

J. KURTZ.
STRAINER FOR MINE PUMPS.

(Application filed Apr. 26, 1902.)

(No Model.)

Fig. 1.

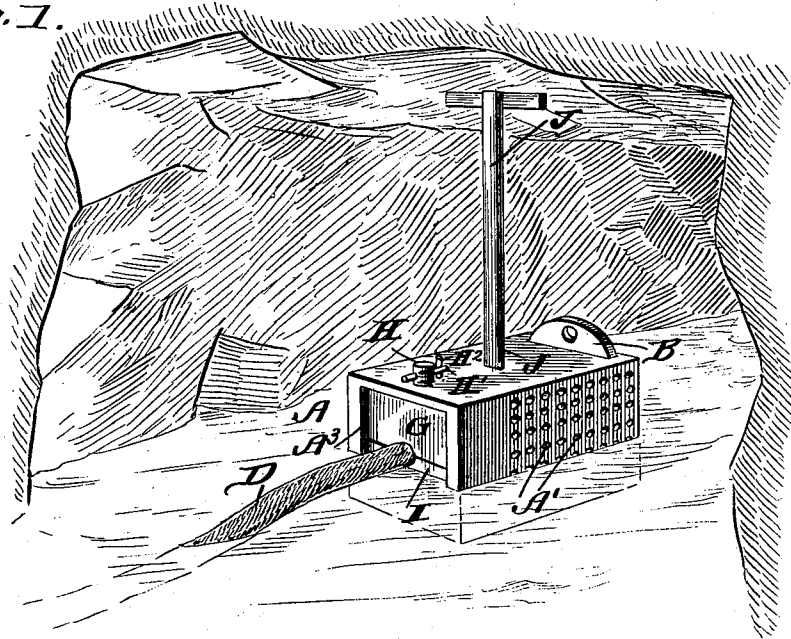


Fig. 2.

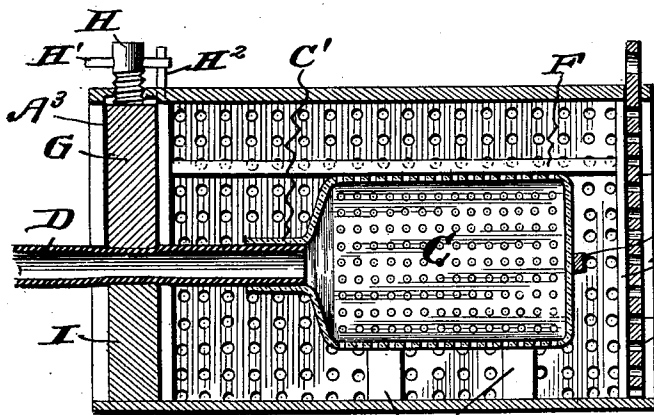


Fig. 3.

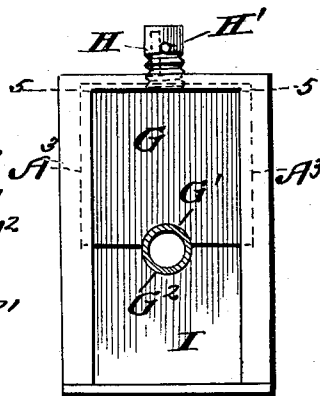


Fig. 4.

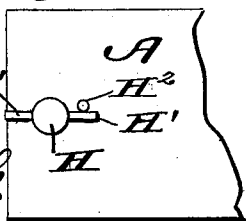
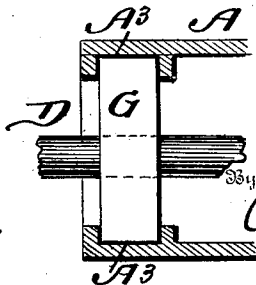


Fig. 5.



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JACOB KURTZ, OF GREENSBURG, PENNSYLVANIA.

STRAINER FOR MINE-PUMPS.

SPECIFICATION forming part of Letters Patent No. 705,364, dated July 22, 1902.

Application filed April 26, 1902. Serial No. 104,834. (No model.)

To all whom it may concern:

Be it known that I, JACOB KURTZ, a citizen of the United States, residing at Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Strainer for Mine-Pumps, of which the following is a specification.

This invention relates to an improved strainer to be used in connection with a suction-pump; and the object thereof is to provide an efficient device capable of ready attachment to or detachment from the free end of the hose or pipe that is connected to the pump proper.

Another object of my invention is to provide a device in which the strainer will be protected against injury and one in which all danger of the strainer becoming clogged is positively avoided.

