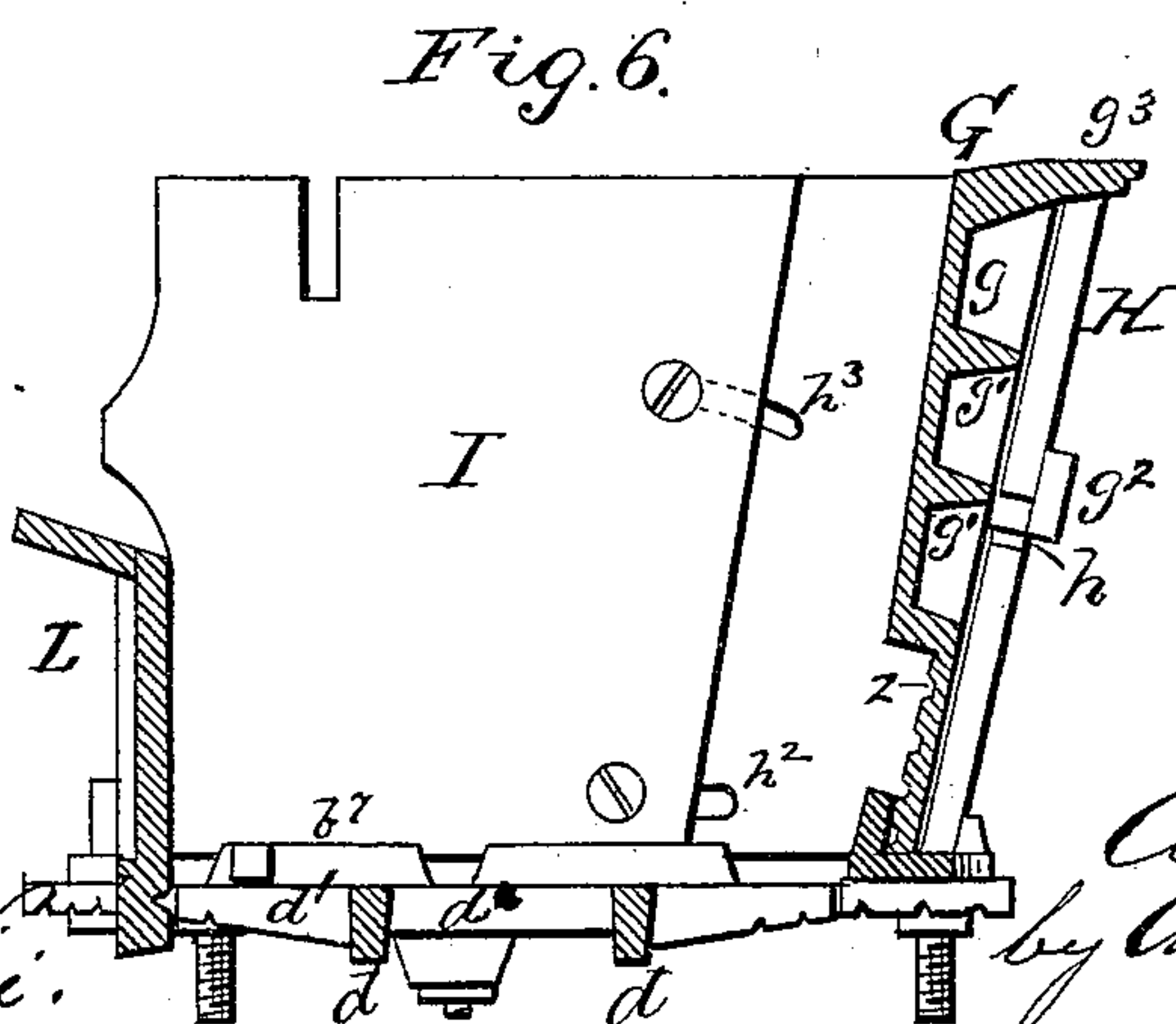
