E. L. VERGURSON.

Gas-Stove.

No. 161,916. Patented April 13, 1875.

Fig. 1

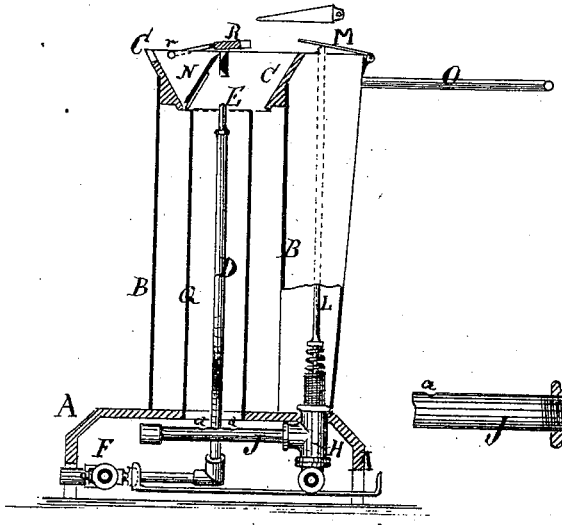


Fig. 4

Fig. 2

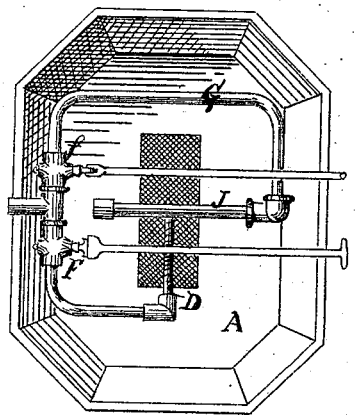
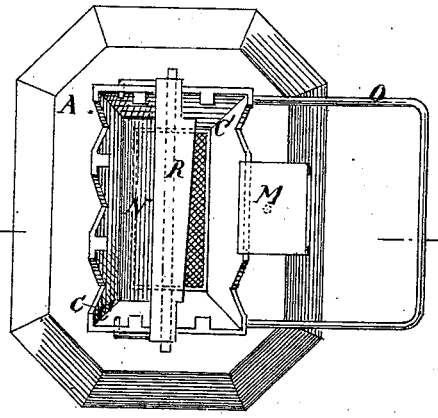
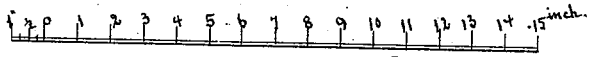


Fig. 3





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UNITED STATES PATENT OFFICE.

EZRA L. VERGURSON, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN GAS-STOVES.

Specification forming part of Letters Patent No. **161,916**, dated April 13, 1875; application filed March 23, 1875.

To all whom it may concern:

Be it known that I, EZRA L. VERGURSON, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Automatic Gas-Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a transverse vertical central section of my invention. Fig. 2 is a bottom view. Fig. 3 is a top or plan view; and Fig. 4, a sectional view of the check-valve, enlarged and detached.

Like letters refer to like parts in each figure.

This invention relates to an improvement in the construction of gas-stoves for bookbinders' use, whereby the amount of flame is regulated by the weight of the tools placed upon the stove to be heated.

The invention consists of a suitable shell and foot-plate, within which are placed certain pipes and burners and a check-valve, the operation and construction of which are more fully hereinafter set forth.

In the drawings, A represents a bottom or foot plate, upon which is placed the shell B. C is a cast-iron top, placed on top of the shell B, the whole being bolted together. D is a gas-pipe, provided with a burner, E, and cock F. G is also a gas-pipe, connected to the supply-pipe through the cock *f*, as shown, communicating with the pipe J. H is a check-valve placed in the T of the pipe J, the said check-valve being between the pipes G and J. The said pipe J is connected to the pipe G, and extends the width of the stove, its opposite end being closed. The top of this pipe has a series of perforations. The independent stem L of the check-valve extends upward through a closed casing, K, so as to project outside of the shell, as shown in Fig. 1. A spiral spring, *m*, surrounds the stem, resting on the upper face of the casing, and exerts its force against a collar on the stem L, serving to hold the check-valve closed. M is a hinged plate placed lengthwise of the top C, in such a manner that it will rest upon the top of the stem L. N is a damper-plate, used to direct the heat to a particular point. O is a movable wire frame, the office of which is to support the handle of the tool. Q is an inner shell, the top of which is provided with a perforated screen, through which projects the tip of the burner E. This shell Q surrounds the pipes D and J, confining the heat, and forcing it to escape through its perforated top.

When it is desired to use the stove, the gas is turned on by opening one or both of the cocks F *f*, and is lighted at the burner E. Tools to be heated are placed with their handles resting upon the wire O, while the points required to be heated lay over the center, or nearly so, of the stove. The weight of the tools upon the plate M depresses the stem L upon the check-valve and spring, thus causing the valve to open, and allowing the free passage of gas to the perforated pipe J. The gas thus escaping within the shell Q becomes ignited by its contact with the frame of the burner E—the damper-plate N, thrown forward so that its upper edge rests upon the sides of a central supporting-bar, causing the concentration of the heat directly upon the tools. When the tools are removed, the gas is shut off from the pipe J by the operation of the spring upon the check-valve, but the gas remains lighted at the burner E.

As the device is so simple in its operation and construction, a further description is deemed unnecessary.

R is a tapered plate, hinged at *r* to the top C, for the use of small stamps, and a wedge, *s*, serves to raise it for large stamps.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the shells B Q, pipes D G K, top C, damper-plate N, hinged plate M, and check-valve H, operated as and for the purpose specified.

E. L. VERGURSON.

Attest:

JULIUS WILCKE,

J. W. MUNDAY.