No. 849,030. PATENTED APR. 2, 1907.

C. VALLIQUETTE.

PUMP.

APPLICATION FILED AUG. 3, 1906.

2 SHEETS—SHEET 1.

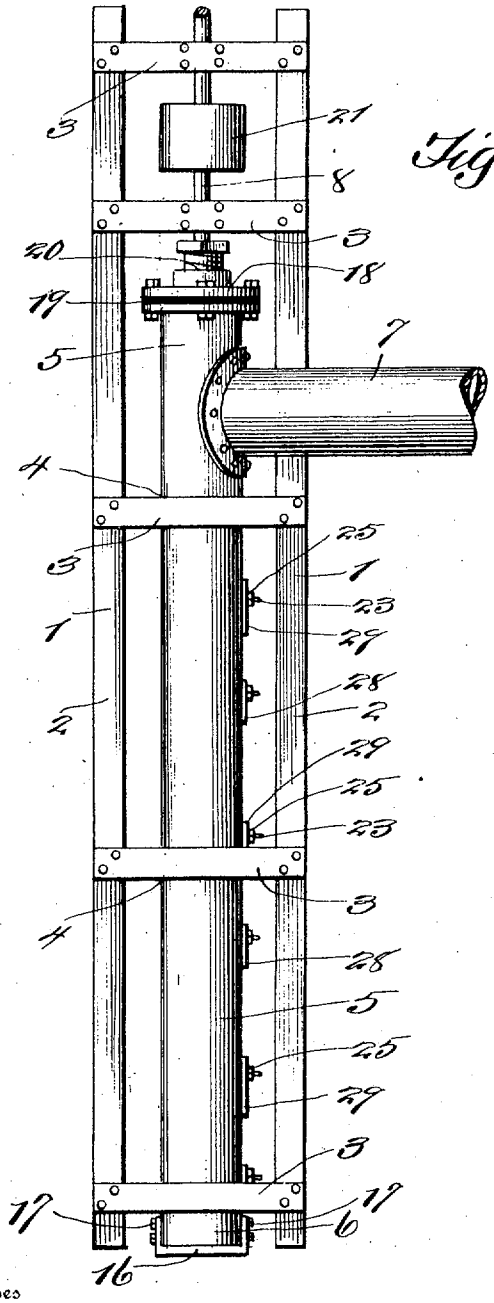


Fig. 1.

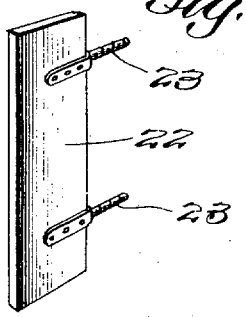


Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

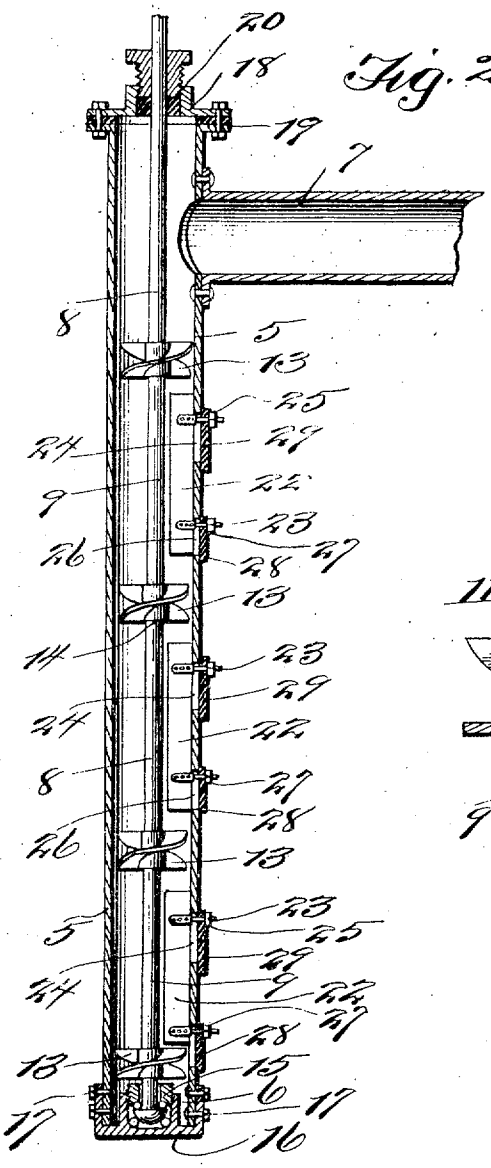
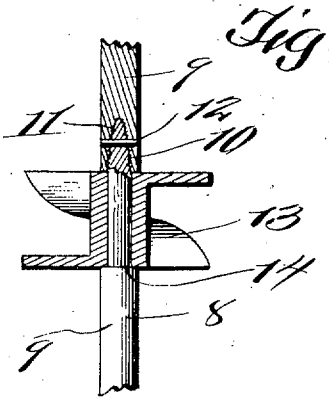


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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PUMP.

No. 849,030. Specification of Letters Patent. Patented April 2, 1907.

Application filed August 3, 1906. Serial No. 329,084

To all whom it may concern:

Be it known that I, CLEMENT VALLIQUETTE, a citizen of the United States, residing at Limestone, in the county of Ottawa and State of Ohio, have invented a new and useful Pump; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful pumps—in other words, a pump whereby water may be lifted to a considerable height, which height depends upon the height of the pump—the invention having for its object to improve generally the construction of such devices.

