

R. JOBSON.

Fire Place.

No. 8,101.

Patented May 20, 1851.

Fig. 1.

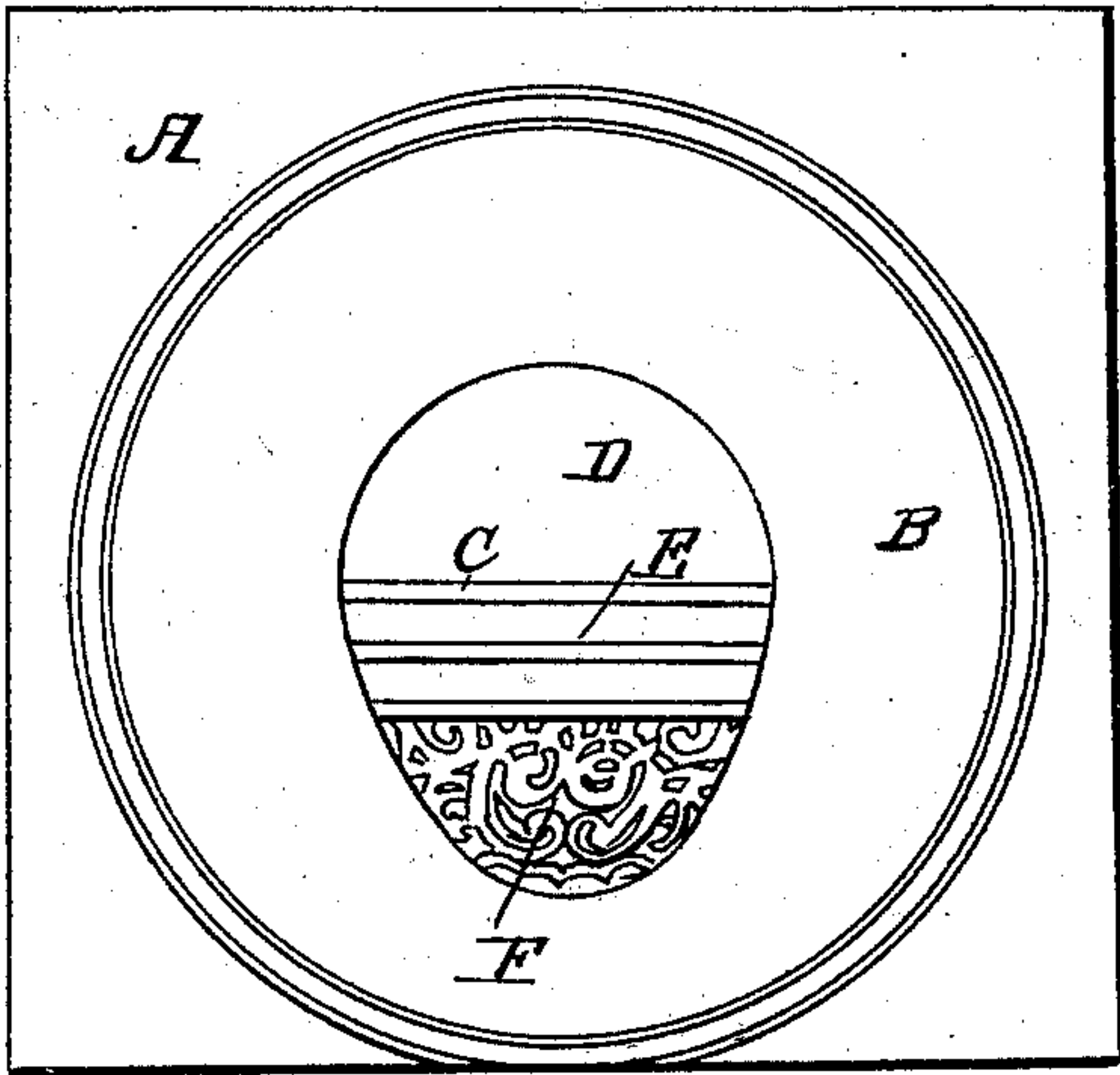


Fig. 2.

