

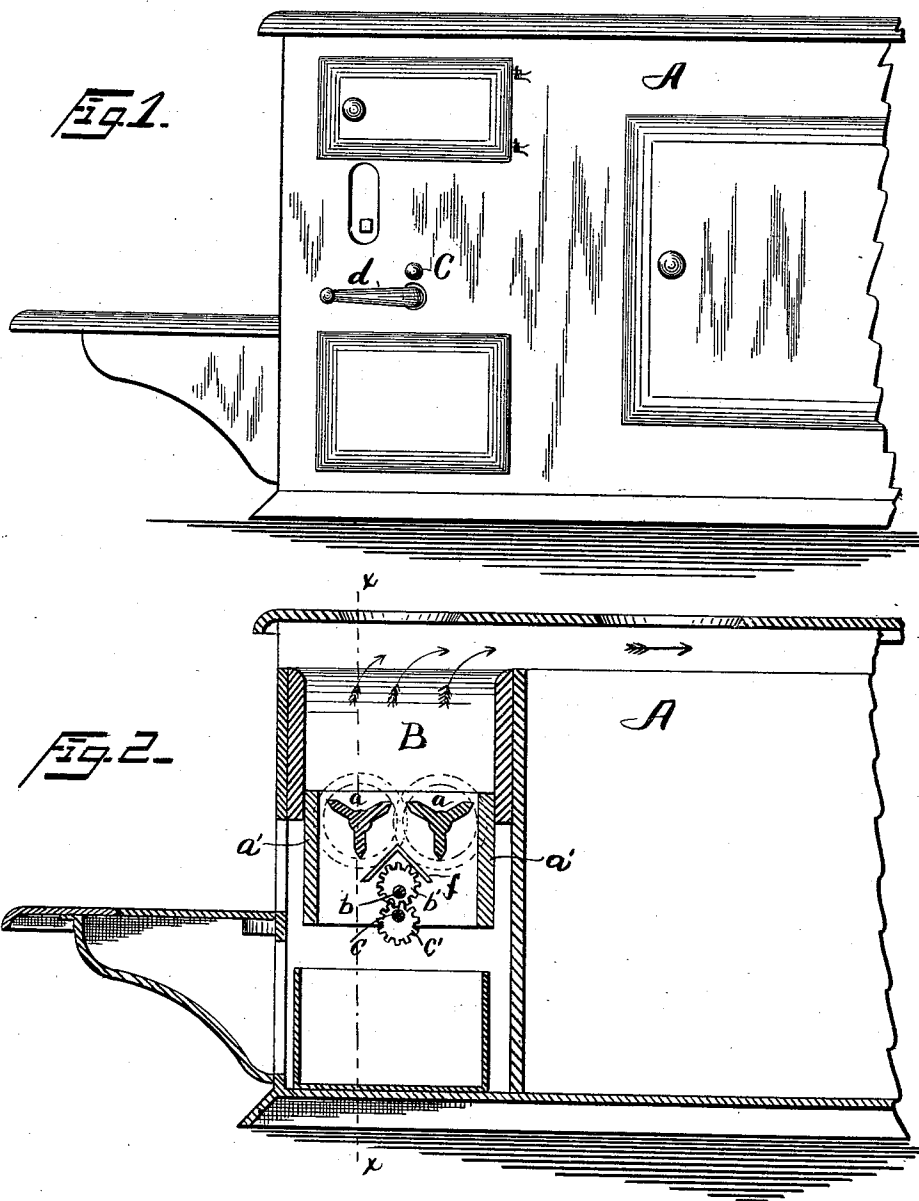
(No Model.)

2 Sheets—Sheet 1.

J. McNAMARA & C. COTTON.
VERTICALLY ADJUSTABLE GRATE.

No. 537,221.

Patented Apr. 9, 1895.



WITNESSES:

Charles H. Marvin.
Jessie E. May.

INVENTORS

John M^c Namara.
Cameron Cotton.

BY

Smith & Arison
ATTORNEYS.

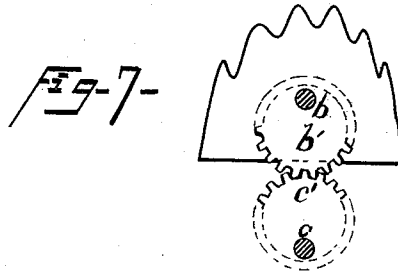
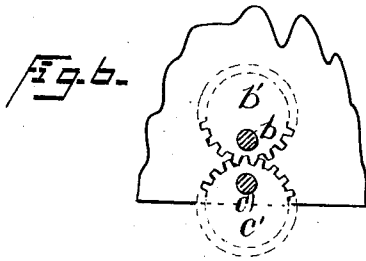
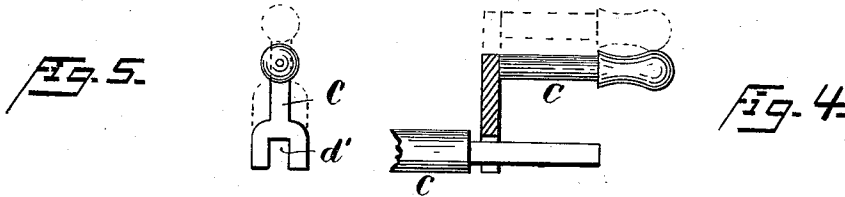
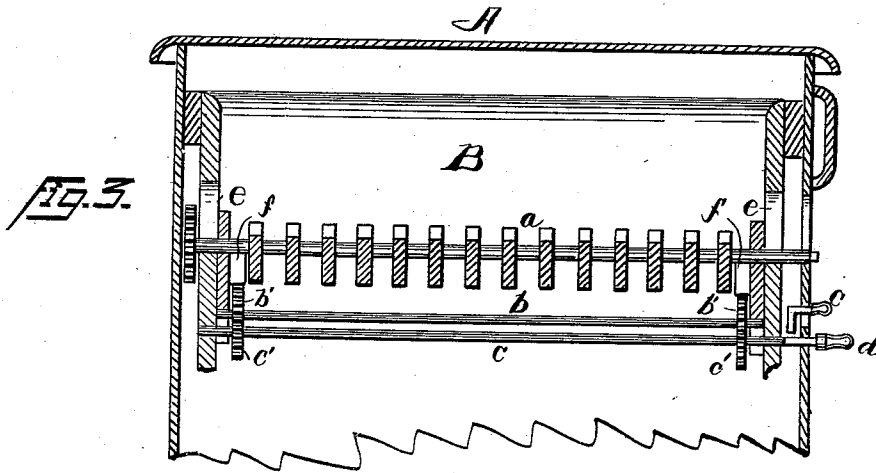
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No. 537,221.

