

(Model.)

J. SPRUCE.
Spring Hinge.

No. 233,569.

Patented Oct. 19, 1880.

fig. 1

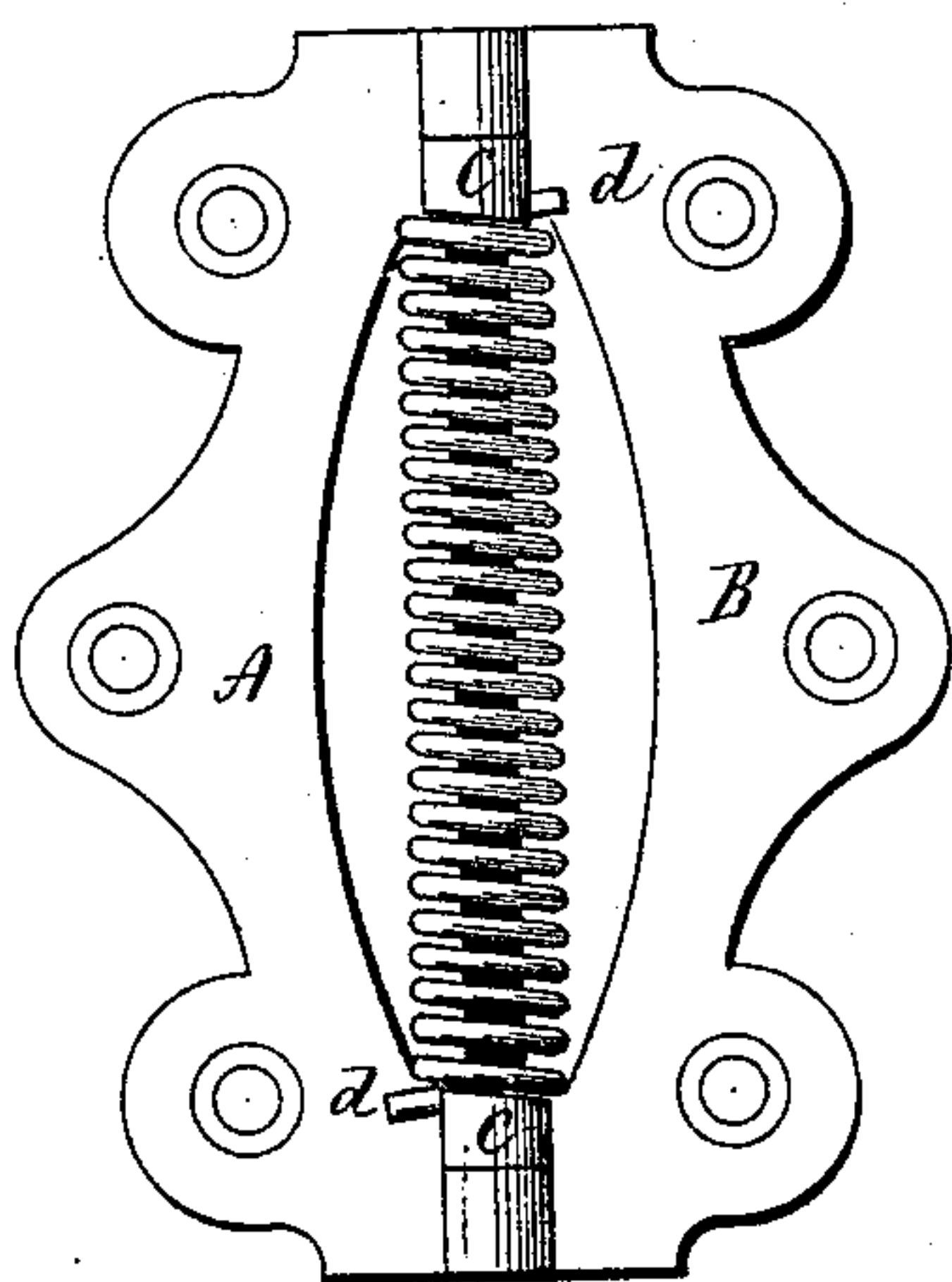


fig. 2

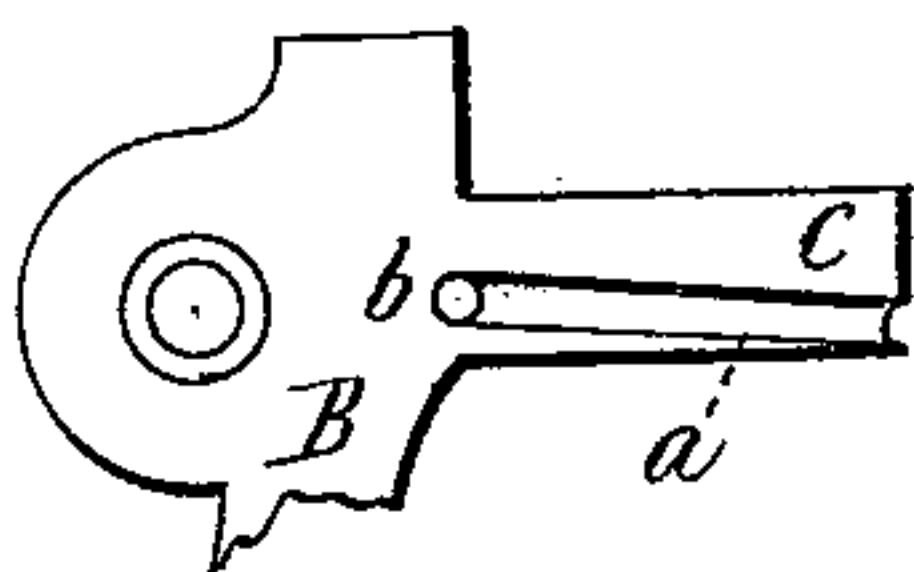
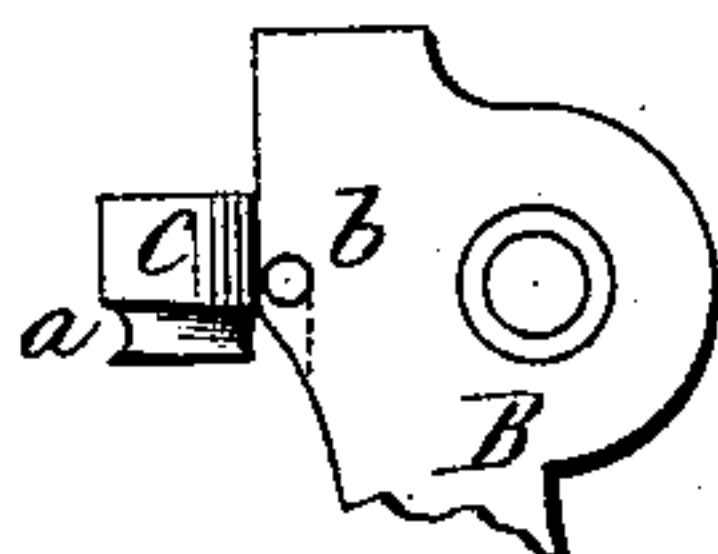


fig. 3



Witnesses
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JAMES SPRUCE, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE SCOVILL
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SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 233,569, dated October 19, 1880.

Application filed July 21, 1880. (Model.)

To all whom it may concern:

Be it known that I, JAMES SPRUCE, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Spring-Hinges, (Case D;) and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description
10 of the same, and which said drawings constitute part of this specification, and represent in—

Figure 1, front view; Fig. 2, back side view of the ear end of one of the leaves; Fig. 3,
15 front view of the same, with the ear bent into shape.

This invention relates to an improvement in that class of spring-hinges in which the coil is arranged around the pintle, so that
20 one end will bear upon the inner face of one leaf, and the other end upon the face of the other leaf.

Various devices have been resorted to for the purpose of holding the spring in its proper
25 position, as well as to prevent wear from contact with the pintle; but all add considerably to the expense of manufacture, and usually by introduction of a sleeve within the spring, either an independent piece or an extension of
30 the ear.

The object of this invention is to simplify the construction; and it consists in the construction, as hereinafter described, and particularly recited in the claim.

35 The outline of the two leaves A B may be of the usual or any desirable form. At one end of each leaf is an ear, offset at one end, so that by inverting the two leaves the ear of one leaf at one end will come outside of the
40 ear of the other leaf on the same end, and vice versa at the other end.

C represents the inner ear. This inner ear, C, is made with a diagonal groove, *a*, on its
