(No Model.) 3 Sheets—Sheet 1.

A. H. FREESE.

SPRING BED BOTTOM

No. 589,942. Patented Sept. 14, 1897.

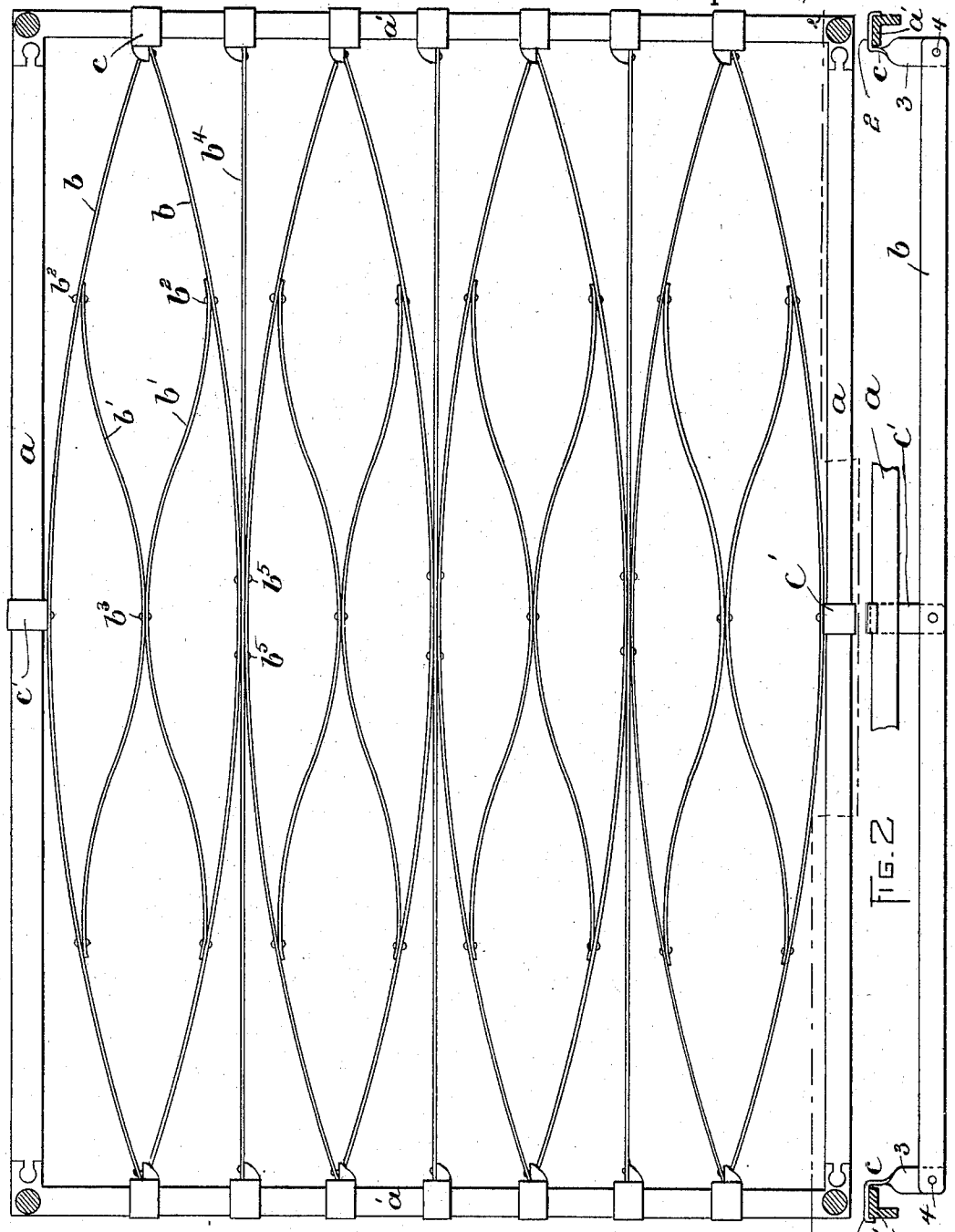


FIG. 2.

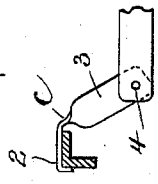


FIG. 3.

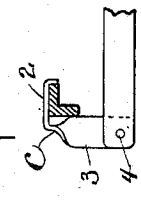


FIG. 4.

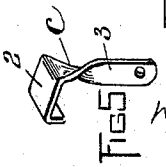


FIG. 5.

FIG. 1.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 2.

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SPRING BED BOTTOM.