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WITNESSES:

Charles W. Marvin
Jessie E. Murray

INVENTORS

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UNITED STATES PATENT OFFICE.

JOHN MCNAMARA AND CAMERON COTTON, OF BATH, NEW YORK.

VERTICALLY-ADJUSTABLE GRATE.

SPECIFICATION forming part of Letters Patent No. 537,221, dated April 9, 1895.

Application filed January 14, 1895. Serial No. 534,754. (No model.)

To all whom it may concern:

Be it known that we, JOHN MCNAMARA and CAMERON COTTON, of Bath, in the county of Steuben, in the State of New York, have invented new and useful Improvements in Vertically-Adjustable Grates, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in stoves and more particularly to the grates thereof.

Our object is to produce a grate which is adapted to be adjusted vertically, so that the bed of coals or fire pot may be raised or lowered as desired, for the purpose of regulating the amount of heat to suit the convenience of the operator. We have found by experience that it often happens that when the fire is nearly consumed and there remains only a small bed of coals just over the grate, it is desired to revive the fire sufficient to do a small amount of cooking, and to do this it is necessary to practically build a new fire, but by arranging the grates adjustable vertically, the fire may be raised to a point just under the apertures so as to get the benefit of all of the heat that there is so as to avoid the necessity of re-kindling the fire; and to that end our invention consists in the several new and novel features and combination of parts hereinafter described, and which are specifically set forth in the claims hereunto annexed. It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of the forward end of a stove with our improvements attached. Fig. 2 is a view of a vertical section just inside of the outer casing of the stove. Fig. 3 is a transverse vertical section on line—*x-x*—of Fig. 2. Fig. 4 shows a side view of the device for locking one of the arbors and thus holding the grates in any height desired. Fig. 5 is a front end view thereof. Figs. 6 and 7 are end views of the rotating shafts having cogs on their ends for the purpose of raising and lowering the grates.

—*A*— is a stove of any ordinary construction, provided with a stationary fire box —*B*— in its front end in any ordinary way.

—*a*— are grates preferably of the Dockash form, although we do not confine ourselves to

this particular kind of grate, as it will be evident that any form of grate may be used as desired.

—*a'*— is a movable frame in which the grate —*a*— is mounted and just below the grate is mounted a shaft —*b*— having cogs —*b'*— mounted eccentrically thereon at either end and preferably within the frame. Just below this shaft —*b*— is a similar shaft —*c*— mounted in the lower part of the frame, within which the frame —*a'*— moves vertically, said shaft —*c*— being also provided with similar cogs —*c'*— eccentrically mounted and adapted to engage with the aforesaid cogs —*b'*—. One end of the shaft —*c*— extends out through the fire box and casing to the exterior of the stove where it may be rotated by a handle —*d*— or in any other manner desired; that part of the shaft extending from the cog to the outer face of the stove being rectangular, so that the key —*C*—, constructed substantially as shown in the drawings, having a recess in its lower end —*d'*— may drop through said rectangular portion of the shaft —*c*— and hold it from further rotation.

It will be observed that when the shaft —*c*— is rotated the cogs normally being in position, as shown in Fig. 6, will engage with the cogs upon the shaft —*b*— and throw the shaft —*b*— upward as the cogs take the position shown in Fig. 7, and inasmuch as the shaft —*c*— is fixed it will necessarily throw the shaft —*b*— upward, which is journaled in the vertically moving frame and thus throw the grate up near the top of the stove.

—*e*— are vertical slot-ways in which the extending ends of the grate are adapted to travel. The key —*C*— is mounted in a slot-way —*e'*— in the outer casing of the stove and adapted to drop down and engage with the rectangular end of the shaft —*c*—, so that it may hold it from rotation at any point desired and thus hold the grate to any height desired.

—*f*— is a shield located over the cogs —*b'*— and —*c'*— for the purpose of keeping the clinkers from falling on them.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

In a stove, the stationary fire box, a verti-

cally adjustable frame placed inside of its lower edge, and carrying the grate bars; and the stove frame provided with suitable slots, combined with a shaft that is journaled in the
5 vertically adjustable grate, a second shaft journaled in the stationary fire box, and provided with an operating handle at one end, gears attached eccentrically to the shafts and meshing together, and a locking device ap-

plied to one end of one of the shafts substantially as shown.

In witness whereof we have hereunto set our hands on this 10th day of December, 1894.

JOHN MCNAMARA.
CAMERON COTTON.

In presence of—

JESSIE E. MURRAY,
HOWARD P. DENISON.