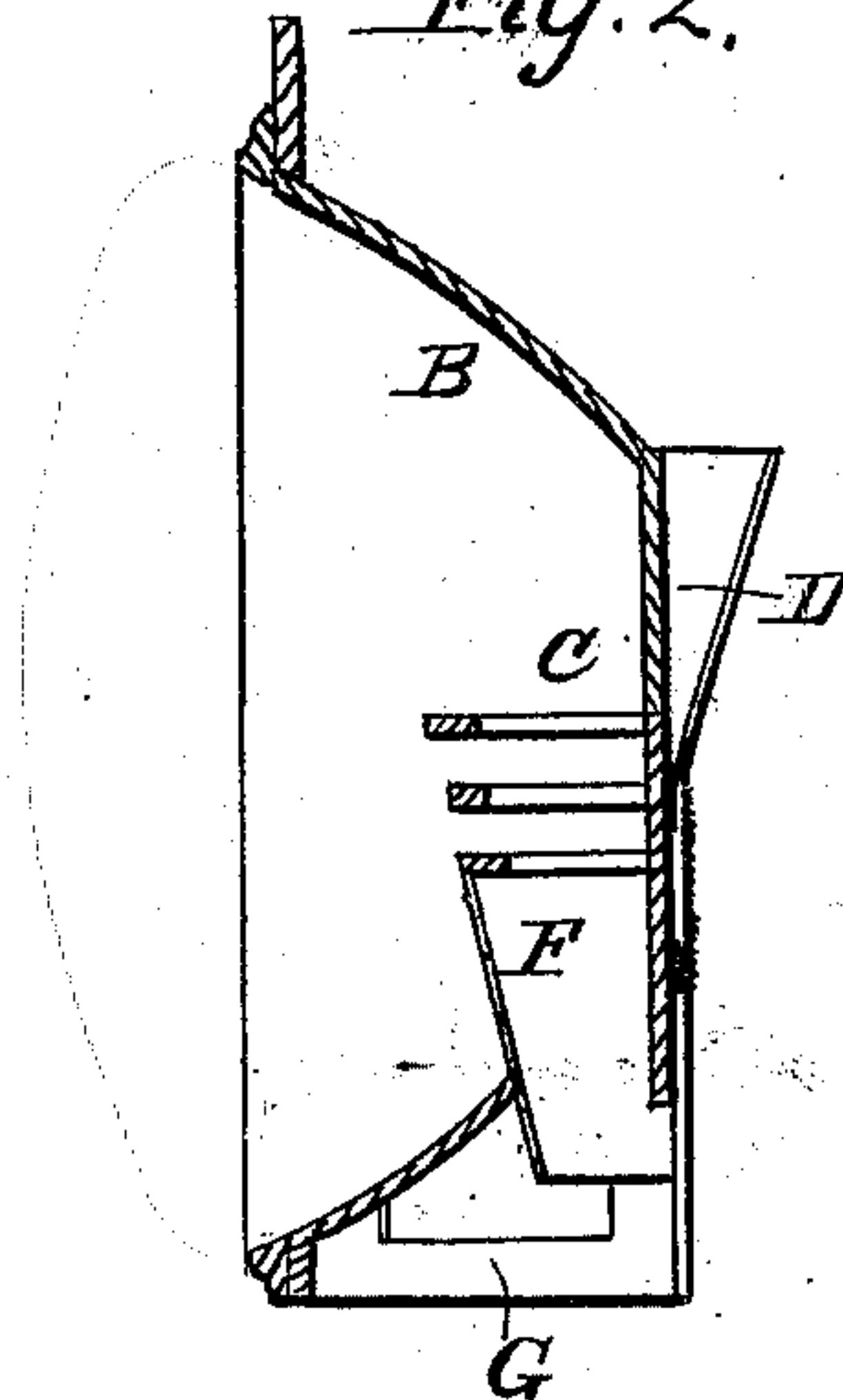


Fig. 3.

