J. H. MEARNS.

GRATES FOR STOVES, RANGES, &c.

No. 192,777. Patented July 3, 1877.

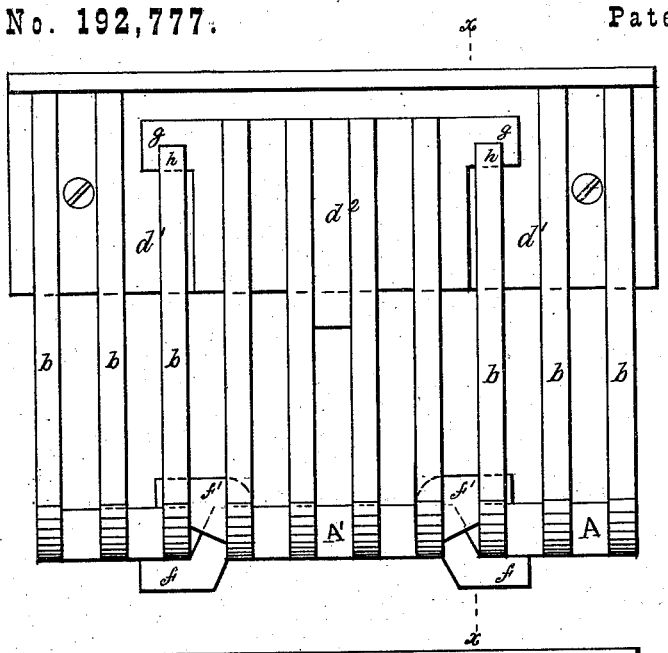


Fig. 1

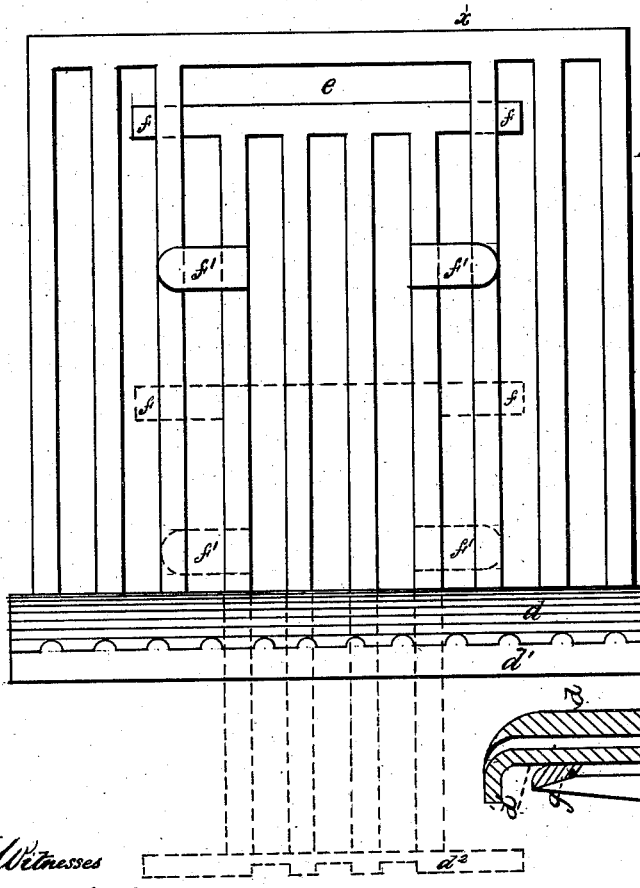
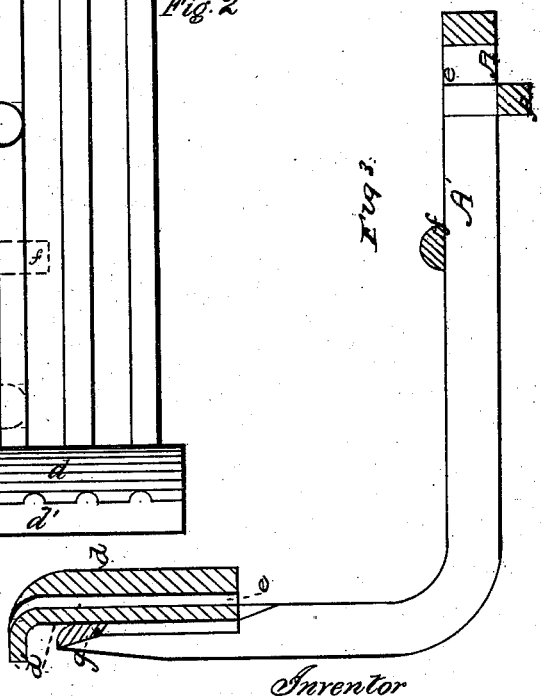


