

UNITED STATES PATENT OFFICE.

WILLIAM L. HESS, OF BELLE PLAINE, IOWA.

COMBINED STOVE-PIPE DRUM, SHELF, AND DAMPER.

SPECIFICATION forming part of Letters Patent No. 272,048, dated February 13, 1883.

Application filed October 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. HESS, a citizen of the United States of America, residing at Belle Plaine, in the county of Benton and State of Iowa, have invented certain new and useful Improvements in Stove-Pipe Drum, Shelf, and Damper Combined; and I do hereby 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.

In the drawings, Figure 1 is a top plan view of my improved stove-pipe shelf, the cover of said shelf being removed to show the inner conical partition. Fig. 2 is a transverse vertical section taken on the line xx of Fig. 1; and Fig. 3 is a similar section taken on the line yy , to show the smoke-space in the tubular sliding valve.

Similar letters of reference in the several drawings denote similar parts.

This invention relates to certain improvements upon Letters Patent numbered 204,570, said patent relating to improvements in stove-pipe shelves or heaters granted to me June 4, 1878. In said patent I employed a flat horizontal partition in connection with a drum or cylinder, the stove-pipe proper extending through said cylinder, and having openings, being opened or closed by a sliding tubular valve. In the present instance I employ a similar drum or cylinder divided into two chambers by a conical diaphragm or partition, through which the heat and smoke ascends, the central of which perforations is opened or closed by a damper operated from the outside of the drum or cylinder. I also employ a tubular valve placed in the stove-pipe above the drum or cylinder, and so arranged as to slide downward to and rest upon the top of the diaphragm or partition above the central perforation therein. In my former patent, when the tubular valve was down the ascending heat and smoke passed upward through the stove-pipe without passing into either of the chambers in the drum or cylinder. In the present invention the ascending smoke and heat pass into and through the chambers of the drum or

cylinder, and thence escape into the pipe, when the tubular valve is down as well as when said valve is up, proper vents being made in said valve to effect this purpose. I have found by experiment that a partition having a conical form or shape, as herein described, gives better results than one made in the form described in my former patent—that is, flat—inasmuch as the ascending heat and smoke (when the central damper is closed) first come in contact with the upper part or apex of the diaphragm, and thence, in order to escape from the lower chamber, must return backward and downward to the vents or perforations made in said diaphragm near its outer edges. By this construction heat remains much longer and is more intense in the chambers of the present improved pipe-shelf than in the corresponding chambers of the pipe-shelf shown and described in the patent above referred to.

Referring to the drawings, A represents a drum or cylinder, the lower portion of which tapers downward and inward, as shown. The lower portion of the drum A is provided with a short section of pipe, A' , adapted to fit upon or in the pipe above the stove.

A^2 represents the cover of the drum or cylinder, said cover being movable and provided with a short section of pipe, A^3 , the lower end or edge of which is flush with the under surface of the cover.

B represents a diaphragm or partition, made conical as shown, and provided with apertures b, b' , the central one of which, b , is circular in form and of the same diameter as the pipe-section, and is provided with a short section of pipe, B' , within which is placed an ordinary damper, B^2 , operated by a rod, b^2 , that extends to the outside of the drum or cylinder. The apertures b' are arranged around the outer edge of the diaphragm B, as shown.

C represents a tubular sliding valve placed in the pipe-section A^3 , and operated by a stud, c , that moves up and down in a bayonet-slot, c' , in the pipe. The lower edge or end of the tubular valve C, is provided with openings c^2 , through which, when said tubular valve is down, the smoke escapes from the chambers.

D represents a frame attached by eyes d to one side or edge of the cover A^2 , and serves to give an additional bearing-surface to the shelf

for large articles. The frame D may be dropped downward against the side of the drum, in which position the lower parts or arms, d^2 , project outwardly and serve to hang articles, as towels, dish-cloths, &c.

I attach importance to the diaphragm having a section of pipe, B', in lieu of a pipe which extends entirely through the shelf. My construction affords a proper inclosure for the damper, and enables me to quickly and conveniently separate the shelf into its several parts for cleaning, repairs, transportation, storage, &c.

I am aware that a diaphragm with perforated edges is not broadly new.

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

1. In a stove-pipe shelf, the combination of

the drum or cylinder A, having the removable cover A^2 , with the conical diaphragm or partition B, having perforations $b b'$, and pipe-section B', substantially as and for the purpose set forth.

2. In a stove-pipe shelf, the combination of the drum or cylinder A, having the removable cover A^2 , and conical perforated diaphragm B, with the tubular valve C, having openings c^2 at its lower edge or end, and held and moved up and down in the pipe-section A^3 by the stud c , substantially as described.

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

WILLIAM L. HESS.

Witnesses:

J. J. MOSNAT,
A. LEAVENS.