

No. 765,272.

PATENTED JULY 19, 1904.

W. E. COLLIER.  
BED.

APPLICATION FILED MAR. 19, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

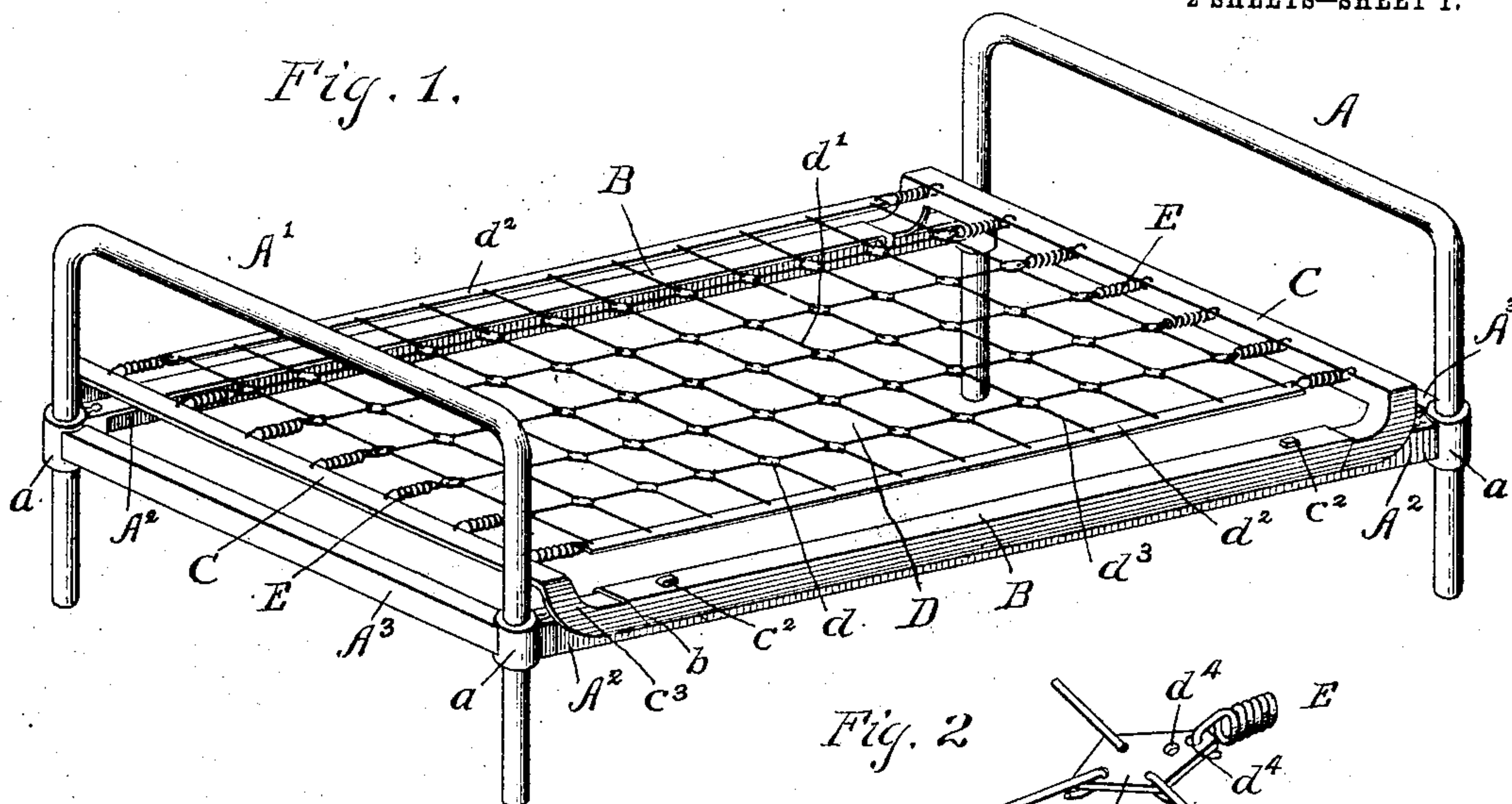


Fig. 2.

