

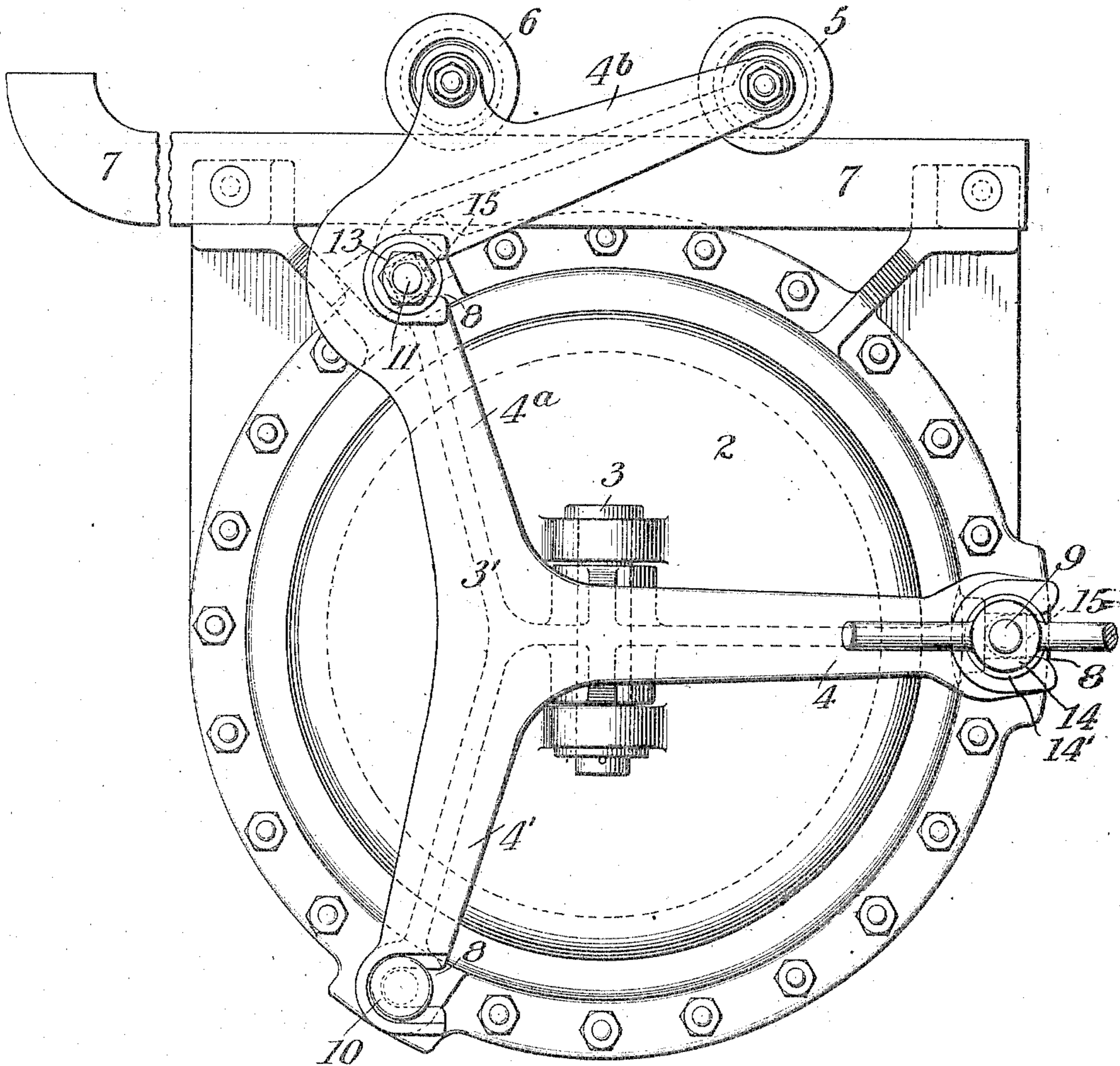
No. 817,070

PATENTED APR. 3, 1906.

