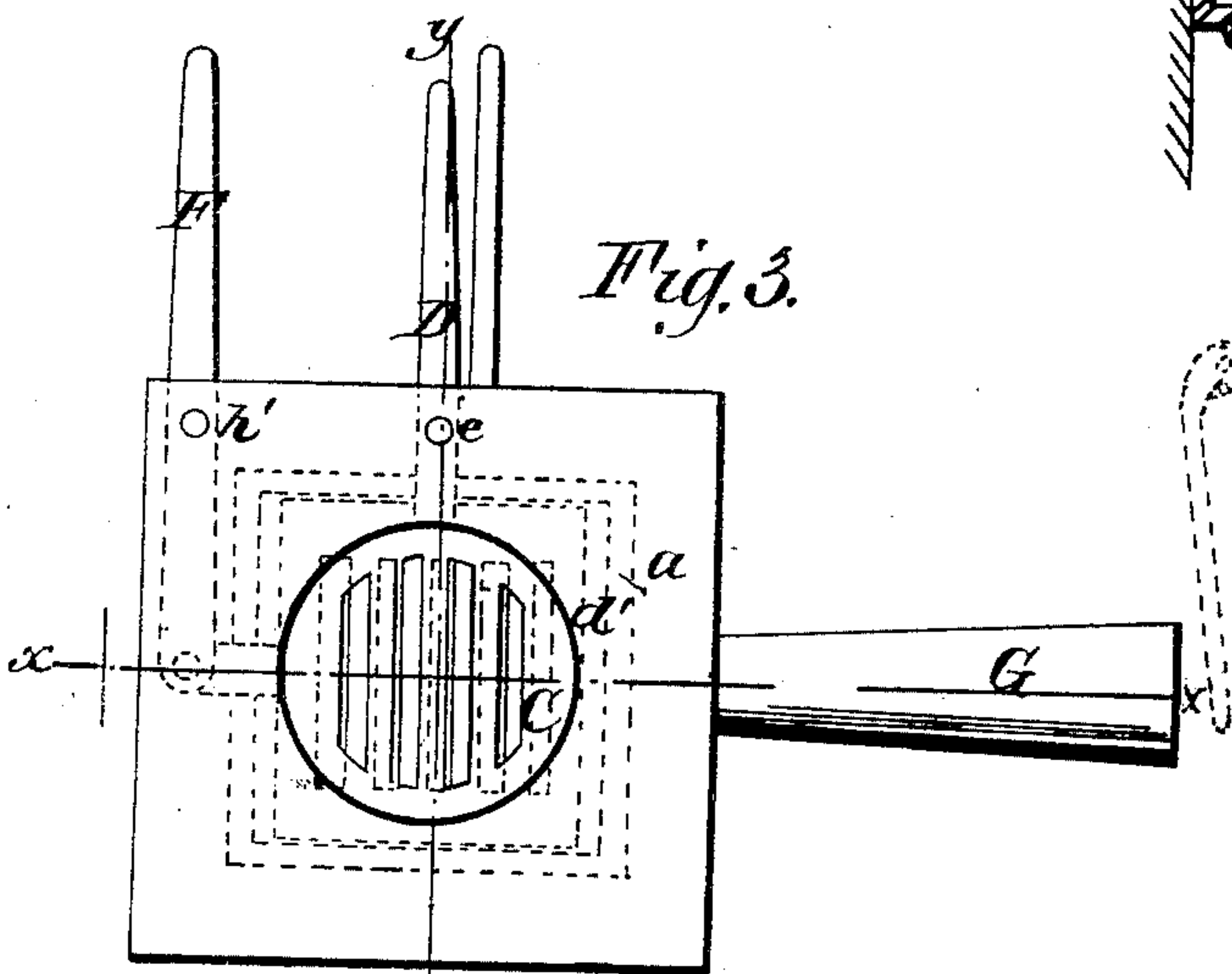
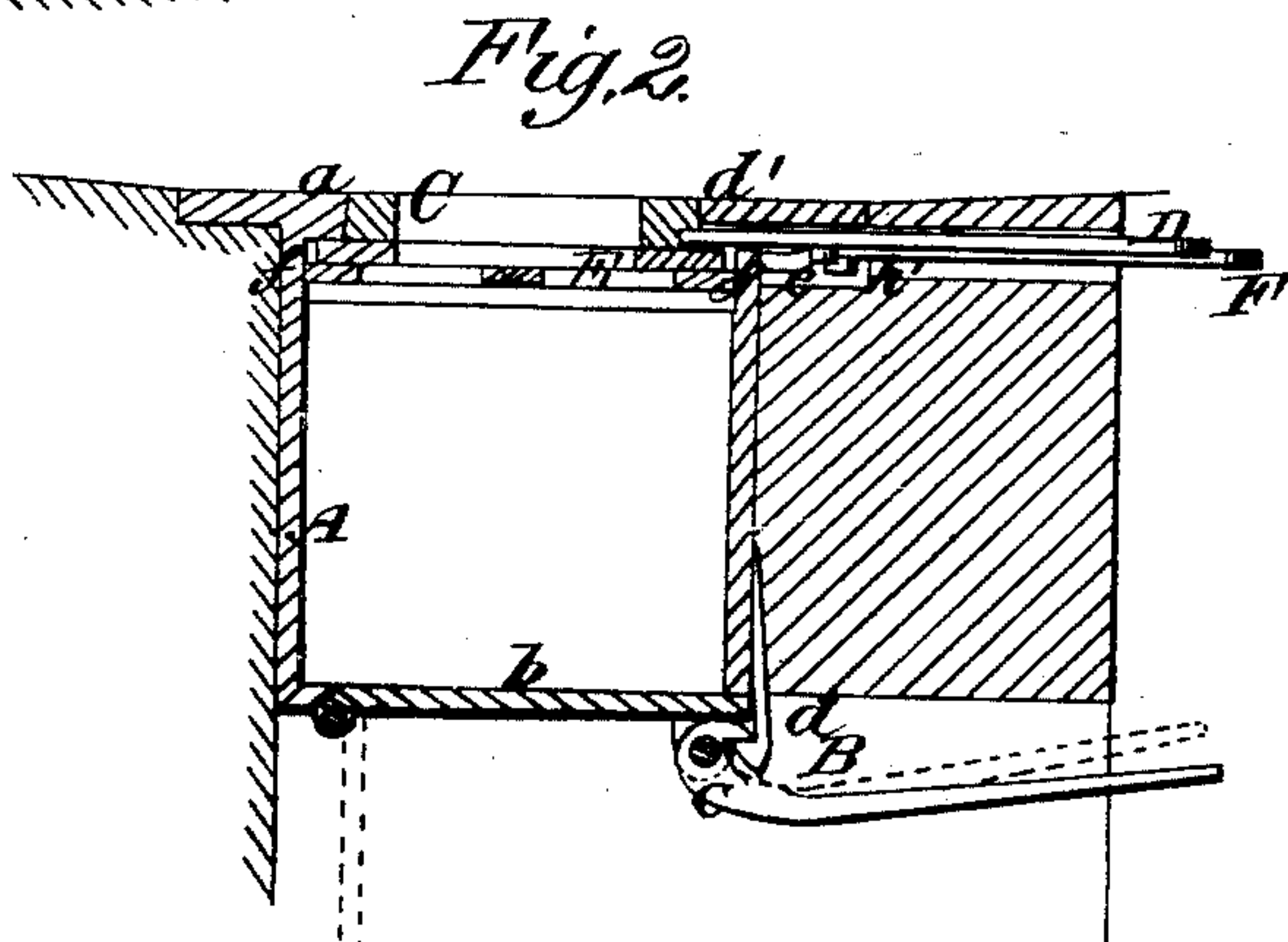
