

No. 664,833.

Patented Jan. 1, 1901.

T. COLLINS.

STRAINER ATTACHMENT FOR PUMPS.

(Application filed Nov. 22, 1899.)

(No Model.)

Fig. 1.

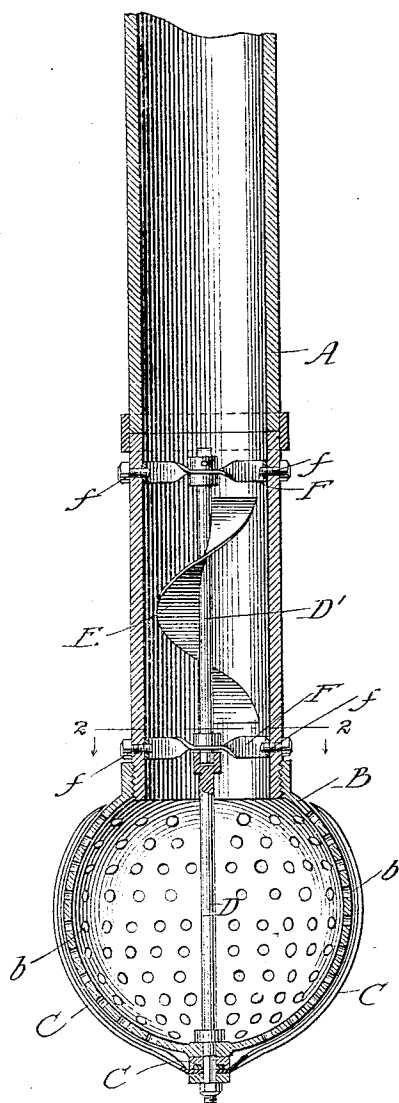


Fig. 2.

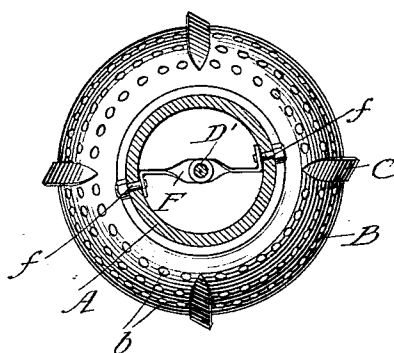
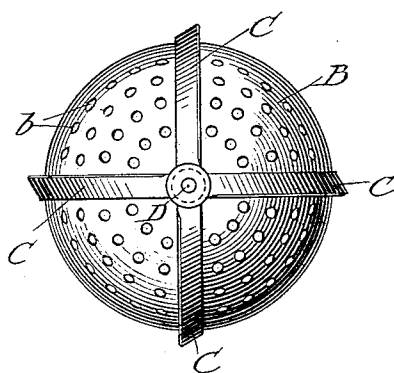


Fig. 3.



Witnesses:

Frank D. Blanchard
Joseph Harvey

Inventor
Thomas Collins

UNITED STATES PATENT OFFICE.

THOMAS COLLINS, OF CHICAGO, ILLINOIS.

STRAINER ATTACHMENT FOR PUMPS.

SPECIFICATION forming part of Letters Patent No. 664,833, dated January 1, 1901.

Application filed November 22, 1899. Serial No. 737,971. (No model.)

To all whom it may concern:

Be it known that I, THOMAS COLLINS, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented a new and useful Straining Attachment for Pump or Conduit Pipes, of which the following is a specification.

My invention consists of a new and useful device for straining water or other fluid as it passes from the reservoir into the pipe, either by force, in case of a pump, or by gravitation.

The objects of my invention are, first, to provide from sheet or cast metal a strong, firm, and inexpensive device that is easily set up and attached to the pipe at the aperture, so that the fluid may be kept free as nearly as possible from foreign substances, and, second, to afford facilities by the proper adjustment of knives or scrapers so that the strainer may be kept clear of stoppage, said knives or scrapers being kept in motion by utilizing the power of the flowing fluid as it passes through the pipe. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a vertical sectional view of the device as attached to the pump-pipe A and ready for use. Fig. 2 represents a top view looking down from the line 2 2, showing the upper portions of the bulb-strainer B and the scrapers C. Fig. 3 represents the bottom of the strainer and the manner in which the scrapers are thereto attached.

Similar letters refer to similar parts throughout the several views.

I will now particularly explain the process of making and the construction of the several parts.

The center turning shaft D D' is provided with an auger-flange, which may be either one entire piece or feathered, so as to produce a rotary motion thereof by contact with the flowing fluid. This shaft may be one piece or preferably two, D and D', fitted at the lower cross-piece F, as shown in the diagram. The

shafts are to be provided with shoulders and washers to hold them firmly in position and are supported by cross-pieces or braces F, which are fastened to the pipe by bolts *f* or otherwise. It is preferable that the lower portion of the pump-pipe be detachable and fastened to the main pipe by threads or otherwise for convenience in putting together. The length of the shaft and the size of the screw-flange will depend upon the size of the pipe.

The bulb or strainer B may be cast or made of sheet metal with many perforations *b* and is attached to the pipe by threads or other arrangement (preferably threads) and is supplied with metallic scrapers C, which pass over the convex surface of the strainer, preferably at an angle, as indicated in the drawings. These scrapers are to be firmly fastened at the lower end of the shaft, so as to rotate with the shaft as the fluid passes through the pipe. They may be cast or made of sheet metal and held firmly in position between two washers, which are provided with a slit in each fitting a corresponding spur on each of the scrapers and are held on by a nut.

I claim as my invention—

In a strainer attachment for pumps the combination with a tube or barrel of a shaft supported therein, a spiral vane upon said shaft arranged in the path of the fluid passing through said tube, a spherical bulb-sieve secured to one end of said tube, a bearing therein to receive said shaft, and curved scrapers secured to said shaft and shaped and arranged to conform to the outer surface of said sieve, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS COLLINS.

Witnesses:

GEORGE H. SUGRUE,
GEORGE A. KEYS.