

No. 767,062.

PATENTED AUG. 9, 1904.

I. KARPEN.
SPRING BOTTOM.

APPLICATION FILED JUNE 5, 1903.

NO MODEL.

Fig. 1.

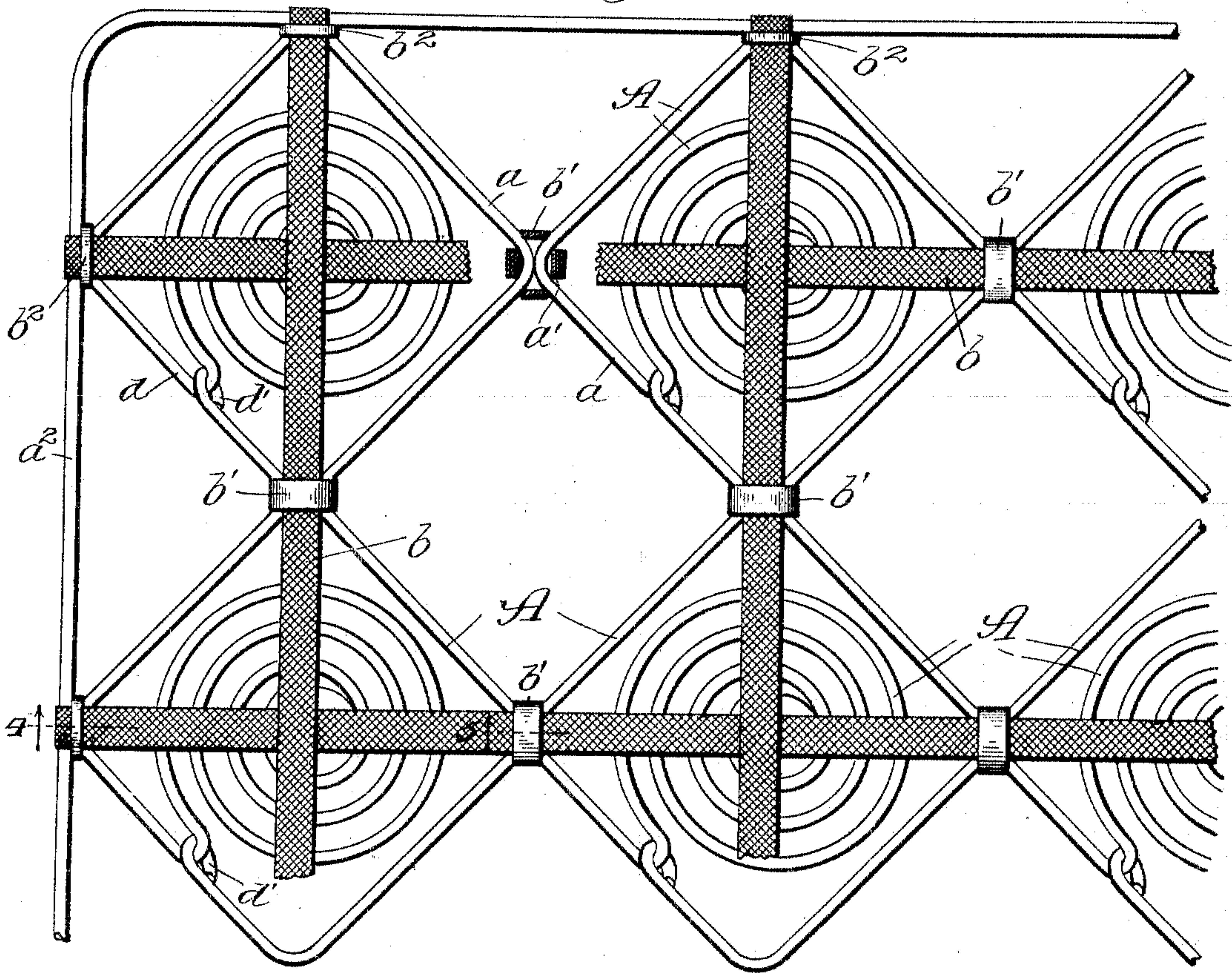


Fig. 2.

