

No. 849,541.

PATENTED APR. 9, 1907.

I. H. HAAS.
SPRING BED.

APPLICATION FILED JULY 30, 1906.

Fig. 1.

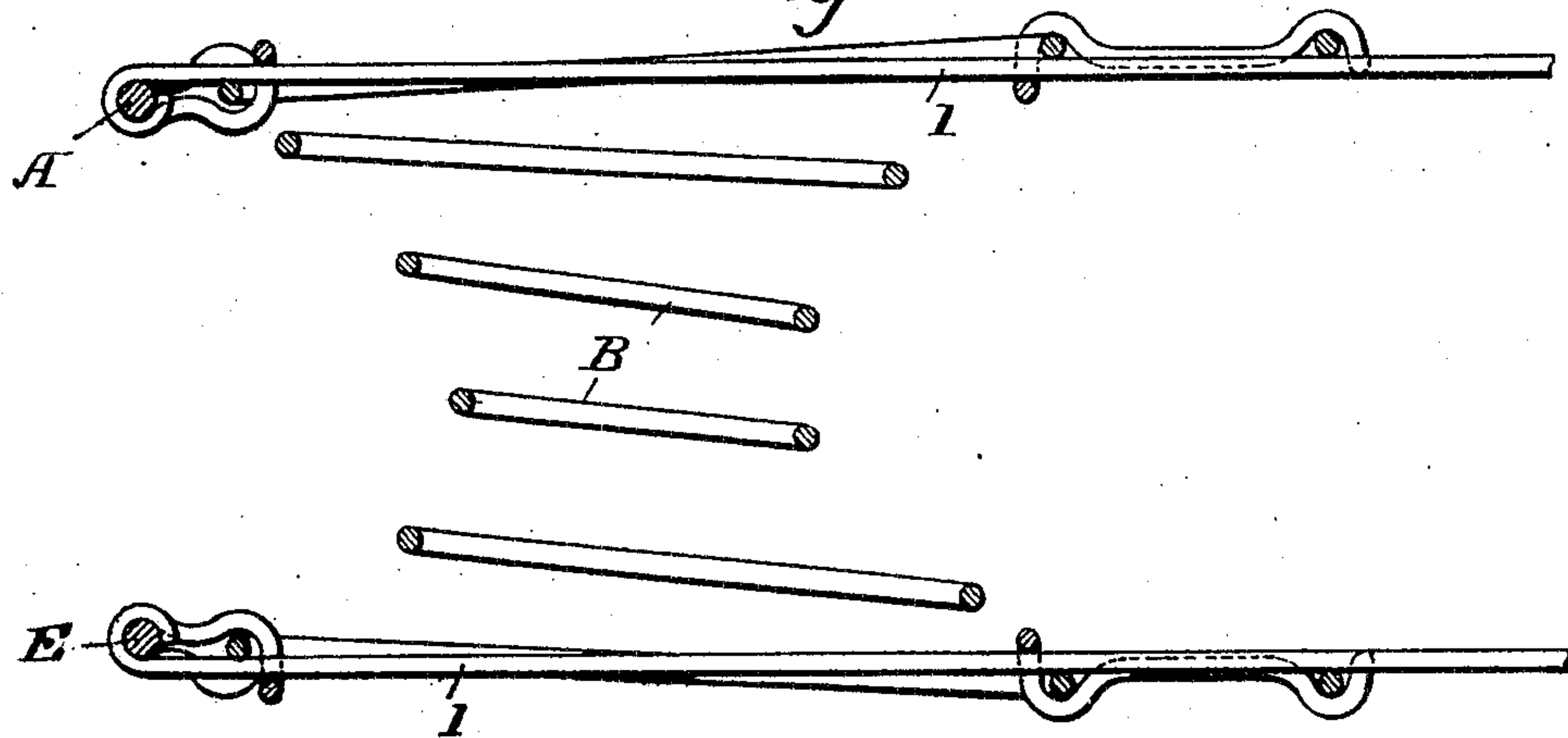


Fig. 2.