Fig. 2



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES H. MEARNS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN GRATES FOR STOVES, RANGES, &c.

Specification forming part of Letters Patent No. **192,777**, dated July 3, 1877; application filed May 16, 1877.

To all whom it may concern:

Be it known that I, JAMES H. MEARNS, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Grates for Stoves, Ranges &c., which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a plan view of the improved grate. Fig. 2 is a front elevation. Fig. 3 is a vertical section taken at the line *x x* of Fig. 1.

Like letters of reference in all the figures indicate the same parts.

My invention, in the first place, consists of a section of a grate in combination with the main portion thereof, the section having lugs on the upper and lower sides of its bars, which slide against the upper and lower sides of the grate in its connection and removal from the same, as hereinafter fully described.

In the second place, it consists of a protecting cap-plate connected with the upper part of the grate, forming a flue between the cap and the rail, for the purpose hereinafter described.

In the drawing, A represents a standing part of a basket-grate, having bars *b b b* at each side, and a protecting cap-plate, *d*, connected with the inside of the top rail d^1, and thereby capable of removal when burnt out. A flue, *c*, is formed between the cap-plate and the top rail for the passage of air, to prevent the warping of the grate, so that the section A′ will at all times readily fit its place.

The space *e* in the middle of the grate, between the two rows of bars *b*, which may be of any desirable number, is filled by the sectional grate A′. Its rear end is connected with the inner bars by means of the lower lugs or slides *f f* cast on its lower side, and the lugs or slides *f′ f′* cast on its upper side. The top rail d^2 of the sectional grate has beveled lugs *g g*, which catch in corresponding notches *h h* on the upper ends of the two inner bars *b b*.

The section is brought into position by bringing the lugs *f f* beneath the said bars *b b* at the front of the standing grate A, and tilting it out of its horizontal position in such a manner as to get the upper lugs *f′ f′* above the bars; then the grate is brought into its horizontal position to cause the lugs *f′ f′* to rest on the bars *b b*, and is pushed backward to its place and the beveled lugs *g g* brought into connection with the notches *h h*, whereby the grate is held securely in connection with the standing part A. The lower lugs *f f* of the section press against the bottom edges of the bars when the section is out in the position shown by dotted lines, (seen in Fig. 1,) to prevent the tilting of the section, and the upper lugs or slides take the weight of it at all times, and also act as stops to prevent it coming all the way out.

If desired, the rear end of the grate A′ may have a sliding connection with the inner bars *b b* of the grate A by having a single lug at each side sliding in a longitudinal groove in the inner side of the bars, the lugs being of sufficient width to prevent the tilting of the section.

Instead of the grate A, having an attachable section, A′, if desired, it may be in one piece and constructed in the same manner as the section A′, and connected either with the sides of the ash-pit or brick-rest, or other suitable device at the sides of the fire-place, the upper lugs *g g* being connected with the front of the fire-place.

I claim as my invention—

1. The section A′ of a grate having lugs or slides *f f* and *f′ f′*, in combination with the grate A having bars *b*, the lugs keeping the section A′ in its horizontal position, it being held in its backward position by any suitable device, substantially as set forth.

2. The flue *c*, between the cap-plate *d* and the top rail d^1 of the grate A, substantially as and for the purpose set forth.

3. The combination of the cap-plate *d*, the top rail d^1 of the grate A, and the top rail d^2 of the section A′, substantially in the manner and for the purpose set forth.

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Witnesses:

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