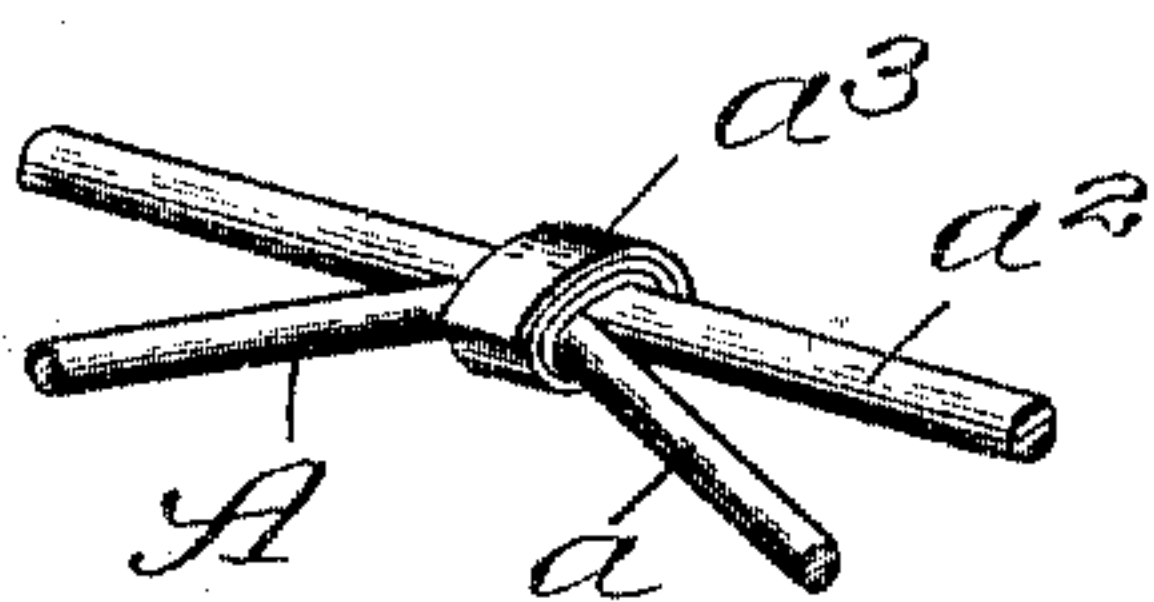


Fig. 4.

