

A. S. ROBERTS.

GRATE.

APPLICATION FILED DEC. 7, 1907.

916,022.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

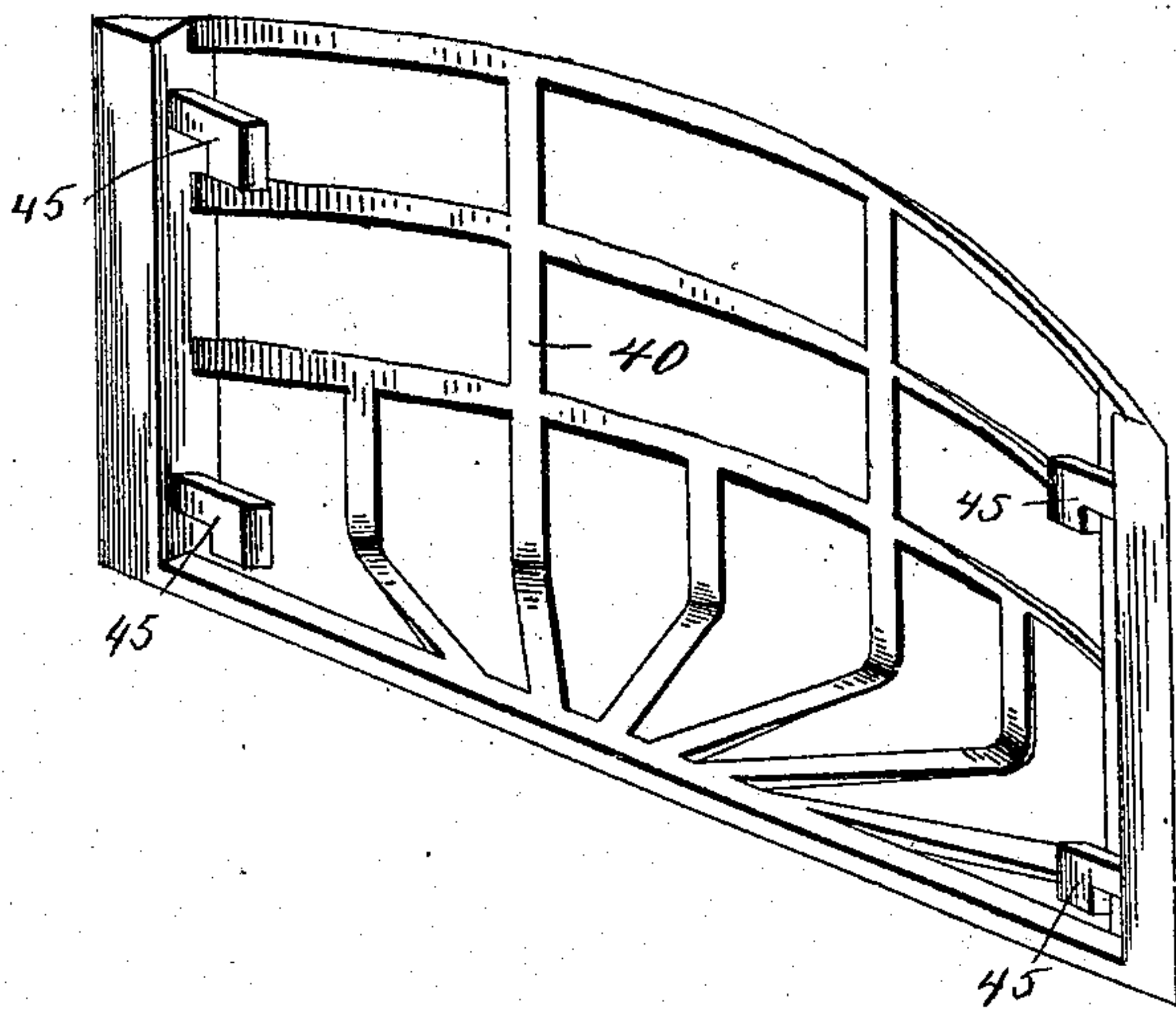
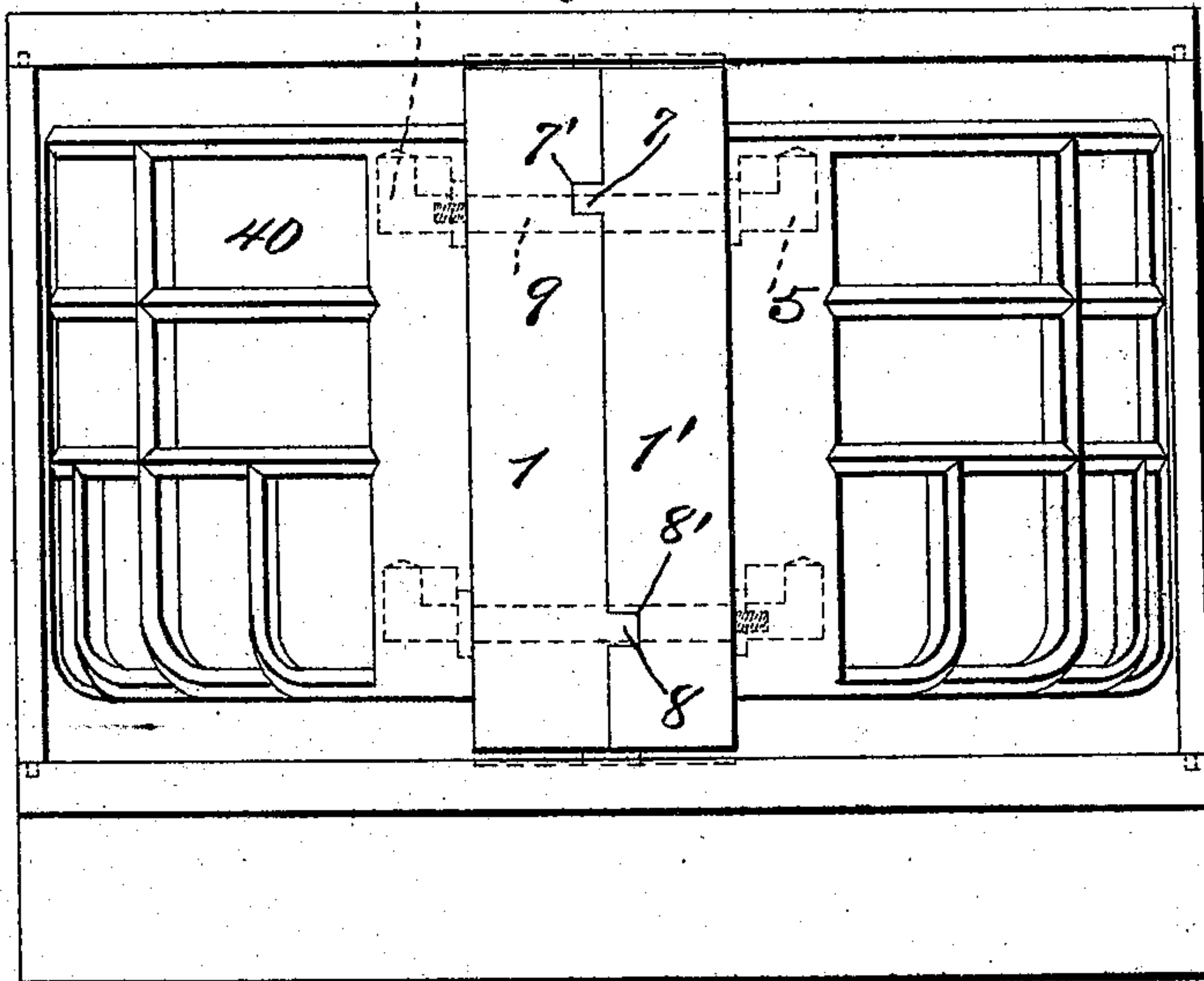