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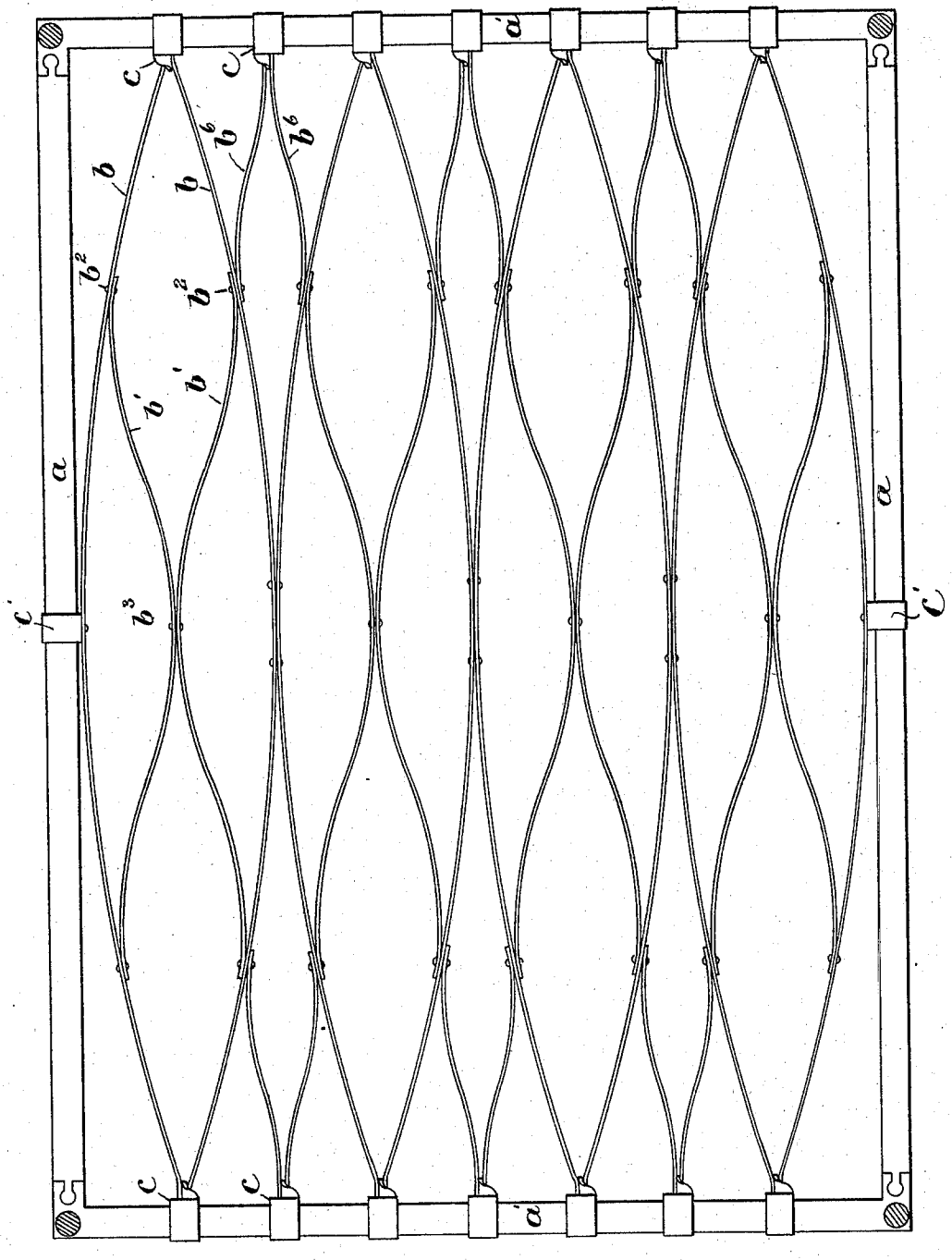


FIG. 5.

