

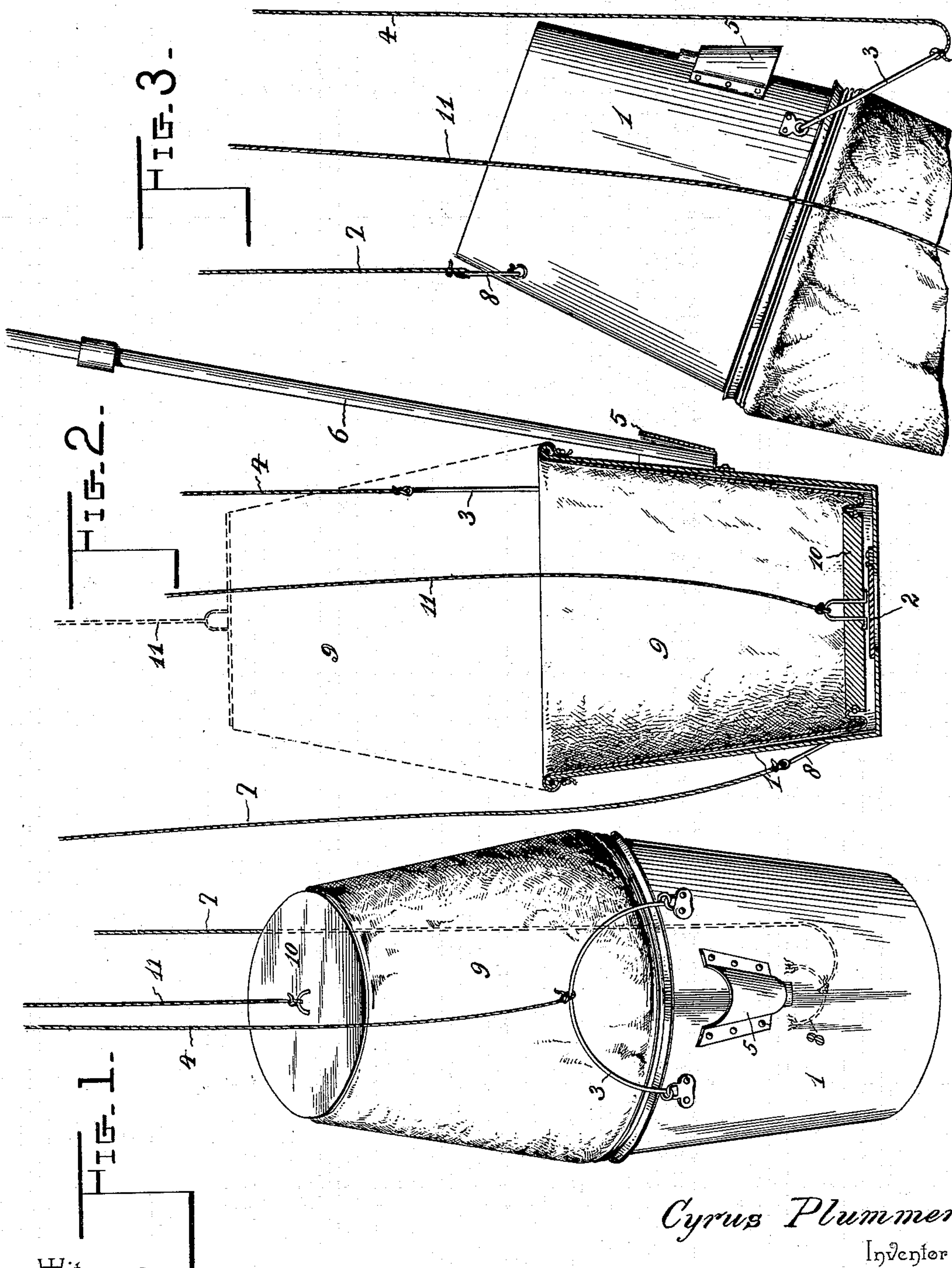
No. 612,176.

Patented Oct. 11, 1898.

C. PLUMMER.
CISTERN CLEANER.

(Application filed Jan. 6, 1898.)

(No Model.)



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Witnesses

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UNITED STATES PATENT OFFICE.

CYRUS PLUMMER, OF FLEMINGSBURG, KENTUCKY.

CISTERN-CLEANER.

SPECIFICATION forming part of Letters Patent No. 612,176, dated October 11, 1898.

Application filed January 6, 1898. Serial No. 665,829. (No model.)

To all whom it may concern:

Be it known that I, CYRUS PLUMMER, a citizen of the United States, residing at Flemingsburg, in the county of Fleming and State of Kentucky, have invented a new and useful Cistern-Cleaner, of which the following is a specification.

This invention relates to means for removing sediment and other foreign deposits from the bottoms of cisterns, wells, tanks, and the like, and has for its object to prevent the fouling of the water by leakage when withdrawing the cleaner, to increase the storage-space as compared with devices of like size, and to provide an apparatus which can be easily manipulated and will give satisfactory results.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the cleaner. Fig. 2 is a vertical central section, the dotted lines showing the flexible cup distended. Fig. 3 shows the cleaner inverted and about as it will appear when being drawn from the well, cistern, or reservoir, a portion of the flexible cup being broken away.

Corresponding and like parts are referred to in the following description and indicated in the views of the drawings by the same reference characters.

