

T. ROWE.  
Spring-Hinge.

No. 219,653.

Patented Sept. 16, 1879.

Fig. 1.

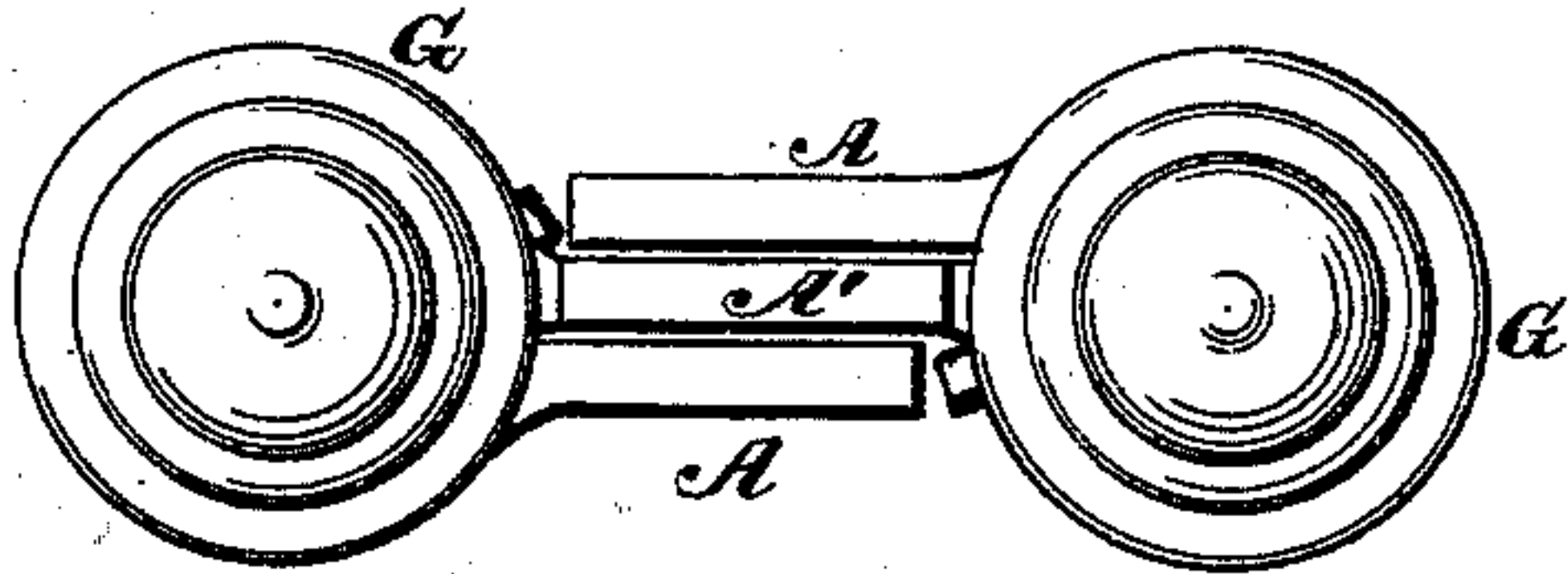


Fig. 2.

