(No Model.)

G. L. JAEGER.

SPRING HINGE.

No. 251,591. Patented Dec. 27, 1881.

Fig. 3.

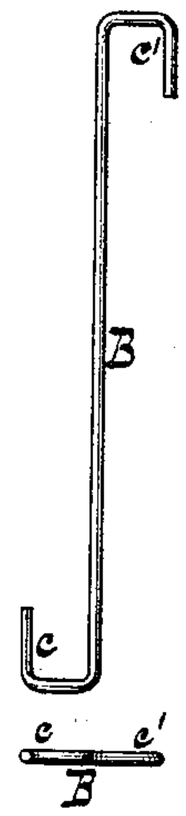

Fig. 4

Fig. 1.

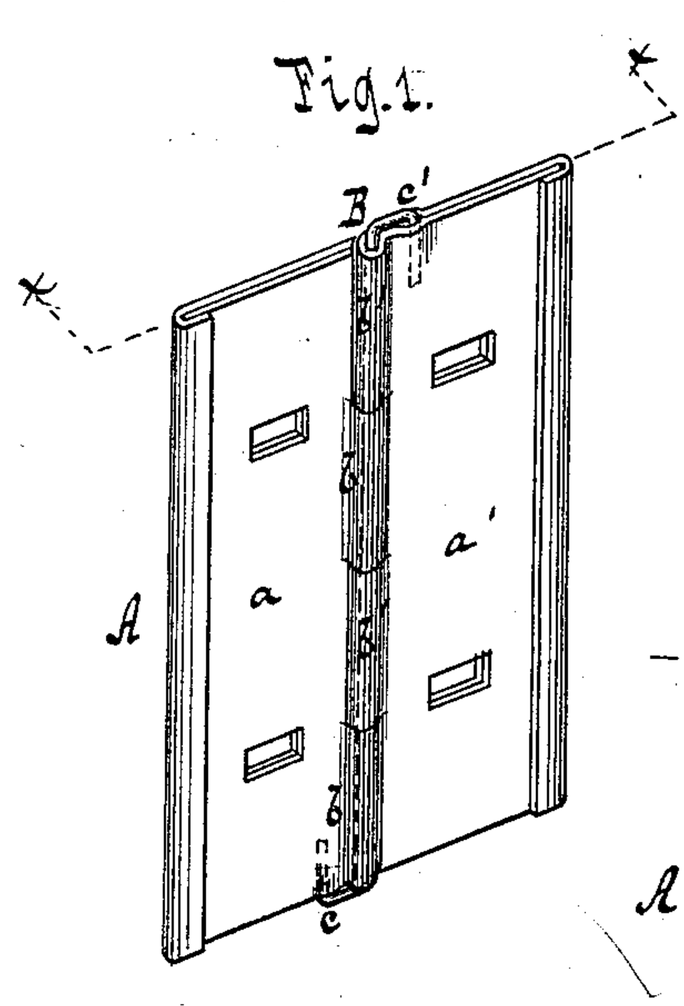

Fig. 2.

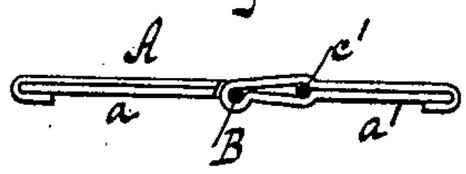

Fig. 10.

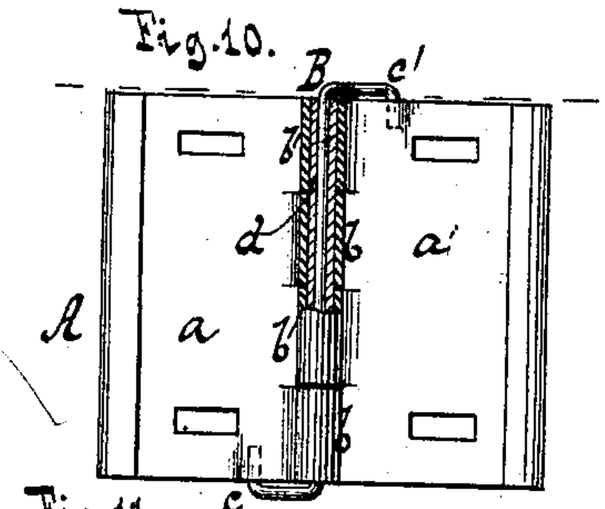

Fig. 11.