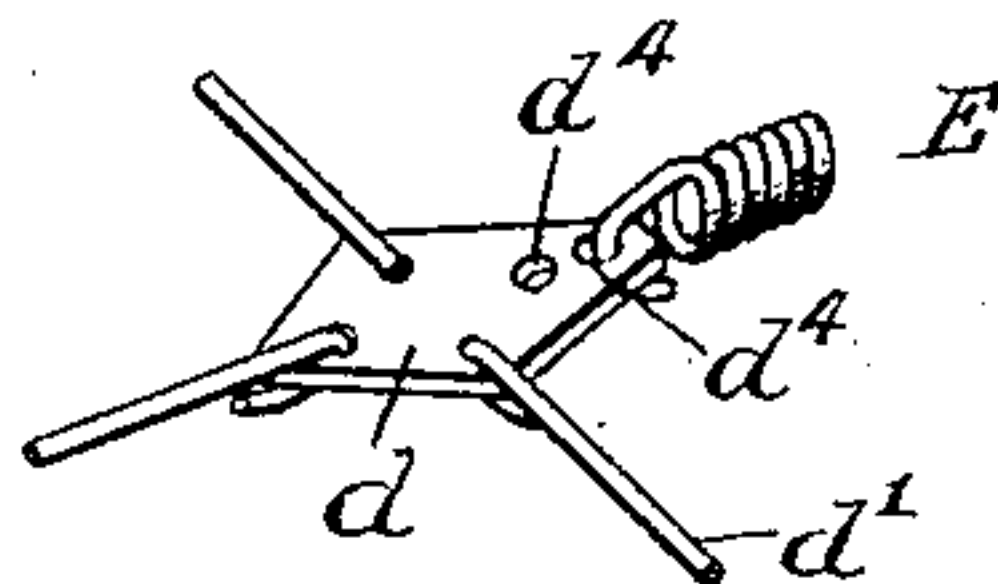


Fig. 3.

