

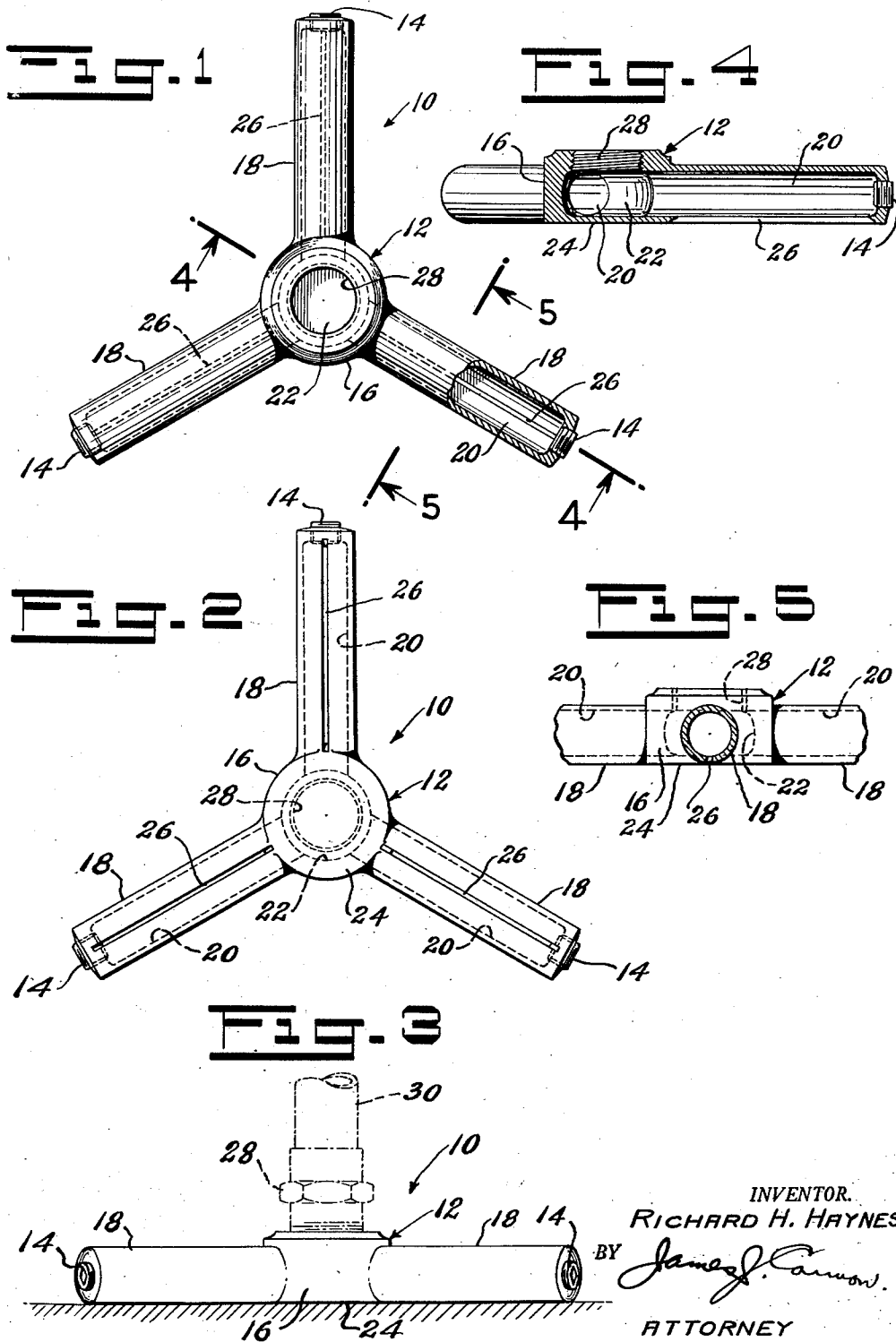
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FLOOR DRAINER

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FLOOR DRAINER

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2 Claims. (Cl. 210-460)

My invention relates to drainers for sump pumps and is directed particularly to an improved drainer for use with suction pumps for removing water from flooded surfaces.

Ordinary strainers and drainers used with suction pumps for removing water from flooded surfaces such as factory floors or basements, swimming pools, flat bottom tanks, drums, etc., withdraw water over a small surface area, which causes a cavity of air to form when the water reaches to within four to five inches of floor level, stopping further drainage.

