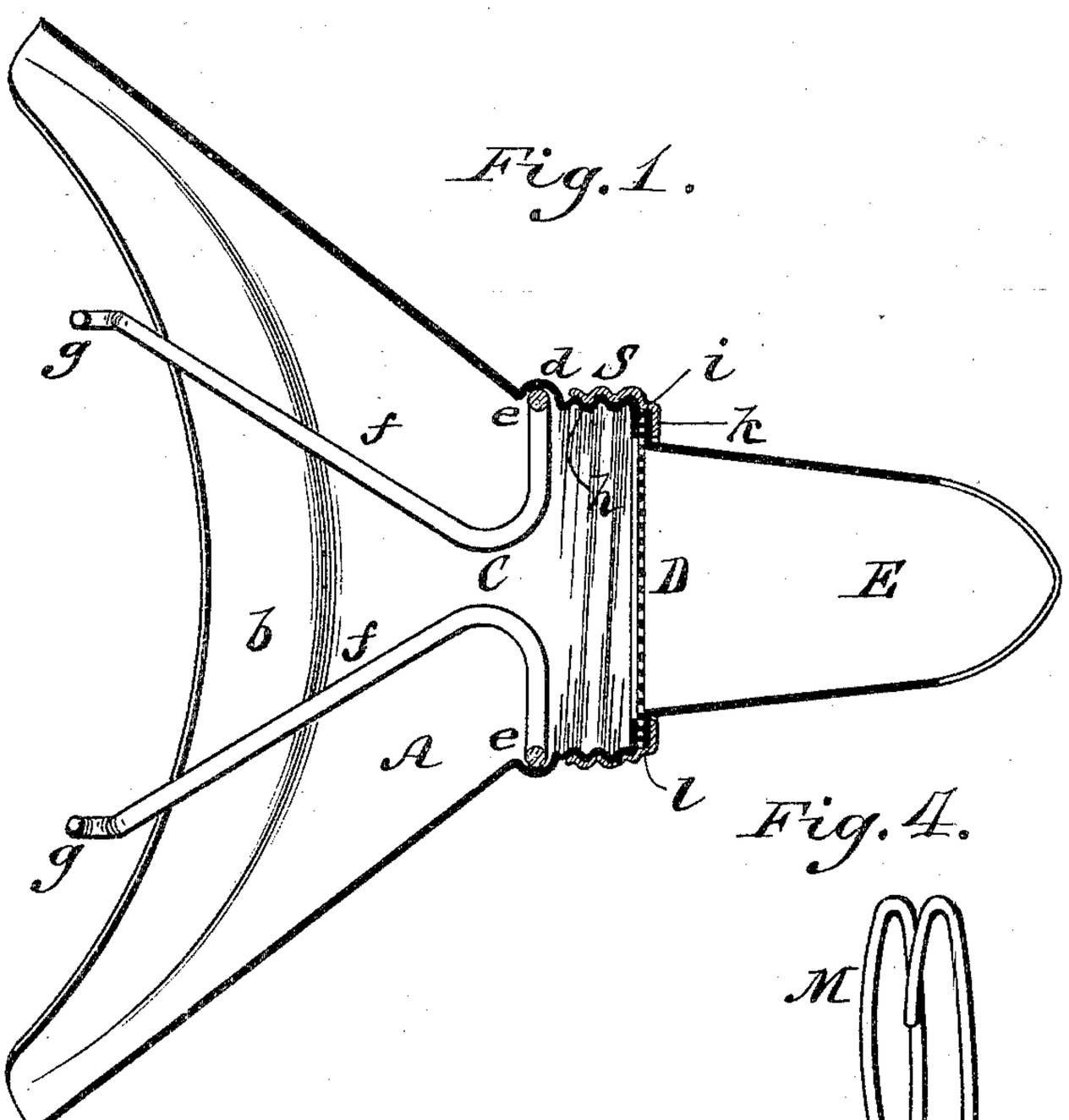


Fig. 4.

Fig. 3.