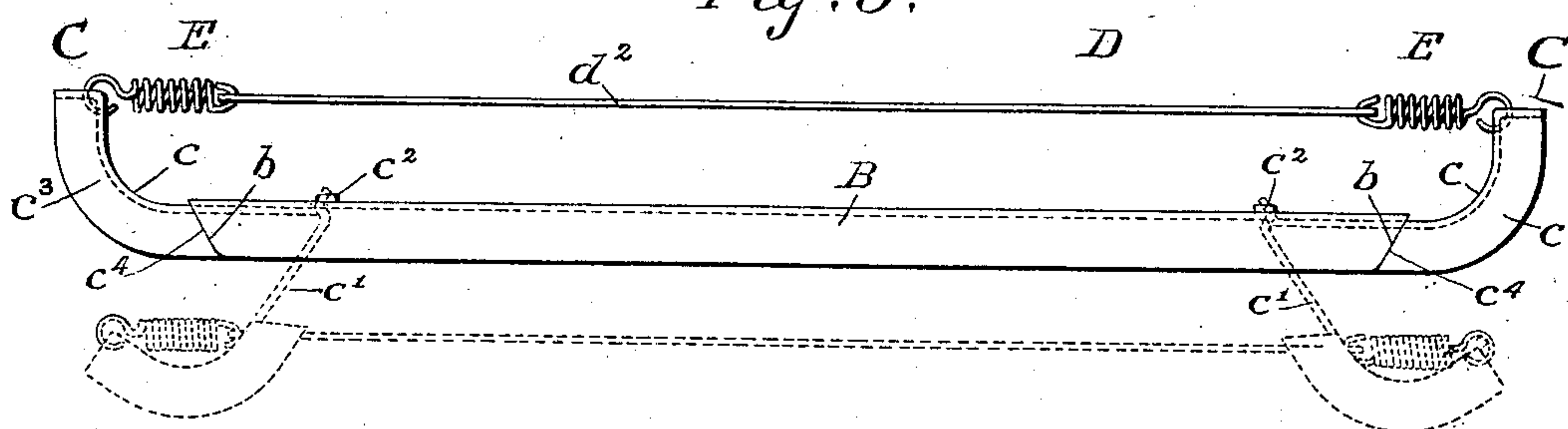
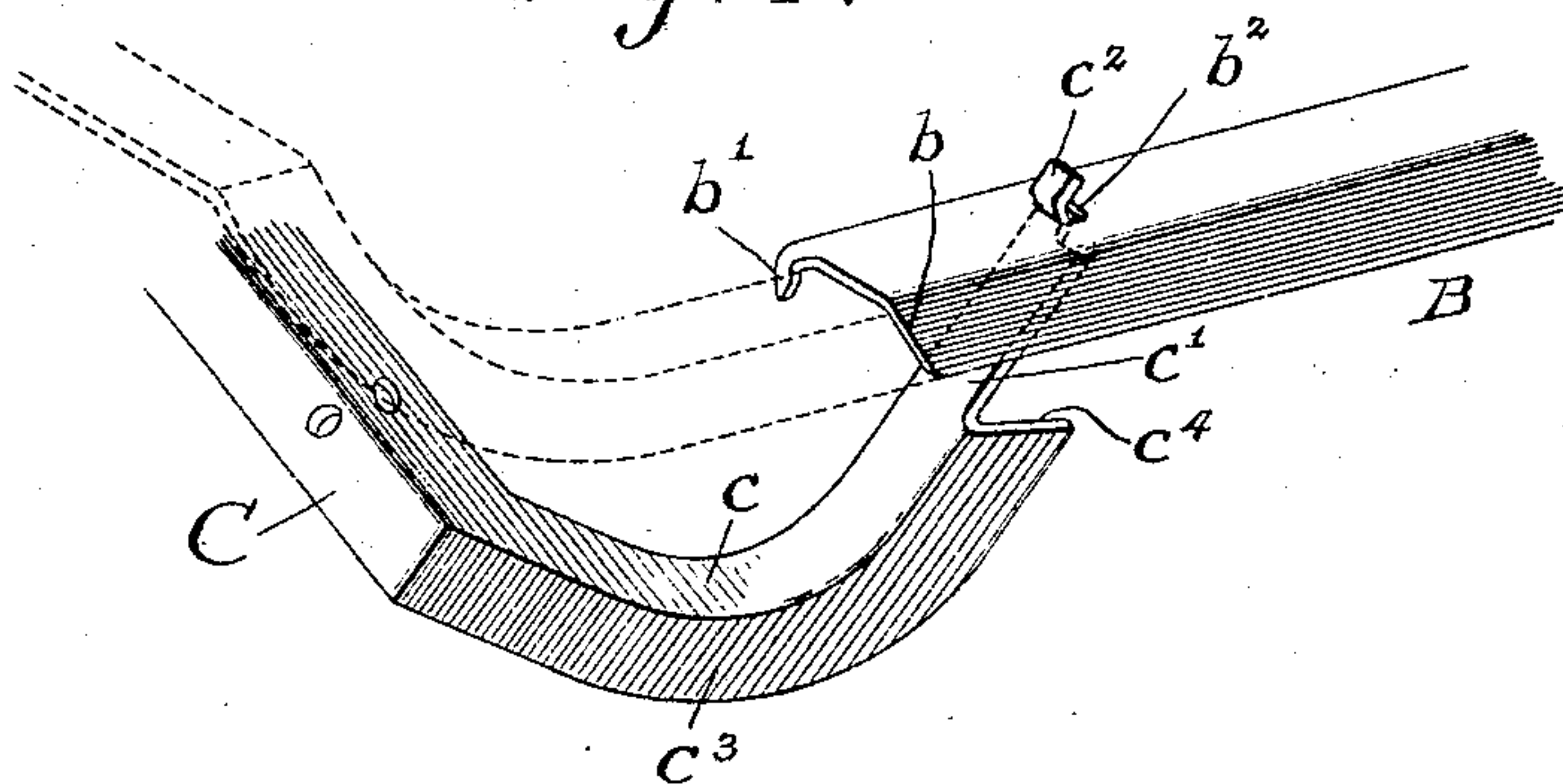


Fig. 4.



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2 SHEETS—SHEET 2.

