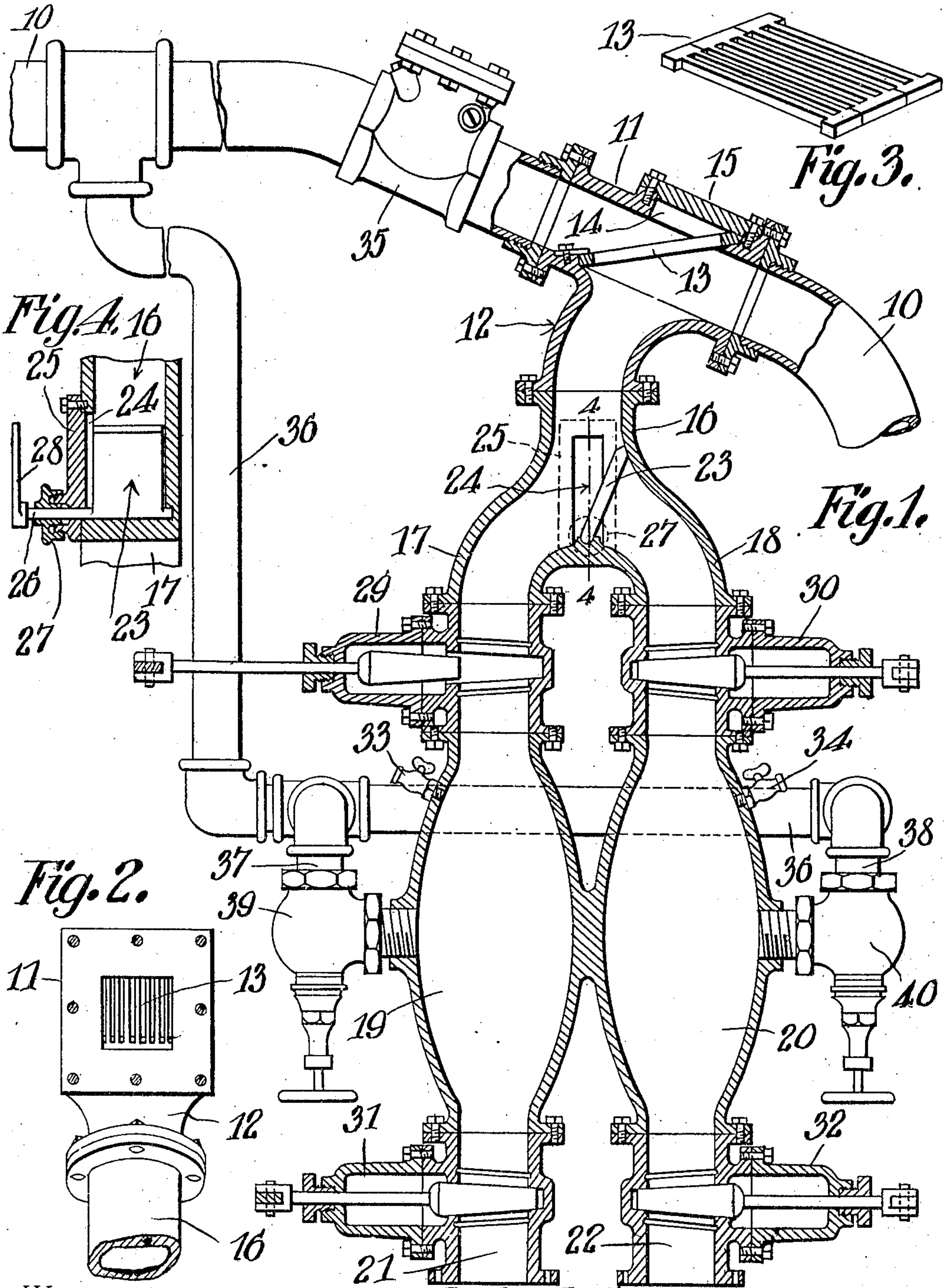


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H. SEWELL.  
ATTACHMENT TO PUMPS.  
APPLICATION FILED AUG. 3, 1906.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

HERBERT SEWELL, OF FORT MYERS, FLORIDA.

## ATTACHMENT TO PUMPS.

No. 849,752.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed August 3, 1906. Serial No. 329,106.

*To all whom it may concern:*

Be it known that I, HERBERT SEWELL, a citizen of the United States, residing at Fort Myers, in the county of Lee and State of Florida, have invented a new and useful Attachment to Pumps, of which the following is a specification.

This invention relates to attachments to pumps for preventing the passage of stones, shells, and other foreign substances into the pumps, while at the same time not materially affecting the flow of the water, and has for its object to simplify and improve the construction and increase the efficiency and utility of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention within the scope of the appended claims.

In the drawings, Figure 1 is a sectional elevation of the improved apparatus. Fig. 2 is an end view of the receiving-chamber with the grating in position therein. Fig. 3 is a perspective view of the grating removed. Fig. 4 is a sectional detail on the line 4 4 of Fig. 1.

The improved device may be employed in connection with any form of pumping apparatus, and as the pump forms no part of the present invention it is not illustrated.

The improved device is connected into the suction or intake portion of the pumping apparatus, and for the purpose of illustration a conventional form of a suction member is represented at 10 with the improved device connected into the same.

