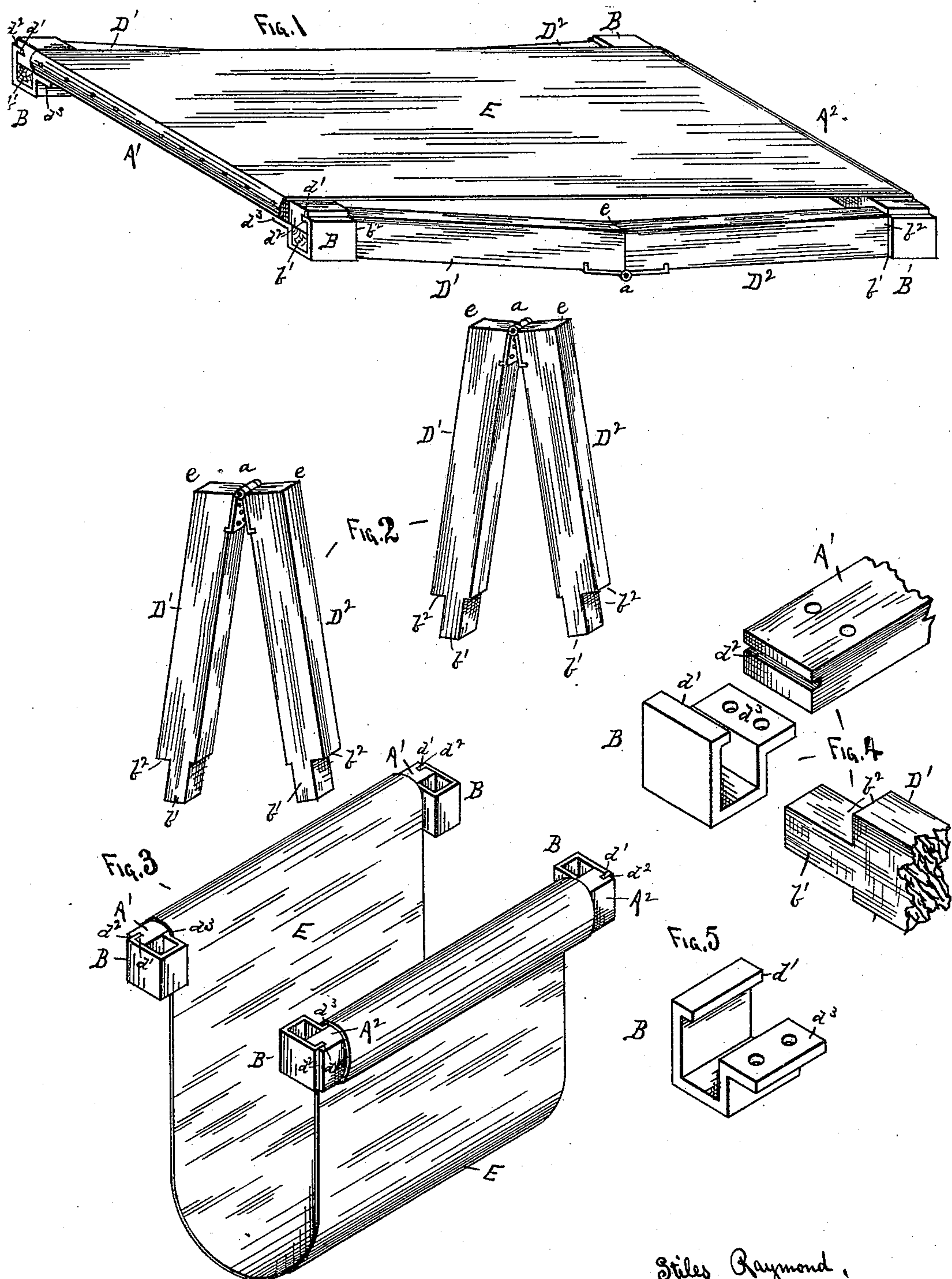


(No Model.)

S. RAYMOND.
FOLDING BED BOTTOM.

No. 470,706.

Patented Mar. 15, 1892.



WITNESSES.
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UNITED STATES PATENT OFFICE.

STILES RAYMOND, OF MINNEAPOLIS, MINNESOTA.

FOLDING BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 470,706, dated March 15, 1892.

Application filed December 24, 1888. Serial No. 294,505. (No model.)

To all whom it may concern:

Be it known that I, STILES RAYMOND, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Folding Bed-Bottoms, of which the following is a specification.

This invention relates to folding bed-bottoms; and it consists in the construction, combination, and arrangement of parts, as hereinafter shown and described, and specifically pointed out in the claims.

In the drawings, Figure 1 is a perspective view of one of the bed-bottoms complete and set up. Fig. 2 is a perspective view representing the hinged side pieces detached and folded together. Fig. 3 is a perspective view of the webbing and the attached end pieces partially folded together. Fig. 4 is an enlarged perspective view representing a section of one end of one of the end pieces, a section of one end of one of the side pieces, and one of the corner socket-frames disconnected to illustrate their relative construction. Fig. 5 is a perspective view of one of the corner socket-frames viewed from the inside.