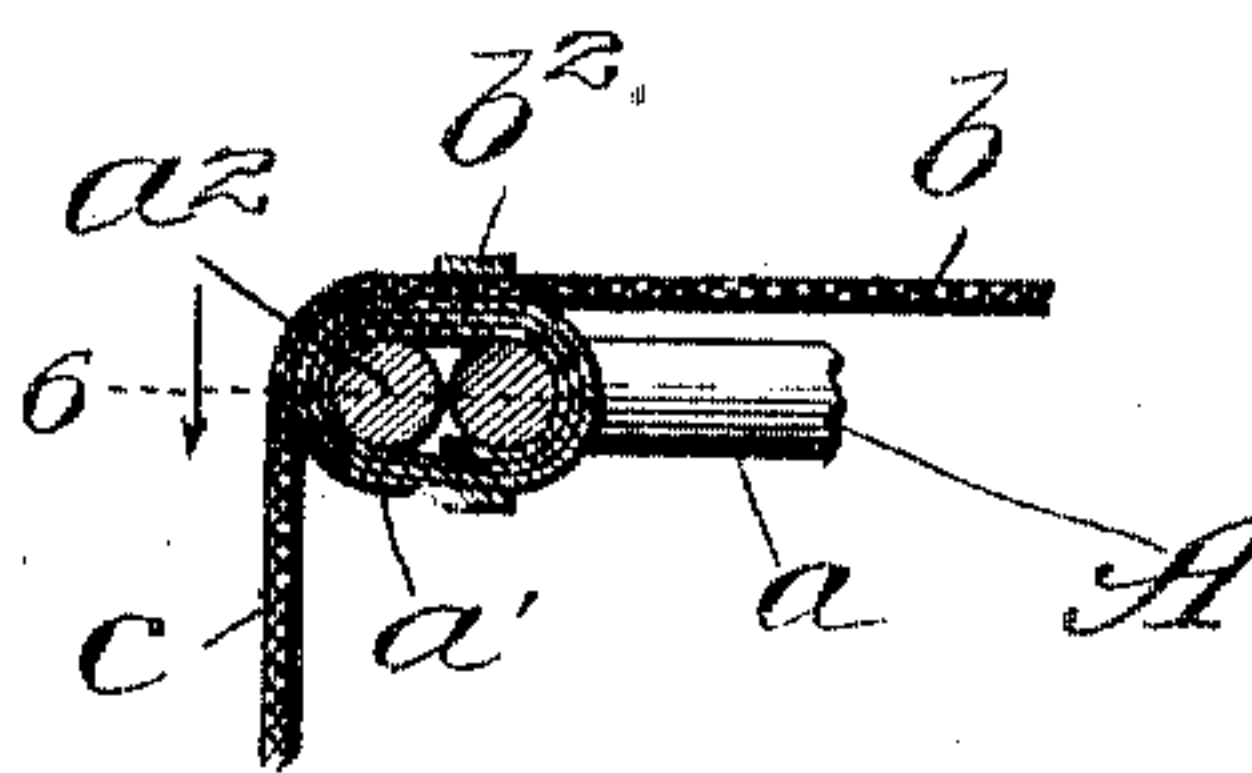


Fig. 5.

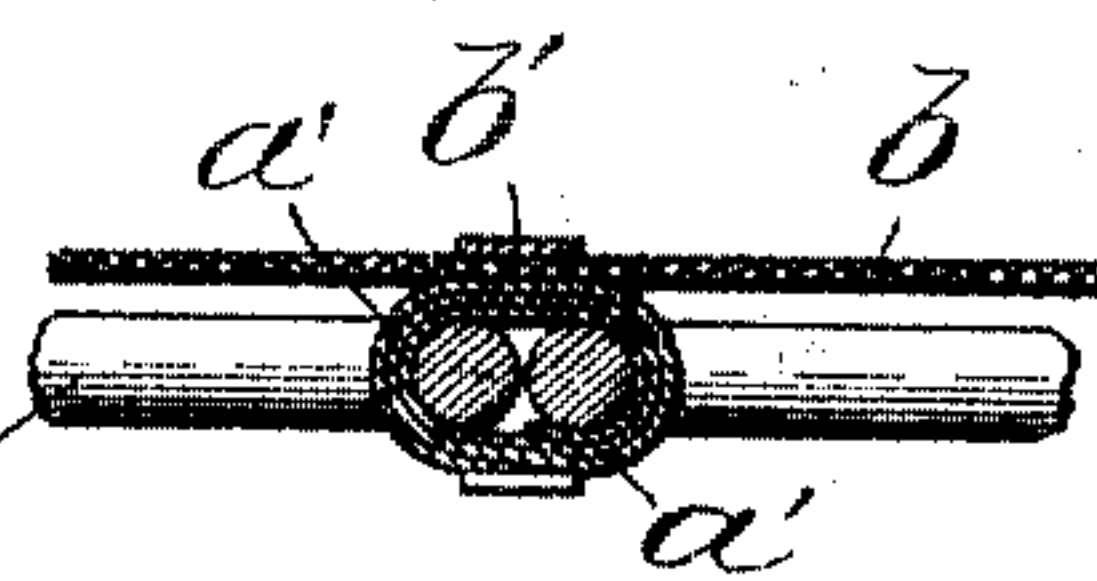


Fig. 3.