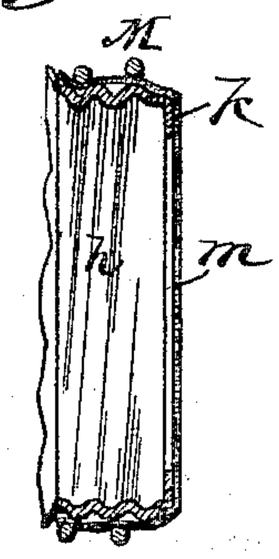
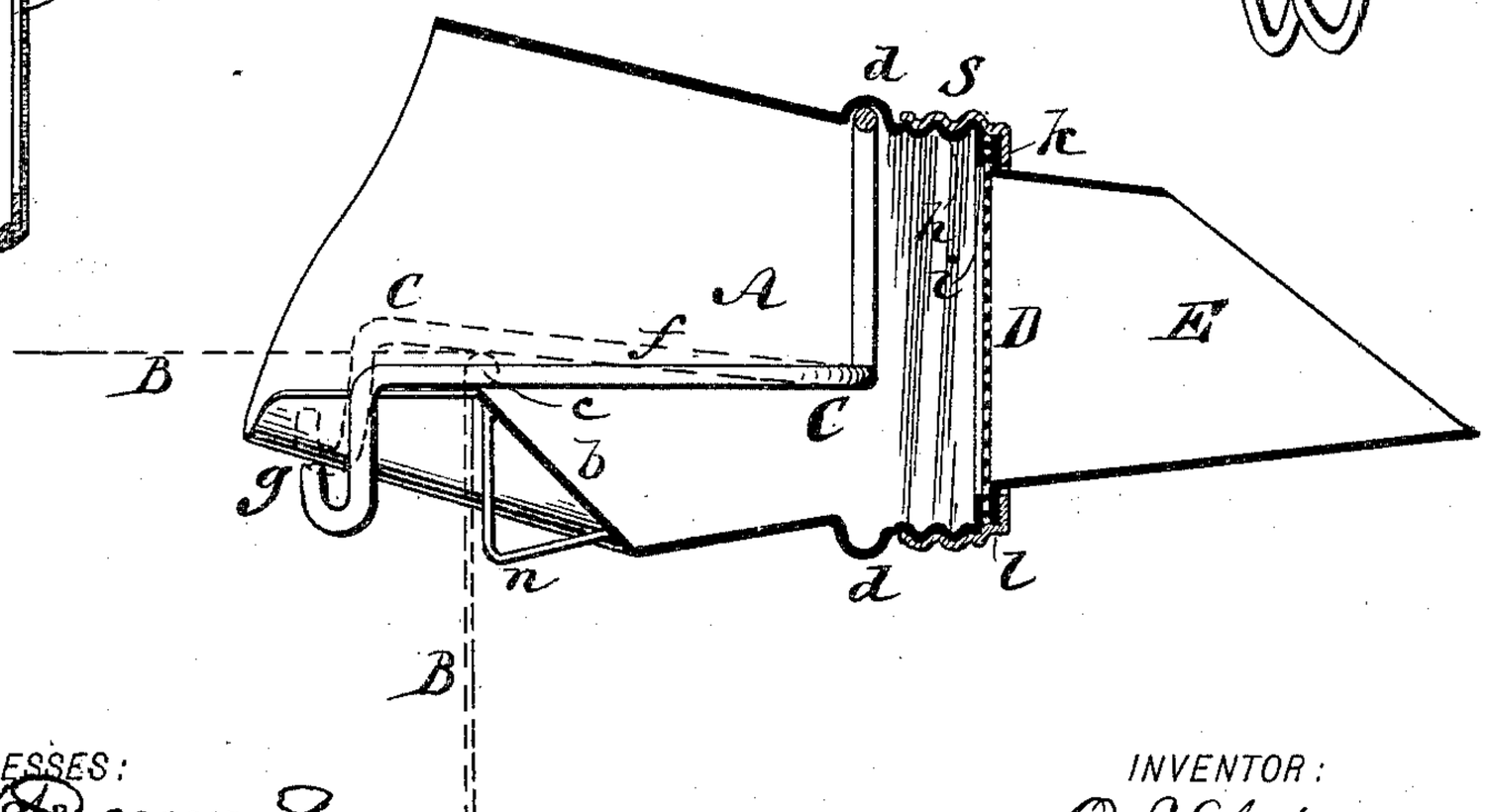


Fig. 2.



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COMBINED STRAINER AND FUNNEL.

SPECIFICATION forming part of Letters Patent No. 436,666, dated September 16, 1890.

Application filed March 22, 1890. Serial No. 344,908. (No model.)

To all whom it may concern:

Be it known that I, OTTO E. LAKE, of Topsfield, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Combined Strainers and Funnels, of which the following is a full, clear, and exact description.