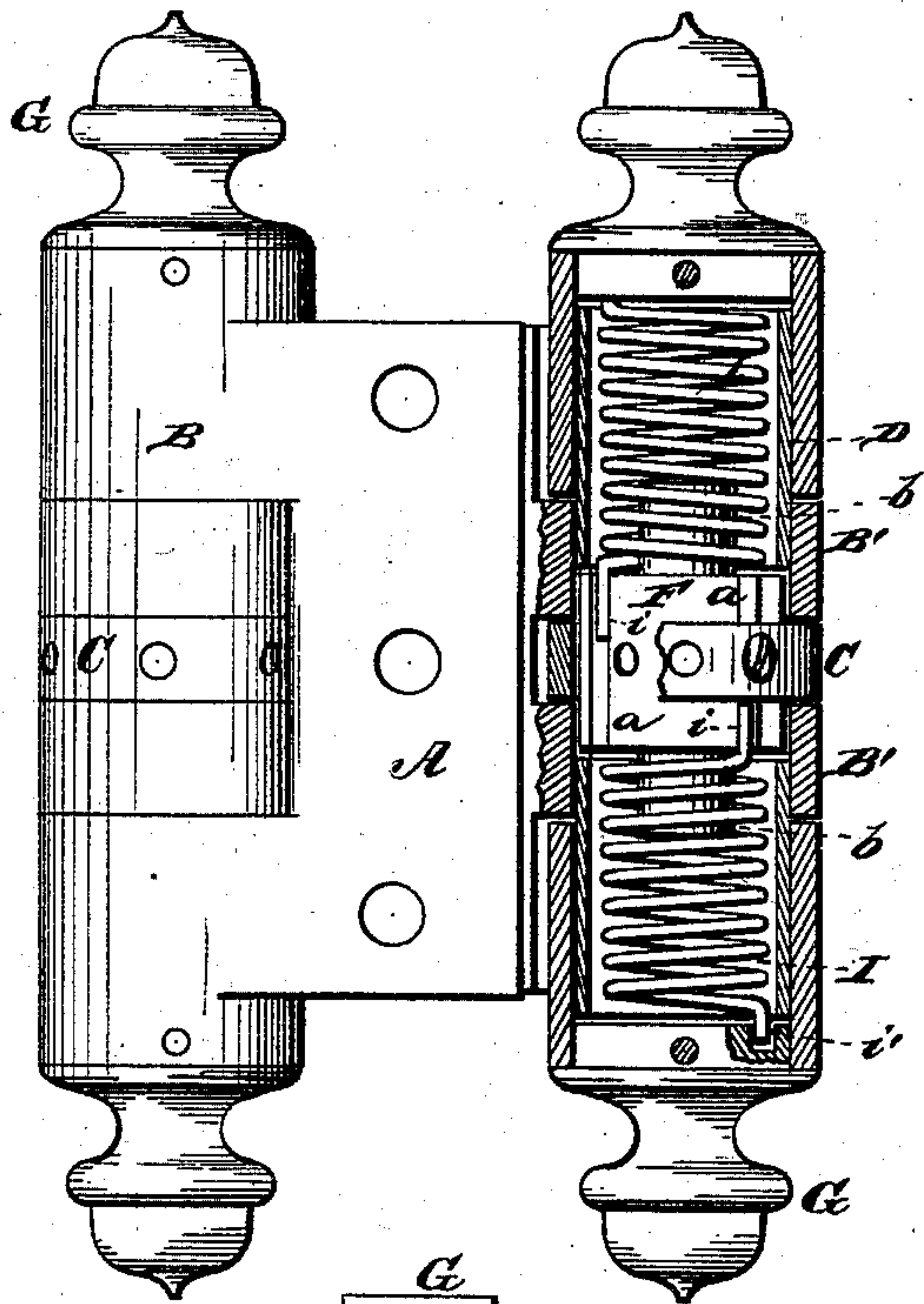


Fig. 4.