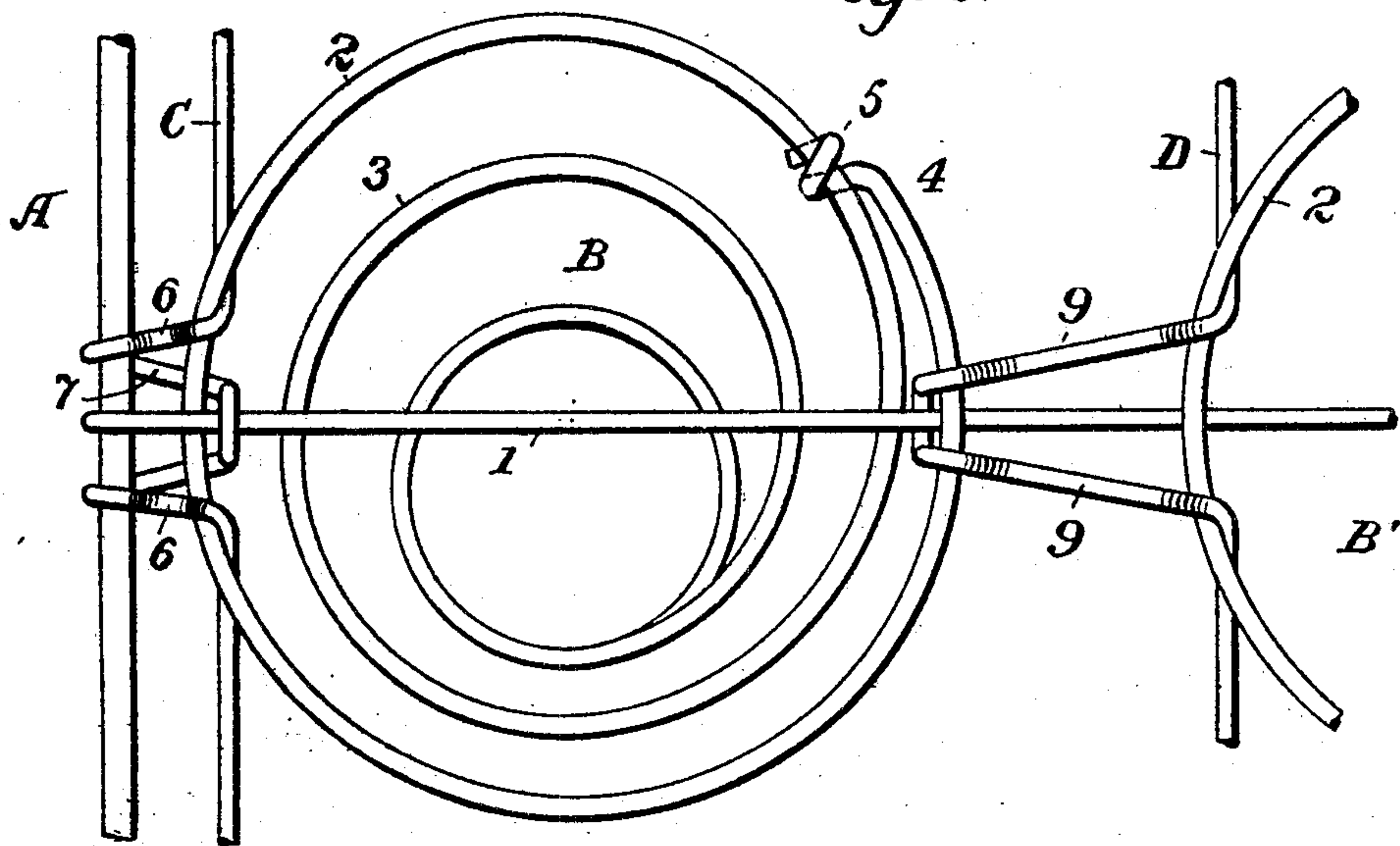


Fig. 3.

