

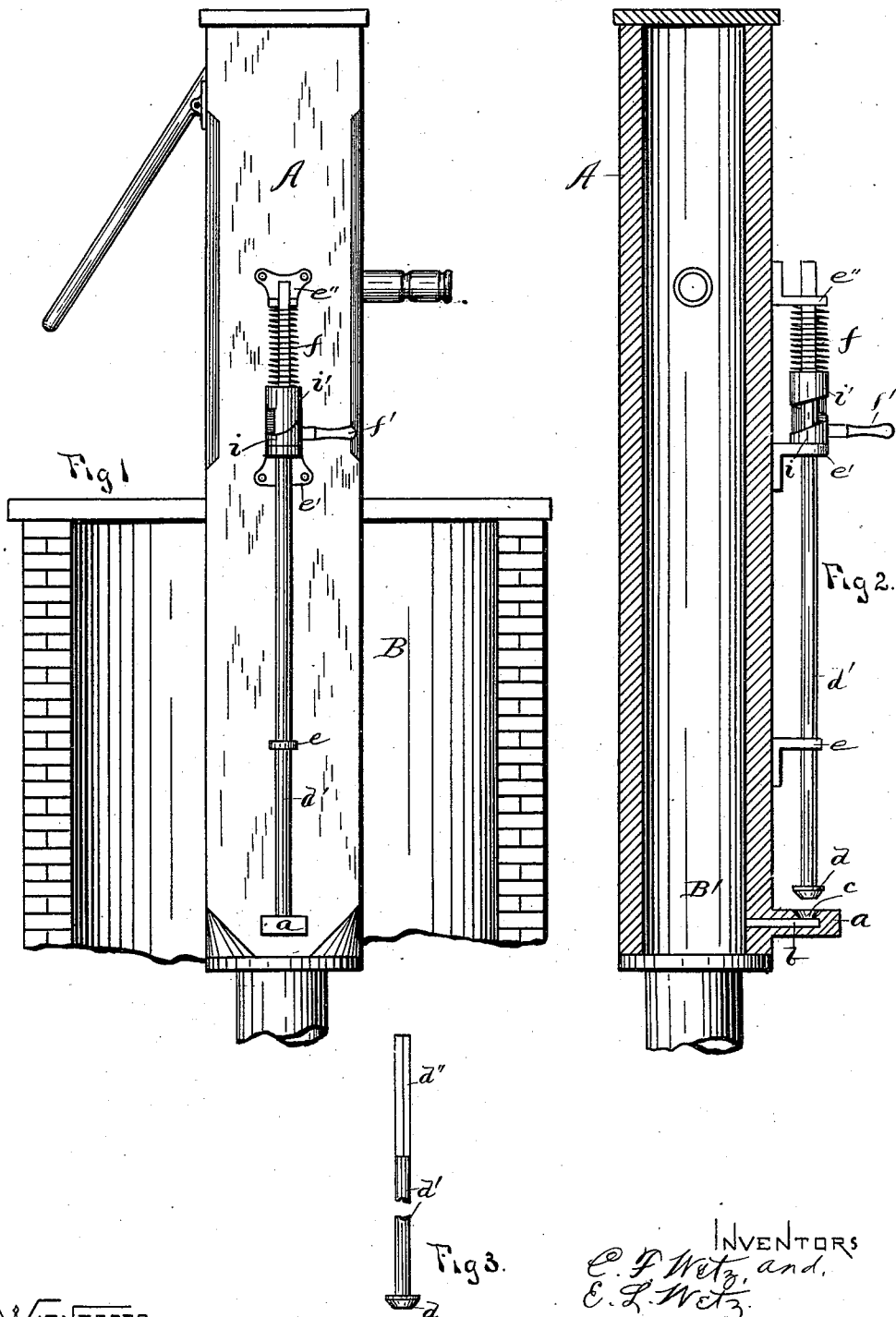
(No Model.)

C. F. & E. L. WETZ.

ATTACHMENT FOR PREVENTING PUMPS FROM FREEZING.

No. 558,541.

Patented Apr. 21, 1896.



WITNESSES.
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UNITED STATES PATENT OFFICE.