A' represents the "head" and A² the "foot" cross-pieces, having metal socket-frames B attached to their ends. The side pieces of the main frame are each formed in two pieces D' D², hinged together on the under side at their centers, as shown at *a*, and with tenons *b'* fitting into the sockets. The end pieces A' A² are connected by a flexible webbing E, which may be of woven wire, cordage, canvas, or other similar suitable flexible material, said webbing being secured to the outer sides of the end pieces and thence passing over the upper edges thereof, whereby when weight is placed thereon the tendency of the end pieces is to twist on the tenons, which twisting tendency is resisted and overcome, as hereinafter described. The sockets B are formed as shown more clearly in Figs. 4 and 5. These sockets B are formed with a lip or rib *d'*, fitting into a channel *d²* in the end of the head and foot or end pieces A' A², and projecting downward below the pieces A' A² and carried inward and upward again and secured by webs *d³* to the pieces A' A² by bolts or rivets. By this means the openings in the sockets come entirely below the pieces A' A² and the sock-

ets do not come in contact with the webbing to chafe the latter. This also permits of the formation of a deep shoulder *b²* on the upper side of the side pieces, so that a broad bearing-surface is obtained the full width of the thickness of the end pieces A' A², which is an important feature, as the end-thrust on the side pieces D' D² is very great. This manner of forming the sockets B also enables me to secure them to the end pieces with only one or two bolts passing through the end pieces back from the ends far enough so as to not weaken them. The hinges *a* are formed with lips or upwardly-extending flanges at the extremities of their wings, said lips being embedded in the lower faces of the adjacent ends of the side pieces to overcome the longitudinal pull to which the side pieces are subjected on account of the inclines of their meeting faces.

When the bed is not required for use or when being transported, the side pieces are "broken" upward at their joints, as shown in Fig. 2, the tenons *b'* removed from the sockets B, and the web rolled up around the end pieces, either with the side pieces rolled up with them or in a separate bundle, as preferred. Then when it is desired to use the bed the web is unrolled and the side pieces set in place, with their tenons *b'* in their respective sockets and the side pieces bent down until their ends *e* are in contact, this action stretching the webbing tightly, (the latter being somewhat shorter than the side pieces to insure this result.) This ability to stretch the webbing is an important function of this device, and is easily secured, as before stated, by making the webbing slightly shorter than the side pieces and utilizing the "toggle" or "knee" joint principle present in the jointed side pieces to stretch the webbing by the exercise of a small degree of force in closing the joints at the hinges *a*, this small degree of force when transmitted through the toggle-joint exerting a very powerful force upon the webbing. It will be noted that the tenons *b'* on the side pieces are formed nearer the lower edge, whereby the point of outward thrust is thrown below the upper edge of the end pieces where the webbing passes over, thereby greatly decreasing the chance of breaking the joint at hinge *a* by any accidental upward move-

ment, as the tendency of the web when weight is placed thereon is to pull the upper edges of the end pieces toward each other, and this tendency is resisted by the tenon in the socket
5 and the shoulder on the side pieces above the tenon, against which abuts the inner side of the end piece.

Having thus described my invention, what I claim as new is—

10 1. In a folding bed-bottom, the combination, with the end pieces provided with sockets on their ends, of a flexible connection between said end pieces, said webbing or flexible connection being secured to the outer sides of the
15 end pieces, and side bars hinged at their middle and having their ends inserted in the sockets in the cross-bars, said side bars being downwardly inclined toward their middle when in position for use, substantially as described.
20

2. In a folding bed-bottom, the combination, with the end pieces provided with metal sockets on their ends, of a flexible connection between said end pieces, said connection being
25 secured to the outer sides of the end pieces, side bars hinged in their middle and provided with tenons on their ends fitting in the sockets, said side bars being downwardly inclined toward their hinged portion when in use, and
30 hinges having their outer ends embedded in

the under side of the contiguous ends of the side bars, substantially as described.

3. In a folding bed-bottom, the combination, with the end pieces, of sockets on the ends of said end pieces, said sockets being formed
35 with lips entering the end pieces and extending downwardly and inwardly to form sockets on the lower sides, a flexible connection between the end pieces, said connection being secured on the outer edges and passing over
40 the end pieces, sectional side bars provided with tenons on their ends adapted to enter the sockets, and a hinge provided with lips on its outer edge embedded in the lower side of the side bars, said side bars having their
45 continuous edges cut at an obtuse angle, thus forming double inclined side bars, whereby when pressure is put upon the webbing passing over the upper side of the end pieces the tendency of the weight is to always maintain
50 a rigid connection between the sections of the side bars, substantially as described.

Intestimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

STILES RAYMOND.

Witnesses:

C. N. WOODWARD,
H. H. DEAN.