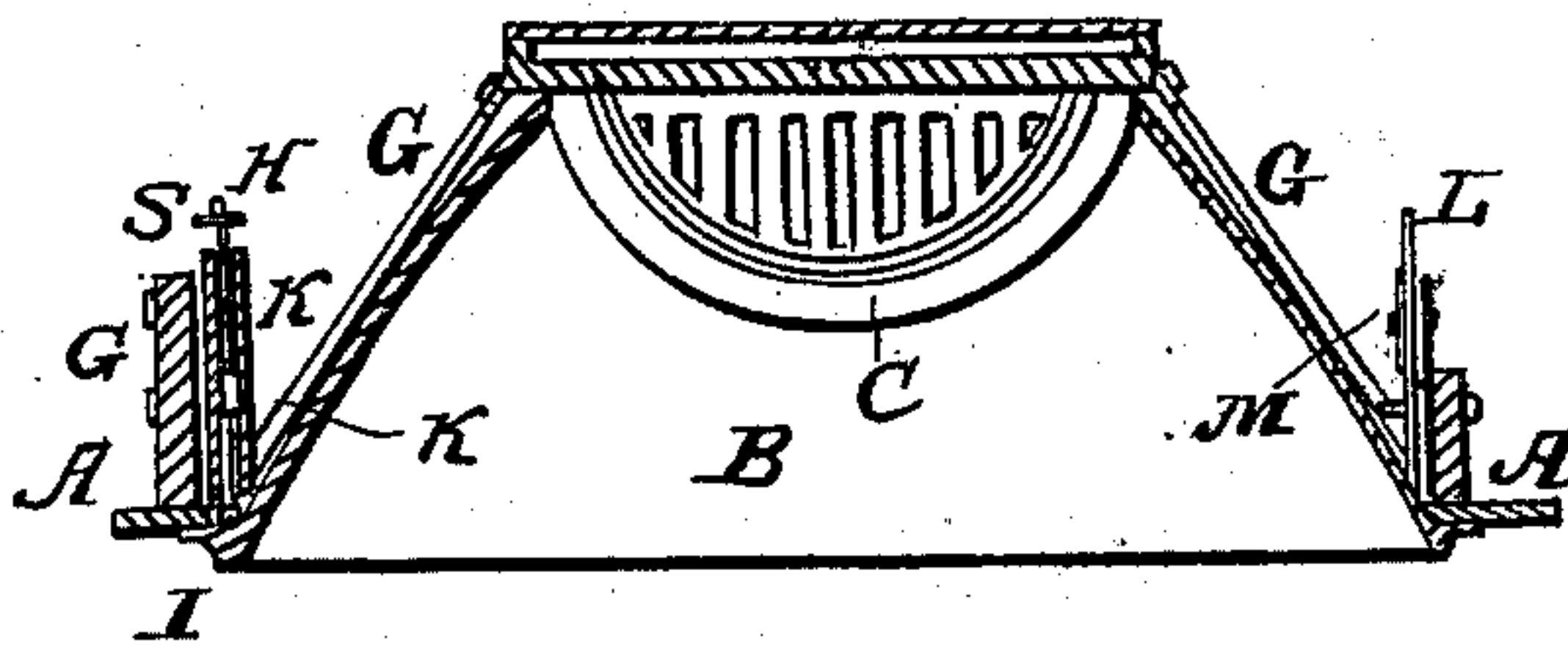


Fig. 4.

