

(No Model.)

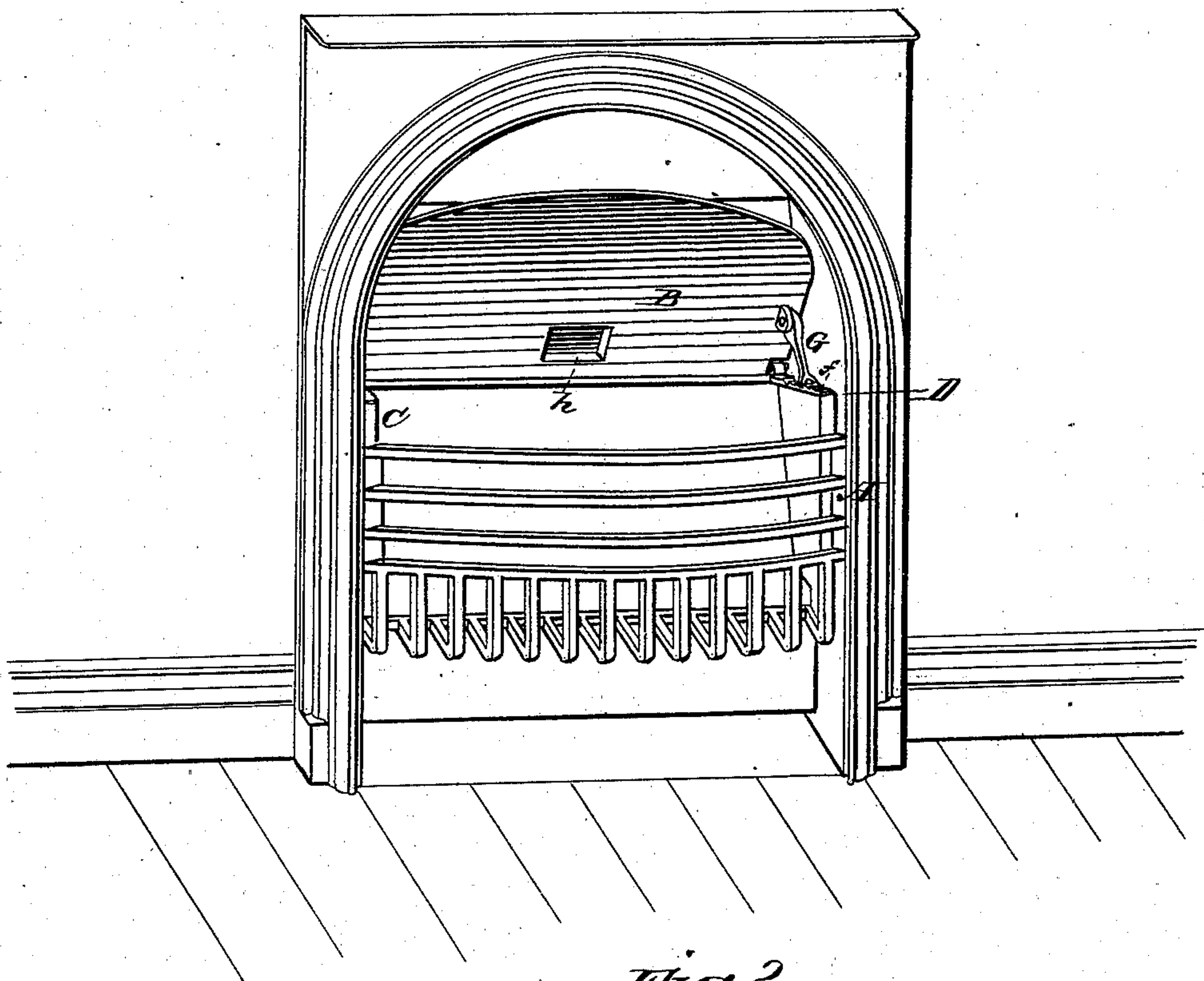
2 Sheets—Sheet 1.

