

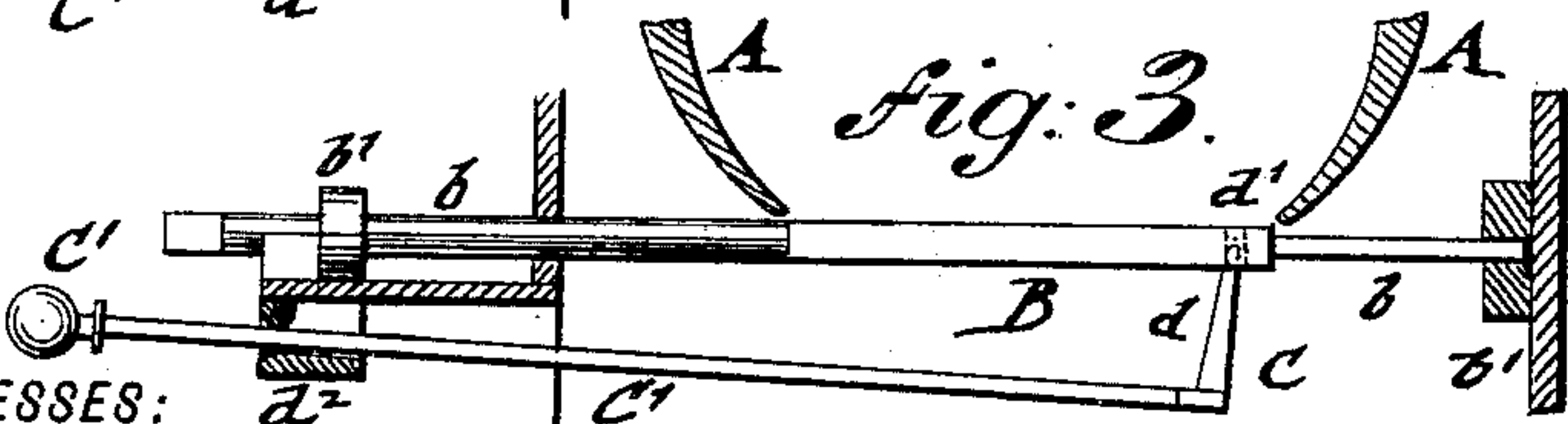
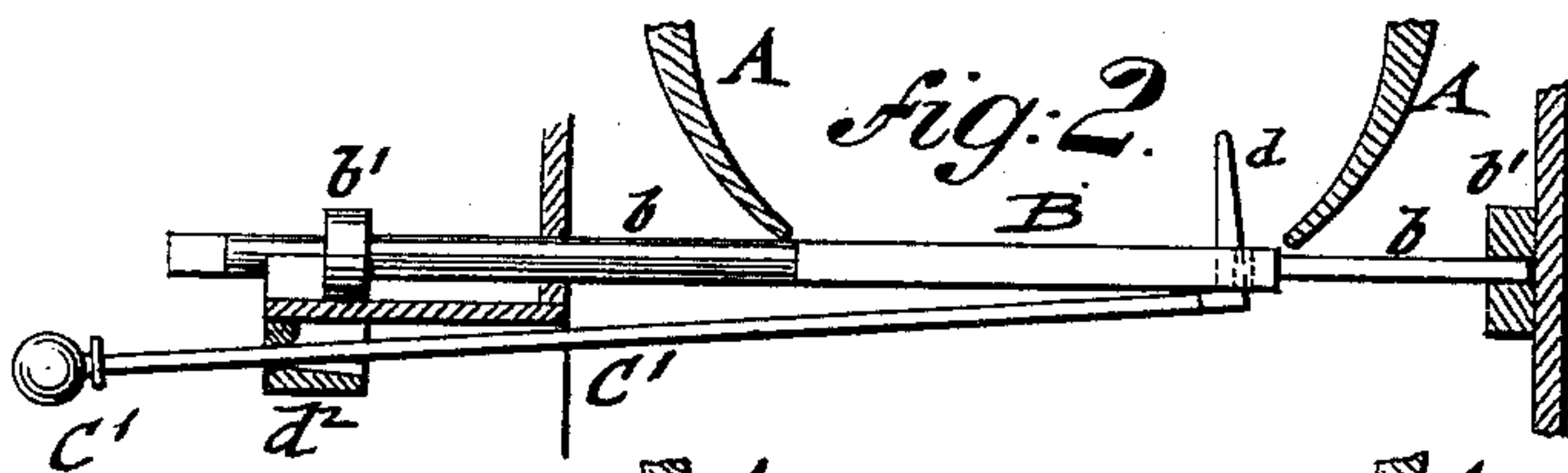
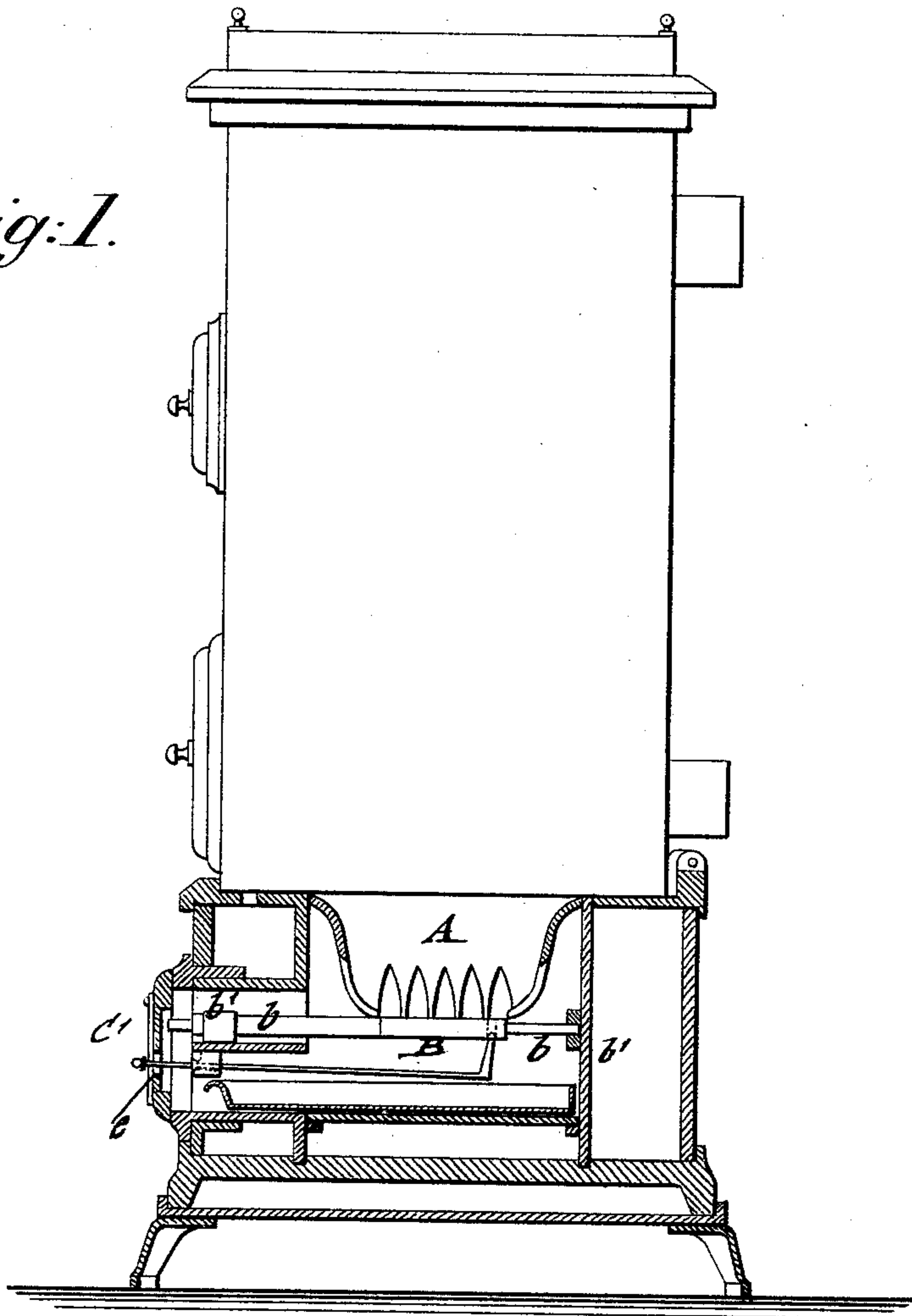
(No Model.)