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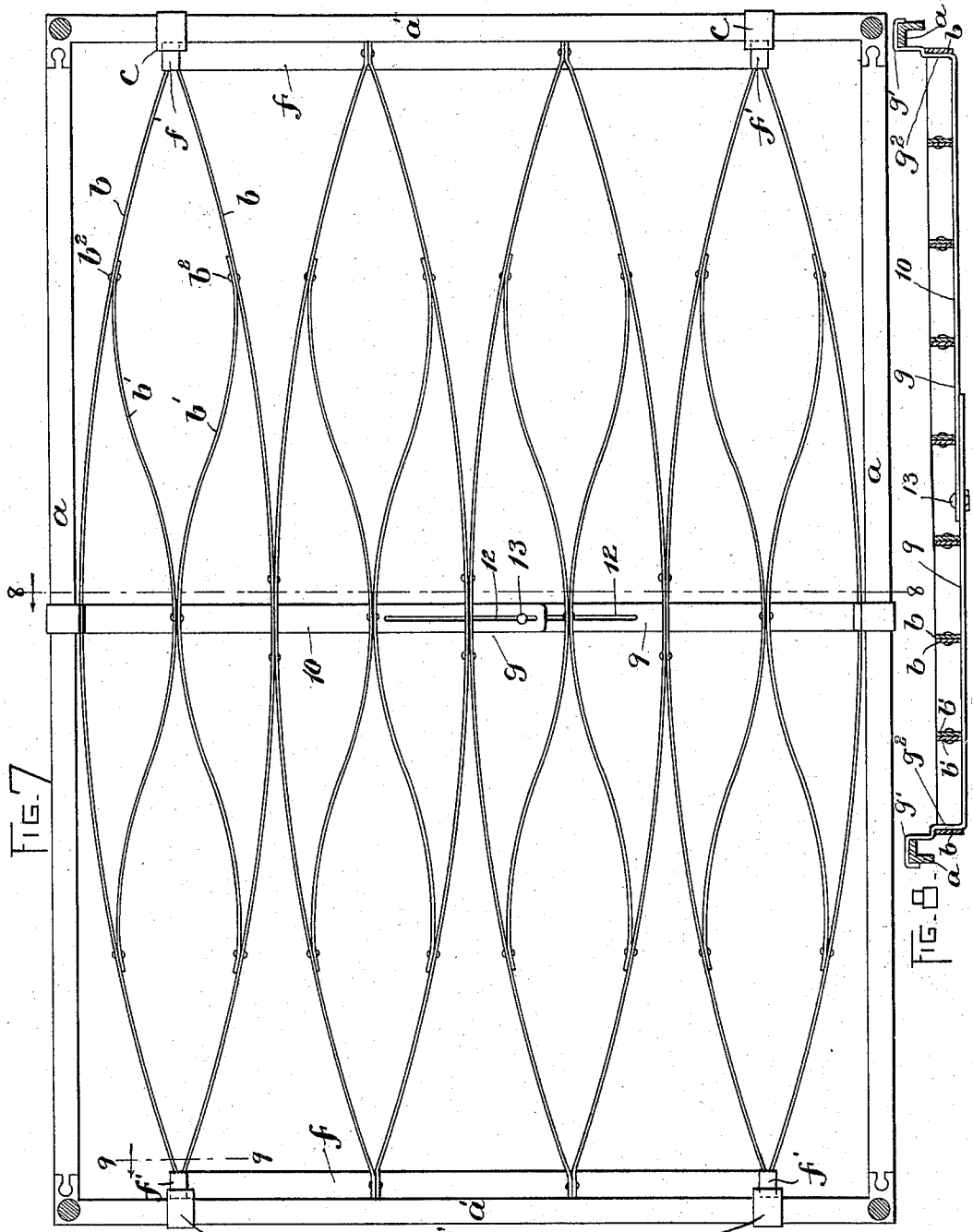
THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

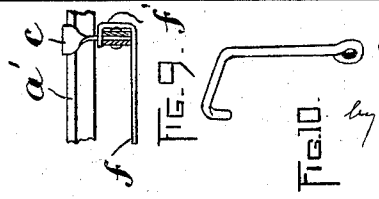
(No Model.) 3 Sheets—Sheet 3.

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UNITED STATES PATENT OFFICE.

AUGUST H. FREESE, OF BOSTON, MASSACHUSETTS.

SPRING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 589,942, dated September 14, 1897.

Application filed December 3, 1896. Serial No. 614,277. (No model.)

To all whom it may concern:

Be it known that I, AUGUST H. FREESE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Spring Bed-Bottoms, of which the following is a specification.

This invention relates to supports which are adapted to be detachably connected to bedsteads to sustain the usual system of springs on which the bed is supported, and particularly to spring-bed-supporting frames or structures which are composed of flexible metal strips forming a frame or structure which is adapted to be extended and contracted to vary its area in one direction. Heretofore bed-bottoms of this class have been constructed to engage the side rails of a bedstead, so that the weight of the structure and all that is supported by it is sustained mainly by the side rails, which being usually of greater length than the end rails are liable to sag under the weight which is thus caused to bear directly upon them.

My invention has for its object, first, to provide a bed-bottom which shall be adjustable to the width of any bedstead and shall be engaged when in use with the end rails of the bedstead, so that the said rails will be caused to sustain the weight of the bed-bottom and the load carried by it.

