

Hiram Bissell File Machine

116920

PATENTED JUL 11, 1871

Fig. 1

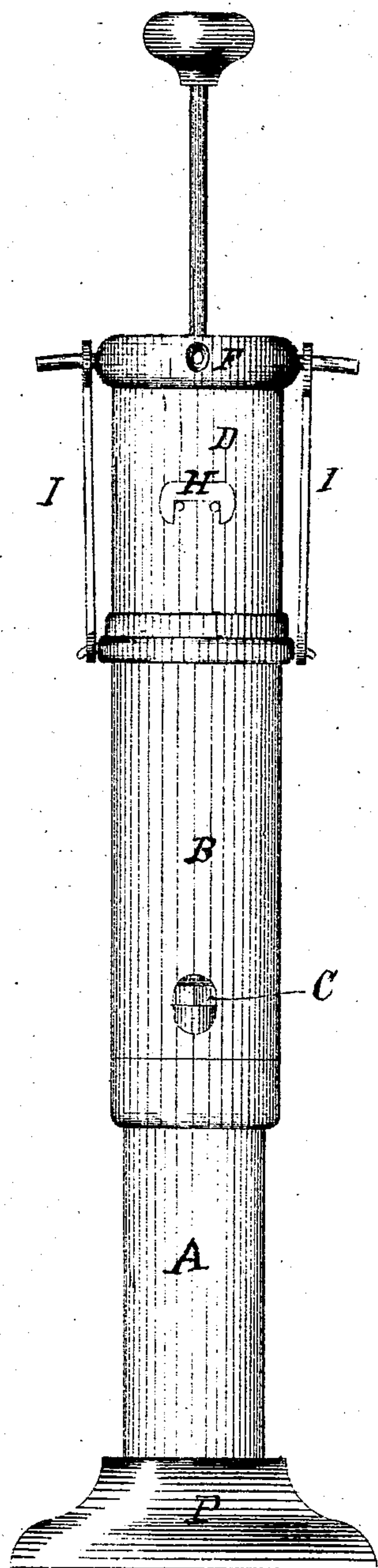
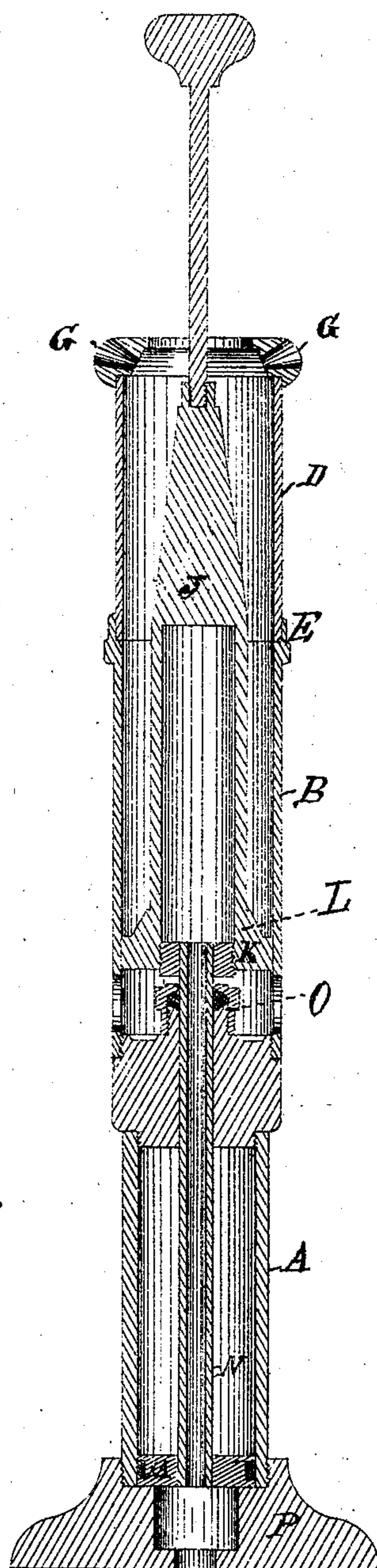


Fig. 2



Witnesses.

