

No. 624,185.

Patented May 2, 1899.

H. P. COPE.  
MEANS FOR REMOVING GRATES.

(Application filed Aug. 13, 1897.)

(No Model.)

2 Sheets—Sheet 1.

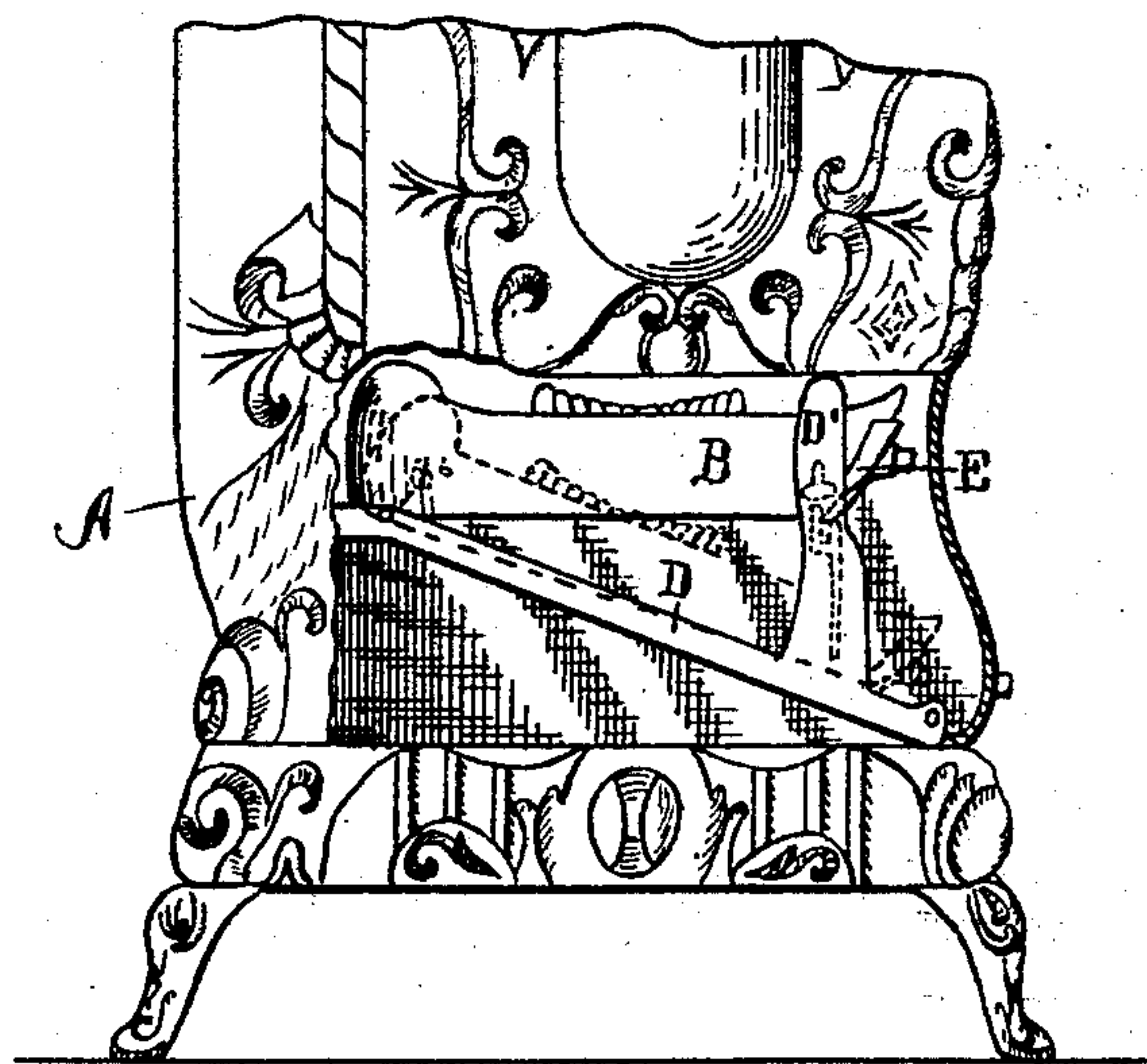


Fig. 1

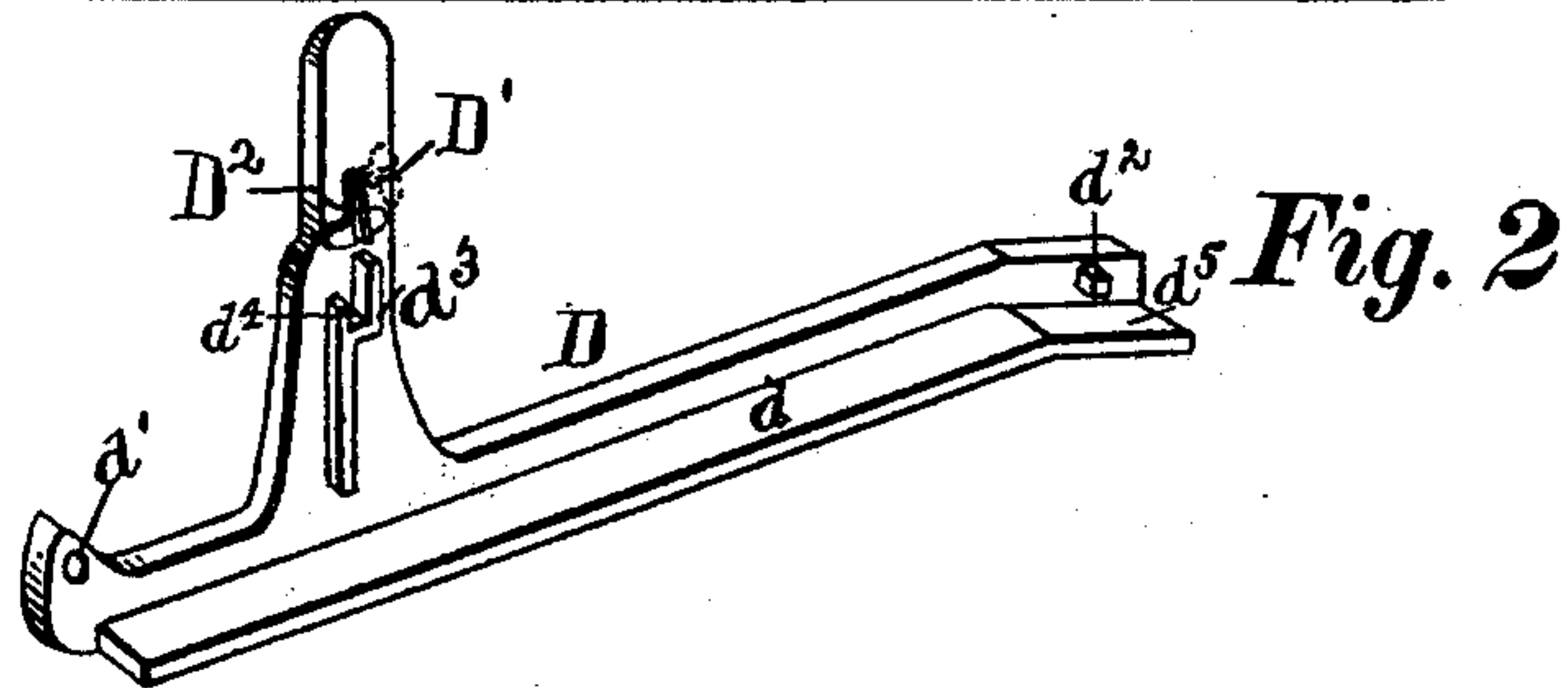


Fig. 2

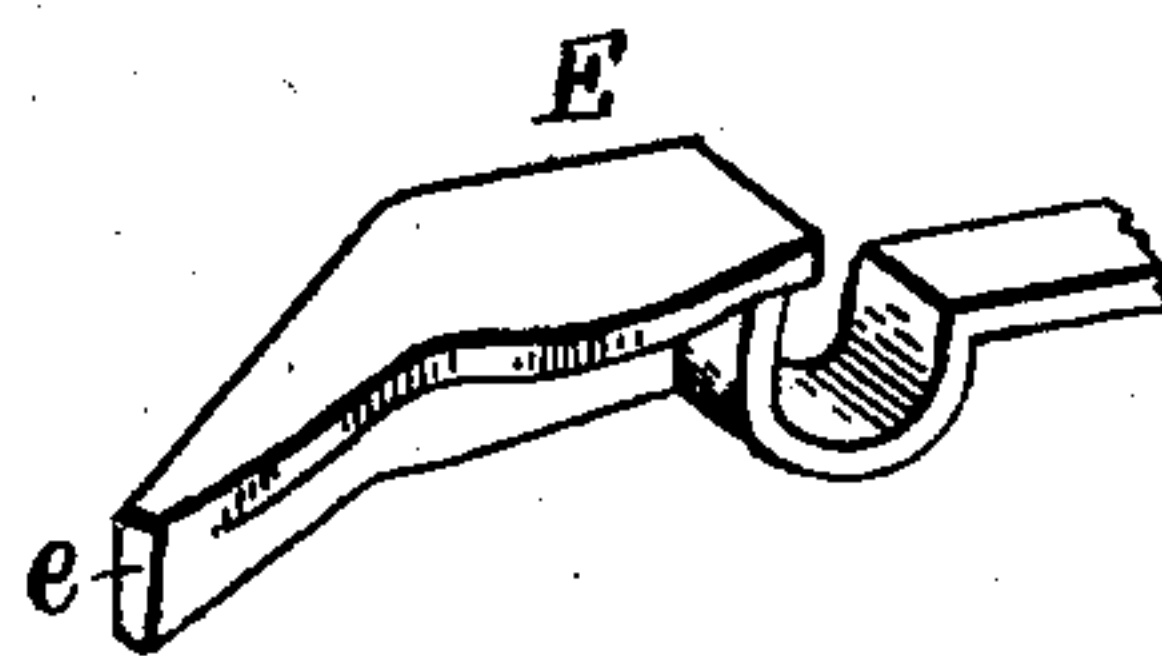