O. P. & G. O. ELTERICH.
FURNACE GRATE.

No. 407,002.

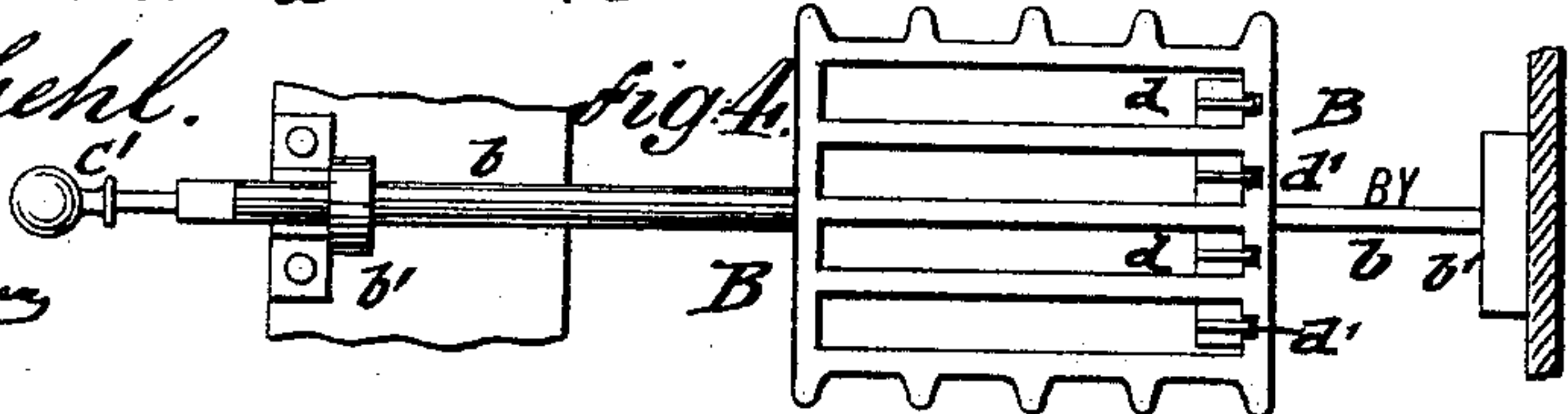
Patented July 16, 1889.