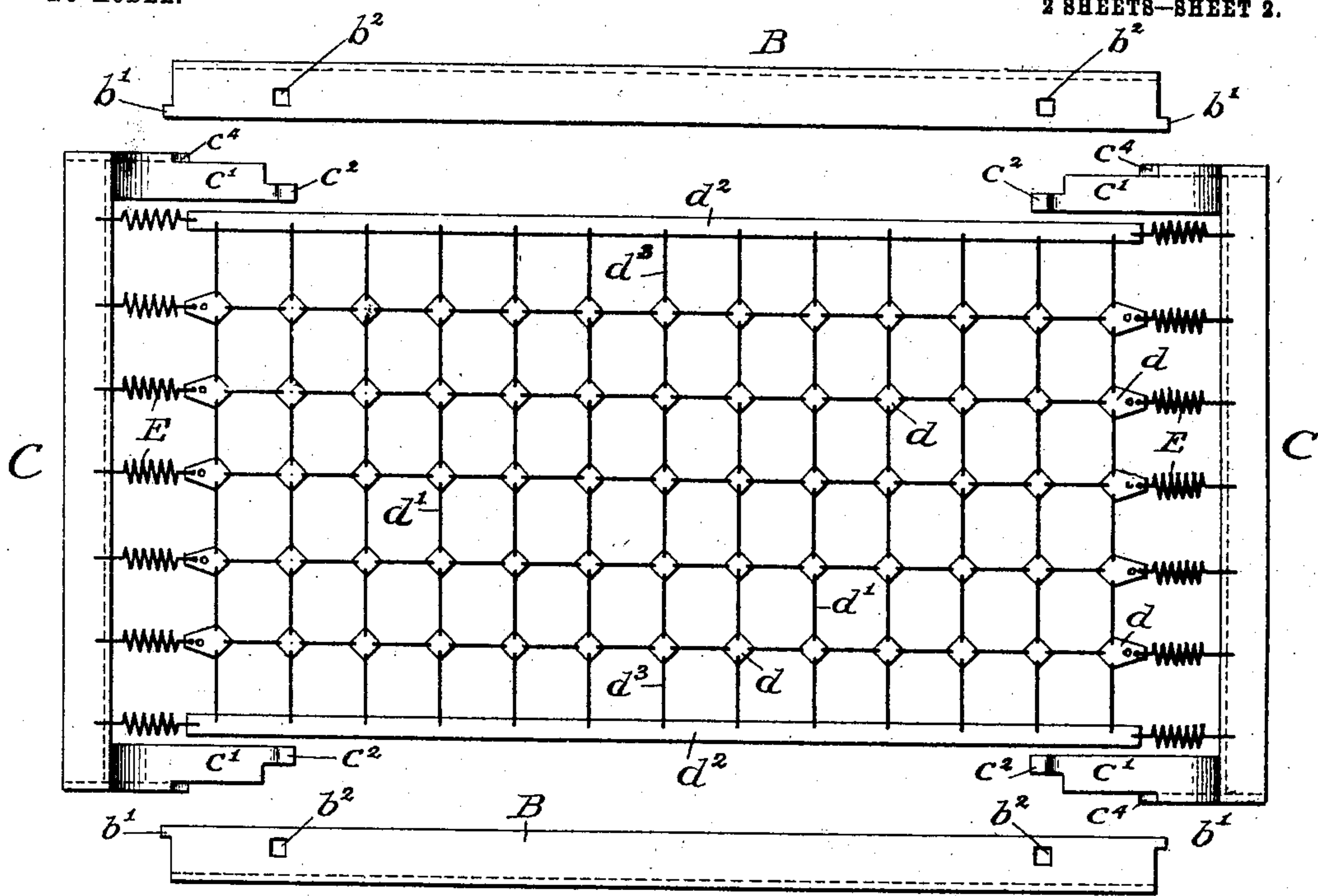


Fig. 5.

