Nov. 2, 1926. 1,605,022

C. H. HAPGOOD

STRAINER

Filed Sept. 6, 1923

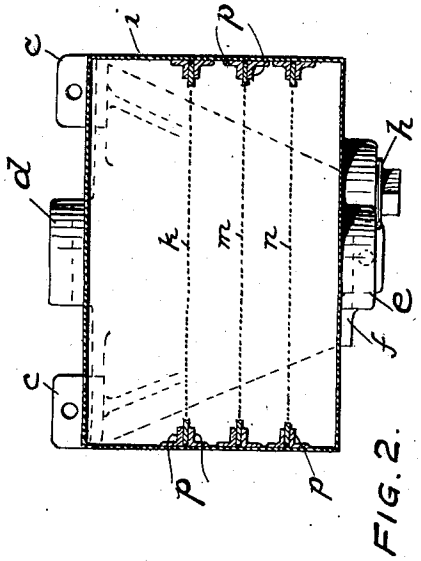

FIG. 2.

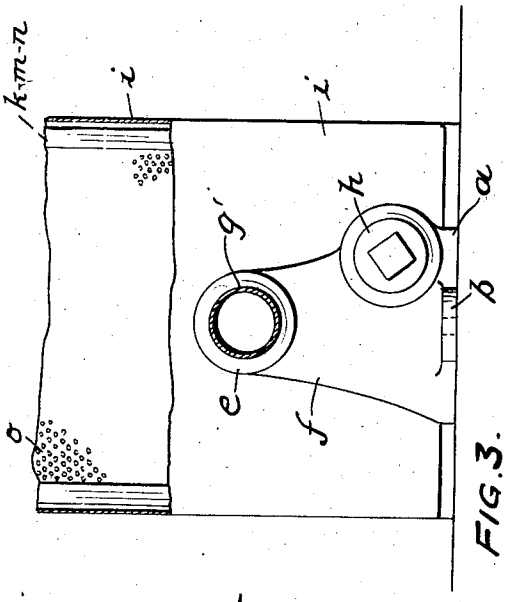

FIG. 3.

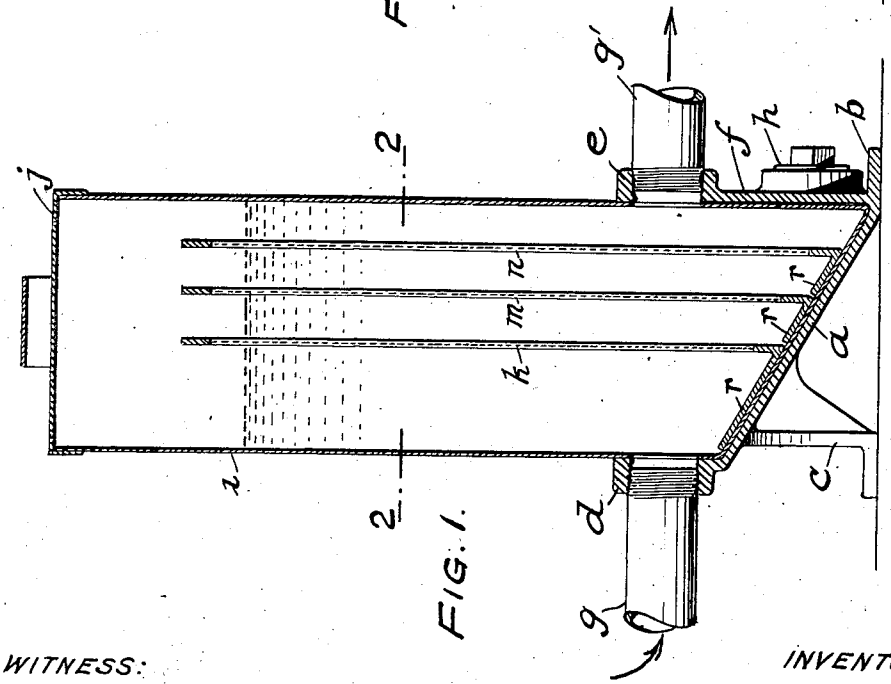

FIG. 1.

WITNESS:

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Patented Nov. 2, 1926.

1,605,022

UNITED STATES PATENT OFFICE.

CYRUS HOWARD HAPGOOD, OF NUTLEY, NEW JERSEY, ASSIGNOR TO THE DE LAVAL SEPARATOR COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

STRAINER.

Application filed September 6, 1923. Serial No. 661,147.

