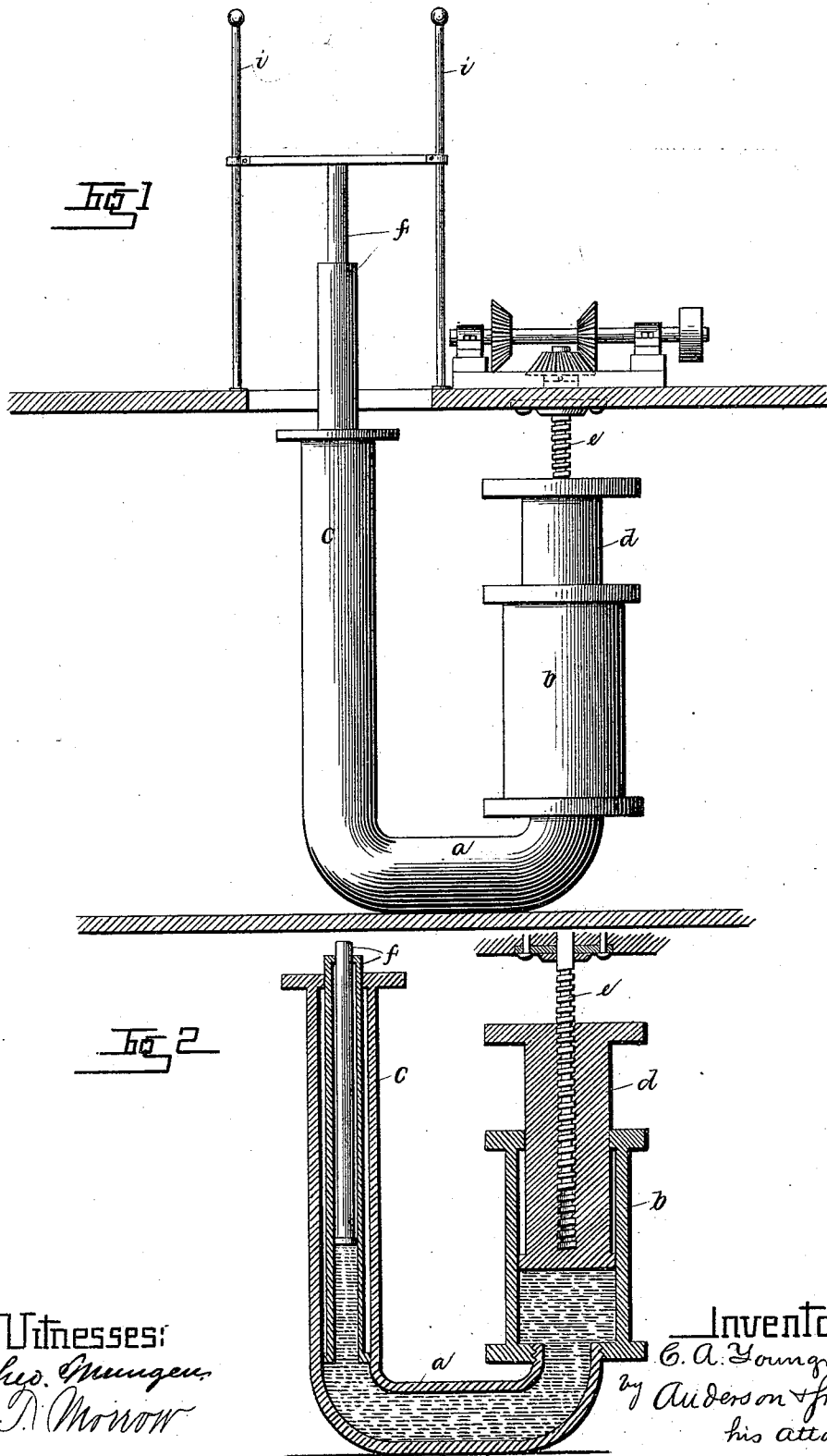


(No Model.)

C. A. YOUNGMAN.
ELEVATOR.

No. 298,331.

Patented May 6, 1884.



Witnesses:
J. H. Mungen
J. D. Morrow

Inventor:
C. A. Youngman
by *Anderson & Smith*
his attorney

UNITED STATES PATENT OFFICE.

CHARLES A. YOUNGMAN, OF LOUISVILLE, KENTUCKY.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 298,331, dated May 6, 1884.

Application filed October 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, C. A. YOUNGMAN, a citizen of the United States, and a resident of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Elevators; and I 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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a side elevation of the improved elevator. Fig. 2 is a vertical sectional view of the branched cylinder, piston, and elevator-shaft.

This invention has relation to elevators run by pressure applied to fluid; and it consists in the construction and novel arrangement of devices, as will be hereinafter fully described, and particularly pointed out in the claim appended.

Referring by letter to the accompanying drawings, *a* designates the cylinder which contains the water, oil, or other fluid, and this cylinder is preferably nearly U-shaped, one branch, *b*, being larger in diameter and shorter than the other branch, *c*.

d designates the piston, which is depressed and elevated by a screw-shaft, *e*, connected to suitable gearing on the floor above the cylinder *a*. The gearing may be operated by hand-power, horse-power, or steam-power, as circumstances may require. The branch cylinder *c* receives the shaft *f*, for raising the elevator-platform. This elevator-shaft *f* is made

in telescoped sections, so that it may be extended to any required height, and when telescoped may occupy a comparatively small space in extension. The construction of the platform-shaft and the cylinder branches is such that the fluid cannot escape therefrom under the necessary pressure to operate the elevator. The short branch of the cylinder may be provided with two chambers and two pistons, if desired, especially where the platform is to be raised to an unusual height. The platform may have any suitable ways to guide it, such as are shown at *iii*, or others. When the screw is reversed to raise the piston, the platform will descend if it has been elevated. The convenience of this construction is obvious where there are no water-works, and the screw is absolutely safe even should the gearing be broken.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, with the U-shaped fluid-cylinder *a*, constructed substantially as described, having the short diametrically-enlarged branch *b* and the long branch *c*, the elevator-shaft *f*, connecting at its upper end to the platform of the elevator, and telescoped in the said branch *c*, of the piston *d*, screw-shaft *e*, and means for operating the piston to compress the fluid in the fluid-cylinder and raise the platform-shaft, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES A. YOUNGMAN.

Witnesses:

WARREN MITCHELL,
E. RICHARDSON.