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UNITED STATES PATENT OFFICE.

HIRAM BISSELL, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN DRAIN-PIPE MACHINES.

Specification forming part of Letters Patent No. 116,920, dated July 11, 1871.

To all whom it may concern:

Be it known that I, HIRAM BISSELL, of Hartford, county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Drain-Pipe Machine; and to enable others skilled in the art to make and use the same I will proceed to describe, referring to the drawing, in which the same letters indicate like parts in each of the figures.

The nature of this invention consists in connecting all the parts together in a detachable manner, in column-form, so that all the working mechanism shall be in an exact line, one part with the other. The object desired to be accomplished is to cheapen the manufacture of the machines, render them more perfect in operation, and less subject to get out of working order, and, at the same time, manufacture tile better, cheaper, and more rapidly.

Figure 1 is a side elevation. Fig. 2 is a side sectional elevation.

A is a steam-cylinder. Its operating mechanism is designed to be substantially such as is in common use for various purposes. B is a cylindrical case. The bearing or connecting-surfaces are fitted together so as to hold each part firmly in line one with the other by means of flanges or screw-threads or other suitable fastening. This case is provided with a hand-hole, C, for the purpose of regulating the packing-box and for the convenience of doing any other necessary work. D is a mold-case, made in the common way. The lower end of this case is fitted into a flange-recess at E, which holds the lower end of the two-part case firmly together. F is a flanged cap, which is fitted over the upper end of the case D. This cap is chambered so as to form or produce the proper shape of the upper end of the pipe. It also has an opening about the same diameter of the plunger which works up through said opening. This cap is provided with conical-shaped discharge-orifices G, through which the surplus material escapes as the plunger ascends through the case, and which are made larger as they extend outward. This case is clamped together near the center of its length by dogs H. The cap F, with the case or mold D, is held firmly in its relative position with the cylinder or case B by means of the clamp-rods I. J is a plunger, the upper end of which is made conical shape. The lower portion, or that part which forms the inside diameter of the pipe

or plunger, is made hollow for a heating-chamber. The lower head K is about the same diameter of the inside of the cylinder B and the mold D, and is also provided with a collar, L, which forms or produces the desired shape for the joint in the end of the pipe. At the point or upper end of this conical-shaped plunger is a square-shaped formation, J', the object of which is to partially rotate the plunger J by means of a lever-wrench, to break the adhesion of the newly-formed tile on the plunger and allow it (the plunger) to descend without damaging the tile. M is a steam-cylinder piston, having a hollow piston-rod, N, for a steam-passage, the upper end of which passes through the cylinder-head or packing-box O into the lower end of the plunger J. P is a pedestal, upon which the machine is mounted, and forms one of the heads of the steam-cylinder, and by which it is held firmly in place.

By this construction steam or fluid-pressure may be used advantageously to operate the machine.

The material used to make the tile is put into the mold from the upper end in the common way, but it is subjected to a greater compression, as the substance is tamped down between the case B and the plunger, and is more firmly compressed into shape by being forced upward into the mold by the action of the plunger J, and the surplus material forced out of the mold through the conical-shaped orifices G by means of the hollow plunger J and hollow piston-rod N.

Thus I am enabled to more perfectly compress and exhaust the damp from the material used to form the tile into the mold, and thereby prepare it (the tile) to be sooner removed from the mold, and also manufacture the tile cheaper and more rapidly, producing more perfect tile.

I believe I have thus shown the nature and construction of this invention so as to enable others skilled in the art to make and use the same therefrom.

What I claim, therefore, and desire to secure by Letters Patent, is—

The cylinder A, hollow piston and rod M N, and plunger J, in combination with former-ring L, cylinder B, mold-case D, and cap F, constructed and arranged substantially as set forth.

Witnesses: HIRAM BISSELL. [L. S.]

E. W. BLISS,
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