Fig. 3

WITNESSES

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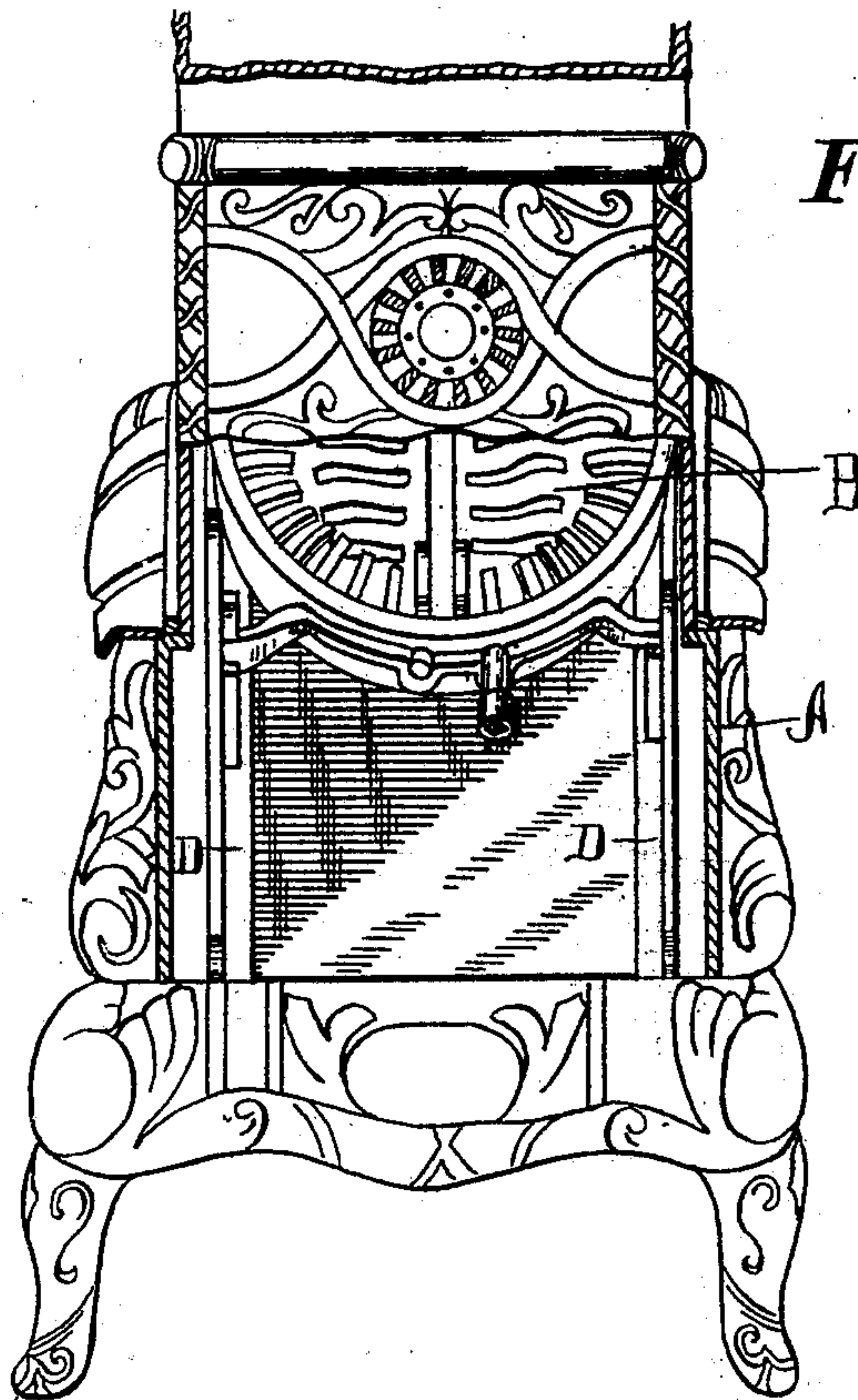