The invention also has for its object to provide a bed-bottom of this class which shall be adjustable lengthwise and thus be adapted for engagement with bedsteads of different lengths.

The invention consists in the several improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a top plan view of a bed-bottom embodying my invention applied to the side and end rails of a bedstead. Fig. 2 represents a section on line 2 2 of Fig. 1. Figs. 3 and 4 represent sectional views showing different adjustments of the end hooks which connect the bed-bottom with the end rails of the bedstead. Fig. 5 represents a perspective view of one of said hooks. Fig. 6 represents a view similar to Fig. 1, showing a different arrangement of strips or slats composing the bed-bottom. Fig. 7 represents a view showing certain devices for supporting portions of the bed-bottom. Fig. 8 represents a section on line 8 8 of Fig. 7. Fig. 9 represents a section on line 9 9 of Fig. 7. Fig. 10 represents a different form of supporting-hook.

The same letters and numerals of reference indicate the same parts in all the figures.

In the drawings, $a\,a$ represent the side rails, and $a'\,a'$ the end rails, of a bedstead, which as here shown is the ordinary type of metal bedstead.

My improved bed-bottom is composed of a plurality of flexible metal strips, which are riveted together and are relatively arranged in such manner as to form a frame which is adjustable laterally—that is to say, in the direction of the width of the bedstead—so that the said frame may be caused to fill a space of greater or less width between the side rails $a\,a$.

As shown in Fig. 1, the bed-bottom is composed of curved strips $b\,b$, arranged in pairs, each pair forming a pointed ellipse, shorter strips $b'\,b'$, riveted at b^2 to the strip b and at b^3 to each other, said strips b' constituting a filling for the elliptical space bounded by the strips $b\,b$, and straight strips b^4 interposed between each pair of strips $b\,b$ and the next and riveted at $b^5\,b^5$ to the adjacent strips b. Each pair of strips $b\,b$ and the filling-strips b', attached thereto, constitute a section of the bed-bottom, and the strips b^4 constitute fillings between the end portions of said sections.

The ends of the frame above described are provided with hooks c, adapted for engagement with the end rails a' of the bedstead. Said hooks are preferably composed of offset hook portions 2, formed to engage the rails a', and shanks 3, which are pivoted at 4 to the ends of the strips b and b^4. The form of the hooks c and their pivotal connection enable them to be adjusted to bedsteads of different lengths. For example, the hooks may be arranged as shown in Fig. 2, the shanks 3 being at the inner edges of the end rails a', or, as shown in Fig. 4, the shanks being at the outer edges of the rails, the change from Fig. 2 to Fig. 4 being accomplished by swinging the hooks half around and inverting the bed-bottom. In Fig. 3 I show the offset hook portions 2 bent upwardly to form an obtuse angle

with the shank 3, the latter being inclined to offset the hook portions 2 from the ends of the sections to which the hooks are pivoted, thus adapting the hooks to the maximum length of the bedstead. It will be seen, therefore, that the pivoted hooks constitute adjustable supporting or coupling devices connected to the end portions of the bed-bottom frame for engagement with the end rails of bedsteads of different lengths. My invention is not limited in this respect to the particular devices here shown—namely, the pivoted hooks *c*. I believe it to be broadly new to provide the end portions of a bed-bottom frame with adjustable devices to couple or connect the end portions with the end rails of bedsteads of different lengths, and I do not, therefore, limit myself to the particular adjustable connecting means here shown.

The strips *b*, forming the outer edge portions of the frame or bed-bottom, may be provided with hooks *c'*, adapted to engage the central portions of the side rails *a*, to prevent the bed-bottom from collapsing or narrowing by the resiliency of its strips, the engagement of the hooks *c'* with the side rails of the bedstead serving to keep the frame laterally distended to correspond to the width of the bedstead.

In Fig. 6 I show instead of the straight, intermediate, or filling strips b^4 shorter filling-strips b^6, arranged in pairs in the spaces between the end portions of the above-described sections, said strips b^6 being connected with the strips *b* by the same rivets that connect the ends of the strips *b'* thereto.

In Fig. 7 I show supporting-hooks *c* on the ends of only the two outer sections of the bed-bottom, the ends of the intermediate sections resting upon and being supported by transverse bars *f*, having hooks *f'* at their ends, which are engaged with the side sections of the bed-bottom, as shown in Fig. 9. The bars *f* extend under the ends of the intermediate sections and prevent said ends from sagging.