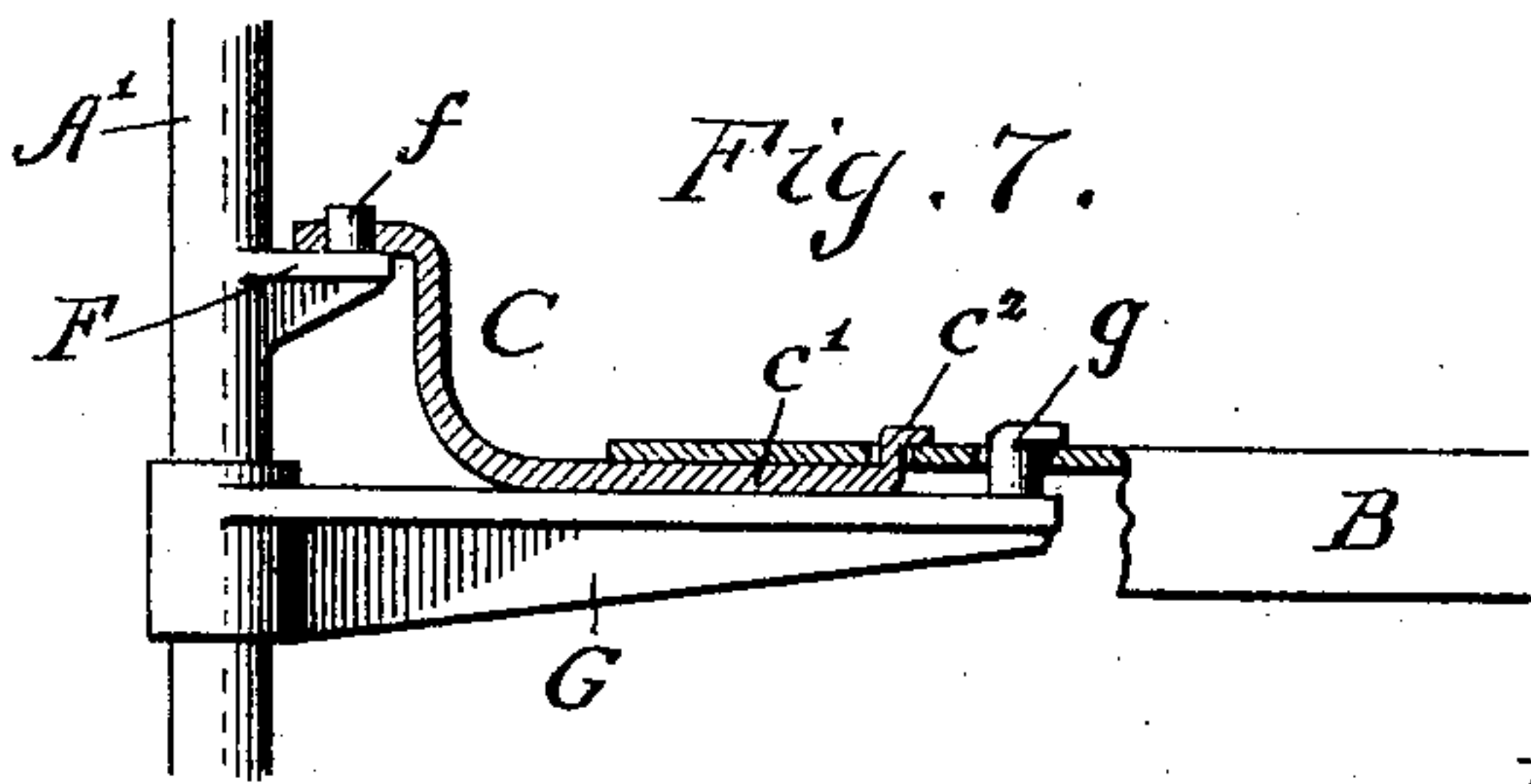


Fig. 7.