This invention consists in a detachable strainer and funnel of novel construction, substantially as hereinafter described, and pointed out in the claims, the same, though applicable to various uses, being mainly designed to be used on pails or other like utensils for running off and straining the contents of the utensil into another receptacle or receptacles.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents an approximately horizontal longitudinal section of my improved device; Fig. 2, a longitudinal vertical section of the same. Fig. 3 is a sectional view illustrating a cloth strainer instead of a metal screen or strainer shown in the other figures of the drawings, and a clamping-collar applied to hold said strainer in place; and Fig. 4 is a view in perspective of the band or clamping-collar used to hold said cloth strainer in place.

Referring, in the first instance, to Figs. 1 and 2 of the drawings, A indicates the body of the device, which may be constructed of metal, paper, glass, or other rigid or flexible material. This body A is essentially of conical form flattened on the under side and made with a crescent-shaped back lower portion or flange *b*, turned up at an angle of about forty-five degrees and adapted to conform to and fit the largest-sized pail or utensil the device is designed to be used upon. Said upturned portion, lip, or flange *b* serves to catch and stop the liquid being emptied or poured through the device from returning and from running down the side of the pail or utensil, shown in part by dotted lines B B in Fig. 2, where the upper edge of the upturned lip or flange *b* is represented as resting under the rim or usual wire *c*, applied under the outer edge or rim of the utensil.

The small or forward end portion of the conical-shaped body A has spun, pressed, or otherwise formed in it a circular groove *d* to receive the partly circular head or end *e* of a binding or carrying spring C, which, in conjunction with the upturned lip or flange *b*, serves to hold the device on the utensil. Thus the portion *e* of the spring-carrier C is of approximately semicircular form to fit the upper portion of the groove *d* in the body A, and terminates below in laterally-diverging spring-arms *f f*, which are sprung or raised, as shown by dotted lines in Fig. 2, to act expansively and bear with pressure down on the rim of the utensil, while the upper edge of the lip or flange *b* bears on the outside underneath the rim, and an attached support *n* to said flange rests against the side of the utensil. Furthermore, the diverging ends of the arms *f f* are bent downward and terminate in hook-shaped ends *g g*, which may rest against the inside of the utensil and serve for the thumb and finger to grasp in adjusting the funnel and strainer to the utensil.

The forward or nose end portion of the body A is of circular construction, and is formed or provided outside of or beyond the groove *d* with a tubular extension, which has pressed or otherwise formed in, on, and around it spiral grooves forming a screw-thread *h*, to fit an outside screw-collar S, that serves to hold in place a metal screen or strainer D, here shown as arranged between a flange *i*, formed by a turned-in end of the screw-threaded extension of the body A, and a flange *k* on the outer end of the collar, or a flange *l* of a loose nose-piece E within the flange *k* of the collar. In some cases—as for filling jars or bottles—the nose-piece E may be clamped direct by its flange *l* between the flange *k* of the screw-collar and the flange *i*.

The screen D is readily detachable at all times for the purpose of cleaning, repair, or otherwise, on taking off the screw-collar S, and when it is desired to use a cloth straining material instead of a metal one, as shown in Fig. 3, a cloth strainer *m* may be substituted therefor by simply stretching it across and over the nose end of the body A and clamping it to its place by a suitable collar M, which acts by compression to hold it in place.

The construction and arrangement of the spring-carrier in no wise interfere with the

flow of liquid through the funnel, and by its elasticity holds itself firmly in place within the groove *d*. Said spring can be easily taken out by simply compressing or closing it near its partly-circular portion *e*. By making the body portion A, or the upturned crescent-shaped flange *b* of it, of flexible material it may be made to sit very close to the pail or utensil and to readily accommodate itself to utensils of different sizes.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combined strainers and funnels, the body of the device having a crescent-shaped back lower portion or flange turned up to occupy an angular position relatively to the bottom of said body, and a circular groove near its forward end, in combination with a spring-wire binder or carrier having a partly circular portion adapted to fit the upper portion of said groove, backwardly-diverging lower arms, and bent-down rear extensions, substantially as specified.

2. The combination of the body A, substantially of conical construction, flattened on its under side and having a crescent-shaped upturned lower back flange *b*, and having a circular front extension provided with a circular groove *d* and screw-thread or groove *h*, the spring-carrier C, the screw-collar S, the removable screen D, and the removable nose-piece E, substantially as specified.

OTTO E. LAKE.

Witnesses:
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