The improved device consists of a receiving-chamber having a deflecting-grating and through which the water is caused to pass and with a lateral branch into which the stones,

shells, and other foreign material is deflected by the grating, two chambers into which the foreign material is alternately precipitated, and a system of guide-wings, controlling-valves, air-valves, and flushing devices whereby the contents of the precipitating-chambers may be alternately discharged without interrupting the operation of the pumping apparatus.

The receiving-chamber 11 is preferably disposed in an inclined position and connected into the suction-pipe 10, so that the water passes through it on its way to the pump. The chamber 11 is provided with a branch 12, extending from its lower side and united to the chamber by a curved section, as shown in Fig. 1, and disposed in the chamber is an inclined grating 13, adapted to deflect any particles carried over by the water and too large to pass through the grating into the branch 12. The chamber 11 is preferably square transversely to facilitate the disposal of the grating therein, and to enable the grating to be readily inserted and removed without disconnecting the parts an aperture 14 is formed therein and provided with a detachable closure 15, as represented in Fig. 1. Attached to the branch 12 is a conductor 16, divided into two branches 17 18, the latter enlarged into precipitating-chambers 19 20, having independent discharges 21 22. A swinging valve 23 is disposed in the portion 16 and operating to deflect the material alternately into the branches 17 18 and precipitating-chambers 19 20.

The conductor portion 16 is provided with an elongated aperture 24, through which the valve is inserted and provided with a detachable closure 25, the stem 26 of the valve passing through this closure and provided with a stuffing-box 27 to prevent leakage around the stem. The stem is provided with an operating-lever 28 to enable the valve 23 to be operated from the exterior.

The branch 17 is provided with a valve 29, while the branch 18 is provided with a valve 30. The discharge portions 21 22 are likewise provided, respectively, with valves 31 32, while the precipitating-chambers 19 20 are provided, respectively, with air-valves 33 34.

The suction-pipe 10 is preferably provided with a check-valve 35, and leading from the



suction-pipe is a water-supply pipe 36, having branches 37 38 leading, respectively, into the precipitating-chambers 19 and 20 and provided with controlling-valves 39 40.

5 In operating the device the swing-valve 23 is set to turn the material into either one of the precipitating-chambers 19 or 20—as, for instance, the chamber 19, as shown in Fig. 1. The valves 31 32 are closed and the valve 29  
10 opened. The valves 39 and 40 are then opened to enable the precipitating-chambers 19 20 to fill with water, the air-valves 33 34 being also opened to allow any air which may be in the chambers to escape. When the  
15 precipitating-chambers are filled with water, which will be indicated by water flowing from the air-valves, the latter, together with the valves 39 40, are closed and the pumps started. As the water flows through the  
20 chamber 11 any particles of material too large to pass through the grating will be deflected thereby into the downwardly-curving branch 12 and thence into the chamber 19, while the water freed from the objectionable  
25 material passes to the pumps. As soon as the chamber 19 is fully charged with the sediment the valve 29 is closed and the valve 30 opened and the swing-valve 23 reversed to deflect the sediment into the precipitating-  
30 chamber 20. In the meantime the valve 31 is opened and the sediment, together with the water in the chamber 19, drawn off through the discharge 21. When the chamber 19 is empty, the valve 31 is closed and the  
35 valves 39 and 33 opened to refill the chamber with water. When the chamber 20 is charged with sediment, the valve 30 is closed and the swing-valve 23 set to turn the material again into the chamber 19 and the  
40 chamber 20 discharged by opening the valve 31. Thus the operation may be continued indefinitely and without interrupting the operation of the pumps.

45 The valves 29, 31, and 32 are preferably of the quick-action "gate" construction, as shown.

50 The device is simple in construction, effective in action, and may be installed in connection with pumps of any capacity or form.

The device is especially adapted for use in connection with pumping operations conducted in localities where large quantities of sediment is present.

55 The water-supply pipe 36 will preferably be connected to the pipe 10 between the pump and the discharge of the conductor.

Having thus described the invention, what is claimed is—

1. In an apparatus of the class described, a 60 receiving-chamber having means for connection into a pump-suction and provided with a depending branch, a grating within said receiving-chamber and adapted to deflect foreign matter into said branch, two precipi- 65 tating-chambers independently connected to said branch, a swing-valve within said branch and operating to connect the same alternately with said precipitating-chambers, valves between said branch and the inlet 70 ends of said precipitating-chambers, and valve at the discharge ends of said precipitating-chambers.

2. In an apparatus of the class described, a 75 receiving-chamber having means for connection into a pump-suction and provided with a depending branch, a grating within said receiving-chamber and adapted to deflect foreign matter into said branch, two precipi- 80 tating-chambers leading into one tubular section and coupled to said branch, by said tubular section, said tubular section having a transverse aperture, a closure to said aper- 85 ture, a valve having a stem journaled through said closure and operating within said tubular section and adapted to alternately connect the same alternately with said precipi- 90 tating-chambers, valves between said branch and the inlet ends of said precipitating-chambers and valves at the discharge ends of said precipitating-chambers.

3. The combination with the suction de- 95 vice of a pump, of a receiving-chamber connected into said suction device and provided with a depending branch, a grating disposed 95 within said receiving-chamber and adapted to deflect foreign matter into said branch, two precipitating-chambers independently connected into said branch, a swing-valve 100 operating to alternately connect said precipitating-chambers with said branch, valves between said precipitating-chambers and branch valves at the discharge ends of said precipitat- 105 ing-chambers, and independent connecting means between said suction device and said precipitating-chambers.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HERBERT SEWELL.

Witnesses:

E. SHEFFIELD,  
WALTER R. KAUNE.