With these briefly-stated objects in view my invention comprises certain details of construction and novel combination and arrangement of parts, as will be fully described in the following specification and pointed out in the claims, reference being had to the drawings, in which—

Figure 1 is a perspective view of my improvement as in use. Fig. 2 is a longitudinal section of the casing or box with the strainer proper in position. Fig. 3 is a front elevation of the box. Fig. 4 is a detail plan view of one end of the box, and Fig. 5 is a detail section taken about on the line 5 5 of Fig. 3.

In the drawings I have shown my invention as used in a mine; but of course it will be understood that the same may be used with equal effectiveness in places where it is desired to draw off water, and in carrying out my invention I employ a box or casing A whose sides are perforated, as shown at A', and at the rear of the box I provide guide-strips A², in which is slidably retained a door B, that is also perforated, as shown at B', the upper end of the door being provided with a finger-hold by which the door is readily removed when desired. Within this box or casing is arranged the strainer C, that has its periphery perforated, as most clearly shown in Fig. 2 of the drawings, and whose front end terminates in a contracted neck portion C', in which is adapted to be held the inner

end of a flexible hose or pipe D, that is connected at its opposite end to a suitable suction-pump. (Not shown.) The strainer C is supported above the bottom of the box or casing A by means of wooden legs E, and above the strainer and at one end thereof I arrange suitable brace-strips F, that securely and firmly hold the said strainer in position within the casing.

The forward end of the casing is provided with a sliding clamping-block G, that operates in grooves A³, arranged in the box or casing A, and is firmly held in position by a wooden screw H, that has an arm H' projecting laterally therefrom and which is adapted for engagement by a pin H², that is fitted in an aperture arranged in the top of the said box or casing. This block G has a portion of its lower face cut out, as shown at G', said cut-out portion being arranged opposite a cut-out portion G², formed in the lower or base block I, that is firmly held in the casing, as shown. By this arrangement the hose or pipe D is firmly clamped to the box or casing A and its extreme end firmly held within the neck portion C' of the strainer.

In practice I prefer to construct the box or casing, the sliding block, the screw, and the door all of wood, while the strainer C is preferably constructed of glass, and it is for this purpose that I provide the strainer with a shield or casing such as described, and of course it will be understood that the door B is for the purpose of obtaining access to the box whenever desired.

My invention is particularly adapted for use in flooded mines, and in order to hold the box or casing firmly in position I employ a suitable prop or brace J, that is positioned against the roof of the mine and the top of the casing, which firmly holds the box or casing in position.

From the foregoing the simplicity and advantages of my improvement will be readily understood, and it will be particularly noted that by arranging the door as described the hose may be quickly and easily attached to or detached from the strainer, it only being necessary to remove the pin H², when the screw may be reversed, the block raised, and the hose or pipe withdrawn and the strainer removed, and by arranging the pin against

which the arms of the screw strike the screw may be firmly and securely held in position to which it has been adjusted.

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

1. A device of the kind described, comprising a perforated box or casing having guide-ways formed in the ends thereof, a sliding door arranged in one end thereof and having a series of apertures produced therein, a strainer arranged within the casing, a hose or pipe connected to the strainer, and means arranged in the forward end of the box or casing for firmly clamping the hose in position, substantially as shown and described.

2. In a device of the kind described, the combination of a box or casing having its sides provided with apertures, a strainer arranged within the said box or casing, braces arranged within the box and adapted for engagement with the said strainer, legs arranged within the casing upon which is adapted to rest the said strainer, the sliding door arranged in one end of the casing and having a series of perforations formed therein, a hose connected to the strainer, a stationary block held in the forward end of the casing, a sliding block arranged above the said stationary block and adapted for engagement with the hose, and a screw arranged in the top of the casing and adapted for engagement with the block, and means for holding the said screw in its adjusted position, substantially as shown and described.

3. An improved strainer attachment for suction-pumps comprising a box or casing having its sides perforated, a strainer held within said box or casing, a door slidably retained in one end of the casing and having a series of apertures produced therein, a hose connected to the said strainer, a block arranged in the forward end of the box and having a recess produced in the upper face thereof, guides arranged adjacent the said block, a movable block held in the said guides and having a recess produced in the lower face thereof which is adapted to register with the recess in the first-named block, a screw operating in the said box or casing and adapted for engagement with the said movable block, arms carried by the screw and a pin arranged upon the casing and adapted for engagement by one of the said arms of the screw, and means arranged within the box or casing for holding the said strainer in position, substantially as shown and described.

4. A device of the kind described, the combination of a box or casing, a strainer held therein, a hose connected to the strainer, a clamp carried by the box or casing and engaging the said hose, a sliding door arranged in the casing opposite the said clamp and a prop or brace engaging the said casing and mine for holding the said casing in position, substantially as shown and described.

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Witnesses:

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