J. SOUTHWARD.  
Heat Reflector.

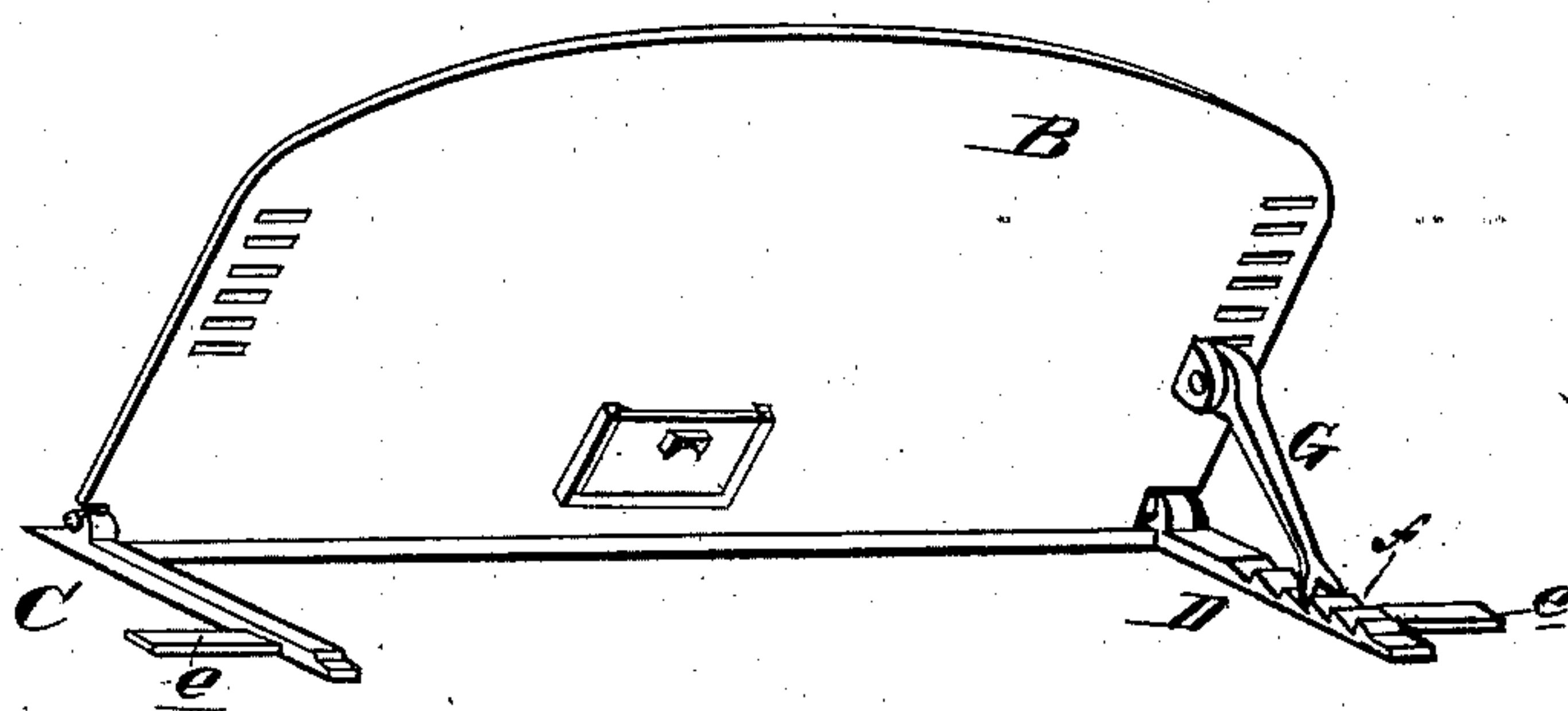
No. 239,873.

Patented April 5, 1881.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

*Francis McArthur,*  
*C. Sedgwick*

INVENTOR:

*J. Southward*  
BY *Mum Ho*  
ATTORNEYS.

(No Model.)