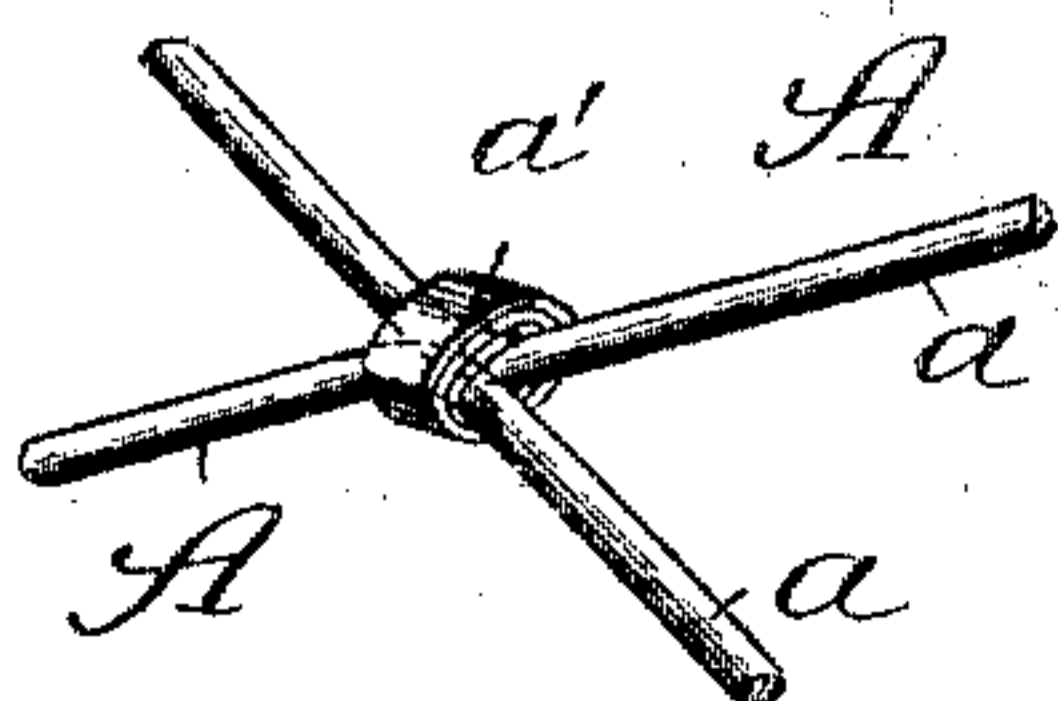


Fig. 7.

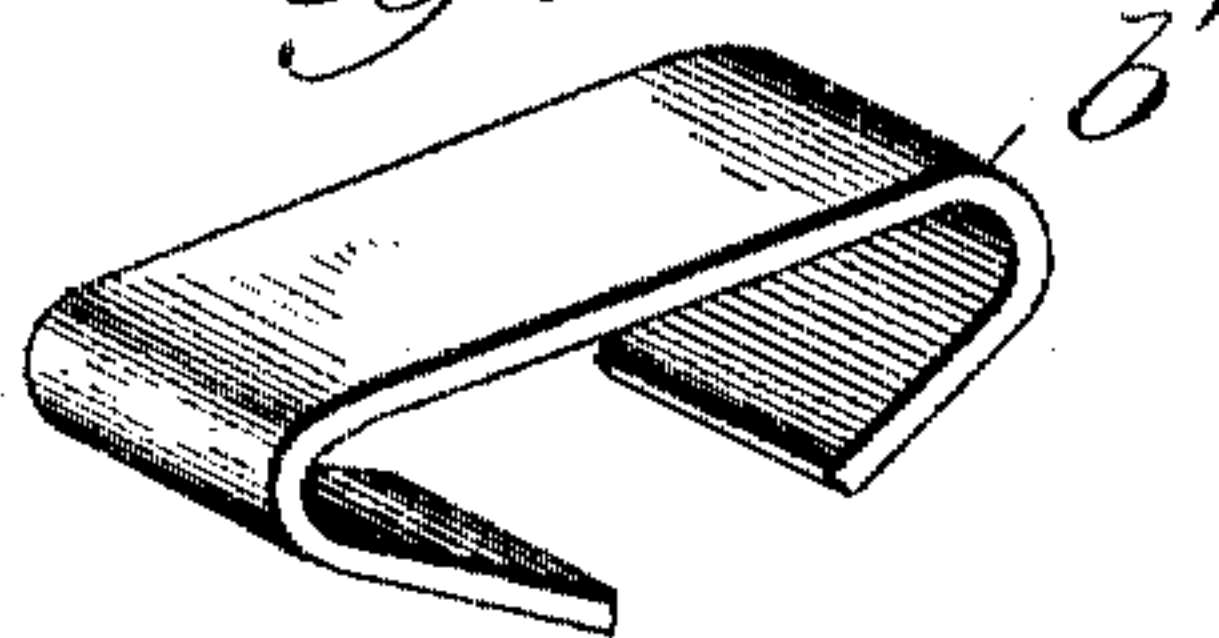
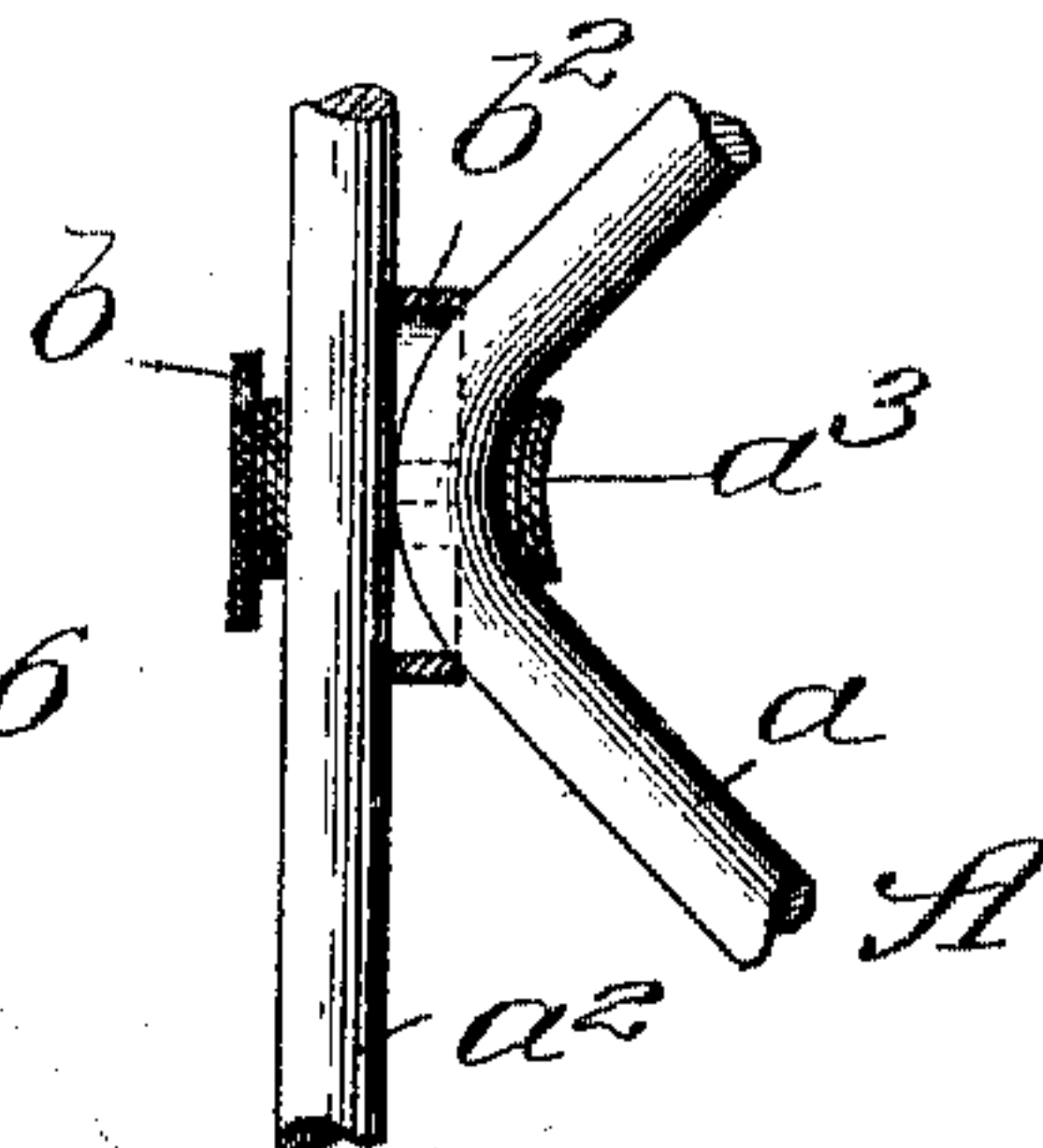