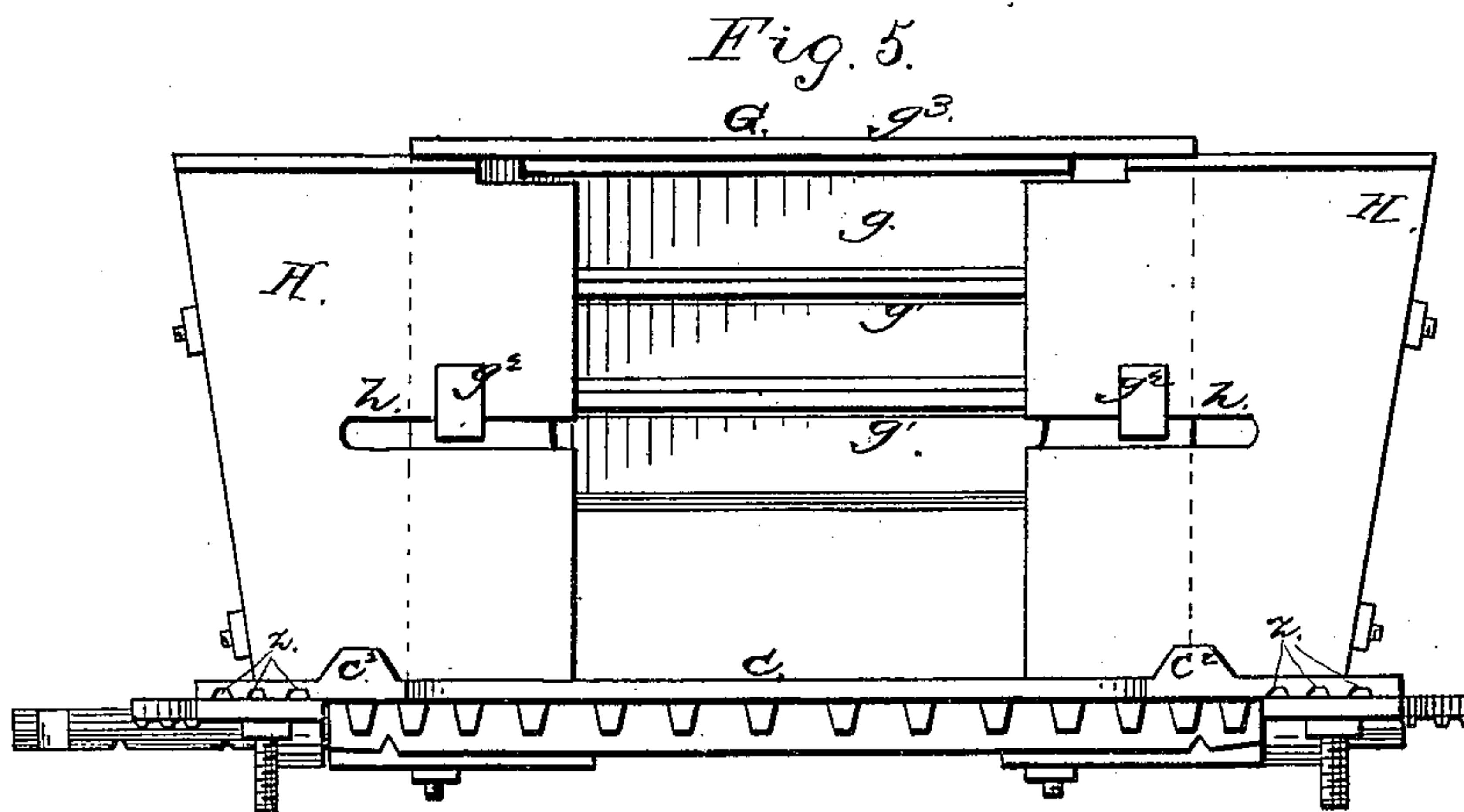