Fig. 5

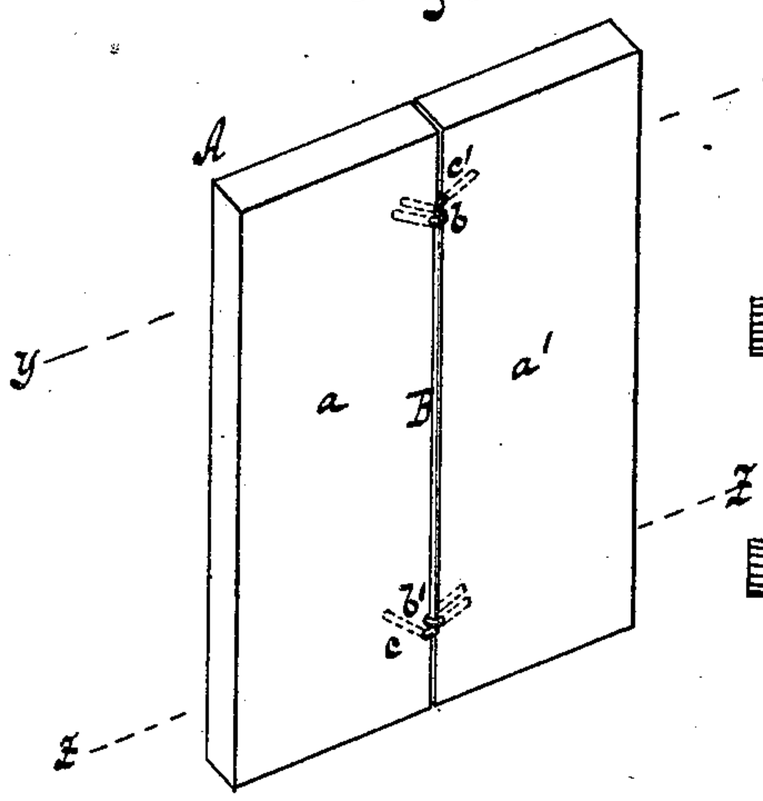

Fig. 6.

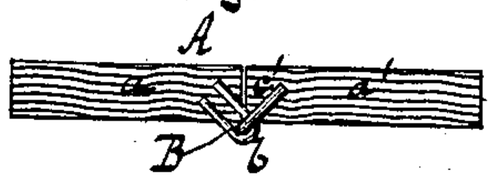

Fig. 7.

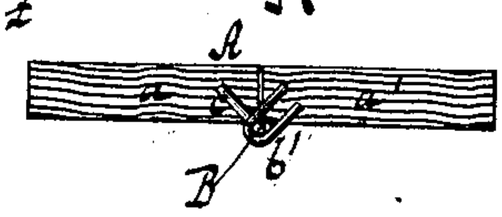

Fig. 8.

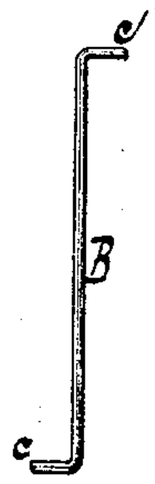

Fig. 9.

Witnesses
Otto Hufeland
William Miller

Inventor
Gustav L Jaeger.
by Van Santvoord & Hauff
his att'ys

UNITED STATES PATENT OFFICE.

GUSTAV L. JAEGER, OF NEW YORK, N. Y.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 251,591, dated December 27, 1881.

Application filed September 3, 1881. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV L. JAEGER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Spring-Hinges, of which the following is a specification.

This invention relates to that class of spring-hinges which consist of two leaves and a torsional spring composed of a flat strip of metal adapted to be twisted by turning one of the leaves, whereby the torsional action of the metal plate will act to return the leaf to its normal position.