Fig. 6.



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UNITED STATES PATENT OFFICE.

ISAAC KARPEN, OF CHICAGO, ILLINOIS, ASSIGNOR TO S. KARPEN & BROS.,
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SPRING-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 767,062, dated August 9, 1904.

Application filed June 5, 1903. Serial No. 160,174. (No model.)

To all whom it may concern:

Be it known that I, ISAAC KARPEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented a new and useful Improvement in Spring-Bottoms, of which the following is a specification.

My invention relates particularly to spring-bottoms for couches, beds, and other articles
10 of furniture; and my primary object is to provide an improved spring-bottom of simple and inexpensive construction and one enabling the parts to be readily assembled in forming the spring-bottom.

15 The invention is illustrated in its preferred embodiment in the accompanying drawings, in which—

Figure 1 represents a broken plan view of a spring-bottom embodying my invention;
20 Fig. 2, a detail of the connection between one of the coil-springs and the marginal frame-rod of the spring-bottom; Fig. 3, a detail of the connection between two adjacent coil-springs; Fig. 4, a broken sectional view taken
25 as indicated at line 4 of Fig. 1; Fig. 5, a broken sectional view taken as indicated at line 5 of Fig. 1; Fig. 6, a broken plan section taken as indicated at line 6 of Fig. 4, and Fig. 7 a perspective view of a clip employed for securing
30 tapes at the junctions between the coiled springs.