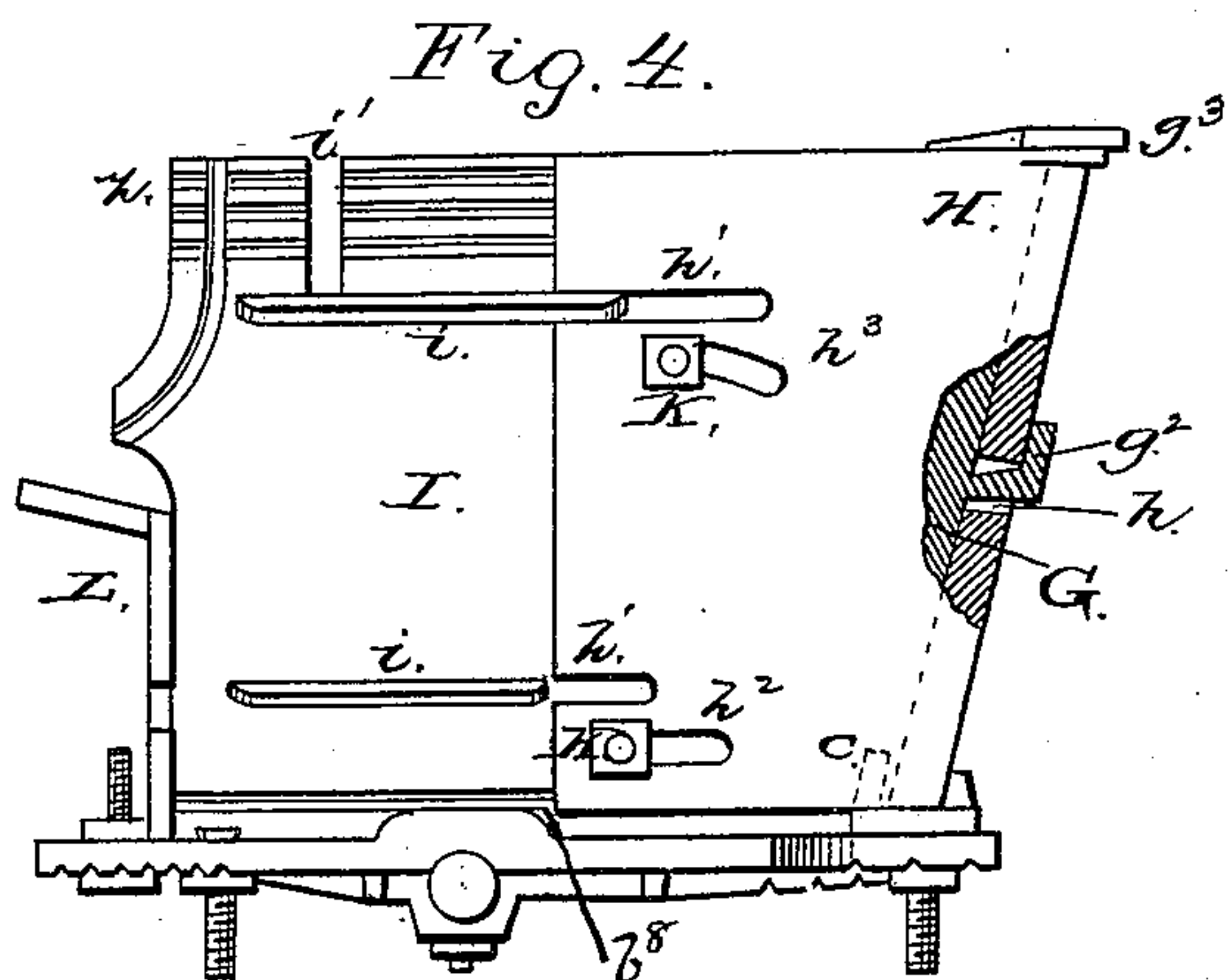