J. KENNEDY.  
DOOR FOR HOT BLAST STOVES AND FURNACES.  
APPLICATION FILED FEB. 1, 1905.

3 SHEETS—SHEET 1.

*Fig. 1.*



WITNESSES

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*Warren W. Swartz*

INVENTOR

*Julian Kennedy*  
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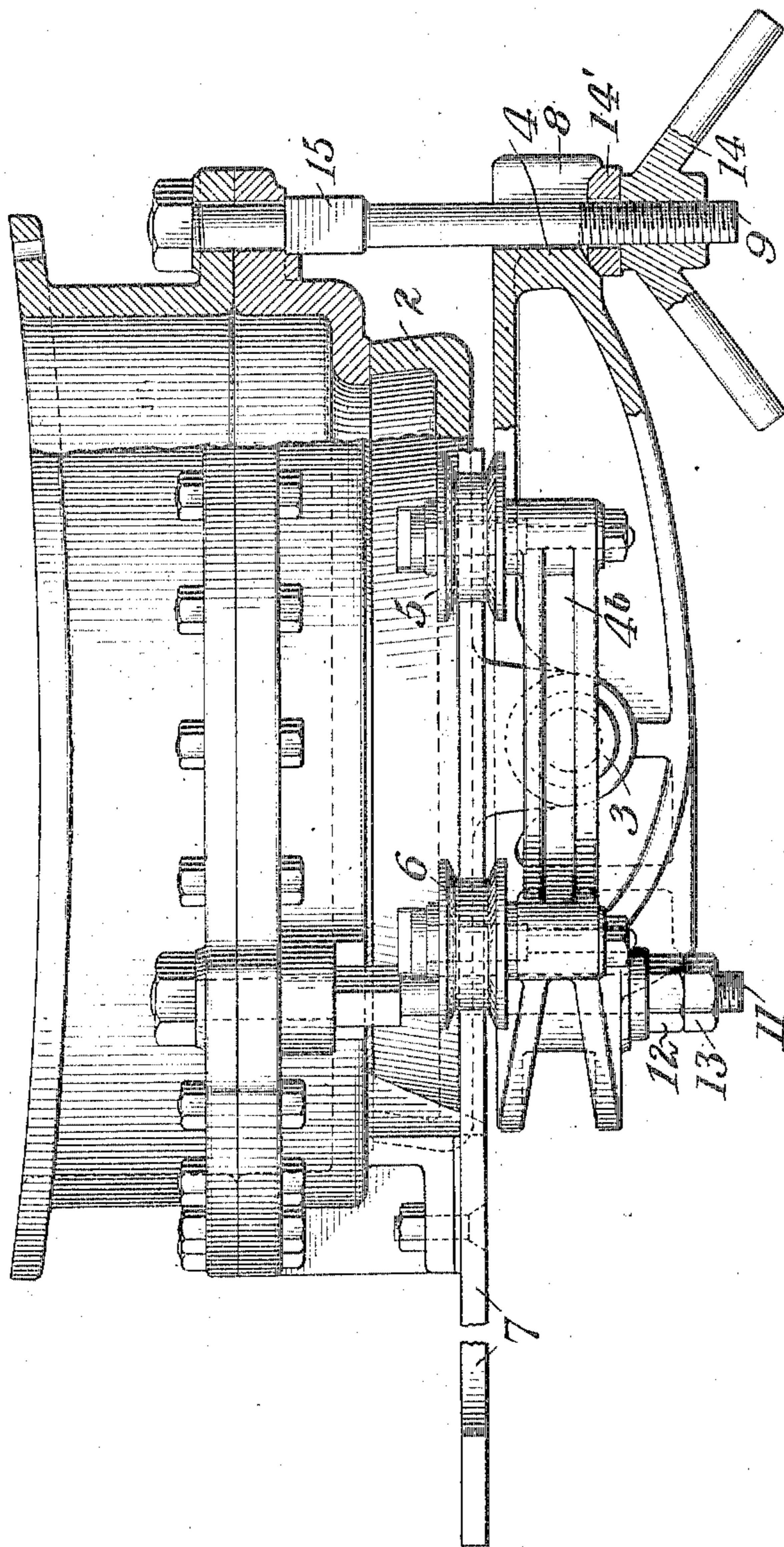
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3 SHEETS—SHEET 2.