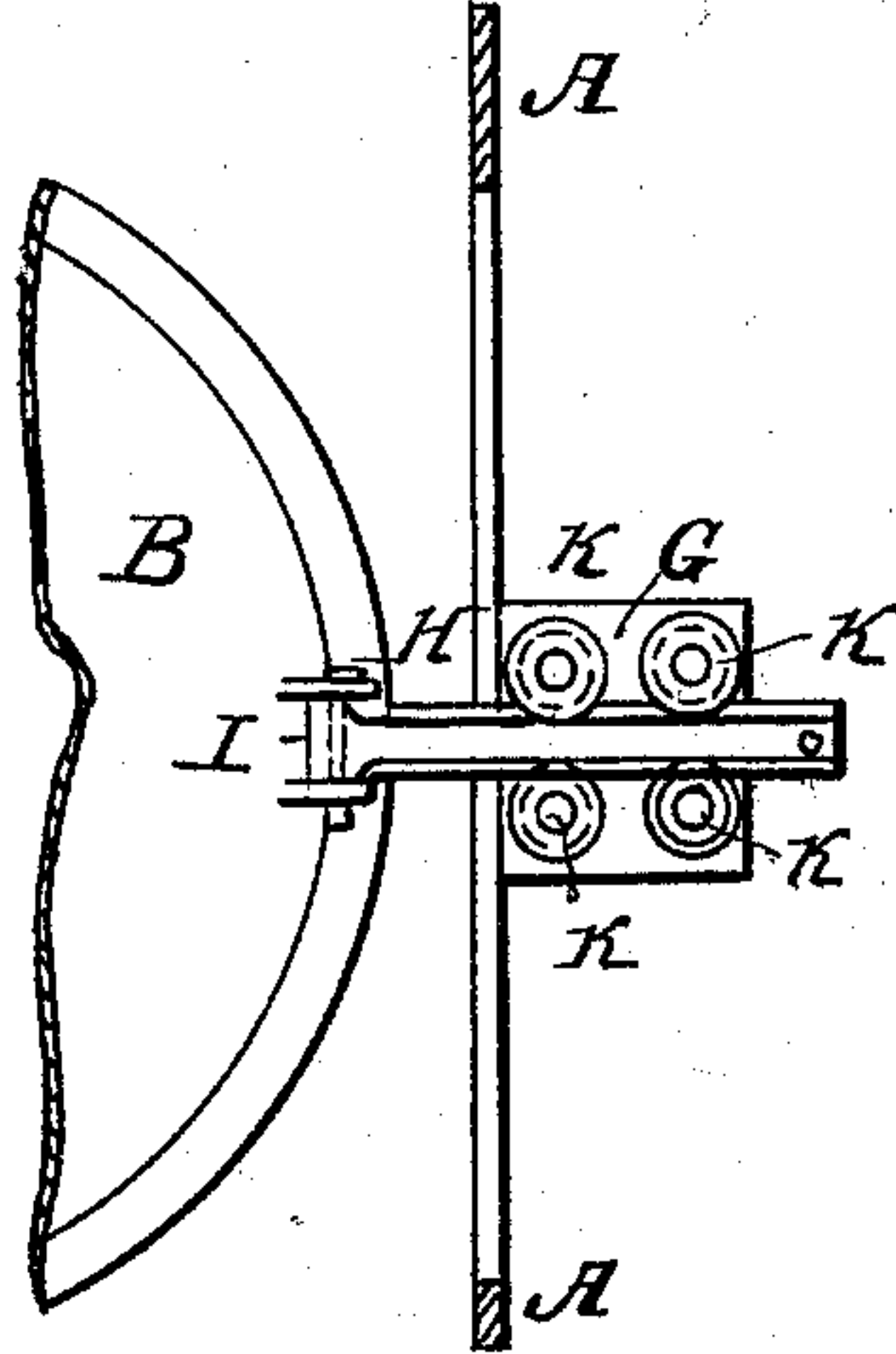
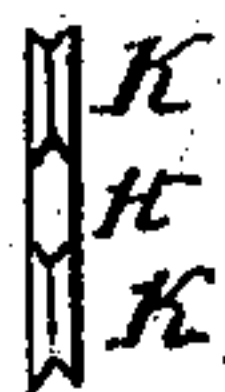


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT JOBSON, OF NEAR DUDLEY, ENGLAND.

REFLECTING-FIREPLACE.

Specification of Letters Patent No. 8,101, dated May 20, 1851.

To all whom it may concern:

Be it known that I, ROBERT JOBSON, of Holly Hall Works, near Dudley, in the county of Stafford, England, have invented
5 Improvements in Fireplaces for the Combustion of Coal or other Proper Fuel and for Warming Apartments; and I do hereby declare that the following is a full and exact description thereof, reference being had to
10 the accompanying drawings, which make a part of this specification.

My said invention consists principally of certain improvements in reflecting surfaces as applied to grates of fire places for the
15 purpose of reflecting the heat into apartments in which such grates may be placed and also for providing easy access to the chimney and preventing the escape of dust and ashes into the apartment.