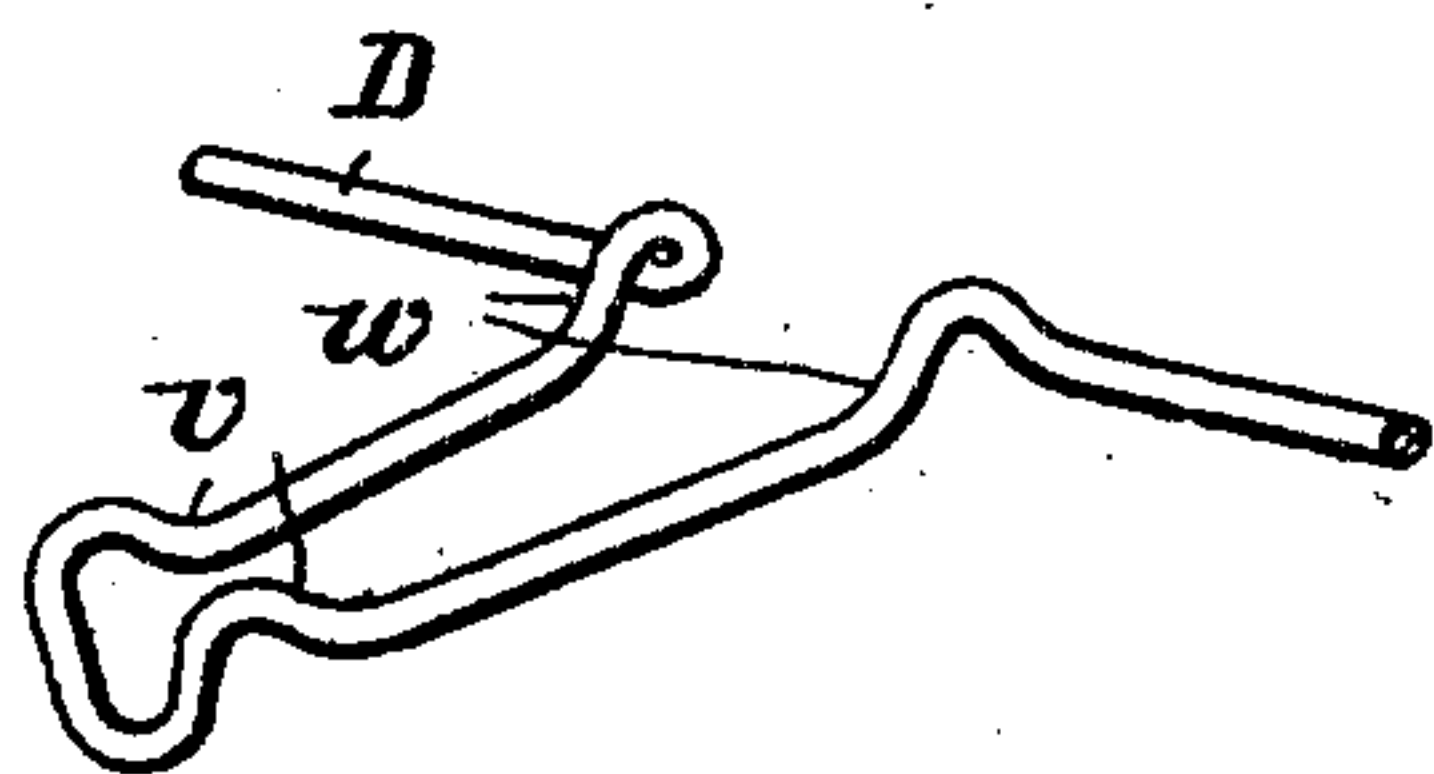