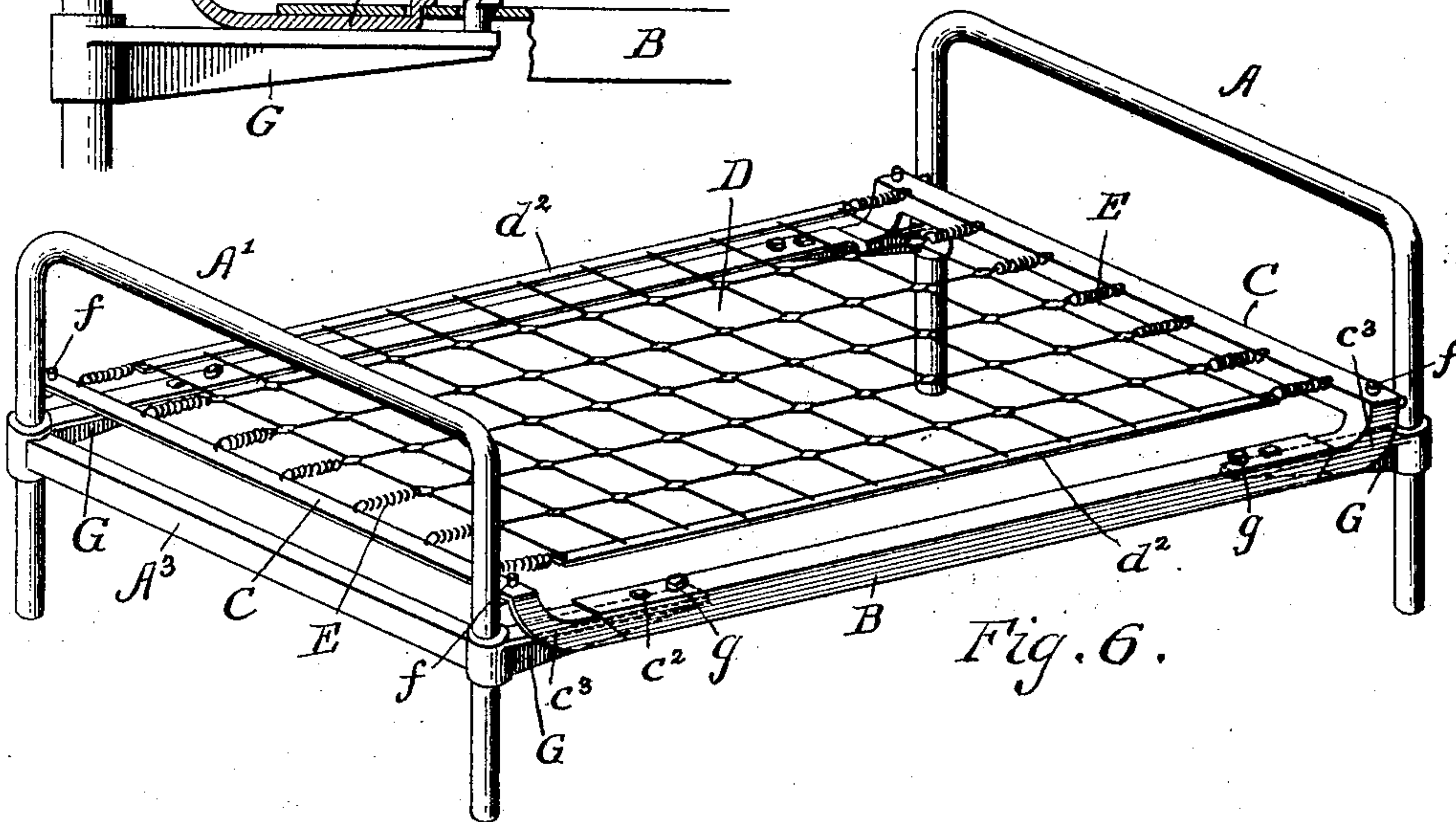


Fig. 6.

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# UNITED STATES PATENT OFFICE.

WILLIAM E. COLLIER, OF WASHINGTON, DISTRICT OF COLUMBIA.

## BED.

SPECIFICATION forming part of Letters Patent No. 765,272, dated July 19, 1904.

Application filed March 19, 1904. Serial No. 198,874. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM E. COLLIER, a citizen of the United States, residing in Washington, District of Columbia, have invented certain new and useful Improvements in Beds, of which the following is a specification.

My invention relates to certain improvements in bed-bottoms and in means for attaching them to bedsteads.

My principal object is to provide a bed-bottom and bedstead that may be easily and thoroughly cleaned.

A further object of my invention is not only to provide a bedstead and bed-bottom that may be easily and thoroughly cleaned, but which may be easily and quickly put together and taken apart and arranged within a small compass for transportation or storage.