CHARLES F. WETZ AND EDWARD L. WETZ, OF DAYTON, OHIO.

ATTACHMENT FOR PREVENTING PUMPS FROM FREEZING.

SPECIFICATION forming part of Letters Patent No. 558,541, dated April 21, 1896.

Application filed September 30, 1895, Serial No. 564,115. (No model.)

To all whom it may concern:

Be it known that we, CHARLES F. WETZ and EDWARD L. WETZ, of Dayton, county of Montgomery, State of Ohio, have invented a new and useful Improvement in Attachments for Preventing Pumps from Freezing; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in drainage attachments for hand-pumps, and has for its object to provide means whereby a pump may be easily drained of water and the parts thereby prevented from becoming frozen in cold weather.

A further object is to provide an attachment to accomplish this end which may be attached to any of the general run of pumps, therefore one that needs no specially-constructed pump to render its use available.

To the foregoing ends the invention has reference to parts, their construction, and arrangement, as will hereinafter be fully specified.

Referring to the accompanying drawings, Figure 1 is a side elevation of a pump having our improved antifreezing attachment thereon. Fig. 2 is a vertical section of the pump-stock, showing the attachment full. Fig. 3 is a detached view of the valve and rod, the latter broken.

The letter A designates the pump-stock, and B is the well or cistern in which the same is mounted.

a designates a wooden tubular spout or plug on the lower end of the pump-stock and through which there is an opening b, that communicates with the interior chamber B', and also with an opening that terminates in a valve-seat c in the upper side of the spout.

A valve d, constructed of rubber or other suitable material, is attached to the rod d' and effectually closes the opening that leads from the pump-chamber.

d' is a rod to which said valve is attached.

e, e', and e'' designate guides or brackets attached to a side of the pump-stock and in

which the valve-rod d' is adapted to slide up and down.

i and i' designate lifting-cams, the inner ends of which taper or incline annularly, substantially as shown in the drawings. The lower one of said cams i rests upon the lower bracket e' and loosely incloses the valve-rod d'. The upper cam i' is rigidly attached to said rod, and with it said rod is movable, as will hereinafter appear.

f designates a helical spring which incloses the upper end of the rod d' and has its ends bearing against the upper bracket e'' and the upper end of the cam i'. The normal pressure of this spring maintains the upper cam in contact with the lower one. Therefore the valve is normally closed under said pressure. The lower cam i has a handle f', by which it may be turned to drive the upper cam upward and therewith the valve-rod against the tension of the spring f to open the valve, as shown in Fig. 2, and thereby permit the pump to drain. The opening in the upper bracket e'' extends through the outer edge thereof and conforms to the cross-section of the upper end of the valve-rod, as at d'', which is square or flat in order to prevent the valve from turning under the movement of the cams.

It will be understood that the upper cam i' will be maintained stationary at whatever point it is driven to, by the lower cam, under the tension of the spring, and that the pressure of said spring is sufficient to effectively close the valve and keep it so normally.

We are aware that it is not new, broadly, to provide a vertically-movable valve on the outside of a pump to open and close an outlet from the lower end of said pump; and we are further aware that it is not new to employ crown-cams on the valve-stem and operating-spindle of a faucet. Therefore we do not desire to claim these things, broadly; but

What we do claim is—

The combination with a pump-stock provided with a valve-seat c, and having brackets e e' and e'', of a continuous rod d' loosely mounted in said brackets and having on its lower end a valve d, the said rod projecting above the central portion of the pump-stock, a cam i supported on bracket e' and loosely surrounding said rod d' so as to permit a free vertical movement of said rod, a second cam

i' rigidly mounted on said rod above the cam
i, and a helical spring inclosed between the
bracket *e''* and the cam *i'* whereby the said
cams are kept in contact with each other,
5 and means for actuating the cam *i* in a hori-
zontal plane to impart a vertical movement
to the cam *i'* and rod *d'*, substantially as and
for the purposes specified.

In testimony whereof we have hereunto set
our hands this 14th day of September, 1895.

CHARLES F. WETZ.
EDWARD L. WETZ.

Witnesses:

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