

(No Model.)

P. H. WALSH.
SPRING HINGE.

No. 308,537.

Patented Nov. 25, 1884.

Fig. 1.

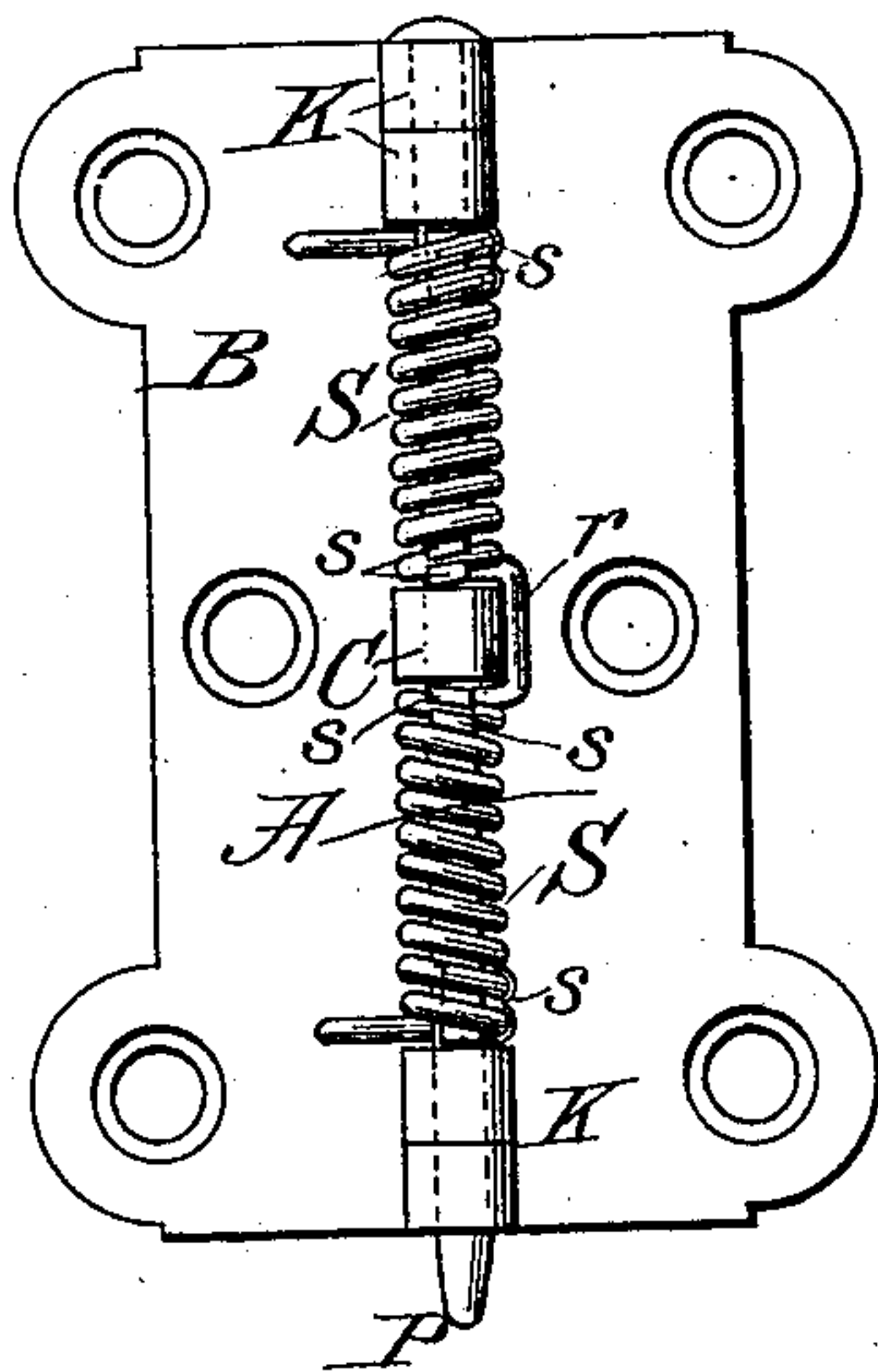


Fig. 2.

