J. P. RICHARDSON.

Magazine for Coal-Stoves.

No. 166,144. Patented July 27, 1875.

Fig. 1.

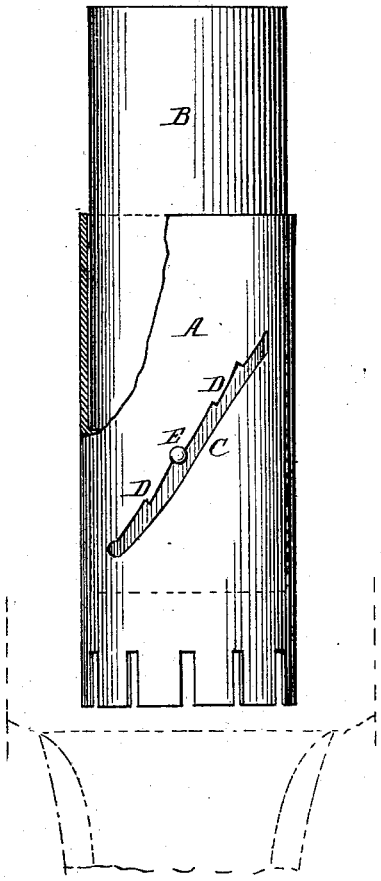
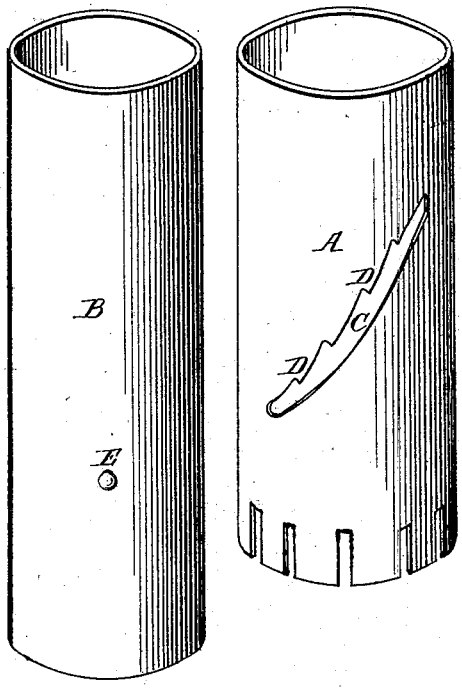


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES P. RICHARDSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN MAGAZINES FOR COAL-STOVES.

Specification forming part of Letters Patent No. **166,144**, dated July 27, 1875; application filed June 11, 1875.

To all whom it may concern:

Be it known that I, JAMES P. RICHARDSON, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Magazine for Coal Stoves, of which the following is a specification.

This invention relates to certain improvements in that class of base-burning stoves in which the magazine is made in sections telescoped together in such manner that the lower section may be raised or lowered so as to increase or diminish the distance of the same from the mouth of the fire-pot, and thus regulate the amount of fuel consumed.

The magazine-stoves have heretofore been constructed with a zigzag slot cut through the outer wall of the lower section of the magazine, through which projects a pin, secured to the inside cylinder, for holding the said section in any desired position, or with a spiral ridge on the outside of the upper section, and a corresponding ridge on the interior of the lower section, the two operating together after the manner of a screw. The zigzag slot and pin have proved objectionable from the fact that the cylinder has to be bodily lifted, step by step, in elevating the lower section. Besides the great exertion necessary to thus bodily lift the section, if the same is lifted from one side only—which must necessarily be the case in stoves as ordinarily constructed, with openings on one side—the inner cylinder is liable to be thrown out of line and bind in the outer cylinder, defying all attempts to elevate it; and where special provision is made for raising the cylinder on both sides at the same time, it will require the services of two persons to elevate the same. Where spiral ridges are employed, gearing together after the manner of a screw, in order to hold the lower cylinder and prevent it from dropping, the inclination or pitch of the ridges must necessarily be very gradual, and in order to secure any practicable vertical play to said cylinder, have to be extended several times around the same, making several entire rotations of the same, necessary in order to elevate said lower cylinder to its full height, requiring an inconvenient amount of time and exertion.

My invention is designed to obviate these defects; and it consists in a magazine constructed of two concentric tubes of suitable diameter and length, one adapted to slide within the other, the outer tube having a spiral slot through its walls, the upper side of said slot being serrated or toothed, forming a series of stops along the length of the outer cylinder adapted to engage upon a stud upon the inner cylinder, in such manner that one cylinder can be let in or out of the other and the two fastened in any convenient position, as will be fully hereinafter set forth.

In the drawing, Figure 1 represents an elevation of my improved magazine. Fig. 2 represents detached views of the telescopic sections of the same.

The letters A and B represent the two concentric cylinders arranged to telescope together, the outer cylinder A sliding freely upon the inner cylinder B. The inner cylinder B, which forms the upper part of the magazine, is secured in any convenient manner within the upper part of the stove in the same position as the upper part of an ordinary magazine, the cylinder A, fitting on said cylinder B, forming the lower section of the magazine, the lower edge of the same being constructed with openings around its circumference similar to those around the lower edge of the ordinary magazine of base-burning stoves. The mouth or lower edge of said outer cylinder may be made flaring or contracted, as usual, to suit the style of fire-pot employed in the various stoves, as may be found convenient. Through the walls of the outer cylinder is formed a spiral slot, C, of any desired length. The upper side of said slot is serrated or provided with a series of teeth, D, which form at different heights along the length of the cylinder a series of stops, which are adapted to engage over a pin, E, secured to the lower end of the inner cylinder and securely fasten the outer cylinder in any position to which it may be adjusted. In order that the adjustment of the outer cylinder may be readily effected, the teeth *c* are peculiarly constructed, one side of each tooth being formed of such shape as to be nearly parallel with the lower edge of the spiral slot which engages the stud or pin on the inner cylinder, and is formed on a line parallel, or nearly

parallel, with a plane through the cylinder at right angles to its axis. It will be seen that, as thus constructed, the teeth may be readily disengaged from the pin on the inner cylinder by simply rotating the outer cylinder. When the teeth are thus disengaged, it is an easy matter to adjust the outer cylinder to any desired position, with respect to the fire-pot, by means of a simple lever or poker, by elevating or lowering the said cylinder until the pin comes opposite the desired tooth, and then turning it so as to bring the tooth in place over the pin. By this means an efficient and simple device for locking the outer cylinder in position is provided, by means of which said cylinder may be readily and conveniently adjusted while the stove is in operation, without the necessity of allowing the fire to die out, as is required in all magazines of this class as hitherto constructed.

It is evident that the device may be modified by attaching the outer tube to the upper part of the stove, the inner tube forming the movable section and lower part of the magazine, without departing from my invention.

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

The telescopic magazine for base-burning stoves, consisting of concentric tubes adapted to slide one within the other, the outer one provided with a spiral slot, one side of which is serrated or formed with teeth to engage and hold over a pin on the inner tube and lock the lower tube in any desired position, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

J. P. RICHARDSON, M. D.

Witnesses:
JNO. D. PATTEN,
ALBERT H. NORRIS.