Furthermore, the invention provides a device of this design comprising a rotary shaft consisting of a plurality of sections joined together, as clearly shown in the drawings, and having the propelling elements fixed between the joints of said sections.

Furthermore, another object of the invention is to improve on the connections of the deflecting-plates, which, together with the other above-set-forth objects, will be clearly hereinafter described, and shown in the accompanying drawings.

This invention comprises, further, objects and combinations of elements, which will be hereinafter more fully described, shown in the accompanying drawings, and the novel features thereof will be pointed out by the appended claims.

To obtain a full and correct understanding of the details of construction, combinations of features, elements, and advantages, reference is to be had to the hereinafter-set-forth description and the accompanying drawings in connection therewith, wherein—

Figure 1 is an elevation of the device disposed upon a vertical plane. Fig. 2 is a vertical longitudinal sectional view through the device, showing the deflecting-plates, portions of which are in section and the propellers in edge elevation. Fig. 3 is a detailed view of one of the deflecting-plates, showing clearly the manner of connecting the same to the casing of the pump. Fig. 4 is a detailed perspective view of two sections of the shaft disassembled, showing clearly the manner of joining the said sections and the mounting of the propellers.

Making renewed reference to the accompanying drawings, wherein similar reference characters indicate corresponding parts in the several illustrations by figures, 1 designates the framing of the apparatus, which is disposed upon a vertical plane. This framing comprises the two side pieces 2 2, which are suitably braced with relation to one another and also parallel by means of a plurality of cross-pieces 3, one upon each side of the side pieces 2 2 and adjacent to one another.

Fixed between these cross-pieces 3, as at 4, is a vertically-disposed cylindrical casing 5, the lower end of which, as at 6, acting as an inlet, and projecting at right angles adjacent to the upper part of said casing is an outlet-casing 7, as clearly shown in Figs. 1 and 2 of the drawings. Journaled within this casing is a rotary shaft 8, composed of a plurality of sections 9, the upper ends of which are reduced in diameter and threaded, as at 10, and adapted to engage a threaded recess 11 in the opposite end of the adjacent section and held therein from rotation by means of a pin 12, which is inserted through an aperture after the sections are joined together.

Before the sections are joined together suitable propelling elements 13 are mounted upon the reduced end of each section and resting against the shoulder 14, formed by reducing the end of the section, after which each section is joined together, which will prevent the displacement of the said propelling elements.

The lower end of the rotary shaft is journaled into a special-designed bearing 15, as shown in the sectional view of the drawings. This bearing is carried by a U-shaped member 16, which is secured to the circumference of the casing, as at 17, and the upper portion of the rotary shaft extends through the head 18 of the casing, which head is provided with a suitable packing-ring 19, which is secured between said head and a flange of the casing, as shown clearly in Figs. 1 and 2 of the drawings. This head is also provided with a suitable packing-gland 20, as shown also in Figs. 1 and 2. The upper part of the rotary shaft is provided with a suitable pulley 21, which may be belted to a motor or any other device for providing power thereto.

The rotary shaft is made in sections of three feet in length in practice for the purpose of lifting the water or other fluid to a height of three feet, because the propellers will only accomplish that much. As the shaft rotates the propeller at the bottom thereof will lift the water to a height of three

feet only, and by the time it reaches the second propeller it is traveling approximately as fast as the shaft, and in this case the second propeller will have very little effect upon it. To obviate this defect, the casing is provided with a plurality of deflectors 22, which are secured thereto between the propellers. These deflectors prevent the centrifugal force of the water to a considerable extent, so as to equalize the work of each propeller. These deflectors are fastened to the casing by means of bolts 23, which are integral with said deflectors, which bolts are threaded at their ends. One of the bolts is inserted through an aperture 24 of the casing, after which a nut 25 is threaded thereon, said aperture being slightly elongated, and the other bolt projecting from each deflector is inserted through an aperture 26 of elongated contour, after which a nut 27 is threaded thereon—that is, after the bushing-plate 28 is fixed in correct position. A suitable bushing 29 is fixed or mounted upon the first-named bolt, as clearly shown in the sectional view of the drawings.

From the foregoing the essential features, elements, and operation of the device, together with the simplicity and practicability thereof, will be clearly observed, and when manufactured in accordance with the invention an inexpensive market will be easily obtained therefor.

Having thus fully described the invention, what is claimed as new and useful by the protection of Letters Patent is—

1. In a pump, a vertically-disposed framework, a casing mounted therein having an inlet and an outlet, a rotary shaft journaled within said casing consisting of a plurality of sections, one end of each section being reduced and provided with threads and the opposite end of each section having a threaded recess to receive the said reduced portion, propellers carried at the joint of the sections, a U-shaped member secured to the lower portion of the casing and being provided with a ball-bearing for the end of the said rotary shaft, deflectors secured to the casing and means for adjusting the same with relation to the propellers.

2. In a pump, a vertically-disposed framework, a casing mounted therein having an inlet and an outlet, a rotary shaft journaled within said casing consisting of a plurality of sections, one end of each section being reduced and provided with threads and the opposite end of each section having a threaded recess to receive the said reduced portion, propellers carried at the joint of the sections, a U-shaped member secured to the lower portion of the said casing and being provided with a ball-bearing for the end of the said rotary shaft, deflectors having threaded bolts projecting therefrom, elongated apertures formed in the casing to receive said bolts, bushings or gaskets carried upon said bolts and nuts threaded upon the ends of said bolts for adjusting the deflectors with relation to the propellers.

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

CLEMENT VALLIQUETTE.

Witnesses:
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