In carrying out my invention I construct the frame of the bed-bottom of side rails and end rails having portions which interlock with each other and normally constitute a rigid frame for supporting the spring fabric. No supplemental fastening devices are used for connecting the four frame-pieces, and when the rails are separated the parts are exposed and accessible for cleaning. The spring fabric may be of any suitable construction, but preferably consists of plates connected by links and attached by springs to the end rails of the frame. The plates at the sides of the fabric are preferably connected by links with longitudinal strips which serve to hold the fabric in a smooth or even condition. A bed-bottom so constructed may be placed on a bedstead of ordinary construction; but I sometimes dispense with the ordinary side rails of the bedstead and support the bed-bottom on arms or brackets projecting laterally from the head and foot of the bedstead.

When the side rails and end rails of the bed-bottom are separated from each other and the fabric is separated from the end rails, the rails may be placed side by side and made to occupy a small space for storage or transportation, and the fabric may be rolled or folded into a small compass for the same purpose.

In the accompanying drawings, Figure 1 is a perspective view of a bed, showing my improved bed-bottom applied to a bedstead of or-

dinary construction. Fig. 2 is a detail view of one of the devices employed for connecting the spring fabric to the end rails of the bed-bottom frame. Fig. 3 shows by full lines a side elevation of my improved bed-bottom with the parts interlocked and ready for use and by dotted lines the position of the parts when the end rails are swung downward and inward. Fig. 4 is a detail perspective view, on an enlarged scale, of one of the interlocking joints between the end rails and the side rails. Fig. 5 is a plan view of the bed-bottom with the side rails detached. Fig. 6 is a perspective view of my improved bed-bottom applied to a bedstead in which the usual side rails are replaced by arms or brackets projecting from the head and foot of the bedstead. Fig. 7 is a detail view, partly in side elevation and partly in section, showing the manner in which the side rails and end rails of the bed-bottom are connected and the manner in which the bed-bottom is supported on arms or brackets projecting from the head and foot of the bedstead.

In Fig. 1 I have shown a bedstead of ordinary construction comprising the head A, foot A', and side rails A<sup>2</sup>. The head and foot are shown as having the usual cross-bars A<sup>3</sup>, and the side rails are detachably connected to the corner-pieces *a* in the ordinary manner.

The frame of the bed-bottom consists of the two side rails B and the two end rails C. Each side rail is preferably made, as shown, of a single piece of angle-iron formed at each end of the vertical flange with a beveled or inclined edge *b* and on the ends of the horizontal flange with downwardly-projecting lugs *b'*. The horizontal flange of each side rail is also formed near each end with an aperture *b*<sup>2</sup> to receive the tongues projecting from the end rails C. Each end rail is preferably formed of a single piece of angle-iron, and it has at each end a downwardly-extending curved portion *c*, from the lower end of which projects horizontally an arm *c'*, at the outer end of which is formed an upwardly and outwardly inclined tongue *c*<sup>2</sup>, adapted to enter one of the apertures *b*<sup>2</sup>. Each curved portion *c* and each arm *c'* is strengthened or braced by a vertical flange *c*<sup>3</sup>, and the outer end of each of



these flanges is inclined or beveled at  $c^4$ , so that when a tongue  $c^2$  is made to interlock in an aperture  $b^2$  the inclined edge  $c^4$  will lie close against the inclined edge  $b$ . The arms  $c'$  are somewhat narrower than the side rails, and when the parts are assembled the arms lie between the lugs  $b'$  and the vertical flanges of the side rails, as shown by dotted lines in Fig. 4. When thus assembled and when the fabric D is in place, the frame-pieces are firmly connected, and whatever may be the weight placed on the fabric there is no danger of the parts separating or moving relatively to each other.

The fabric D is shown as consisting of small rectangular plates  $d$ , connected together by links  $d'$ . This kind of a fabric is of known construction; but I preferably employ longitudinal strips  $d^2$ , to which the longitudinal edges of the fabric are connected by links  $d^3$ . These strips serve to hold the fabric smooth and level. The plates at the head and foot of the fabric are preferably enlarged, as shown in Fig. 2, and provided with a series (two being shown) of apertures  $d^4$  to receive the ends of the springs E, which connect the fabric to the end rails. The ends of the strips  $d^2$  are in like manner connected by springs to the end rails. By providing a series of apertures  $d^4$  the tension of the springs may be readily adjusted.