A. S. NEWBY.

LINING FOR FIRE BOXES OF STOVES.

No. 246,807.

Patented Sept. 6, 1881.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALBERT S. NEWBY, OF CHAMPAIGN, ILLINOIS.

LINING FOR FIRE-BOXES OF STOVES.

SPECIFICATION forming part of Letters Patent No. 246,807, dated September 6, 1881.

Application filed April 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, ALBERT S. NEWBY, a citizen of the United States, residing at Champaign, in the county of Champaign and State of Illinois, have invented certain new and useful Improvements in Linings for Fire-Boxes of Stoves; and I 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a top view of the device. Fig. 2 is a bottom view of the grate. Fig. 3 is a view of the front piece. Fig. 4 is an end view. Fig. 5 is a rear view. Fig. 6 is a vertical transverse section.

This invention relates to improvements in stoves, more particularly the grate-linings.

The object of the invention is the production of a device whereby a wood-stove can be readily adapted to the use of coal, and a lining formed to be used with different sizes of stoves.

The invention consists in lining for a stove, the lining being made adjustable and made of metal, in combination with some plastic material, all as hereinafter set forth.

In the annexed drawings, A is the bearing of the lining, and is the first part to go into the fire-box.

B B are the side pieces, having the reverse aligned bearings b b for the grate-bottom pintles, the elongated openings b' b' to let ashes through, the bolt-holes b^3 b^3 at the front to add on pieces to increase the length, and longitudinal slots b^4 at the rear ends for adjustable attachment to the back piece, C, by bolts b^5 , and rib b^7 and stud b^8 to hold the end pieces of lining. This back piece, C, has the slots c' for its own adjustment, and ribs c and studs c^2 to hold the lower edge of the back of the lining. The ends of the pieces B and C are grooved, as shown at z , so that they can be diminished to suit smaller stoves.

b^6 are stops on the side pieces to limit the motion of the bottom. D is the grate-bottom, consisting of two longitudinal ribs, d d , and the right-angled transverse bars d' . The ribs d d are narrower than the bars d' , and extend

below these, as shown in Fig. 6. The bars d' are thinner—that is, of less depth—between the ribs, thus compensating for expansion or contraction and preventing warping. The spaces between the transverse bars are wider at the middle of the grate than at the ends, making a better draft where most needed. E E are the pintles, having shanks e e , with slots e' e' , which are adjustably secured one to each end of the bottom by bolts F F, which pass through spaces between the bars d' d' and through slots e' e' . The bars forming the spaces which are to receive these bolts F F are countersunk at their top edges, so that the heads of the bolts will be flush with the upper surface of the bottom, and not liable to burn, and can be slipped endwise. The ends of the ribs and bars have the grooves z , so that they may be shortened. This bottom thus constructed can be used with various sizes of lining and can be readily applied.

G is the back, having swell g to receive the plastic, with ribs g' to prevent warping, and lugs g^2 to hold to the corners, and overhanging lip g^3 and grooves z for reducing the size.

H H are the corners, having open slots h at the back to receive the hooks of lugs g^2 , and in front, at top and bottom, the slots h' h^2 h^3 . The slots h' are open at their outer ends to receive the fins i . The other slots, h^2 h^3 , are closed, the former being straight, the latter curved, as shown.

I I are the end pieces, having fins i i , fitted to open slots h' , and held to the corners by bolts K, passing through slots h^2 h^3 , the curve in the latter giving different pitch to the back. Near the front, in their top edges, these ends have the open slots or seats i' i' for bolting to the stove. These end pieces have the grooves z , so as to be made smaller.

L is the front of the grate, having open slots l at the ends for attachment to the stove, and holes l' for bolts, which adjust it to or from the stove-front.

l^2 are depending bars, straight or backward curved. These bars and the ends of front L have the grooves z , so that the front can be made smaller. This lining, so formed, is to be adjusted to the particular fire-box where it is to be placed by breaking away its edges or adjusting the various parts by their slots and

bolts and then put in place, the front being bolted in, the bearing put at the bottom, and the other parts inserted in order. Some plastic, such as cement, fire-clay, or other material
5 used for such purpose, is put in behind the lining, and the stove is ready for the use of coal.

I claim—

1. The combination of back G, having hooked lugs g^2 , corners H, having slots h h' h^2 h^3 arranged as described, and ends I, having fins
10 i , all as set forth.

2. Corners H, having straight slots h^2 and curved slots h^3 , in combination with ends I and bolts K, as set forth.

In testimony whereof I affix my signature in 15 presence of two witnesses.

ALBERT S. NEWBY.

Witnesses:

J. MUSMAN,
S. T. LOW.