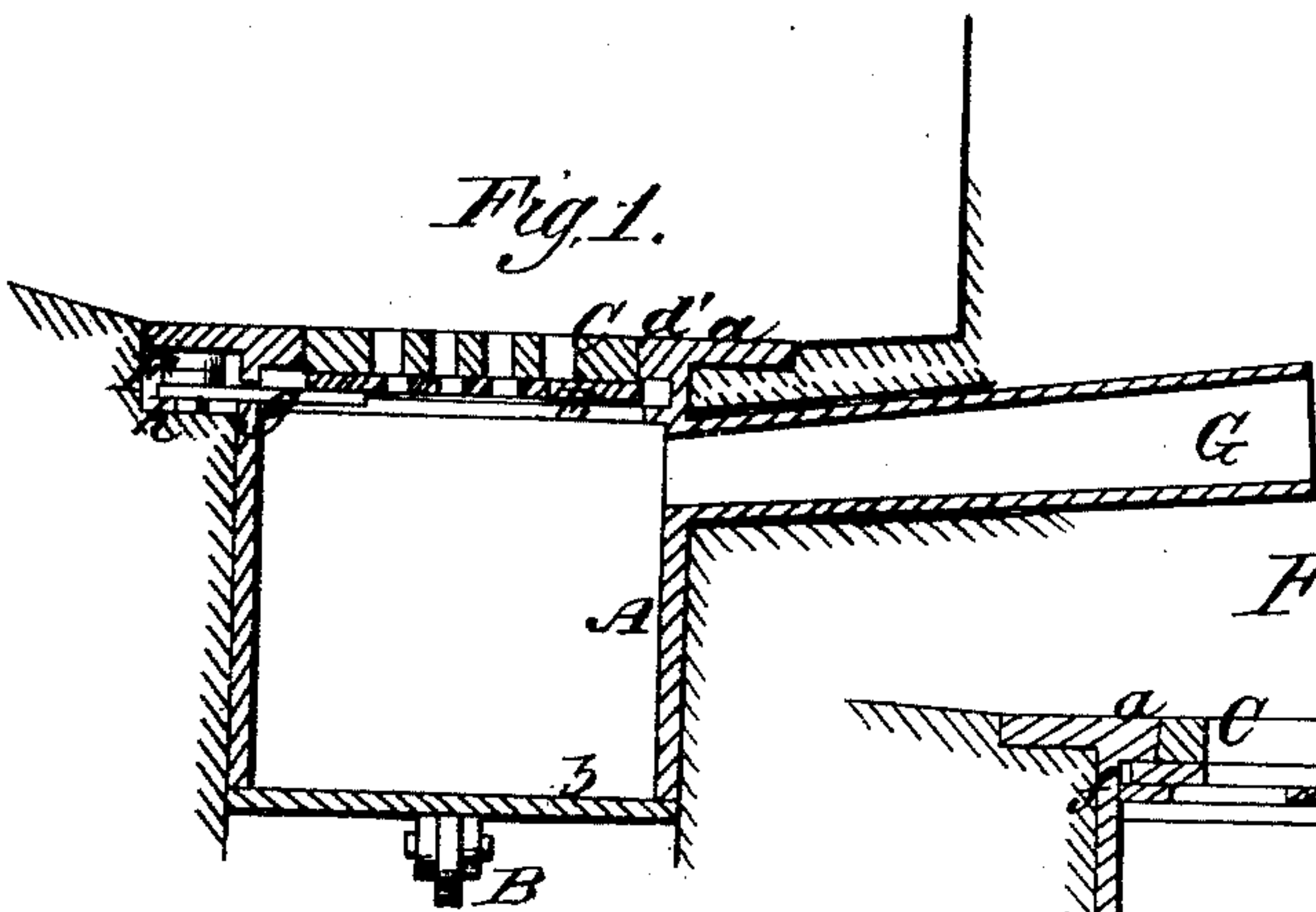


