J. S. CORBIN.

CHAIN-PUMP.

No. 181,145. Patented Aug. 15, 1876.

FIG. 1.

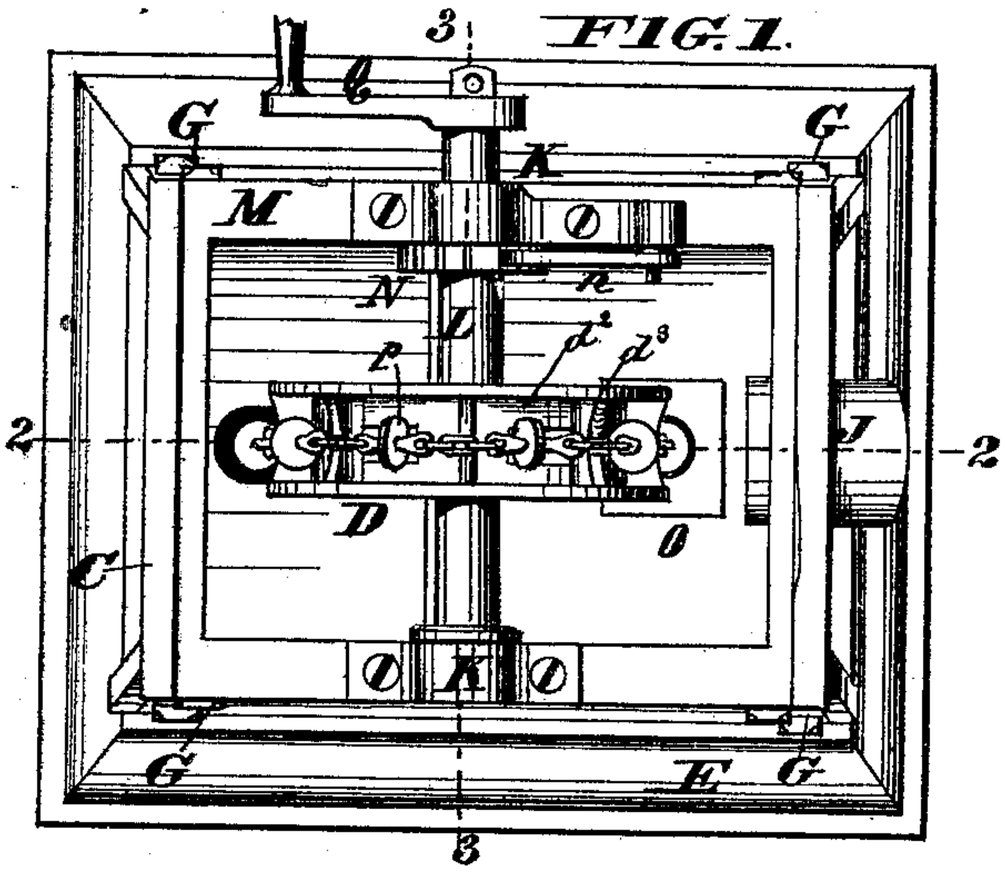


FIG. 4.

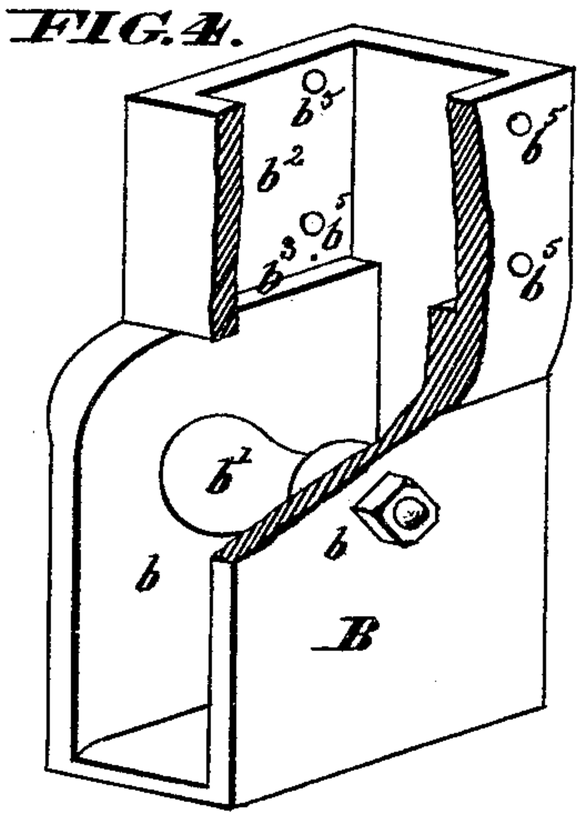


FIG. 2.