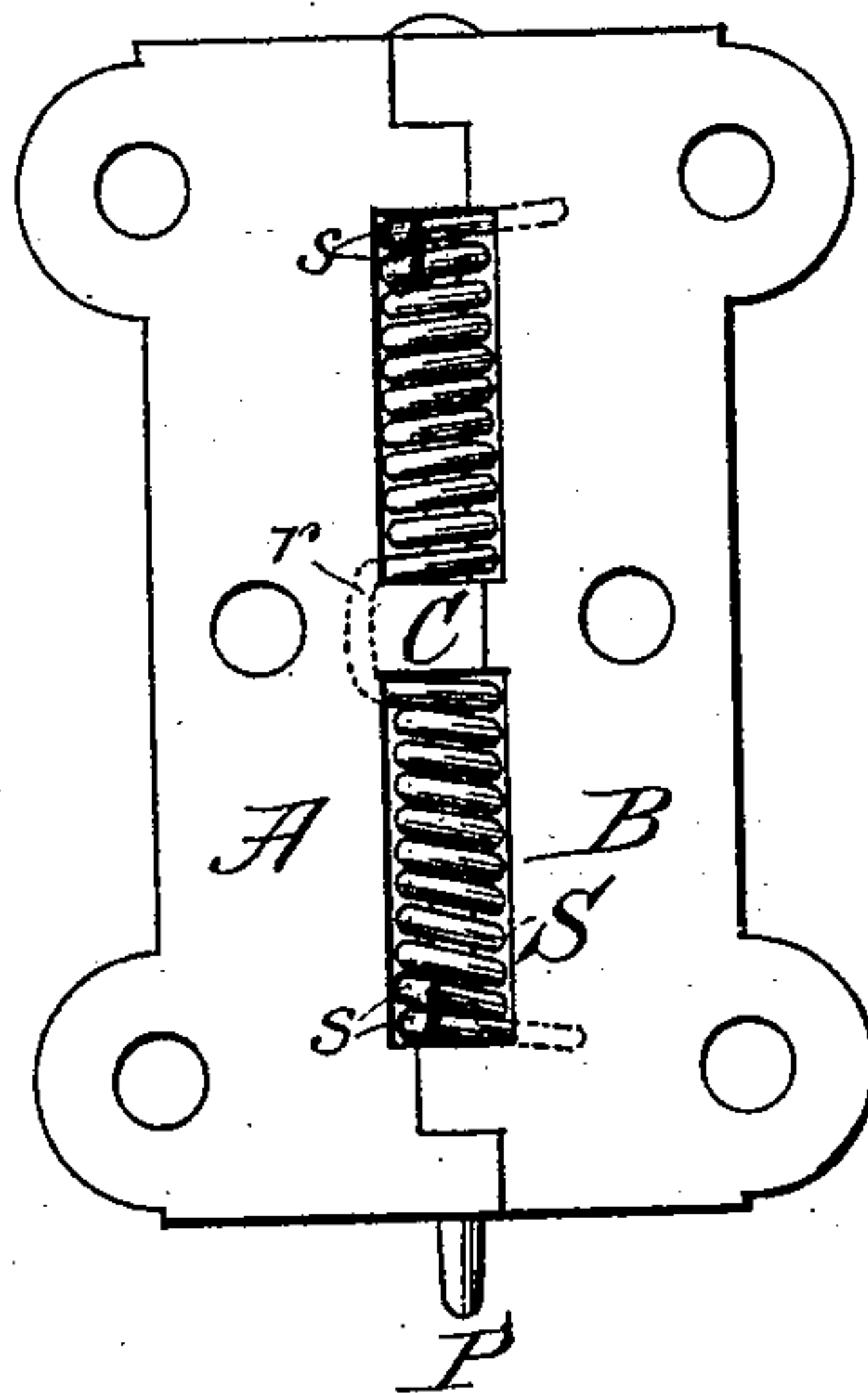


Fig. 3.