A. ORDWAY.
TWYER.

No. 28,296.

Patented May 15, 1860.



Witnesses.
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UNITED STATES PATENT OFFICE.

ALANSON ORDWAY, OF STRATHAM, NEW HAMPSHIRE.

TWYER.

Specification of Letters Patent No. 28,296, dated May 15, 1860.

To all whom it may concern:

Be it known that I, ALANSON ORDWAY, of Stratham, in the county of Rockingham and State of New Hampshire, have invented a new and Improved Twyer; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x, x*, Fig. 3. Fig. 2, a vertical of section of ditto taken in the line *y, y*, Fig. 3. Fig. 3, a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a cast iron box, which may be of rectangular form and of any suitable dimensions and provided with a cover or top *a* which projects over each side of the box. The box A, has its bottom *b*, connected to one side of it by a hinge or joint, the opposite end of the bottom being secured to the box by a catch B, which is shown clearly in Fig. 2, said catch being formed of a hooked lever *c*, attached to the bottom and a spring *d*, provided with a shoulder attached to the box A, the hooked end of the lever *c*, catching over the shoulder of the spring when the bottom is closed.

In the top *a*, of the box a circular opening *d* is made to receive a circular grate C, which is allowed to turn freely first in one direction and then in the other in the opening *d*, and is actuated by a lever D, which passes through one side of the box, and has its fulcrum at *e*, as shown in Figs. 2 and 3.

Beneath the circular grate C, a rectangular grate E, is placed. This grate has two opposite sides fitted in grooves *f, f*, in the upper part of the box, the grate being allowed to move freely, back and forth therein. The grooves *f, f*, are shown clearly in

Fig. 2. The circular grate C, rests on the grate E, below it, and grate E, has an arm *g*, attached to it at one side, to the outer end of which arm a lever F, is attached by a pivot *h*; the lever F, being attached to the top *a*, by a fulcrum pin *h'*.

G, is a tube which communicates with the box A, just below the grate E, said tube receiving the nozzle of the bellows.

The box A, is fitted in the masonry of the forge, the top *a*, forming the hearth which is flush with the upper surface of the masonry. In the masonry and below the box there is a passage allowed to admit of the dropping of the bottom *b*, and the escape of the contents of the box. The blast from the bellows passes into the box A, and is admitted to the fire in a greater or less volume by adjusting the lower grate E, which is done through the medium of lever F, the two grates C, E, forming a register, the bars of one grate coinciding more or less with the other according as the lower grate is adjusted.

In case the fire becomes clogged or choked with ashes and cinders the upper circular grate C, is turned or vibrated to the right and left by actuating lever D, the ashes and cinders falling through the grates C, E, into the box from which they are removed by dropping the bottom *b*.

The device is extremely simple and efficient, may be constructed at a small cost, and does not involve a material expense in fitting it in the forge.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

The combination of the rotating circular grate C, with the horizontally sliding grate E, and levers D, F, as and for the purpose herein shown and described.

ALANSON ORDWAY.

Witnesses:

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