It is the principal object of my invention to provide an improved drainer of the character described which will not form such a cavity, and which will allow the continuation of pumping action until substantially all the water has been removed from the surface being drained.

It is another object of my invention to provide an improved drainer for sump pumps wherein the orifices through which the water is drained are in the form of a plurality of narrow slits, said slits serving as strainers for keeping foreign materials from entering the pumping system.

It is another object of my invention to provide a drainer of the character described which is readily adaptable for attachment to suction hoses of various sizes.

It is still another object to provide a drainer of the character described which is simple in construction, easy to manufacture, light in weight, and efficient and durable in use.

Other objects, features and advantages of my invention will be apparent from the following description when read with reference to the appended drawings.

In the drawings:

Fig. 1 is a top view of an improved drainer embodying the invention;

Fig. 2 is a bottom view of the same;

Fig. 3 is an elevational view of the same, illustrating the position of use;

Fig. 4 is a vertical cross-sectional view taken along the line 4-4 of Fig. 1 in the direction of the arrows;

Fig. 5 is a vertical cross-sectional view of Fig. 1 taken along the line 5-5 thereof in the direction of the arrows.

Referring now in detail to the drawings, wherein like reference numerals denote corresponding parts throughout the several views, my improved drainer for suction pumps is indicated generally by reference numeral 10, the same comprising a body member 12 and three end plugs 14. The body member 12 comprises a generally cylindrical, hollow base portion 16 formed with three equiangularly spaced radial tubular arms 18 whose interior openings 20 communicate with the central opening 22 of said base portion. The bottom surface 24 of the base portion 16 lies in a common plane with the lowermost cylindrical surface portions of the tubular arms 18 so that the drainer 10 can rest flat upon a flat surface to

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be drained, as illustrated in Fig. 3. The bottom surfaces of the tubular arms 18 are provided with longitudinal slits 26 extending nearly the entire length of the tubular arms 18. The ends of the arms 18 are formed with threaded openings within which the end plugs 14 are tightly screwed.

The upper end of the base portion 16 of body member 12 has an internally-threaded central opening 28 for threadedly receiving a pipe or hose coupling fitting 28 (Fig. 3) for connection to the suction line 30 (see Fig. 3) running from a drain pump (not illustrated).

The body member 12 comprising the hollow base portion 16 and the tubular arms 18 preferably are integrally formed by casting of a lightweight metal such as aluminum.

In use the improved drainer will be connected, preferably by flexible hosing, to the suction port of a drainage pump and positioned flat upon the floor or other horizontal surface to be drained, as illustrated in Fig. 3. Drainage is effected through the narrow radial slits 26 of the arms 18 which, because of being substantially at floor level, and because of their extending over a relatively large area of the surface being drained, operable without interruption until all water is drained from the floor surface. It has been determined that with three arms 20 of approximately seven inches in length each, and having slits 26 of about $\frac{3}{32}$ inches in width, a desirable flow rate can be achieved for ordinary drainage operations. The slits 26 are nevertheless narrow enough to act as strainers preventing foreign matter from entering the pumping system. In the event it becomes necessary to clean the interior of the drainer 10 to remove incrustation, corrosion, etc., this can readily be accomplished by simply removing the end plugs 14 for internal scraping.

While there is disclosed herein only one form in which the invention may be embodied in practice, it is to be understood that this form is shown for the purpose of illustration only, and that the invention is not to be limited to the specific disclosure but may be modified and embodied in various other forms without departing from its spirit. In short, the invention contains all the modifications and embodiments coming within the scope of the following claims.

I claim:

1. A suction drainer comprising, in combination, a hollow body member, a plurality of hollow arms extending outwardly from said body member, the interiors of said arms being in communication with the interior of said body member, and a longitudinally extending narrow slit in each of said hollow arms, communicating with the respective interiors thereof, said arms and said slits being arranged so that said slits lie in a common plane, said body member having a flat bottom surface lying substantially in the common plane of said slits.

2. In a suction drainer the combination comprising a hollow body member, a plurality of tubular arms extending radially from said body member and communicating with the interior thereof, and a longitudinally extending narrow slit through each of said tubular arms, said slits and said arms being arranged so that said slits lie in a common plane, wherein said body member is substantially cylindrical in shape and has a bottom wall lying substantially in the common plane of said slits.

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