The cleaner comprises a body or pail 1, of any desired shape and size, and has an upwardly-opening valve 2, closing an opening in its bottom, said valve being of rubber, leather, or other material generally employed for this purpose. A bail 3 is applied to a side of the body or pail and an operating cord or rope 4 has connection therewith to serve as a means for lowering the cleaner into the cistern and removing it therefrom. A pocket 5 of tapering form is applied to a side of the body or pail 1 below the bail 3 and is intended to receive the lower end of a jointed

rod 6, by means of which the cleaner is held in position and shifted along the bottom of the well or cistern when lowered therein. A lifting rope or cord 7 has connection with a ring 8, applied to the lower portion of the cleaner, and is designed to invert the cleaner and withdraw it from the well or cistern bottom side up, so as to prevent fouling of the water by any leakage through the valve-controlled opening 2. The primary purpose of the cord or rope 4 is to lower the cleaner into the well, and it may be employed for removing it therefrom, if desired, although it is not preferred to employ it in this capacity, because of the danger of rendering the water impure through leakage of the cleaner in the manner set forth. The provision of the lifting-rope 7 wholly obviates the danger of contaminating the water, inasmuch as the cleaner when charged is inverted and withdrawn from the well with its bottom side up-permost.

A flexible cup 9, conforming as near as possible to the interior shape and size of the body or pail 1, is firmly attached at one end thereto, and its closed end is stiffened by a head 10, which may be of wood, metal, or like material. The body of the cup may be of duck, pliable leather, or any waterproof material sufficiently flexible and pliable to admit of the cup being turned and fitted into the body or pail and withdrawn therefrom by pulling upon the head 10. An operating rope or cord 11 is attached at its lower end to the head 10 in any desired manner and enables the flexible cup to be withdrawn from the body or pail when the cleaner is in operation.

When it is required to clean a cistern, well, reservoir, or tank, the device is lowered therein to the surface of the water by means of the cord or rope 4. The rod 6 at this stage has its lower end thrust into the pocket 5 and is pressed upon to lower the device to the bottom of the cistern and hold it there until the cord or rope 11 is pulled upon to partially withdraw the flexible cup 9, whereby a suction or vacuum is created within the device, which causes the valve 2 to open, so as to admit the sediment, filth, and other matter deposited upon the bottom of the cistern. The cleaner is shifted from one place to another upon the bottom of the cistern by means of

the rod 6, and after each shift the cord or rope 11 is pulled upon to withdraw the flexible cup 9 farther from the body or pail, thereby providing for the ingress of foreign matter. After the flexible cup has been extended to its full capacity the rod 6 is withdrawn from the pocket 5 and the lifting rope or cord 7 pulled upon, which inverts the cleaner and withdraws it from the cistern.

10 Prior to lowering the cleaner into the cistern or storage-reservoir to be cleaned the flexible cup is pressed into the body or pail so that its head 10 engages with the valve 2, thereby preventing the unseating of the latter and the entrance of water into the device when lowering the latter into the cistern through the body of water contained therein. By having the rod 6 jointed it can be lengthened or shortened, and by having it detachably connected with the cleaner it is not necessary to withdraw it from the cistern or well at each operation of the cleaner, thereby enabling the device to be operated in places where the cistern or reservoir is protected by a covering or roof. The provision of the flexible cup increases the capacity of the cleaner twofold over devices of like size, because when the flexible cup is extended to its full capacity, as shown in Fig. 1 and by the dotted lines in Fig. 2, the space inclosed by the cup and body is about double that circumscribed by the body or pail, as will be readily understood. This flexible cup also prevents leaky joints generally existing in devices of this character depending for their action upon pistons or telescoping sections.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

40 1. A cistern-cleaner comprising a pail or body and a flexible cup firmly attached at one end to the pail or body and adapted to be extended or withdrawn from the pail or body at its opposite end so as to create a suction therein, substantially as set forth.

2. A cistern-cleaner comprising a pail or body, a flexible body secured at one end to the open end of the said pail, and a rigid head applied to and closing the opposite end of the flexible body and adapted to have an operating-cord or the like applied thereto, substantially as and for the purpose specified.

3. In a cistern-cleaner, the combination of a pail or body having an opening in its bottom controlled by an inwardly or upwardly opening valve, and a flexible cup secured at one end to the open end of the pail and adapted to have its opposite end pressed therein into engagement with the aforesaid valve and hold the latter seated when lowering the cleaner into a cistern or well, substantially as set forth.

4. A cistern-cleaner comprising a pail or body having a valve-controlled opening in its bottom, means for lowering the cleaner into a cistern or well and causing a suction therein, and a lifting cord or rope applied to the lower portion of the cleaner for inverting the latter when charged and removing it from the well bottom side up, substantially in the manner and for the purpose described.

5. In a cistern-cleaner, the combination of a pail or body provided at one side near its upper end with a bail, a pocket applied to the side of the pail below the bail, an operating rope or cord having connection with the bail, and a rod detachably fitted within the said pocket, substantially as and for the purpose specified.

6. The herein-described cleaner for cisterns, wells and the like, comprising a body or pail having an opening in its bottom controlled by an inwardly or upwardly opening valve, a flexible cup secured firmly to the open end of the body and provided at its free end with a rigid head, a bail at one side of the pail and having an operating-cord secured thereto, a pocket affixed to the side of the pail below the bail, a rod detachably fitted within the said pocket, a cord connected with the free end of the flexible cup to invert and distend it, and a lifting-cord having connection with the lower end of the pail to reverse the latter and withdraw it from the cistern or well bottom side up, substantially as set forth.

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

CYRUS PLUMMER.

Witnesses:

CHAS. M. FLEMING,
S. J. BRENT.