In Fig. 1 the bed-bottom is shown in position for use. The bed-bottom frame rests on the side rails of the bedstead, and the interlocking joints hold the parts securely in place. The bed-bottom merely rests on the frame of the bedstead and may readily be raised therefrom without detaching any parts. By merely turning the end rail C downwardly, as indicated by dotted lines in Fig. 3, the rails B and C may be separated from each other, and then all parts are exposed and may be quickly and thoroughly cleaned. The parts may be reconnected by bringing them together in the manner indicated by dotted lines in Fig. 3 and then raising the end rails to the position shown by full lines. When the parts are separated, the side rails and end rails may be placed parallel with each other in a small compass and may be tied together for storage or transportation, and the fabric may also be rolled or folded into a small space for the same purpose.

In Figs. 6 and 7 I have shown how my improved bed-bottom may be supported on a bedstead in which the vertical side rails are dispensed with. In such case each vertical portion of the head and foot of the bedstead is provided with brackets F and G. Each bracket F is formed with a lug  $f$ , which extends into an aperture in the end rail, and each bracket G, which is somewhat longer than the bracket F, is provided with a hook  $g$ , extending into an aperture in one of the side rails B. The brackets F and G may be cast on the head

and foot frames or they may be secured thereto in any suitable way. It will be observed by reference to Fig. 7 that the end rail C is supported on both the brackets F and G, the upper horizontal flange of the end rail C resting on the bracket F and being held against movement by the lug  $f$ . The end rail C also rests on the bracket G, and this bracket is of sufficient size and strength to bear a large part of the weight.

I claim as my invention—

1. A bed-bottom comprising side rails, end rails having arms extending under the side rails and which have an interlocking vertically-swinging connection therewith and a spring fabric attached to the end rails and which draws the arms thereon up against the under side of the side rails.

2. A bed-bottom comprising side rails formed with vertical apertures, end rails having arms extending under the side rails and formed with tongues extending through the vertical apertures therein and resting on the top thereof, and a spring fabric connecting the end rails.

3. A bed-bottom comprising side rails, end rails provided with arms having an interlocking vertically-swinging detachable connection with the side rails, and a spring fabric connected with the end rails and which holds the side rails normally above the end rails.

4. A bed-bottom, the frame of which is formed of four parts only and which comprises two side rails and two end rails the latter being formed with arms overlapped by the side rails and having tongues extending through apertures in the side rails and resting on the top thereof whereby a detachable vertically-swinging connection is made between the end rails and side rails, and a spring fabric connecting the end rails.

5. A bed-bottom, the frame of which comprises flanged side rails and flanged end rails, the former having vertical apertures and lugs on their horizontal flanges, and the latter having arms and tongues which respectively lie between the lugs of the side rails and the vertical flanges thereof and enter the apertures in said side rails and extend over the tops thereof to provide a vertically-swinging interlocking connection between the end rails and the side rails.

6. A bed comprising side rails formed with vertical apertures, end pieces of the bed having arms extending under the side rails and formed with tongues extending through the apertures therein and overlapping the top of said side rails whereby a detachable vertically-swinging connection is made with the side rails, and a spring fabric connected to the ends of the bed.

7. A bed-bottom the frame of which is formed of two side rails and two end rails the side rails having apertures near their ends and being formed with beveled or inclined edges



and the end rails having arms entering the apertures and having flanges with beveled or inclined edges matching the beveled or inclined edges of the side rails.

5 8. The combination with a bedstead formed with laterally-projecting arms or brackets replacing the ordinary side rails and a bed-bottom comprising side rails and end rails having arms interlocking with the side rails and  
10 which rest on the top of said brackets.

9. A bed-bottom comprising a fabric formed of plates connected together by links and connected to longitudinally-floating strips at the

longitudinal edges of the fabric, and a frame comprising two side rails and two end rails 15 connected by arms on one set of rails which have a swinging interlocking connection with the other set of rails and are readily detached therefrom.

In testimony whereof I have hereunto sub- 20 scribed my name.

WILLIAM E. COLLIER.

Witnesses:

LLOYD B. WIGHT,  
ROLAND C. BOOTH.