Fig:1.



WITNESSES:

A. Schehl.
Henry J. Mann



INVENTORS

Otto P. Elterich
G. Otto Elterich
James R. Rogers
ATTORNEYS.

UNITED STATES PATENT OFFICE.

OTTO P. ELTERICH AND G. OTTO ELTERICH, OF NEWARK, NEW JERSEY, ASSIGNORS OF ONE-THIRD TO CLEMENS HEITEMEYER, OF SAME PLACE.

FURNACE-GRATE.

SPECIFICATION forming part of Letters Patent No. 407,002, dated July 16, 1889.

Application filed May 1, 1888. Serial No. 272,529. (No model.)

To all whom it may concern:

Be it known that we, OTTO P. ELTERICH and G. OTTO ELTERICH, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Furnace-Grates, of which the following is a specification.

This invention relates to an improved construction of grates for furnaces and stoves of all kinds in which clinkers and ashes can be quickly and effectively removed from the grate-bars and dumped in the ash-pit; and the invention consists of certain improvements in grates for stoves and furnaces, which will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of a heating-stove with our improved grate, partly in section through the lower part. Figs. 2 and 3 are vertical longitudinal sections of a portion of the fire-box, showing the poker of our improved grate respectively in raised and in normally-lowered position; and Fig. 4 is a top view of the grate, the last three figures being drawn on a larger scale.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the basket of a stove or furnace, and B the grate of the same, which corresponds in size and shape to that of the basket A. The grate B is provided with a central spindle *b*, which turns in suitable bearings *b'* of the fire-box. In connection with the grate *b* is used a poker C, which is made in the shape of a rake and provided with as many teeth *d* as there are longitudinal openings in the grate B, said teeth resting in inclined recesses *d'* at the inner side of the rear bar of the grate when the poker is in its normally-lowered position, as shown clearly in Figs. 3 and 4. The shank *C'* of the poker C is guided in an eye or sleeve *d²*, which is located below the spindle of the grate and constructed with rounded-off edges and with a downwardly-inclined bottom part, so that the shank of the poker can be readily moved in said sleeve, and that the teeth of the poker can be vertically and longitudinally reciprocated in the openings of the grate. The

eye or sleeve *d²* supports the poker-shank and prevents the poker from dropping below the grate. When the poker C is lifted, so that the teeth *d* project above the grate, as shown in Fig. 2, a longitudinally-reciprocating action imparted to the same will clear the grate of ashes and clinkers and give access of air to the fuel. The shank of the poker is extended through an opening *e* in the door of the ash-pit and provided with a small knob or handle, that does not interfere with the opening or closing of said door, as the opening *e* is made large enough to pass readily over the knob. For removing the clinkers and ashes entirely from the grate the grate is dumped by turning the poker on its axis. This is accomplished by lifting the teeth of the poker above the grate, then pulling the poker forward until its teeth abut against the front bar of the grate, and then turning the grate by the aid of the poker, whereby the dumping is easily and quickly accomplished without opening the door of the ash-pit. When the poker has been used for cleaning the grate or dumping the same, it is pushed back and dropped in its normal position, in which it is retained by the recesses *d'* in a position below the grate, as shown in Fig. 3.

We are aware that a journaled furnace-grate having side guide-flanges, a poker provided with prongs and guided along said flanges, and a poker-shank that is guided in the tubular or sleeve-shaped journal of the grate have been used heretofore, and we do not claim these features, broadly.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination, with a journaled and axially-movable grate, of a poker provided with teeth or fingers extending into the openings of the grate, a shank or rod extending forward from said poker, and an eye or sleeve for guiding the shank located below the journal of the grate, said eye being rounded off at the edge and provided with an inclined bottom part, substantially as set forth.

2. The combination, with a journaled and axially-movable grate, the rear bar of which is provided with recesses at the inner side, of

a poker having teeth or fingers extending into the openings of the grate, a shank or rod extending forward from said poker, and an eye or sleeve for guiding the shank located below
5 the journal of the grate, said eye having rounded-off edges and an inclined bottom part, so as to support the poker when in dropped position, substantially as set forth.

In testimony that we claim the foregoing as our invention we have signed our names in the presence of two subscribing witnesses.

OTTO P. ELTERICH.
G. OTTO ELTERICH.

Witnesses:

PAUL GOEPEL,
MARTIN PETRY.