

R. HAM.  
Stove Grate.

No. 93,712.

Patented Aug. 17, 1869.

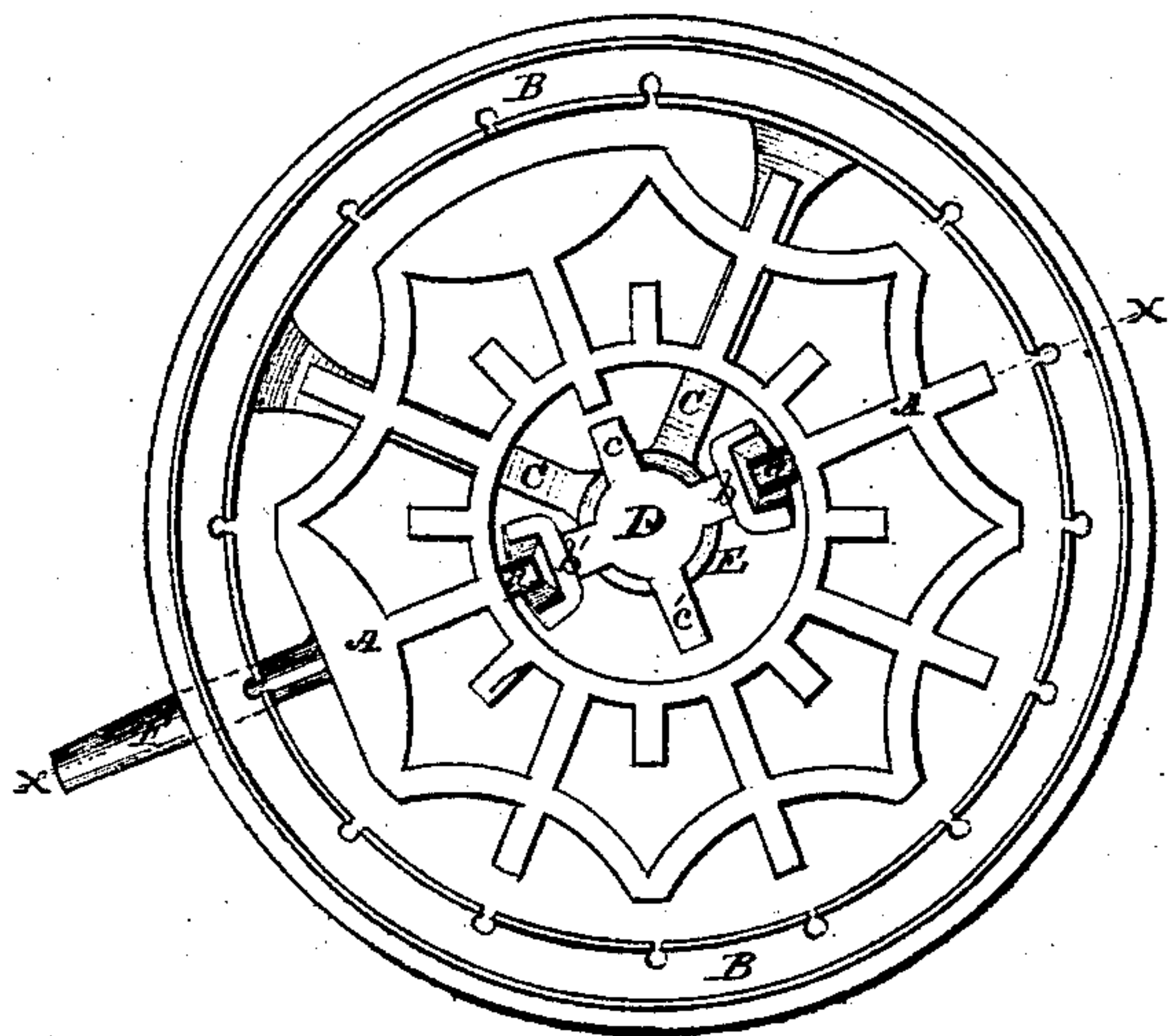


Fig. 1

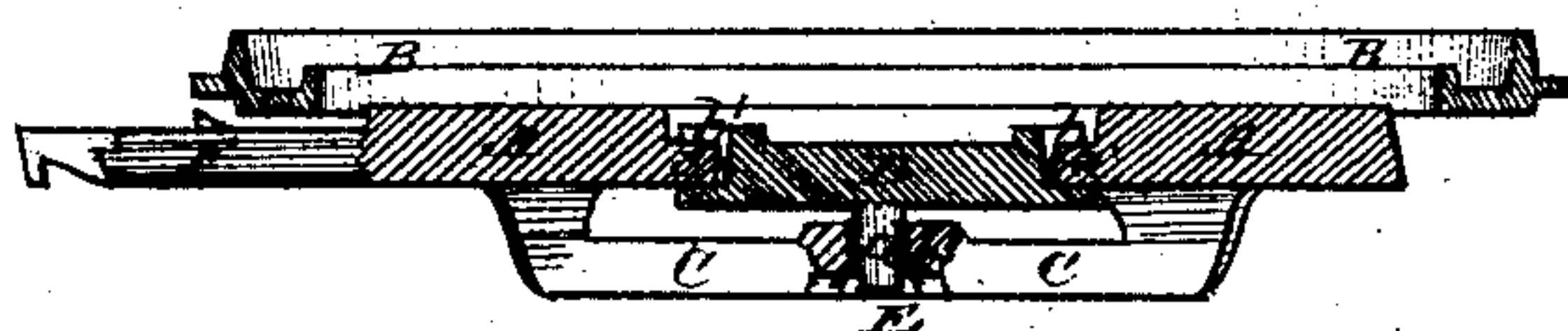


Fig. 2

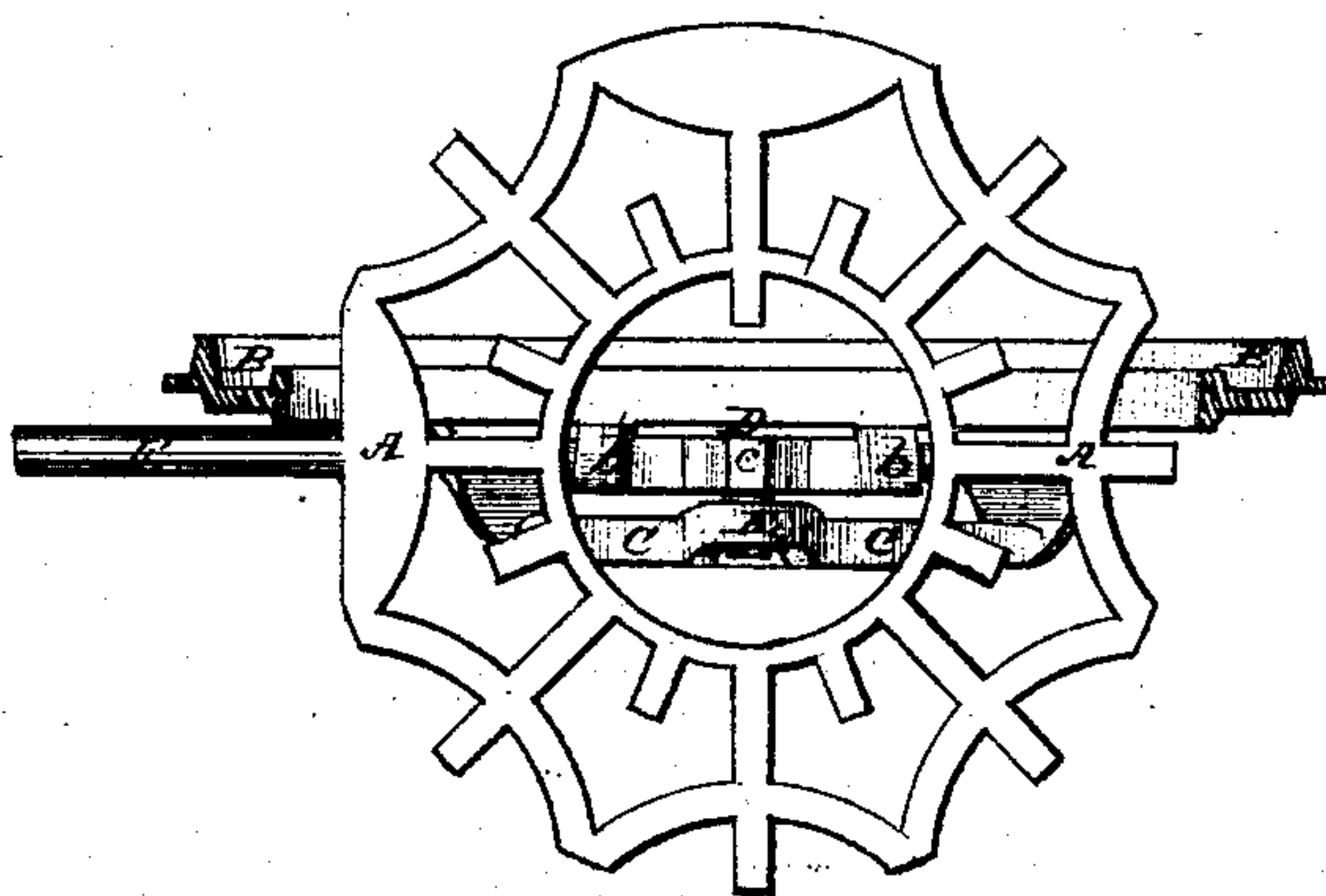


Fig. 3

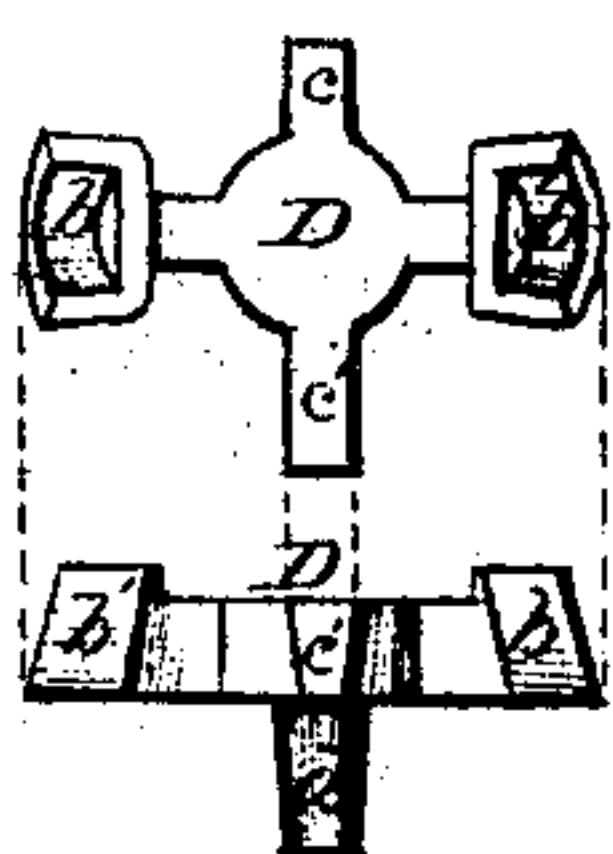


Fig. 4

Witnesses—

J. J. Savage  
Robert Rogers

Inventor—

Robert Ham

# United States Patent Office.

ROBERT HAM, OF TROY, NEW YORK.

Letters Patent No. 93,712, dated August 17, 1869.

## IMPROVEMENT IN GRATES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, ROBERT HAM, of Troy, in the county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Stove-Grates; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a plan or top view of said grate;

Figure 2 is a vertical section thereof, through line *x* of fig. 1;

Figure 3 is a view of said grate when dumped; and

Figure 4 is a separate view of the pivot of said grate.

The same letters refer to like parts in each of said figures.

My said invention consists in constructing, detached or separate and free from the grate, a movable pivot therefor, which supports the grate and moves with it in its horizontal vibratory movements, but is immovable when the grate is dumped thereon; and the said pivot supporting the grate is also so constructed as to form therewith the central fire-side thereof, all substantially as hereinafter fully described and shown.