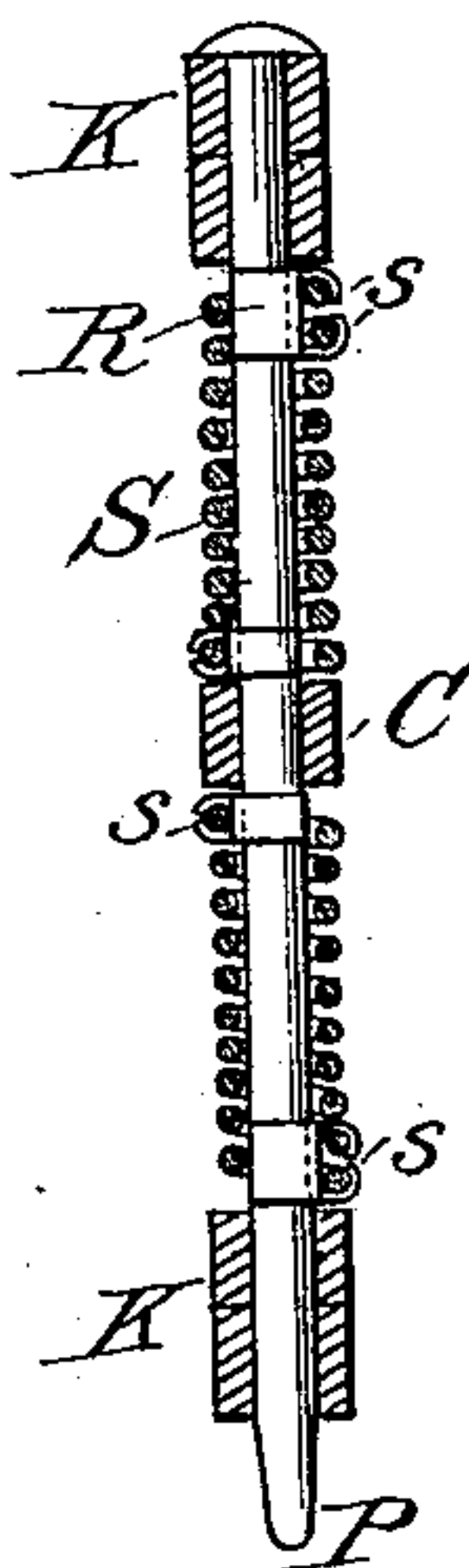


Fig. 4.

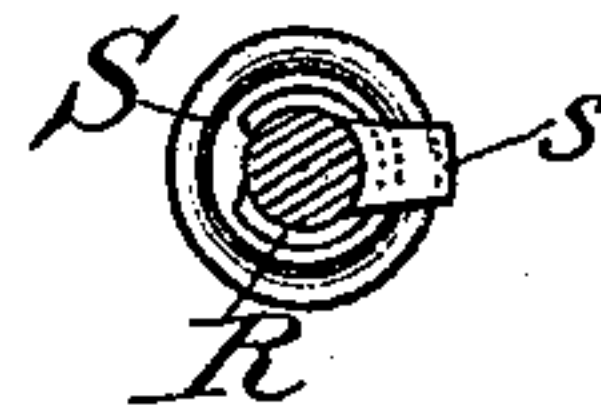
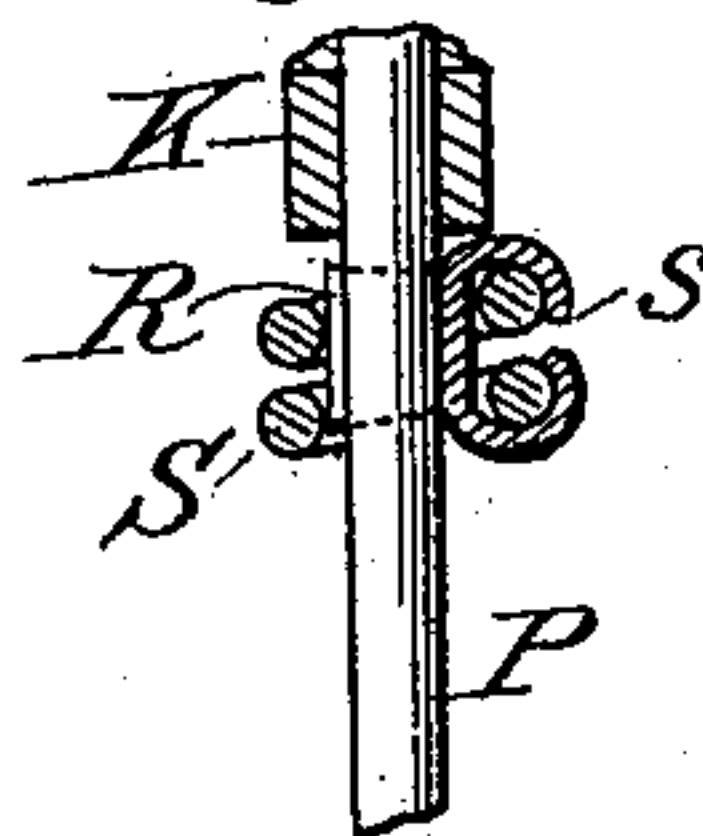


Fig. 5.