Fig. 2.



WITNESSES

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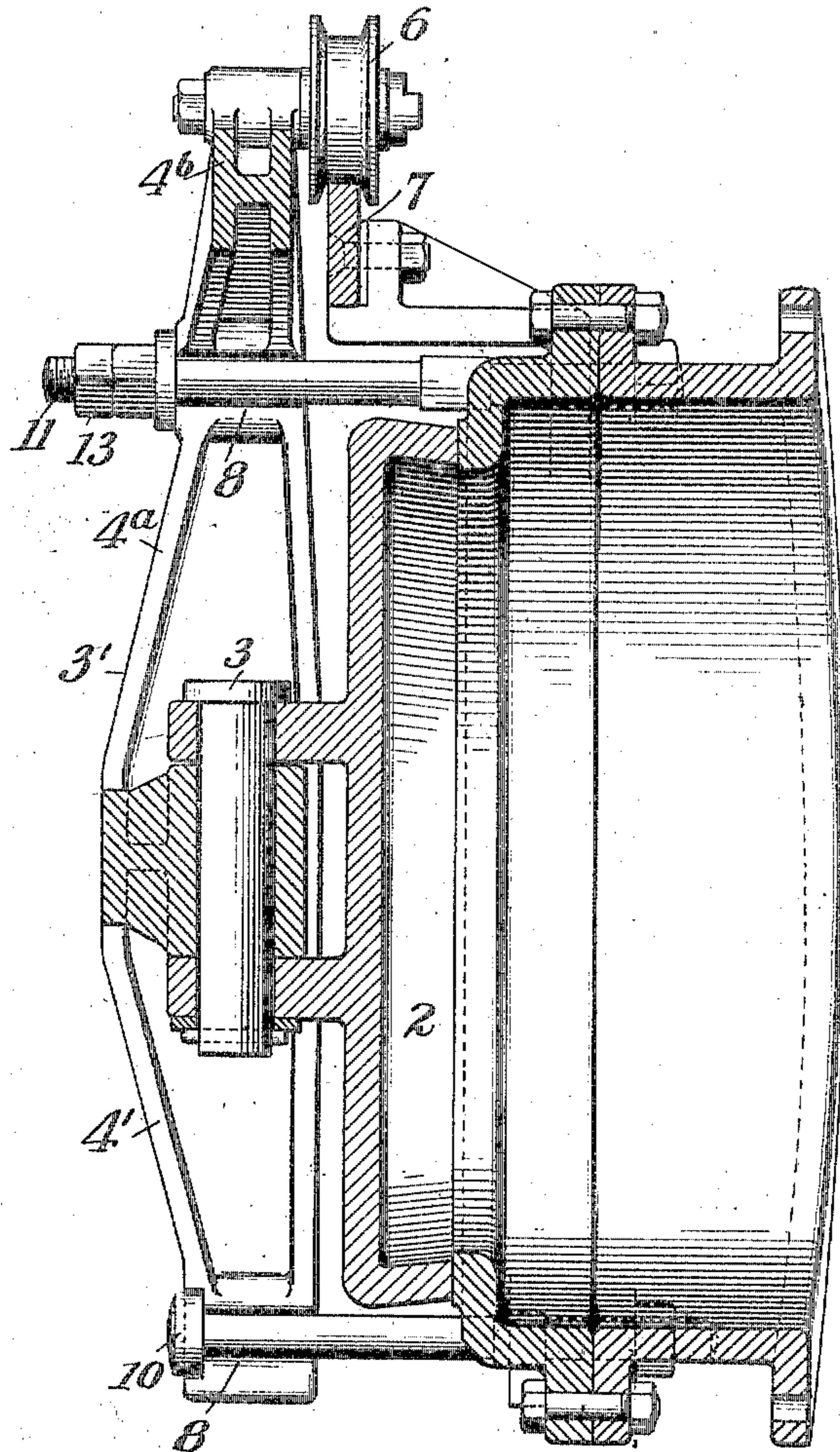
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3 SHEETS—SHEET 3.