In the operation of dry cleaners, one well known form of which comprises a washer for receiving the cleaning liquid (e. g. gasoline,) and within which the clothes are washed, a centrifugal clarifier, a pipe line from the washer to the clarifier and back to the washer, and a pump to maintain the circulation of cleaning liquid, it is customary to interpose a strainer in the pipe line between the washer and the pump and clarifier to prevent the passage of buttons, lint and other similar products that would obstruct the action of the pump or clog the clarifier. My invention is more particularly intended for use as such a strainer, although it is adapted for use in any apparatus in which a straining operation is required or desired.

In the drawings, which show a preferred embodiment of the invention:

Fig. 1 is a sectional elevation of the strainer.

Fig. 2 is a horizontal section on the line 2—2 of Fig. 1.

Fig. 3 is an end view, partly broken away, of the lower part of the strainer, looking toward the rear.

The base of the strainer is a casting comprising a bottom *a* carrying a supporting flange *b* at the rear and flanged supporting legs *c*, *c* at the front, the bottom thus being supported so as to slope downward from front to rear. The base, at the front, has an entrance nozzle *d*. At the rear, the base has an upright *f* supporting a discharge nozzle *e*. These two nozzles are on the same level, and are respectively connected with the two sections, *g*, *g'*, of the pipe line, it being desirable to have the two sections of the pipe line leading to the pump on the same level. The flange *f* also carries a drainage and cleaning outlet, normally closed by a plug *h*.

The shell *i* of the strainer rests on the base *a*, its front and rear walls having openings registering with the nozzles *e* and *d*. Within the shell *i* extends a series of screens *k*, *m*, and *n*, which are arranged vertically, and parallel with the front and rear walls of the shell *i*. These screens comprise thin plates provided with a multiplicity of small perforations *o*. The screens are supported in position by sliding in grooves in members *p* secured to the side walls of the shell (see Fig. 2). From the lower edge of each screen extends an upturned flange *r* adapted to rest on the bottom of the shell.

It is preferred to provide a relatively wide space in front of the front screen *k*, and to space the remaining screens apart at uniform distances. However, the number of screens and their relative spacing may be varied.

The shell *i* is provided with a removable top *j*. The screens preferably extend almost to the top of the strainer. The strainer should be so positioned relatively to the washing drum (not shown) that the gasoline level in the washing drum will be just below the upper ends of the screens.

In case any solid materials of the character hereinbefore mentioned enter the strainer, they will be arrested thereby, and sink down into the crotch of one of the screens. Most of such materials, and all large sized solid material, such as buttons, will not pass the first screen, wherefore it is preferred to provide a relatively wide space in front of the front screen *k*.

From time to time, and, if desired, during the operation of the washer and the flow of liquid through the strainer, the screens may be removed, one at a time, cleaned, and replaced. During the removal of the front screen *k*, for example, the next sereen, *m*, will act as the primary screen.

It is impracticable, or at least undesirable, to make the entire strainer of heavy material; but by making the base in the form of a heavy rigid casting, the whole contrivance is rendered sufficiently staunch to resist wear and tear.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:

1. A strainer of the character described comprising a shell having imperforate side walls, front and rear walls provided respectively with liquid admission and discharge orifices, and an imperforate bottom sloping from front to rear; a removable screen having a perforated vertical member and an imperforate flange extending at an acute angle thereto and resting on the shell bottom; and a separate nozzle supporting member and nozzles carried thereby registering with said orifices.

2. A strainer of the character described comprising a shell having an inlet in its

front wall and an outlet in its rear wall and a bottom sloping from front to rear, and independently removable elements each comprising a vertical extending screening member and a flange extending at an acute angle thereto and resting on the sloping shell bottom, each of said flanges except the one on the front screen substantially covering that part of the shell bottom between the screen from which it extends and the next adjacent screen in front.

3. A strainer of the character described comprising a shell having an inlet in its front wall and an outlet in its rear wall and a bottom sloping from front to rear, and independently removable elements each comprising a vertically extending screening member and a flange extending at an angle thereto and resting on the sloping shell bottom, each of said flanges except the one on the front screen substantially covering that part of the shell bottom between the screen from which it extends and the next adjacent screen in front, the flange on the front screen substantially covering that part of the shell bottom between the front screen and the front wall of the shell.

In testimony of which invention, I have hereunto set my hand, at New York, on this 24th day of August, 1923.

CYRUS HOWARD HAPGOOD.