20 Figure 1 of the drawings is a front view. Fig. 2 a vertical section and Fig. 3 a horizontal section of one of my improved stoves.

The same letters refer to similar parts in each figure.

25 A is a square plate of metal forming the front of the stove.

B is a circular metallic reflector surrounding the fire.

30 C is the grate for containing the fuel.

D is the register or damper.

E is the back of the grate.

F is a metal plate or ash guard perforated with apertures for admitting air under the fire. Its principal office is to prevent the
35 ashes and coals which may drop from the grate from falling upon the reflector.

G is a frame or skeleton connecting the front plate A with the back E. The grate C is supported by being screwed to the
40 back E.

H is a sliding plate to which the reflector is hinged at I. The slide H is supported and guided by four rollers K, K, K, K, turning in a frame fixed on the skeleton G and
45 better seen in Fig. 4 which shows a portion of the skeleton G the slide H, rollers K, K, K, K, hinge I and a portion of the back of the reflector B. Fig. 5 shows a section of the slide H together with two of the
50 rollers K, K.

Instead of allowing the ashes to fall through the grate on the hearth it is more convenient to place under the grate C an
55 ash box which may be made large enough to hold a considerable quantity of ashes and will consequently only require occasional

emptying. When it is to be emptied or when access to the chimney is required the reflector B is drawn forward until the stop S on the slide H meets the skeleton G. The
60 reflector is then swung around on the hinge I.

L is a bar or blade which is fixed to the reflector and is guided into its place by the roller M. A small pan may be placed under
65 the front edge of the reflector to receive any dust or coal which may fall on the reflector. Owing however to the reflector being notched out below the fire and having an
70 ash guard F applied to it and the front of the grate, the greater portion of the dust and ashes will fall into the ash box and by means of the ash guard be effectually prevented from entering the apartment in
75 which the stove is fixed.

When the stove is in use the fire appears completely surrounded by the reflector which thus throws out into the apartment nearly the whole of the radiant heat of the fire. The reflector being made of one piece
80 of cast iron completely surrounding the fire is much easier made than a reflector which only partially surrounds the fire or which is made in separate pieces because these pieces
85 are very apt to warp and become twisted and deformed while in the act of cooling after they are cast which is not the case with the reflector cast in one piece which completely surrounds the fire. I do not however
90 confine myself to the use of cast iron as the material of the reflector for wrought iron or steel or brass or other suitable material or materials may be employed.

The reflector shown in the drawing is a portion of a paraboloid the section being a
95 portion of a parabola. The sectional form may be varied and a portion of a sphere or a cone or hyperboloid or bell shaped figure may be employed. The form of the front view may also vary and instead of being
100 circular may be oval or rectangular. In place of hanging the reflector on a hinge it may be rendered movable by being supported on wheels or in any other convenient
105 manner.

Instead of making the whole of the reflector movable only a portion of the upper part over the fire may be made movable so as to form a door for obtaining access to the
110 chimney but the principal part of the reflector should still completely surround the fire when viewed in front and should be

formed of one piece of metal so that it may not be liable to warp in the casting which would be the case if it were completely cut through at any part. The lower part of this
5 fixed reflector should be notched as already described with regard to the movable reflector so as to embrace the ash guard. The ash box when used may be made shallow so as to enable it to be drawn out under the re-
10 flector which for this purpose may be fixed with its lower edge a few inches from the floor or hearth.

I do not claim as my invention a reflector made to partially surround the fire, but
15 what I claim as my improvement is—

The extension of the curved reflector entirely around the fire grate in combination with having an opening through it, immediately under the fire grate, for the passage of
20 the ashes as specified.

2. And in combination with the fire grate and the extension of the reflector under or below the grate essentially as explained, I claim the ash guard F, the same being applied in manner and for the purpose as 25 set forth.

3. And in combination with the reflector B and its sustaining frame, I claim the hinged slide H and the sustaining rollers K, K, K, K, or their mechanical equivalent; 30 the same being applied so as to enable the reflector to be moved outward for the purpose of providing easy access to the chimney or for convenience of removing the ashes whenever such may be deemed necessary.

ROBT. JOBSON.

Witnesses:

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