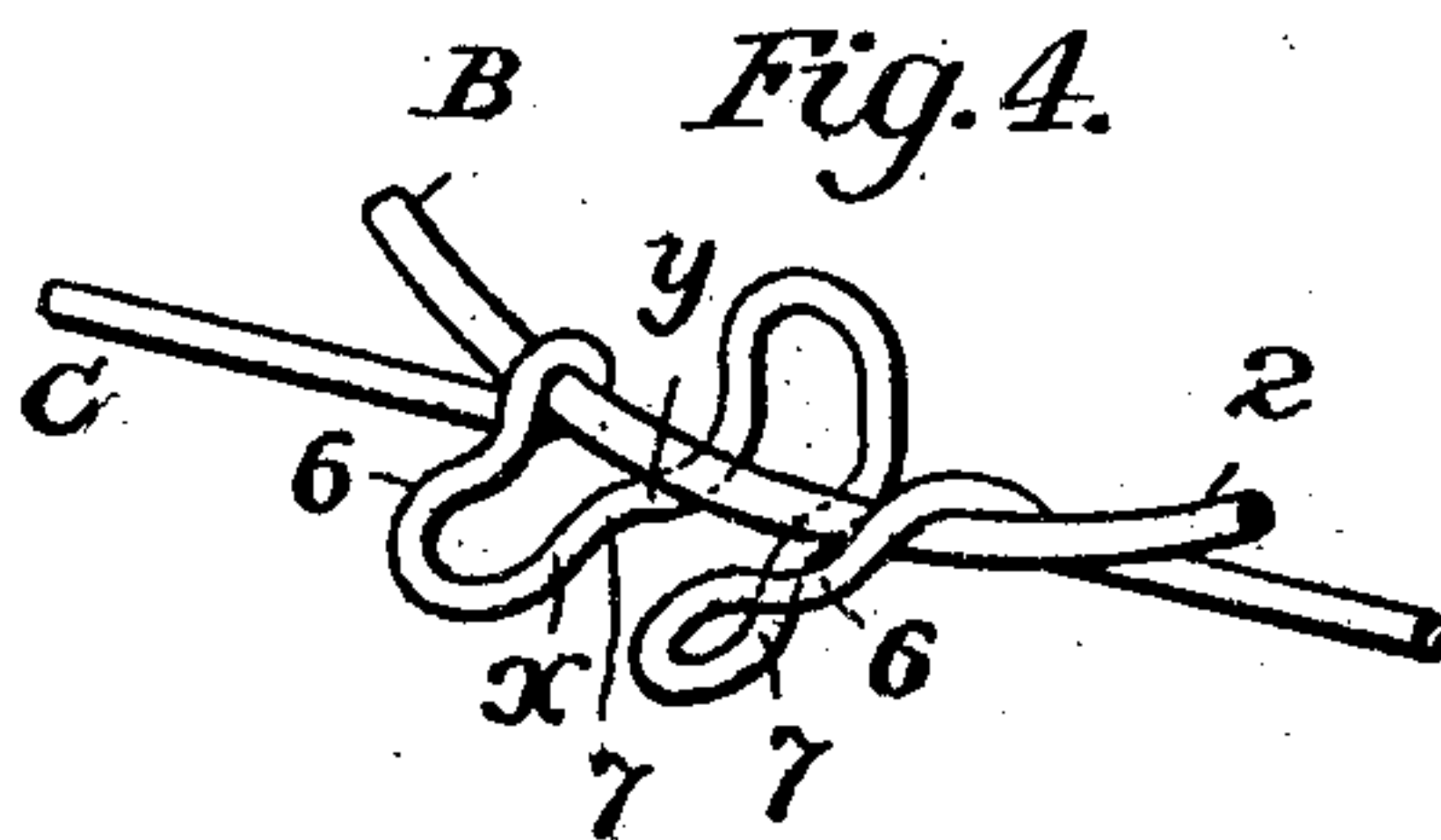