Fig. 4

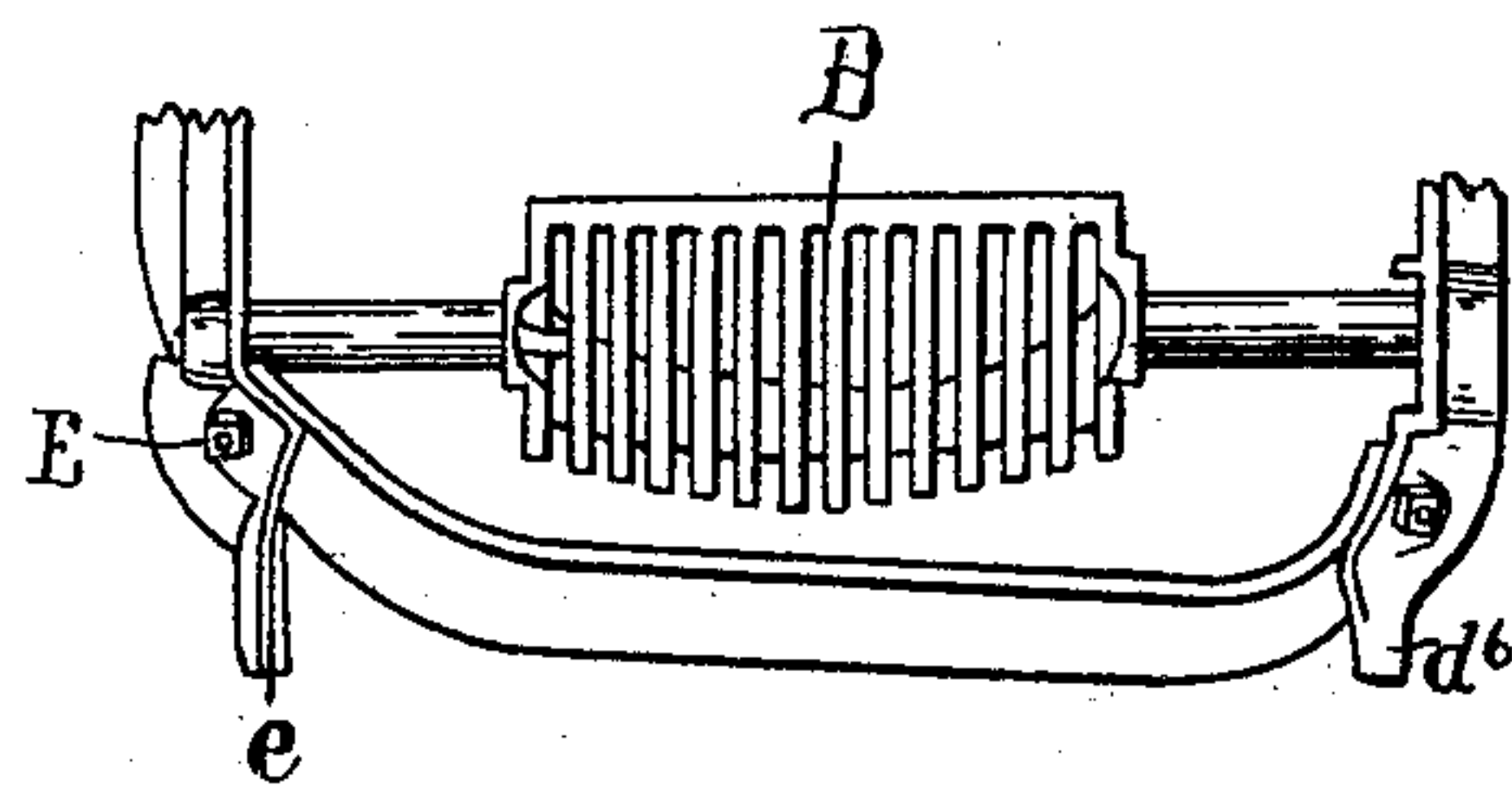


Fig. 5

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# UNITED STATES PATENT OFFICE.

HENRY P. COPE, OF DETROIT, MICHIGAN, ASSIGNOR TO THE PENINSULAR STOVE COMPANY, OF SAME PLACE.

## MEANS FOR REMOVING GRATES.

SPECIFICATION forming part of Letters Patent No. 624,185, dated May 2, 1899.

