

No. 668,335.

Patented Feb. 19, 1901.

C. S. MARSHALL & F. E. DAVIS.

SPRING SEAT OR BOTTOM.

(No Model.)

(Application filed Oct. 12, 1900.)

Fig. 1.

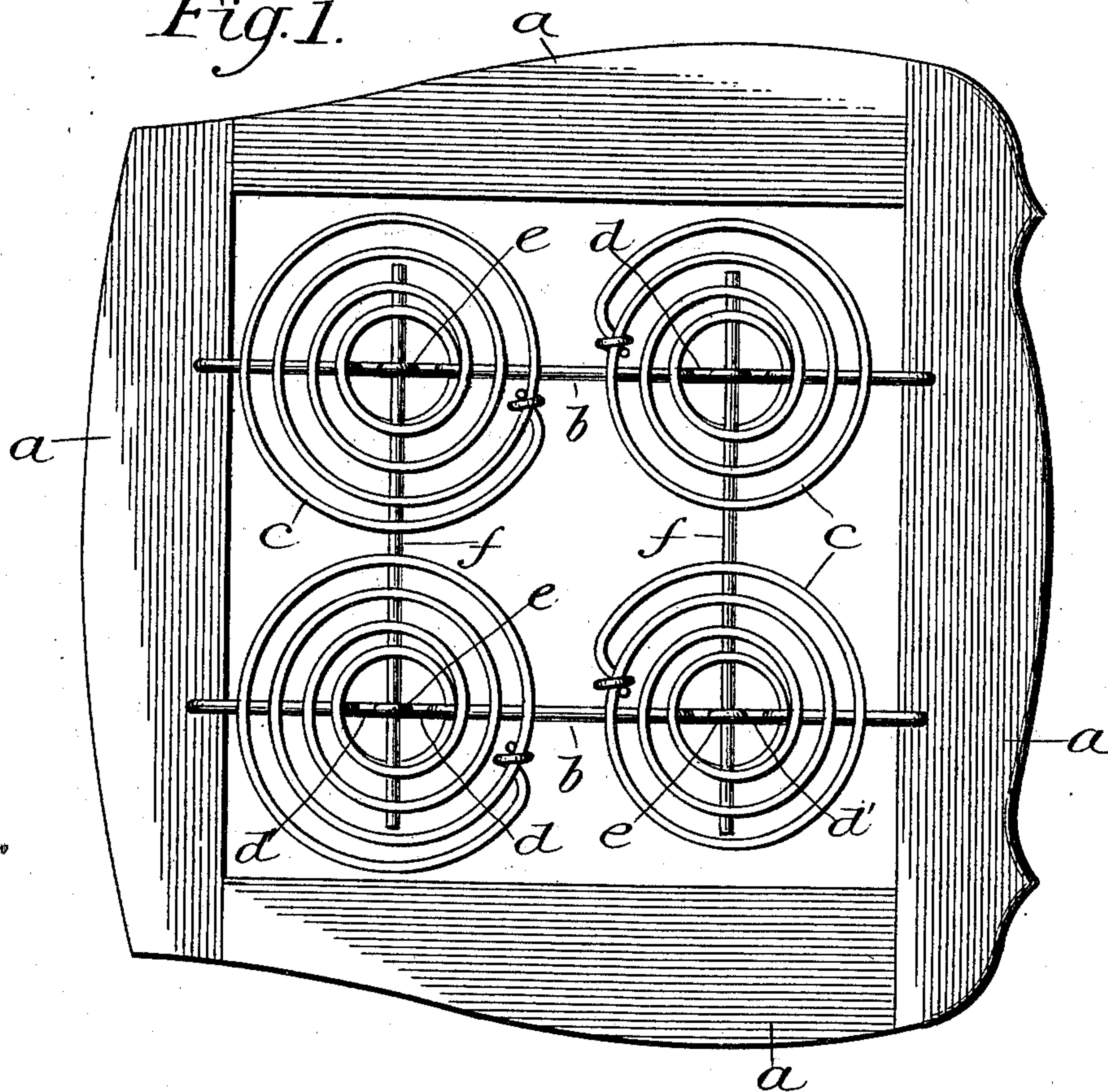
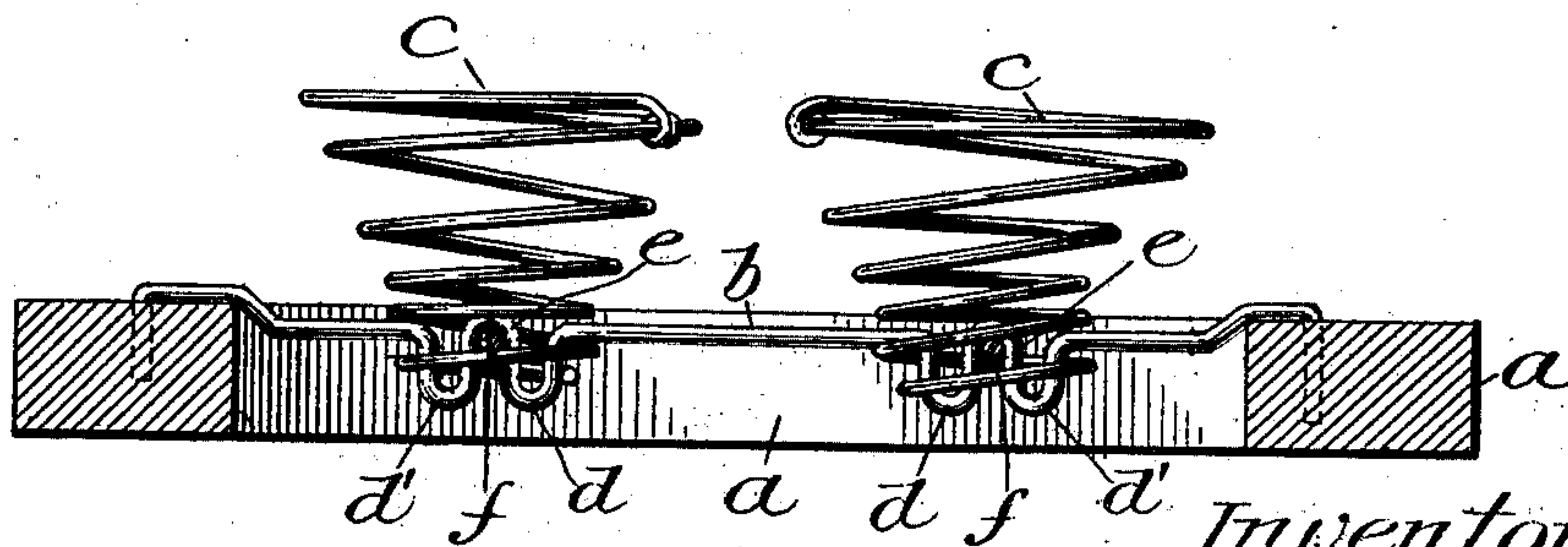