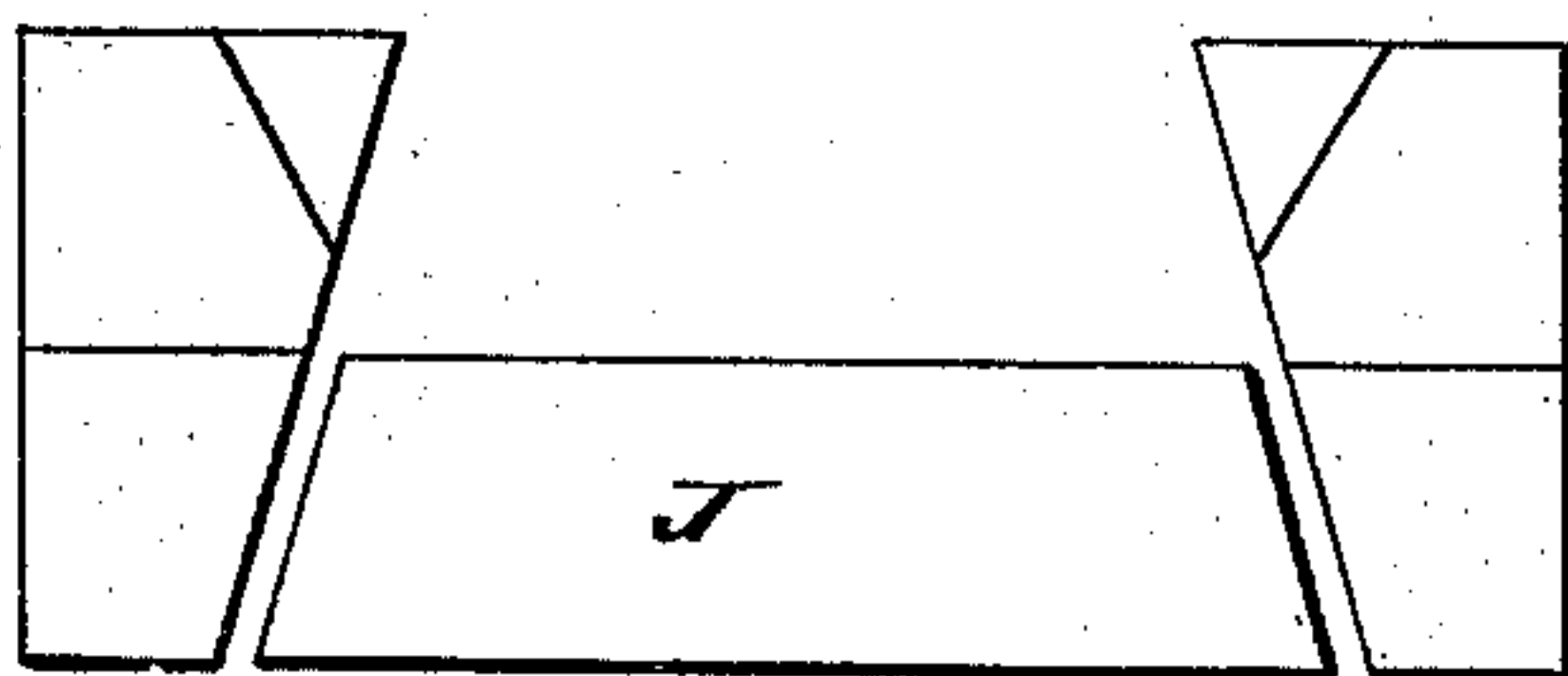
2 Sheets—Sheet 2.

J. SOUTHWARD.  
Heat Reflector.

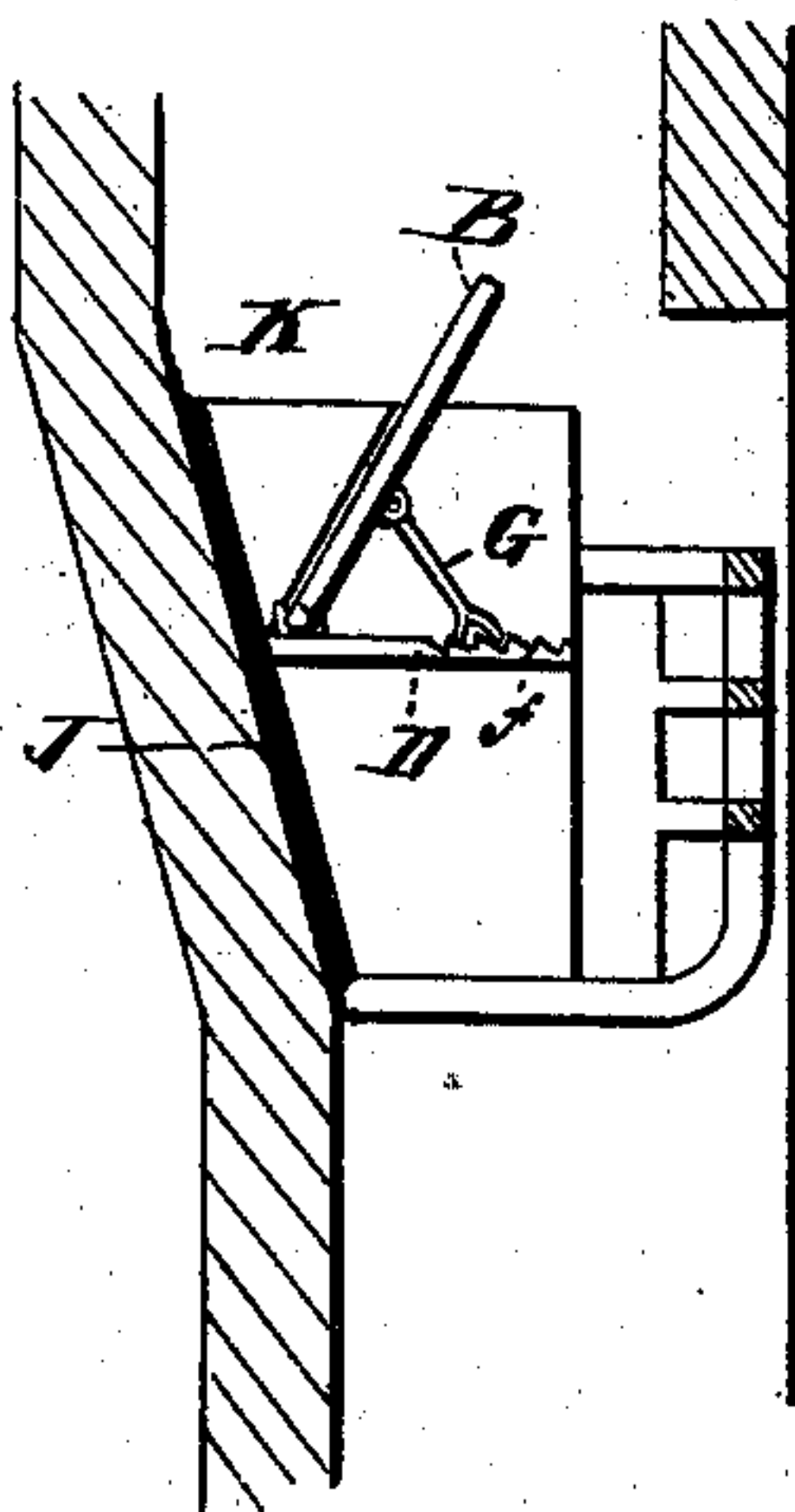
No. 239,873.

