(No Model.)

A. A. PAGE.

SPRING HINGE.

No. 525,861. Patented Sept. 11, 1894.

Fig. 1

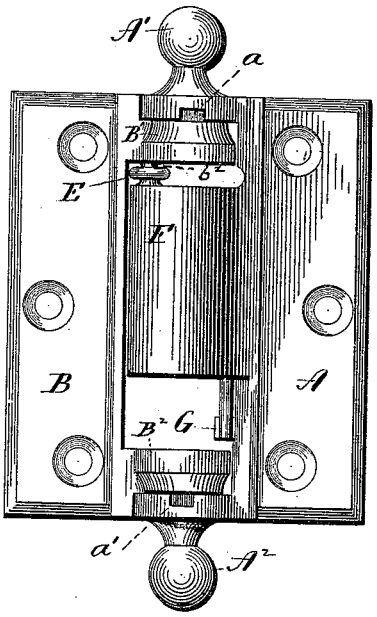


Fig. 2

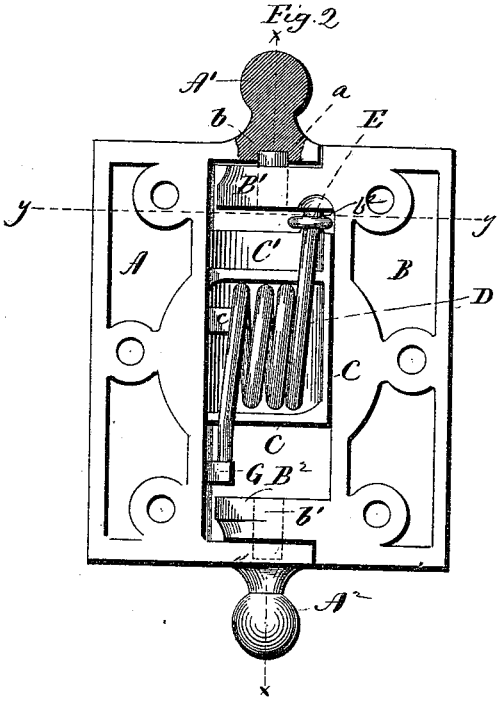


Fig. 4

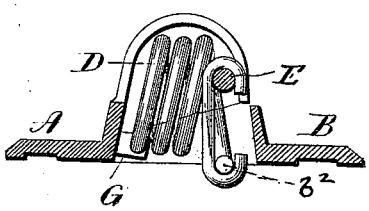
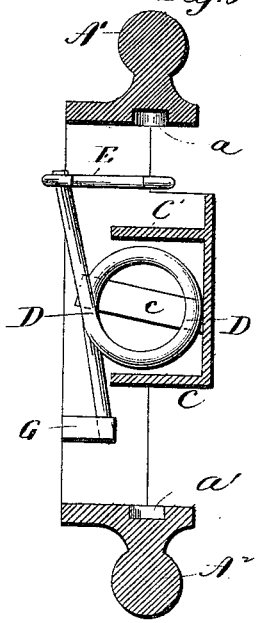


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

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SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 525,861, dated September 11, 1894.

Application filed November 13, 1893. Serial No. 490,747. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. PAGE, of East Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Spring-Hinges; 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 of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in outside elevation of a spring constructed in accordance with my invention; Fig. 2, an inside view thereof with the pintle-socket arm of one leaf shown in vertical section; Fig. 3, a sectional view of the hinge on the line *x—x* of Fig. 2; Fig. 4, a view of the hinge in transverse section on the line *y—y* of Fig. 2.

My invention relates to an improvement in that class of hold-back hinges in which the spring is arranged at a right angle to the axis of the hinge, it being understood that a hold-back hinge is one which is constructed so that the spring holds the leaves in their folded positions when, in folding, they pass a certain point or dead center.

The object of my present invention is to produce a hold-back hinge of the type described, which shall be simple, compact and effective, and adapted to be produced at a low cost for manufacture, and to employ the spring itself to the highest advantage.

With these ends in view, my invention consists in a spring hinge having certain details of construction and combinations of parts, as will be hereinafter described and pointed out in the claim.

In carrying out my invention as herein shown, I construct the leaf A of the hinge with pintle-socket-arms A′ and A^2, having ornamental, knob-like projections, and constructed with pintle-sockets *a a′* opening outward. The leaf B of the hinge is constructed with two pintle-arms B′ B^2, respectively carrying outwardly projecting pintles *b b′* which are seated in the sockets *a a′* before referred to, from the open outer ends thereof. The leaf A is also constructed upon its inner edge with a concavo-convex strap-like extension C, provided upon its inner face with a housing or box C′, adapted in its internal dimensions to receive a coiled spring D, which has oppositely projecting ends, and which is arranged with the axis of its coil at a right angle to the axis of the hinge, which is represented by a line uniting the two pintles *b b′* aforesaid, the axis of the spring being also located in the plane of the said leaves when they are in their normal or closed positions. It will be observed that the spring is centrally unsupported, which is to say that it is not held in place by any post or arbor extending through its coil, as coiled springs have been in prior hinges of the same general type. Under my construction, therefore, there is nothing to obstruct the free action of the several members or turns of the coiled part of the spring. A wedge *c* introduced into the box between the adjacent wall of the leaf A, and the adjacent coil of the spring, assists in holding the same in the box. A link E, engaged at one end with one end of the spring, and at its other end with a grooved pin b^2, depending from the pintle-arm B′ of the leaf B, connects the said end of the spring with the said leaf, while the other end of the spring is connected with the leaf A, by its engagement with the lug G, projecting inward therefrom.

A spring-hinge constructed on the principle above described is very easily made and assembled, and cheap to produce, and the power of the spring is not only utilized, substantially without loss, but the spring is retained in place in such a manner that it cannot escape, for the tension imposed upon its ends tends constantly to force its coiled portion into the bottom of the housing.

I am aware that a hold-back spring, comprising two leaves and a coiled spring arranged at a right angle to the axis of the hinge, is old. I am also aware that it is old to connect the respective ends of the coiled spring with the respective leaves of a hinge. I am further aware that it is old to employ, in a hinge, a centrally unsupported coiled spring. I am still further aware that it is old, in a hold-back hinge, to connect one end of the spring with one leaf of the hinge by means of a link.

I do not, therefore, claim any of those constructions broadly, but only my particular construction.

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

In a spring hinge of the hold-back type, the combination with the leaves thereof, one of which is constructed with a box or housing; of a centrally unsupported coiled spring located in the said housing, having oppositely projecting ends, and arranged with the axis of its coil at a right angle to the axis on which the leaves of the hinge turn, but in the plane of the leaves when they are in their normal or open positions; a link connecting one end of the spring with one of the leaves, and means for connecting the other end of the spring directly with the other leaf, substantially as set forth, and whereby the tension imposed upon the oppositely projecting ends of the spring exerts a constant effort to force the coiled portion thereof into the bottom of the housing, so as to hold it therein.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALBERT A. PAGE.

Witnesses:
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