Fig. 2.



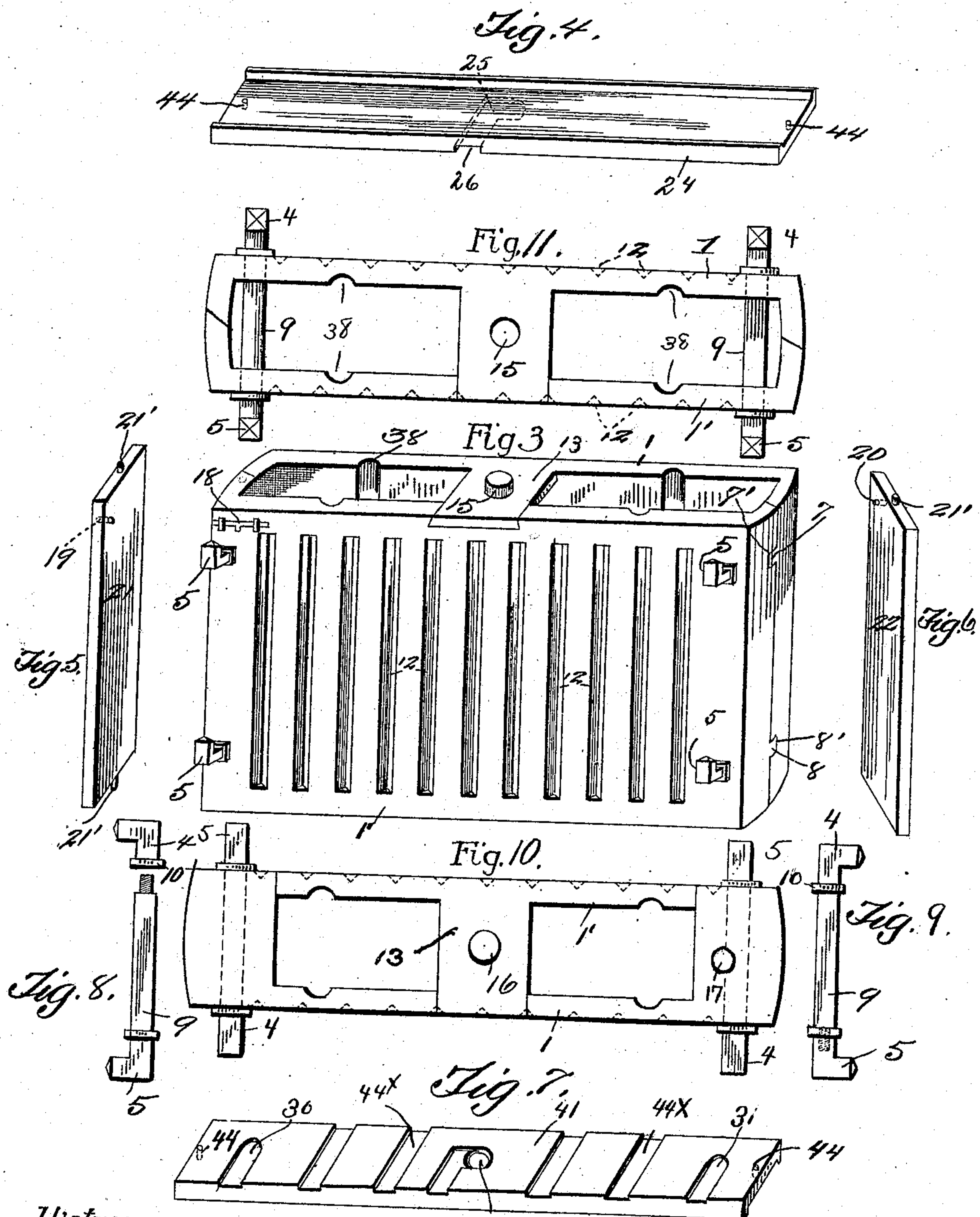
Witnesses
Arthur D. Ryan;
William H. Mason.

Inventor
Arthur S. Roberts

916,022.

A. S. ROBERTS.
GRATE.
APPLICATION FILED DEC. 7, 1907.

Patented Mar. 23, 1909.
2 SHEETS—SHEET 2.



Witnesses.
Arthur D. Ryno.
William H. Mason

Inventor.
Arthur S. Roberts

UNITED STATES PATENT OFFICE.

ARTHUR S. ROBERTS, OF KNOXVILLE, TENNESSEE.

GRATE.

No. 916,022.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed December 7, 1907. Serial No. 405,579.

To all whom it may concern:

Be it known that I, ARTHUR S. ROBERTS, citizen of the United States, residing at Knoxville, in the county of Knox, State of Tennessee, have invented certain new, useful, and economical Improvements in Grates, and do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in revolving hollow grate backs adapted to support grate baskets on one side or the other thereof and designed for use in suitable frames in openings in partition walls between two rooms and so arranged that a fire in one grate basket may be made to heat one or the other of the rooms by swinging the hollow grate back upon pivots.

More specifically, the invention comprises a revolving hollow grate back made up of two co-acting U-shaped plates which are fastened together and provided with hooks upon which the grate basket may be supported.

The invention comprises various details of construction, combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—Figure 1 is a perspective view of one of the grate baskets. Fig. 2 is an end view of the hollow grate back showing baskets hung on the opposite sides thereof. Fig. 3 is a detail perspective view of the hollow grate back, showing the manner in which the two angled plates are fastened together. Fig. 4 is a detailed view of the top of a casing or frame adapted to be positioned in an opening in the partition wall and in which frame the hollow grate back is mounted. Fig. 5 is a detail perspective view of one of the sides of the frame. Fig. 6 is a similar view of the opposite side of the frame. Fig. 7 is a detail perspective view of the bottom of the frame. Fig. 8 is a detail view of one of the fastening devices for holding the two U-shaped co-acting plates forming the hollow grate back together. Fig. 9 is a similar view to Fig. 8 showing the two hooks fastened together. Fig. 10 is a bottom plan view of the hollow grate back, and Fig. 11 is a top plan view of the grate back.