45 back side, running from the lower extreme angle upward toward the leaf of the hinge, where a perforation, *b*, is made. This groove and perforation correspond to the size of the

wire. When the ear is bent the groove takes a spiral form, as seen in Fig. 3, the perforation *b* opening onto the leaf of the hinge. The
50 spiral spring is placed upon the pintle. One end of the spring lies in the groove *a*, its end *d* extending through the perforation *b* onto the face of the leaf, as seen in Fig. 1, the same at both ends, as seen in Fig. 1. This spirally-
55 shaped groove on the ear parts secures the spring to the leaves independent of the pintle, and so that no contact occurs between them. It may be made by striking the groove and perforation in sheet metal while the blank
60 is flat, as seen in Fig. 2; but in cast metal the groove and perforation will be formed in the mold, or it may be otherwise made. In casting, however, it would be better or easier to make the perforation a notch, as indicated in
65 broken lines, Fig. 3.

This construction may be made with the ears of the same length, or without any elongation in consequence of the method of attachment.

The groove *a* may be omitted, the perforation or notch *b* remaining, in which case the
70 last coil would bear on the extreme outer surface of the ear C. This may be done on hinges made from thin metal with light springs, but
75 for the heavier class of springs the groove is preferable.

It will be understood that if the action of the spring is to be reversed the arrangement of the end will be made to pass upon the op-
80 posite or other face of the leaf.

I claim—

In a spring-hinge, substantially such as described, the inner ear of each leaf constructed with a spiral groove to receive the end coil of
85 the spring, and a perforation or notch in the ear through which the end of the spring extends onto the leaf of the hinge, substantially as described.

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Witnesses:

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