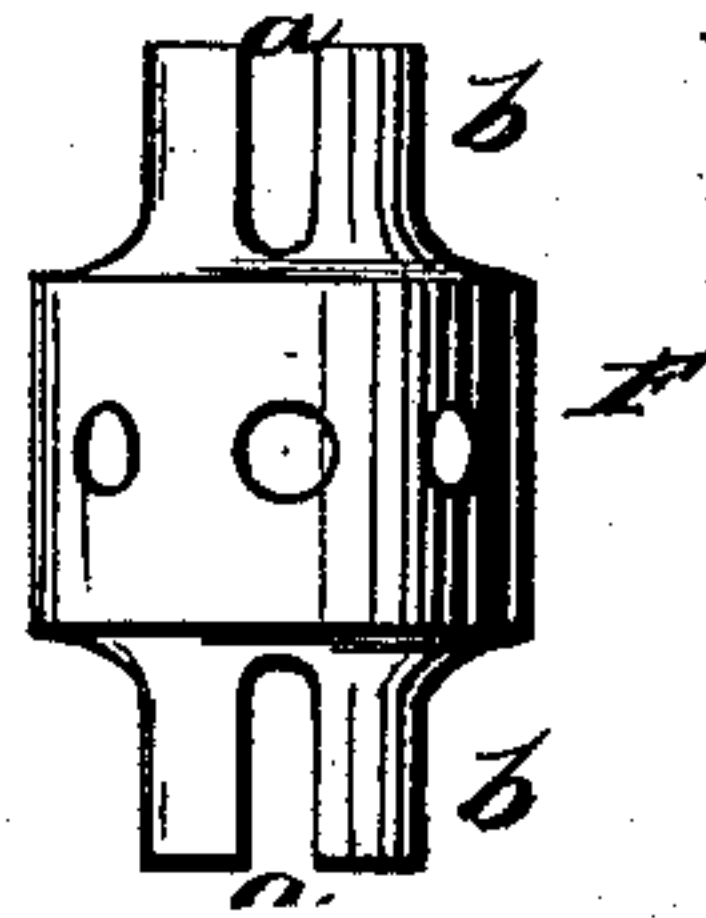
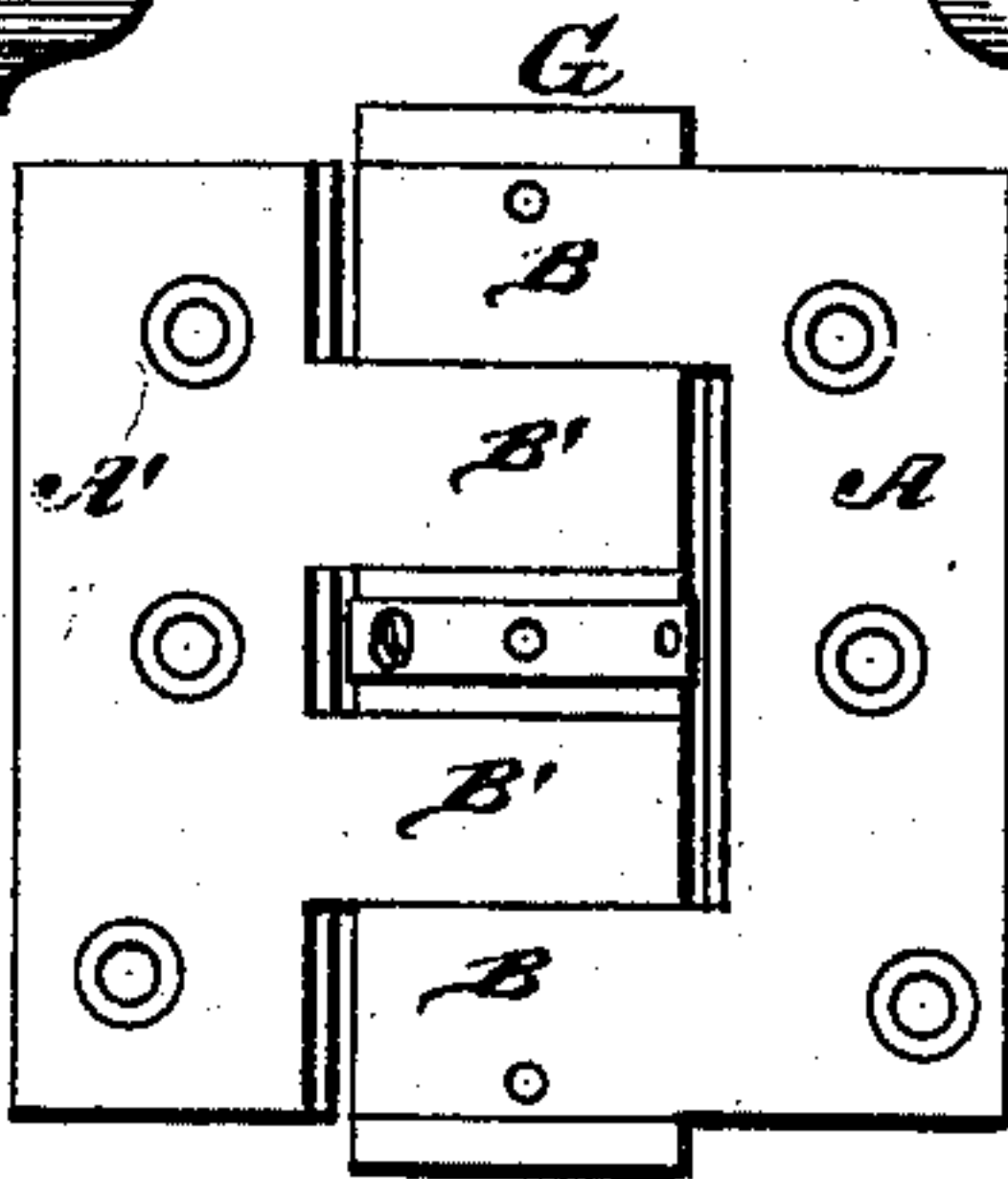