The objects of my invention are to simplify the construction of this class of hinges and to reduce the cost of manufacturing the same, whereby an efficient but comparatively inexpensive hinge can be furnished, which is especially adapted for the lids of boxes. This object I accomplish by the construction of parts illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of my hinge when made of sheet metal. Fig. 2 is a transverse section of the same in the plane *x x*, Fig. 1. Fig. 3 is a detached view of the torsional pintle. Fig. 4 is an end view of the same. Fig. 5 is a perspective view of my hinge having wooden leaves. Fig. 6 is a transverse section in the plane *y y*, Fig. 5. Fig. 7 is a similar section in the plane *z z*, Fig. 5. Fig. 8 is a detached view of the torsional pintle used for the hinge. Fig. 9 is an end view of the same. Fig. 10 is a sectional face view of a hinge with a hollow pintle. Fig. 11 is an end view of the same.

Similar letters indicate corresponding parts.

In the drawings the letter A designates a hinge, the leaves *a a'* of which are made of sheet metal and provided with interlocking eyes *b b'*, through which extends the pintle B. This pintle is made of metal wire, and after it has been passed through the eyes *b b'* its ends *c c'* are bent and fastened one end to the leaf *a* and the other to the leaf *a'*. In the example shown in Fig. 1 of the drawings the leaves *a a'* are made of double layers of sheet metal, and the ends *c c'* of the torsional pintle B are bent over twice, as shown in Fig. 3, so that they can be made to catch between the two layers of the leaves, as indicated in dotted lines in Fig. 1.

If the parts to be hinged are made of wood, as shown in Fig. 5, the eyes *b b'* are formed by means of staples, which are driven obliquely into the wood, (see Figs. 6 and 7,) so that the pintle B can pass through them, as shown in Fig. 5. The ends *c c'* of the pintle are simply bent and driven one into the part *a* and the other into the part *a'*. The part *a* may represent the body of a box and the part *a'* the cover, the two parts being connected by the torsional pintle and the two eyes.

In both examples shown in the drawings the torsional pintle is applied to the leaves or parts *a a'* of the hinge in such a manner that it has a tendency to throw said leaves open, and that if the leaves are closed, the pintle is twisted, so that when the leaves are released the torsional force of the pintle throws the same open.

It will be readily seen from the above description that my torsional pintle can be applied to the leaves *a a'* of the hinge in such a manner that it has a tendency to keep said leaves closed, and that the ends of the pintle can be connected to the leaves in a great many different ways which will readily suggest themselves to any mechanic of common sense.

If short heavy hinges are required, a number of my spring-pintles may be employed in the same hole side by side, thereby giving the necessary elasticity, which a short and heavy spring-pintle would not give; or for heavy hinges a hollow pintle, *d*, may be used, through which extends the torsional spring B, the ends *c c'* of which are connected to the leaves *a a'* of the hinge, respectively, as shown in Figs. 10 and 11.

Heretofore spring-hinges have been constructed of two leaves and a metal plate composing the torsional spring, which is attached at its ends to independent plugs, inserted in the ends of a spindle which connects the two leaves together, said plugs being connected respectively with the two leaves of the hinge by means of transverse pins passing through the plugs and the eyes on the leaves. Spring-hinges have also been composed of two leaves, a connecting-pintle, and a coiled spring wound around the pintle and having its ends connected respectively with the two leaves. Such con-

struction of hinges, however, not being my invention, is not here claimed.

What I claim as new, and desire to secure by Letters Patent, is—

1. A spring-hinge combining in its structure two leaves having projecting eyes and a connecting torsional pintle consisting of a wire extending through the said eyes and serving to connect the leaves and having its projecting ends bent and attached directly to the said leaves of the hinge, substantially as described.

2. The combination, with the two leaves of a hinge having interlocking eyes connected by a tube, of a torsional spring consisting of a wire extending through the tube and having its projecting ends bent and respectively acting on the leaves, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

GUSTAV L. JAEGER. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.