Reference now being had to the details of the drawings by numeral, 1 and 1' designate respectively two U-shaped co-acting plates

forming a hollow grate back, one of said plates, designated by numeral 1, being provided with a lug 7 at each end adapted to engage a recess 7' in the angled end of the plate section 1' and a lug 8, integral with the plate 1', engages a similar recess 8' formed in the angled end of the plate 1. Projecting from the top of the plate 1 and from the bottom of the plate 1' are the integral bars 13, the bar upon said plate 1 having dovetail connection with the upper edge of the plate 1', while the bar 13 upon the lower edge or bottom of the plate 1' has similar dovetail connection with the bottom of the plate 1. Bolts 9 are passed through said plates and each bolt has a threaded end adapted to engage a nut 10 having a hook end 4, a detail of which is shown in Fig. 8 of the drawings. Each bolt has a hooked end 5 and each of the hooks 4 and 5 is adapted for the reception of hooks 45 upon a basket 40. Said plates are preferably U-shaped and have vertical slots 12 formed in the outer faces thereof and entirely below said plates is the bottom 41 of a frame which has an angled recess 29 formed in the upper face thereof, the inner end of which recess ends in an aperture 28 which forms a bearing for the lug 16 upon the bottom of the plate 1'.

Immediately above the hollow grate back and supported upon the sides 21 and 22 respectively of the frame is the top 24 of the frame, shown clearly in Fig. 4 of the drawings. Each end of the sides 21 and 22 respectively has a lug 21' adapted to engage the holes 44 in the top 24 and bottom 41, which latter is also provided with an angled recess 26 in the under surface thereof, the inner end of which recess in the top terminates in an offset 25, which recess and offset are provided for the reception of a pivot 15 upon a projection 13 of the plate 1. When the two U-shaped plates are fastened together in the manner shown in Fig. 3 of the drawings and mounted between the top and bottom of the frame, the basket may be hung upon the hooks 4 or 5. A slip bolt 18, shown in Fig. 3 of the drawings, is mounted upon the plate 1' and is adapted to engage an aperture 19 or 20 in either side 21 or 22 accordingly as the hollow grate back is swung in one direction or the other and provided for the purpose of holding said hollow grate back stationary. It will be noted that the upper surface of the bottom 41 of the frame is channeled as at 44^x, affording means for allowing cool air to enter

through said channels designed to communicate with channels 38 formed in the inner faces of the plates 1 and 1'.

In order to limit the pivotal movement of the hollow grate back, a stop 17, shown in Fig. 10, is provided which projects from one of the grate sections and is adapted to engage one or the other of the recesses 30 or 31 and, as said stop comes in contact with the end wall of either recess 30 or 31, the movement of the hollow grate back in one direction or the other will be limited.

In operation, when it is desired to rotate the hollow grate back, the slip bolt is released from one or the other of the apertures 19 or 20 and thus allowing the back to swing so that a basket may be made to project into one room or another or, if desired, the basket may be hung upon either side of the hollow grate back in the manner shown in Fig. 2 of the drawings.

What I claim to be new is:—

1. In combination with a frame adapted to be positioned in an opening in a partition wall, a hollow grate back made up of two co-acting U-shaped plates each having a recess therein, each plate having a laterally projecting portion adapted to have dove-tail connection with the other plate in one of said recesses, a lug upon each of said projections, the top and bottom of the frame having re-

cesses formed therein with an offset at the end of each recess in which said lugs have bearings, hooks projecting from the outer faces of said plates, and baskets hung upon said hooks, as set forth.

2. In combination with a frame adapted to be positioned in an opening in a partition wall, a hollow grate back made up of two co-acting U-shaped plates each having a recess therein, each plate having a laterally projecting portion adapted to have dove-tail connection with the other plate in one of said recesses, a lug upon each of said projections, the top and bottom of the frame having recesses formed therein with an offset at the end of each recess in which said lugs have bearings, hooks projecting from the outer faces of said plates, baskets hung upon said hooks, the bottom of the frame having recesses adjacent to the ends thereof, a stop upon the hollow grate back adapted to swing into one or the other of said oppositely opening recesses and designed to contact with the inner walls of the recesses to limit the rotary movement of the grate back, as set forth.

In testimony whereof, I affix my signature in presence of these witnesses.

ARTHUR S. ROBERTS.

Witnesses:

HARRY WHITEHOUSE,
JOHN L. SONNER.