Fig. 3.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN SPRING-HINGES.

Specification forming part of Letters Patent No. **219,653**, dated September 16, 1879; application filed February 8, 1879.

*To all whom it may concern:*

Be it known that I, THOMAS ROWE, of Brooklyn, in the county of Kings and State of New York, have invented a new and valuable Improvement in Spring-Hinges; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a top plan of my spring-hinge. Fig. 2 is a side-elevation view, partly in section; and Figs. 3 and 4 are detail views.

My invention relates to spring-hinges for doors, gates, &c., in which the tension may be adjusted at will, so that loss of spring strength may be compensated for, and greater or less force be imparted to the spring and hinge, and particularly to that class of hinges in which a right and left hand spring in one piece, having a yoke formed in the connecting portion, and a bolt operating through a perforated adjustable ring and acting in such yoke, is employed.

The nature of my invention consists in a central cylindrical perforated block constructed to receive the ends of the spiral springs arranged upon each side of the block, and in the construction and combination of parts, as will be hereinafter more fully set forth, and pointed out in the claim.

In the drawings, A represents one of the leaves of my improved hinge, having eyes B B formed rigid therewith at the ends on the outer edge.

A' represents the center leaf of a double-acting hinge provided with similar eyes B' B' on both edges. The eyes B' B' on each edge of the leaf A' are so located that they will fit between the respective eyes B B on the leaves A.

As in a double-acting hinge the two parts are exactly alike, a description of one will answer for both.

The eyes B', while they fit between the eyes B, are separated by a sufficient space to receive an adjustable cylindrical perforated ring C, as shown. The parts B B' thus form a cylin-

der upon each end of the hinge, against the inner surfaces of which bear spring-sleeves D, which cover the joints and keep the parts in relatively proper positions.

F represents a central cylindrical block perforated to correspond with the holes in the ring C, and it operates within the cylinder, being slightly longer than the width of the space between the rings B'.

The block F is at each end provided with a cylindrical projection, *b*, of such size as to enter the ends of the spiral springs I I, and in the block are longitudinal grooves *a a*, to receive an arm, *i*, projecting from the inner end of each spring.

The springs I are separate, and by the construction as shown I avoid a short heavy bearing of the bolt upon the yoke and furnish more secure connections.

Instead of the grooves *a* in the block F, the projections *b* of said block may be formed with jaws to receive a cross-arm on each spring.

The outer ends of the springs I are provided with arms *i'*, which are inserted in holes in suitable caps or end pieces, G, fastened by pins or otherwise in the outer ends of the rings B B.

Though the above description refers more particularly to a double-acting hinge, it is evident that the same device is applicable to a single-acting hinge, in which case the center leaf, A', will form the other leaf of the hinge proper.

I claim—

In a spring-hinge, the perforated cylindrical block F, provided with projections *b* at each end and slots or grooves *a*, as described, for the reception of the springs I, in combination with the sleeves D, perforated ring C, and leaves A A', having eyes B B', as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THOMAS ROWE.

Witnesses:

J. D. VELSOR,  
E. B. WOOD.