Fig. 2.



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CLINTON S. MARSHALL AND FRANK E. DAVIS, OF WORCESTER, MASSACHUSETTS; SAID MARSHALL ASSIGNOR TO THE AMERICAN STEEL AND WIRE COMPANY OF NEW JERSEY, OF NEW JERSEY.

SPRING SEAT OR BOTTOM.

SPECIFICATION forming part of Letters Patent No. 668,335, dated February 19, 1901.

Application filed October 12, 1900. Serial No. 32,863. (No model.)

To all whom it may concern:

Be it known that we, CLINTON S. MARSHALL and FRANK E. DAVIS, citizens of the United States, and residents of Worcester, county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Spring Seats or Bottoms; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to spring-bottoms for beds, sofas, seats, and the like; and the particular object in view is to secure the coiled springs to their supporting-wires by a simple and efficient arrangement that will brace and steady them against tipping and lateral deflection when the weight of the person is thrown on them.

The invention has to do with that type of bottoms which consists of helically-coiled springs that are secured at their lower ends to supporting-wires which extend across between the side pieces of the main frame. It is illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of a chair-seat; and Fig. 2, a cross-sectional view, the springs and supporting-wires being shown in elevation.

Referring to the views, *a* denotes the side pieces of the seat or bed frame. It may be made of wood or metal, as desired, and may also be of any preferred size and shape. Extending across between these side pieces are wires *b*, to which the springs *c* are secured. These wires support the springs and are secured in any suitable manner at their ends to the side pieces. As herein shown, their ends are turned down and driven into the upper surface of the pieces *a*; but obviously the invention is not restricted to any particular way of fastening them. There may be any desired number of these wires, depending on the size of the springs and the character of the bottom. The springs are of the helical type, long well known, and are arranged with their largest coils at the upper ends, so as to afford the greatest amount of supporting-surface.

The supporting-wires *b* are preferably de-

pressed below the upper surface of the frame sides *a*, as best illustrated in Fig. 2; but this is not a necessary feature, and they may be level with the frame-surface, if desired.

At the points along the length of the wires *a* where the springs *c* are to be located the wires are provided with pairs of downwardly-extending loops *d d'*, and between the individual loops of each pair the wires are bent upwardly, as indicated at *e* in Fig. 2. The number of these pairs of loops varies with the number of springs, and the size of the loops will be determined by the size of the wires and the diameter of the end coils of the springs.

The springs are connected with the wires *b*, as indicated in Fig. 2, where it will be seen that the wires pass transversely through the springs just above the lowermost coil or convolution and the pairs of loops extend downwardly through and beyond the end coil, the middle bend *e* of the wires projecting up centrally within the coil.

The distance apart of the individual loops forming the pairs above described is regulated by the diameter of the end coils of the springs, the object being to have the coils fit closely on the loops, so as to be braced and steadied by them.

The extent to which the loops project downwardly is not a material matter, so long as they pass clear through the lower coils.

Preferably the bends *e* extend upward sufficiently to permit cross-wires *f* to be passed at right angles to the wires *b* on a level with the latter through the springs immediately above the lower convolutions, said wires passing under the bends *e* and over the lowermost coils.

The construction being as thus described, it will be noted that the springs cannot be lifted off the wires, but are securely locked thereto by the cross-wires *f*, as well as by the passage of the supporting-wires through them. Furthermore, the cross-wires steady the springs by providing additional points of support at right angles to the wires *b*.

Having thus described our invention, what we claim is—

In a spring-seat, the combination of a heli-

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cal spring, a supporting-wire passed transversely through the spring above the lower convolution, and formed into a pair of depending loops which extend downwardly
5 through and are closely encircled by said lower convolution so as to brace and steady the spring, and a cross-wire passing through the spring above the lower convolution at right angles to the supporting-wire, said cross-

wire passing under the supporting-wire between the loops.

In testimony whereof we affix our signatures in presence of two witnesses.

CLINTON S. MARSHALL.

FRANK E. DAVIS.

Witnesses:

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