Fig. 4.



Witnesses
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SPRING-BED.

No. 849,541.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ISAAC H. HAAS, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Spring-Beds, of which the following is a specification.

My invention relates to spring bed-bottoms, and consists of a bottom having upper and lower rigid frames, intermediate springs, and cross-bars and provided with tie-rods having loops with shoulders, as fully set forth hereinafter, so as to prevent displacement of one part in respect to the other, while permitting proper movements of the different members, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a cross-section of part of a spring bed-bottom embodying my improvements; Fig. 2, a plan view of Fig. 1; Fig. 3, a perspective view of part of one of the tie-rods adjacent to the point where it connects with the springs, and Fig. 4 a perspective view of part of another tie-rod at the point adjacent to one of the springs and the side bar of the frame.

There are two rectangular frames A E, preferably of round bar-iron of suitable weight and thickness, the said frames being connected by straight cross-rods 1 1, between which lie the coiled springs B. Each of the latter is formed with two nearly concentric end coils 2 3, which lie against the inner sides of the rods 1, except that the end 4 of the outer coil 2 is carried over the adjacent rod 1 and is connected by a hook 5 with the other coil 3.

In order to properly position the springs B in respect to the side bars of the frames, I provide tie-rods C, each parallel and adjacent to one of the side bars of the frame A or E, and these rods C are formed into double loops, one of the loops 6 extending from below through the coil 2, outward and around the adjacent side bar, and being then formed into the other loop 7, which extends from the side bar below the coil 2 and upward, so as to permit the passage of the rod 1, which thereby locks the loop 7.

Each of the looped portions 6 and 7 is bent so as to form shoulders *x y*, which engage,

respectively, the side bars and the adjacent coils 2 in such a manner that the loops cannot move laterally in respect to the side bars nor can the coils 2 move laterally in respect to the loops, the side bars, the loops 2, and the rods 1 being thereby firmly clamped in place, so that there can be practically no movement of one part in respect to the other.

The upper portion of each spring B, adjacent to the side bar of the frame, being thus locked, I lock the said spring B with the adjacent spring B' by means of a loop 9 of a tie-rod D, parallel to the rod C. This loop 9 passes upward through the coil 2 of the spring B', over the latter and over the outer coil of the spring B, and between the latter and the coil 2 down below the rod 1, and in order to prevent any lateral change of position of the springs B and B', I bend each side of the loop 9 so as to form shoulders *v w*, one engaging the outer coil of the spring B and the other the outer coil of the spring B', thus holding them rigidly in respect to each other laterally without interfering with their independent vertical movements.

By providing the loops 9 with the shoulders *v w*, I absolutely prevent the swinging of one spring laterally in respect to the other, and thus avoid the independent lateral sagging of the springs, which is apt to occur in ordinary constructions.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A spring bed-bottom consisting of parallel upper and lower frames A, E provided with parallel straight connecting-rods 1 and intermediate springs B, B' the upper coils of the springs bearing against the inner sides of the rods, the end of each outer coil extending over the rod and provided with a hook-connecting it to the adjacent coil, and tie-rods C each parallel to one of the side bars of the frame and having two loops 6, 7 extending in opposite directions and both engaging the side bar and the adjacent coil of each spring and one loop engaging also the rod 1 against which said spring bears.

2. A spring bed-bottom consisting of parallel upper and lower frames A, E provided with parallel straight connecting-rods 1 and intermediate springs B, B' the upper coils of

the springs bearing against the inner sides of
the rods, the end of each coil extending over
the rod and provided with a hook connecting
it to the adjacent coil, and tie-rods C each
5 parallel to one of the side bars of the frame
and having two loops 6, 7 both engaging the
side bar and the adjacent coil of each spring
and one loop engaging also the rod 1 against

which said spring bears, the side portion of
each loop having shoulders x, y , as set forth. 10

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

ISAAC H. HAAS.

Witnesses:

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JACOB R. HAAS.