*Fig. 3.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

JULIAN KENNEDY, OF PITTSBURG, PENNSYLVANIA.

## DOOR FOR HOT-BLAST STOVES AND FURNACES.

No. 817,070.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed February 1, 1905. Serial No. 243,673.

*To all whom it may concern:*

Be it known that I, JULIAN KENNEDY, of Pittsburgh, Allegheny county, Pennsylvania, have invented a new and useful Improvement in Doors for Hot-Blast Stoves and Furnaces, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of a furnace-door constructed in accordance with my invention. Fig. 2 is a top plan view showing the door partly in section, and Fig. 3 is a vertical central section.

The purpose of my invention is to provide a door for hot-blast stoves and furnaces which is adapted to be easily opened and closed and which when in place will fit tightly. My improvement is of importance because of the efficiency with which the door performs its functions and the ease with which it can be operated.

In the drawings, 2 represents the furnace-door, which is preferably made circular in outline and is hinged by a pivot-pin 3 to a carrier-frame 3', which preferably comprises arms 4, 4', 4<sup>a</sup>, and 4<sup>b</sup>. The arm 4<sup>b</sup> carries rollers 5 6, which run upon a track 7, consisting, preferably, of a steel bar which extends adjacent to the furnace-opening which is to be closed. The arms 4, 4', and 4<sup>a</sup> are provided with open slots or sockets 8, which open in the same direction and when the door is closed are adapted to fit bolts 9, 10, and 11. These project outwardly from the furnace-casing and are provided with nuts 12, 13, and 14, which when the door is in place are on the exterior of the door and bear against the same. These bolts 9, 10, and 11 have squared portions 15, which fit against flat shoulders in the door-frame, and thus hold the bolts from turning. When it is desired to close the door, the frame is moved on the track 7, so as to bring the sockets at the ends of the arms 4 4' 4<sup>a</sup> into connection with their respective bolts, and the nut 14 is then turned on its bolt, so as to press the frame inwardly and to force the door tightly against its seat. When the door is to be opened, this nut is loosened, so as to free the arms 4 4' 4<sup>a</sup> from engagement therewith, and the frame

carrying the door can then be moved on the track 7, so as to expose the opening. The purpose of the hinge 3 is to give the door flexibility, so that it can always be brought firmly to its seat.

The nut 14 is provided with a washer 14', which is made tapering on its inner surface to engage a correspondingly-tapered socket in the arm 4, so that when the nut is screwed firmly against the arm it will automatically center itself in the proper position.

The ease with which the door can be freed and moved and the closeness with which it fits and seals the door-opening constitute advantages of the invention.

The form of the invention may be modified in many ways without departure from the definition thereof, which is given in the claims, since

What I claim is—

1. A furnace-door having a sliding frame, said frame being flexibly connected to the door substantially at its center, said flexible connection constituting a pivotal support; substantially as described.

2. A furnace-door having a sliding frame, said frame having open sockets to receive fastening devices by which the door is pressed to its seat; substantially as described.

3. A furnace-door having a frame to which it is hinged, said frame being mounted on movable bearings and having open slots to receive fastening devices; substantially as described.

4. A furnace-door having a frame to which it is hinged, said frame being mounted on rollers on a track, and means acting directly on the frame to indirectly press the door to its seat; substantially as described.

5. A furnace-door having a sliding frame to which the door is flexibly connected, and a bolt projecting from the furnace-casing for securing the door, said bolt provided with a nut having a tapering seat in the frame; substantially as described.

In testimony whereof I have hereunto set my hand.

JULIAN KENNEDY.

Witnesses:

H. M. CORWIN,  
JOHN MILLER.