In carrying out my invention I employ coil-springs A, formed, preferably, with enlarged
35 end portions a of substantially square formation, arrange the springs in rows both longitudinally and transversely of the spring-bottom with the tops of the springs corner to corner, join the meeting corners of said tops by clips or soft-metal windings a' , provide a
40 marginal wire or rod a^2 , and join the adjacent corners of the tops of the springs to said rod by clips or metal windings a^3 . Finally I preferably, though not necessarily, provide lon-
45 gitudinally and transversely extending fabric tapes b , which cross each other at the centers of the coils and are secured at the junctions of the coils by clips b' , which pass about the tapes and the fastenings a' . The tapes are also secured adjacent to the marginal wire a^2

by clips b^2 , which bind the projecting angles 50 of the tops of the marginal rows of springs and the tapes to the windings a^3 . The ends of the tapes may be allowed to extend downward over the marginal rod a^2 , as shown at c in Fig. 4, and the ends may be secured to 55 the frame of the couch (not shown) or to the lower portion of the spring-bottom, (not shown,) if desired, or the ends of the tapes may be left unanchored, if desired.

The springs may be of the usual conical 60 form, the wire being bent back upon itself at the top of the coil to form the loop at d , then bent at suitable points to form the angles of the square, and finally secured at its extremity by an eye d' to the loop d . By ar- 65 ranging the coils and connecting them in the manner shown it will be observed that hinges are provided between the rows both longitudinally and transversely. At the same time the coils are securely bound together, and 70 a top surface for the spring-bottom is provided having a suitable bearing-surface for the mattress, tending to prevent undue wearing of the mattress and to insure a desirable distribution of the weight upon the springs. 75 Moreover, the stiff metal clips b' , passing at right angles about the soft-metal windings a' , serve to preserve lineal rectitude or alinement of the coils (both longitudinally and transversely) without interfering with the pivotal 80 action at the corners of the springs. Incidentally the clips b' impart strength to the joints and lend a desirable degree of stability to the structure without impairing the individual freedom of motion of the springs as 85 related to the compression thereof, which is considered of the greatest importance in this class of construction. The tapes b are preferably employed in the manner illustrated, but are not considered as vitally essential to 90 the invention.

It will of course be understood that the invention is applicable to box-springs where double conical springs are employed, in which case each coil-spring is provided with a rectan- 95 gular head at each end of the spring.

The gist of the invention consists in providing enlarged top portions for springs hav-

ing projecting angles and connecting the coil-springs directly together at said angles.

The form of the top of the spring may be varied widely without departure from my invention, as is evident.

What I regard as new, and desire to secure by Letters Patent, is—

1. A spring - bottom, comprising spring-coils having enlarged substantially square tops arranged corner to corner in longitudinal and transverse rows, individual clips joining said tops pivotally together at meeting corners and permitting individual freedom of compression to the springs, and clips at right angles to and embracing said first-named clips and serving to insure lineal rectitude of the rows, substantially as and for the purpose set forth.

2. A spring - bottom, comprising spring-coils having enlarged substantially square tops arranged corner to corner in longitudinal and transverse rows, soft-metal windings joining the meeting corners of the spring-tops pivotally together, and clips arranged at right angles to and embracing said windings and serving to preserve lineal rectitude of the rows of springs, for the purpose set forth.

3. A spring - bottom, comprising spring-coils having enlarged substantially square tops

arranged corner to corner in longitudinal and transverse rows, soft-metal windings joining the meeting corners of the spring-tops pivotally together, tapes extending across the central portions of the tops of the springs of the longitudinal rows, tapes extending across the central portions of the tops of the springs of the transverse rows, and clips arranged at right angles to said tapes and soft-metal windings and embracing the same at the junctions of the spring-tops, for the purpose set forth.

4. A spring - bottom, comprising spring-coils having enlarged substantially square tops arranged corner to corner in longitudinal and transverse rows, soft-metal windings pivotally joining the meeting corners of the tops, clips at right angles to and embracing said windings between the meeting corners of said tops, a marginal frame-rod, soft-metal windings pivotally joining the free corners of the spring-tops to said rod, and clips at right angles to and embracing said windings between the rod and corners of the tops, for the purpose set forth.

ISAAC KARPEN.

In presence of—

JAMES YOUNG,
IDA KESTEL.