That others skilled in the art may make and use my invention, I now proceed to fully describe its construction and operation.

I construct the dumping-part A A of the fire-grate in form and manner substantially as shown in the accompanying drawings, or in any other suitable form for the purpose, and provide it with a shank, F; and the bearing-journals *a* and *a'* thereof are made in the central parts of the grate, substantially as shown.

This grate is supported in operative position by the movable and detached or loose centre pivot D and *d*, constructed as follows:

The pivot-head D has arms extending horizontally therefrom and opposite each other, which terminate respectively in and from the journal-boxes *b* and *b'*; and also extending horizontally from said pivot-head D, opposite each other, and midway or thereabouts between the journal-boxes aforesaid, are the arms *c* and *c'*, substantially as shown.

B B represent the bed-plate of the fire-grate, which

has arms C C extending therefrom, and uniting below the centre of the fire-grate, forming thereby a bearing, E, for the pivot D, thus supporting the fire-grate in its place.

This grate is mounted for use by first placing its loose central and pivot part D in the said bearing E, then placing the dumping-grate A A, with its bearing-journals *a a'*, in the boxes *b* and *b'* aforesaid, of the pivot D, which thus supports the fire-grate A A in position for use; and it forms, also, the central fire-part or surface of said grate, substantially as shown.

When the fire-grate A A is shaken or vibrated horizontally by means of its shank F, the central part D moves with it as part thereof; but when the grate-part A A is dumped, which may be done in line with its shank F, and at any point of its range of vibratory movement, this central part D thereof then remains immovable, and supports the part A A when dumping and in a dumped position, in manner substantially as shown in fig. 3 of annexed drawings, while cinders and ashes slide therefrom into the ash-box below; and this aforesaid improved manner of constructing the centre pivot of stove fire-grates permits the grate to be easily mounted for use, readily repaired, and always reliable in its respective operations of shaking and dumping.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. Forming the central part of the fire-grate surface, with and by means of the detached pivot D, operating as set forth, and provided with arms *c c'* and *b b'*, substantially as described.

2. Arranging and supporting the fire-grate A A on a loose or detached centre pivot, D, forming part of its fire-surface, and movable in horizontal directions with said fire-grate, but immovable when supporting said grate, so as to dump on a line with its shank F at any point of its range of vibratory movement, substantially as described.

ROBERT HAM.

Witnesses:

J. J. SAVAGE,  
ROBT. SCORER.