Application filed August 13, 1897. Serial No. 648,124. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY P. COPE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have  
5 invented a certain new and useful Improvement in Means for Removing Grates; and I declare the following to be a full, clear, and exact description of the invention, such as  
10 it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to stoves for heating, and more especially to facilities for the with-  
15 drawal of the grate therefrom; and it consists of means therefor and in the combinations and improvements hereinafter described and claimed.

In the drawings, Figure 1 is a side view of  
20 a stove containing my improvement with the side plate removed. Figs. 2 and 3 represent details. Fig. 4 is the front view of the interior of a stove, the front plate being removed, thus showing the grate in position  
25 and the means for readily permitting its removal. Fig. 5 represents the right-hand half of a portion of the grate, showing the portions engaging with the slides.

Similar letters refer to similar parts.

30 In the drawings, A represents the body of the stove containing the grate B, both of which may be of any suitable form or dimensions.

The stove shown is not a "base-burner"  
35 so called; but it will be obvious that the improvement is applicable to any form in which a grate is used.

In the ash-pit of the stove are placed two inclined slides D D of the substantial form  
40 shown in Fig. 2 and as shown fixed in position in Figs. 1 and 4. These slides are rights and lefts, and consist, essentially, of a ledge d, held in the inclined position in the ash-pit, preferably by suitable bolts at d' d<sup>2</sup>, al-  
45 though the ledges might be cast as part of the side plates. Projecting from the lower and front portion of the ledge is a bracket or standard D', carrying on its inner face a lug d<sup>3</sup>, having a notched or recessed portion d<sup>4</sup> on  
50 its upper face.

Projections E E on the grate, one of which

projections is shown in detail in Fig. 3, are adapted at their outer extremities e e to rest in the notches d<sup>4</sup> d<sup>4</sup> of the bracket when the grate is in the normal operative position. 55 On one or both of the brackets and hung over the notch d<sup>4</sup> is a button D<sup>2</sup>, which is pivoted in the bracket at its upper portion and is adapted to swing in the dotted position, but to return to the indicated position over the 60 notch d<sup>4</sup> by gravity. This serves to prevent the projection E from being accidentally displaced when in position in the notch d<sup>4</sup>. The inner ends of the ledges d d are angled at d<sup>5</sup>, so that that position when the slides are in 65 place is substantially horizontal, and the notch d<sup>4</sup> and the level portion of the slides d<sup>4</sup> form a horizontal rest for the grate when in place, substantially as shown in Fig. 1.

The rear portion of the grate at d<sup>6</sup> is adapt- 70 ed to rest on the ledges and slide down the same when the front portion is lifted out of the notches d<sup>3</sup> d<sup>3</sup> and the grate is drawn forward. A lug d<sup>6</sup> is shown on this portion of the grate in Fig. 5.

The mode of operation is to push the swing- 75 ing button D<sup>2</sup> from over the lug E, lift the front of the grate out of the notches, and draw it forward, when the rear portion slides down the ledges, as stated. 80

The dotted position in Fig. 1 shows the grate ready to be drawn out, when it can then be readily drawn out from the stove. To re- 85 place it, place the rear lugs d<sup>6</sup> on the ledges D D and slide the grate back. Then raise it and place the lugs e e over and in the notches d<sup>4</sup>, when the button D<sup>2</sup> will swing forward, holding it in position.

It is obvious that the form and mechanical details can be considerably varied without 90 departing from my invention.

What I claim is—

1. In a stove, the combination with ledges inclined from the front upwardly toward the rear of the ash-pit, of a grate provided with 95 portions at or near the rear thereof to engage slidably on said ledges, supporting-brackets for the front of the grate, and portions on the grate removably engaging said brackets for supporting the grate in substantially horizon- 100 tal position, substantially as described.

2. In a stove, the combination with ledges

inclined from the front upwardly toward the rear in the ash-pit, and supporting-brackets for the front of the grate, of a grate provided at or near its rear with lugs adapted to slidably engage on said ledges and at or near its front with projections adapted to removably engage in holding-notches in said supporting-brackets to support the grate in substantially horizontal position, substantially as described.

10 3. In a stove, the combination with ledges inclined from the front upwardly toward the rear in the ash-pit, and supporting-brackets each near the front of the ash-pit provided in their upper portions with notches, a grate provided with laterally-extending lugs at or near 15 its rear adapted to slidably engage on said ledge and provided at or near its front with projections adapted to removably seat in said notches in the supporting-brackets, and means to prevent accidental displacement of 20 said projections from said notches, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

HENRY P. COPE.

Witnesses:  
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VIRGINIA M. CLOUGH.