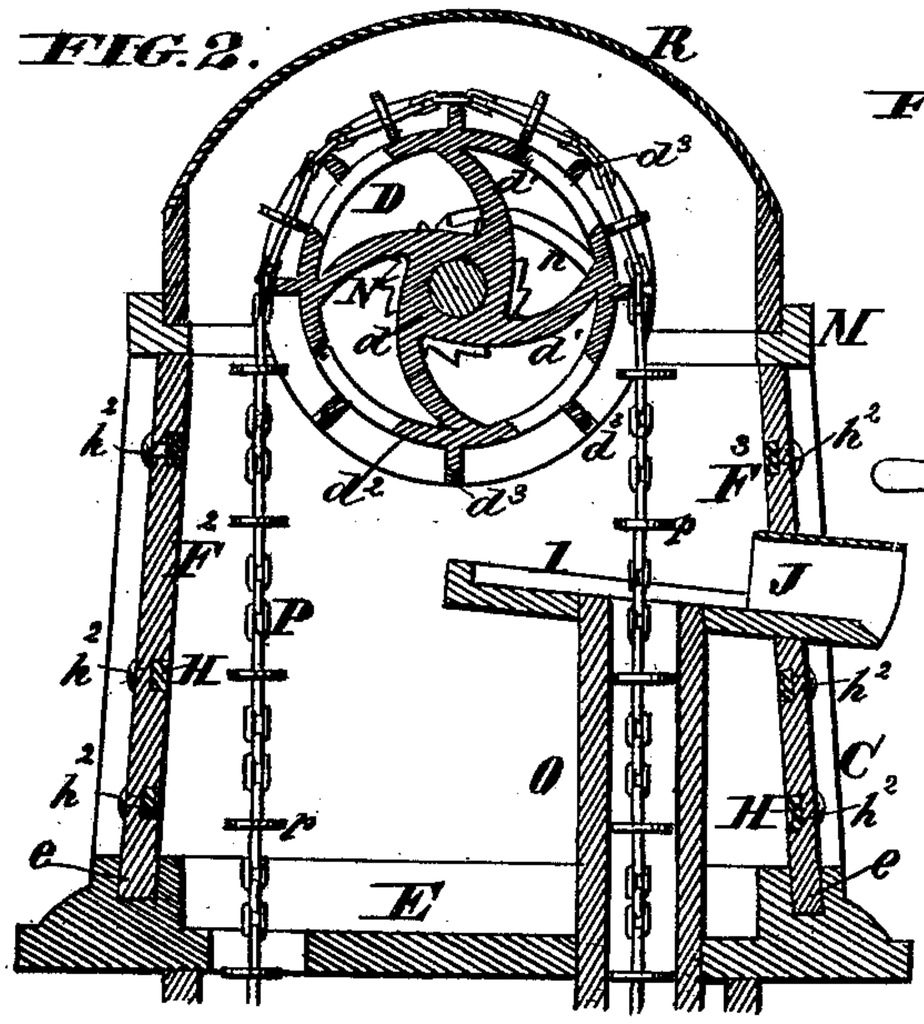
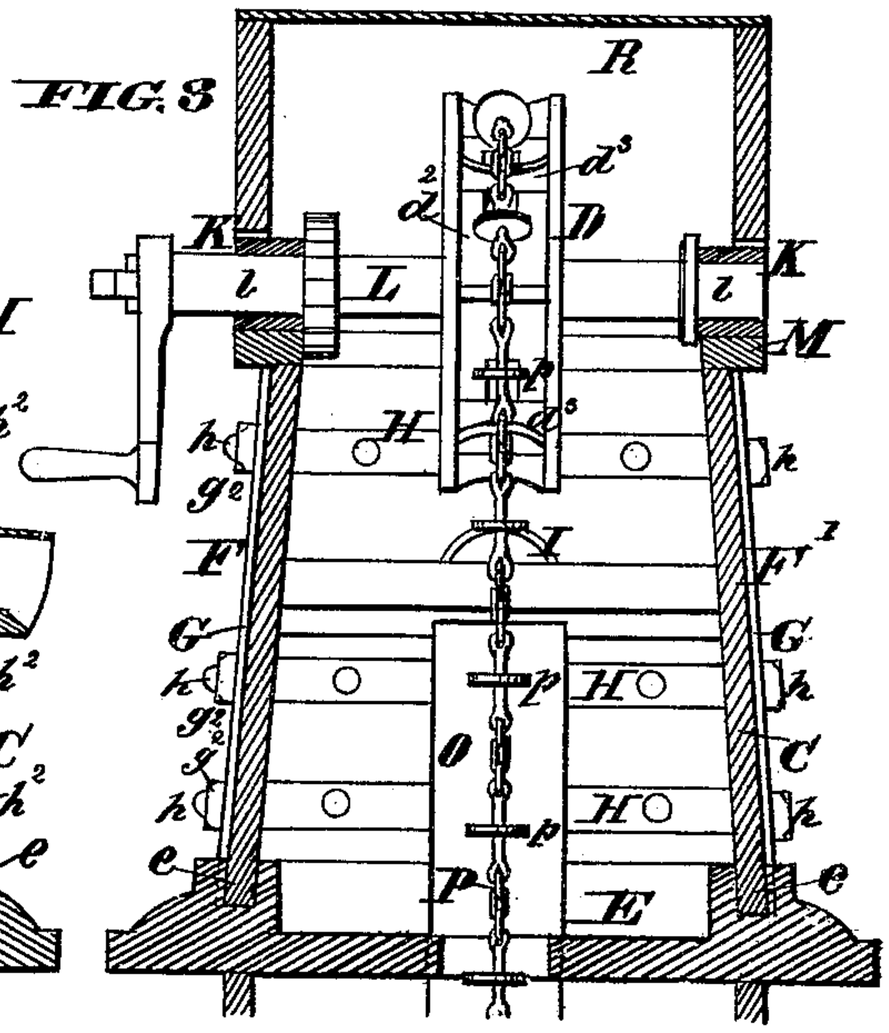