In Fig. 7 I also show a central cross-bar which extends across the lower edges of all the strips and has hooks *g'* at its ends adapted to engage the side rails *a*. The cross-bar *g* has arms g^2, which are formed to bear upon the inner sides of the outer strips *b*, as shown in Fig. 8, and thus hold the bed-bottom laterally distended. The cross-bar *g* is preferably made in two sections 9 10, which are adjustable relatively to each other to vary the length of the cross-bar and are provided with slots 12 and a connecting-bolt 13, whereby the parts of the bar may be positively held at any desired adjustment.

The chief function of the cross-bar *g* is to hold the bed-bottom frame distended and prevent its collapsing, this being accomplished by the bearing of the arms g^2 against the inner sides of the outer strips *b* of the bed-bottom. Hence the hooks *g'* on the cross-bar *g* may be omitted.

It will be seen that when the described bed-bottom is detached from the bedstead it can be contracted laterally and thus reduced to a very compact form for storage and shipment, the strips being adapted to come together or into close proximity to each other.

The hooks *c* may be made of wire, as shown in Fig. 10. A hook thus made is more compact than one made from a metal strip, as shown in Fig. 5.

I claim—

1. A bed-bottom comprising a series of flexible metal strips or slats riveted together, and forming a frame which is adjustable laterally and non-adjustable longitudinally, or in the direction of the length of the strips, and hooks pivotally connected to the ends of said strips and adapted to swing in the direction of the length of the strips, whereby the hooks may be caused to project outwardly from the ends of the frame to engage a longer bedstead, or inwardly over the ends of the frame to engage a shorter bedstead.

2. A bed-bottom comprising a series of flexible metal strips or slats riveted together and forming a frame which is adjustable laterally, and non-adjustable longitudinally, hooks having shank portions 3 pivoted to the ends of the strips, and adapted to swing lengthwise thereof, and offset portions 2, on the outer ends of the shank portions, said hooks being adapted to be bent to cause the offset portions to stand at different angles with the shank portions, so that by swinging the shanks outwardly from the ends of the frame, and adjusting the offset portions at an obtuse angle with the shank portions, the frame may be engaged with a bedstead of extreme length, as set forth.

3. A bed-bottom comprising a series of flexible metal strips or slats forming a laterally-adjustable frame and grouped in sections, hooks secured to the outer sections, and transverse bars engaged with the outer sections and supporting the ends of the intermediate sections.

4. A bed-bottom comprising a series of flexible metal strips or slats forming a laterally-adjustable frame, hooks secured to end portions of the frame for engagement with the end rails of a bedstead, and a central cross-bar having arms formed to engage the outer strips of the frame and prevent the frame from closing or collapsing.

5. A bed-bottom comprising a series of flexible metal strips or slats forming a laterally-adjustable frame, hooks secured to end portions of the frame for engagement with the end rails of a bedstead, and a central cross-bar having arms formed to engage the outer strips of the frame and provided with hooks to engage the side rails of the bedstead.

6. A bed-bottom comprising a series of flexible metal strips or slats forming a laterally-adjustable frame, hooks secured to end portions of the frame for engagement with the end rails of a bedstead, and a central cross-bar having arms formed to engage the outer strips of the frame, said cross-bar being lon-

gitudinally adjustable and provided with means for holding it at any desired adjustment.

7. A bed bottom or frame comprising a plurality of curved longitudinal strips extending the entire length of the frame, and rigidly connected at their ends in pairs, each pair constituting an elliptical section, while the sections collectively constitute a frame which is adjustable by the opening and closing of the sections, and flexible fillings within the elliptical sections adapted to open and close therewith.

8. A bed bottom or frame comprising a plurality of curved longitudinal strips extending throughout the entire length of the frame, and rigidly connected at their ends in pairs, each pair constituting an elliptical section, while the sections collectively constitute a frame which is adjustable laterally by the opening and closing of the sections, and flexible filling-strips located within the elliptical sections and riveted at their ends to the longitudinal strips and between their ends to each other, said filling-strips constituting flexible fillings which are laterally adjustable with the longitudinal strips.

9. A bed bottom, or frame comprising a plurality of curved longitudinal strips rigidly connected at their ends in pairs, each pair constituting an elliptical section adapted to be opened and closed to vary the width of the frame, the sections being connected by rivets b^5 at or near the center of the length of the frame, and flexible filling-strips located within the openings of said sections and connected at their ends with the longitudinal strips by rivets b^2 which are located between the rivets b^5 and the ends of the frame, the filling-strips being connected centrally by rivets b^3.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 25th day of November, A. D. 1896.

AUGUST H. FREESE.

Witnesses:

CYUS FRED FELLOWS,

C. F. BROWN.