Fig. 6.



Attest:

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per

Inventor:

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UNITED STATES PATENT OFFICE

PATRICK H. WALSH, OF WATERBURY, CONNECTICUT.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 308,537, dated November 25, 1884.

Application filed May 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, PATRICK H. WALSH, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Spring-Hinges; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The nature of my invention will be fully described below, and pointed out in the claims.

In the drawings, Figure 1 is a plan view. Fig. 2 is a plan view of the under side. Fig. 3 is a vertical section, the hinge being turned sidewise. Fig. 4 is a horizontal section below the upper knuckles. Fig. 5 is a detail view of a peculiar form of a pintle-shoe. Fig. 6 is a broken section near the upper part of the pintle, showing clearly the application of the shoe to the pintle and spring.

Like letters refer to like parts.

A and B represent the two leaves of the hinge, and K K the two upper and lower knuckles.

P is the pintle.

S represents the spring, and this is divided into two sections by a central knuckle, C. The upper section is coiled to the left, and passes around the said central knuckle, C, in the form of a loop, *r*; thence the coil continues to the right to its termination. The loop *r* rests upon leaf A at the base of the knuckle C, or where it joins said leaf, of which it is an integral part. The spring will therefore act against the leaf A at this point through the loop, which may be laterally extended on the leaf farther than shown, as the case may require. The free ends of the spring rest upon the leaf B, and the latter may be hollowed out slightly at the inner edge to receive them.

In a hinge like mine it is important to prevent the coils of the spring from bearing against the pintle, and as the free ends of the

spring rest on one of the leaves it is also desirable to hold the two coils nearest each free end from binding on the upper or lower knuckles, or from unduly spreading, great strain curving the said free ends and coils. The same may be said of the single coil above and below the central knuckle. To accomplish these objects a double shoe or clip, E, is provided. The peculiar form of it is seen in Fig. 5, in which R is a split ring or sleeve, adapted to nearly encircle the pintle, and *s* is also a split sleeve for inclosing one or more coils of the spring, both being at right angles to each other, and made from a single blank of metal; or, in other words, the shoe consists of two integral split rings, back to back. The ring R of the double shoe is placed about the pintle under the two upper and lower coils of the spring, and also under the single coil above and below the central knuckle. Though the ring R does not entirely encircle the pintle, it does sufficiently so to prevent the said coils from touching the pintle anywhere. The ring *s* incloses the two upper and lower coils, and also the single coil above and below the central knuckle, whereby the said coils are not only kept from binding on the knuckles, but also from unduly spreading. Moreover, as the ring *s* is integral with ring R, the latter is always held in the proper position, whereas a single sleeve is likely to move out of place when worn, nor does it have the advantage afforded by the additional ring *s*.

I am aware that single sleeves have been placed about the pintle to keep away the spring; also of a clip about the pintle having a sleeve for the free ends of the spring resting on the leaves; likewise of a hinge like mine without any pintle-shoe, and I disclaim any of these.

I am not aware of a shoe like mine, or of the same combination of parts.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a spring-hinge, the double shoe formed from a single piece of metal, consisting of two directly contiguous right-angled sleeves, substantially as shown, combined with one or

more coils of the spring, the pintle, and the leaves, as set forth, and for the purposes described.

2. The spring S, made into two coils of opposite twist, having its free ends bearing on leaf B, and the connecting-loop r, bearing against leaf A, combined with the said leaves A and B, jointed together by the pintle P and knuckles K K and C, and the double shoes E, consisting of the contiguous right-angled rings

R and s, respectively placed nearest the knuckles about the pintle, and one or more coils of the spring, substantially as described.

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

PATRICK H. WALSH.

Witnesses:

W. A. BOWN,
D. H. TIERNEY.