FIG. 3



WITNESSES

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JAMES S. CORBIN, OF LAUREL, OHIO.

IMPROVEMENT IN CHAIN-PUMPS.

Specification forming part of Letters Patent No. **181,145**, dated August 15, 1876; application filed May 31, 1876.

To all whom it may concern:

Be it known that I, JAMES S. CORBIN, of Laurel, in the county of Clermont and State of Ohio, have invented new and useful Improvements in Chain-Pumps, of which the following is a specification:

My improvements relate to a peculiar construction of curb and shoe or roller-box for chain-pumps.

My invention consists, first, in constructing the curb partly of cast-iron and partly of wood, the case being provided with grooves, into which the sides are inserted. The sides are bound securely together by means of metal bands placed horizontally and vertically on the inside and outside, respectively.

My invention consists, secondly, in a cast-iron shoe, which rests on the cistern-floor, and is provided with journal-bearings for the lower sheave, and socket for the lower end of the customary wooden tube for the chain.

In the accompanying drawing, Figure 1 is a top view of my improved chain-pump. Fig. 2 is a vertical section on the line 2 2, Fig. 1. Fig. 3 is a vertical section on the line 3 3, Fig. 1. Fig. 4 is a perspective view of the cast-iron shoe, a portion of the top being broken away to exhibit the supporting-ledges for the tube.

A may represent the well or cistern casing; B, the cast-iron shoe or sheave-box; C, the curb, and D the rag or sprocket wheel. The curb C is provided with a cast-iron base, E, having channels or grooves *e*, for the reception of the sides F F^1 F^2 F^3, constructed of wood. Near each end of the sides F F^1 vertical metal bands G are placed. These bands G are perforated to receive the ends *h* of lateral metal bands or rods H, which are securely attached to the former by nuts or taps g^2. The bands or rods H form ribs to support the side F^2 F^3, and are rigidly secured to the latter by rivets or bolts h^2. I is the water-receptacle placed at a convenient height within the curb, and J a spout.

The top of the curb has a horizontal frame, M, upon which are placed the bearings K for the journals *l* of the axle L, carrying the sprocket or rag wheel D. On one end of the axle L is applied a ratchet-wheel, N, with which a pawl, *n*, engages. The sprocket-wheel D has a hub, *d*, curved bars d^1, for attachment of the rim d^2, which is grooved for the reception of the checks or stops d^3. The inner side of the rim is perforated to permit escape of water. Depending from the water-receptacle I is the water-tube O, which may be supported in any suitable manner between each end.

The cast-iron shoe B rests on the cistern-floor, and affords journal-bearings *b* for the lower sheave b^1, and has a socket, b^2, for the lower end *o* of the tube O. The shoe is provided with ledges b^3, on which the end of the tube rests. The tube is secured therein by wood-screws b^4, which are inserted through perforations b^5, so that the tube holds the shoe in erect position. P is the chain, supported by checks or stops d^3, and provided with buttons *p*. Q is the handle attached to the end of the axle for turning the wheel. R is the pump-cover.

The groove *e* in the base E is generally filled with thick paint, in order to exclude the water from the curb and prevent it from rotting, and the whole curb thoroughly painted inside and out.

The curb, being constructed in the manner described, will be found in use to be equal in durability to an iron curb, beside being much lighter in weight. The metal parts effectually prevent warping and parting of the wooden portions, and the grooves prevent any contact of the elements with the lower edges of the boards, which are, in the common curb, the first to give way. The curb can readily be taken to pieces, repainted throughout, put together again, and replaced as good as new at any time.

Having thus described my invention, the following is what I claim as new, and desire to secure by Letters Patent:

1. The curb C, provided with channeled or grooved base E *e*, wood sides F F^1 F^2 F^3, metal bands G, bands or rods H, and nuts g^2, as and for the purpose set forth.

2. The cast-iron shoe B, having journal-bearings *b* for the lower sheave, and adapted to rest on the cistern-floor, in combination with the water-tube O, as and for the purpose set forth.

In testimony of which invention I hereunto set my hand.

JAMES S. CORBIN.

Attest:

GEO. H. KNIGHT,

WALTER ALLEN.