Patented April 5, 1881.

*Fig. 3.*



*Fig. 4.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN SOUTHWARD, OF MOUNT STERLING, OHIO.

## HEAT-REFLECTOR.

SPECIFICATION forming part of Letters Patent No. 239,873, dated April 5, 1881.

Application filed August 23, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN SOUTHWARD, of Mount Sterling, in the county of Madison and State of Ohio, have invented a new and useful  
5 Improvement in Heat-Reflectors, of which the following is a specification.

My invention relates to certain improvements on the invention for which Letters Patent No. 197,205 were granted to William J. Cox and to  
10 myself under date of November 20, 1877.

In the accompanying drawings, Figure 1 is a perspective view, showing the application of the invention to an open fire-grate. Fig. 2 is a perspective view of the invention itself. Fig.  
15 3 is a detail view, and Fig. 4 a sectional elevation.

Similar letters of reference indicate corresponding parts.

A represents a fire-place or open grate of  
20 any suitable description.

B represents my improved reflecting-plate, which is made with a plane smooth surface instead of corrugated, as in the patent above referred to. At the lower edge of the plate B  
25 it is hinged, at or near its ends, to two bars, C D, which rest upon the jambs of the fire-place. Each bar is provided with a lug, *e*, which extends into the brick-work of the fire-place, and thus holds the apparatus firmly in  
30 position. The bar D is provided with notches or serrations *f* on its upper surface, for engagement with the lower end of a prop consisting of a rod, G, the upper end of which is hinged to the plate B. By means of this prop the  
35 plate B may be held at different angles of inclination, so as to reflect the heat into the room in a similar manner to that described in the patent above referred to. The plate B is provided with an opening, *h*, to allow the smoke

and gases to escape up the chimney when the  
40 plate is lowered to a horizontal position, and said opening is provided with a slide for closing it when the plate B is raised.

In order to provide for the setting of this heat-reflector, the back of the fire-place is inclined backward instead of forward, as heretofore. The back of the fire-place consists of a  
45 tile, J, inclined at an angle of from thirty to forty-five degrees, as may be desired, and extending from one of the side jambs of the fire-  
50 place to the other, and to about an equal distance above and below the rear edge of the plate B, where it is hinged to the bars C and D, as before described. By this means a chamber, K, is formed behind the plate B, and be-  
55 tween it and the back tile, J, so that when the wind blows down the chimney the draft or current from the room will counteract the effect of the downward draft and prevent the smoke and gases from being driven into the  
60 room.

I am aware that reflectors adapted to be held at any desired angle are not broadly new; but

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

1. The combination, with the hinged reflector  
65 B, provided with the hinged rod G, of the bars C D, each provided with a lug, *e*, and the bar D, provided with the serrations *f* on its upper surface, substantially as and for the purpose  
70 set forth.

2. The reflector B, hinged to bars C D, provided with lugs *e*, as and for the purpose specified.

JOHN SOUTHWARD.

Witnesses:

G. W. SOUTHWARD,  
J. S. BUZICK.