

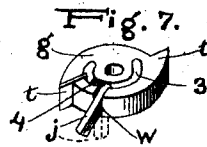
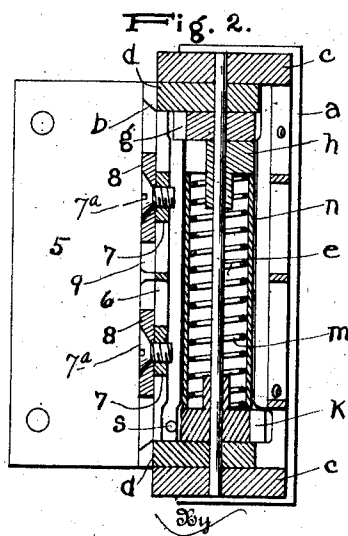
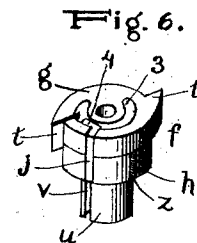
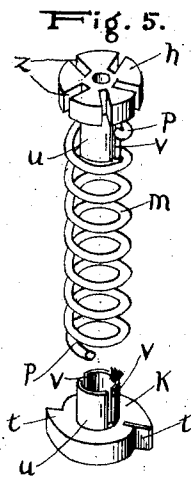
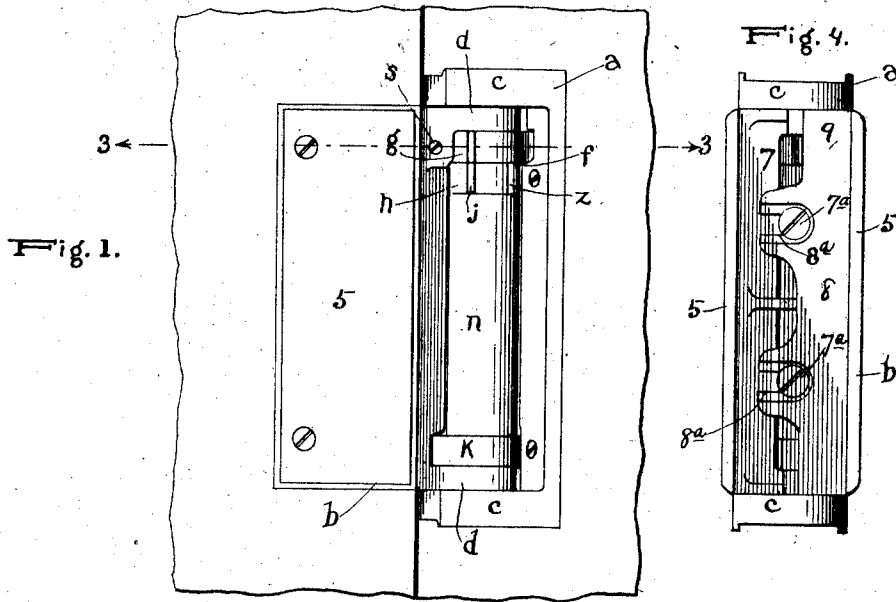
No. 864,747.

PATENTED AUG. 27, 1907.

A. G. WILSON.
HINGE.

APPLICATION FILED OCT. 8, 1906.

2 SHEETS—SHEET 1.



Witnesses

Stuart Hilder.
George M. Emerson.

Inventor
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2 SHEETS—SHEET 2.

Fig. 3.

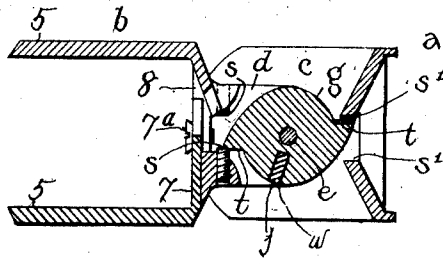


Fig. 8.

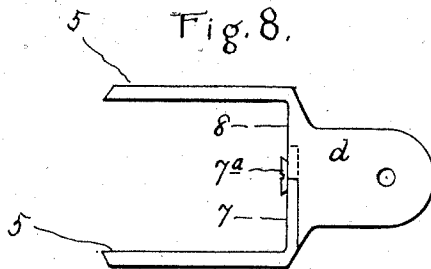


Fig. 9.

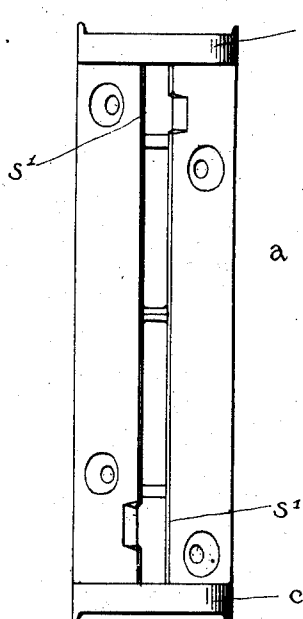
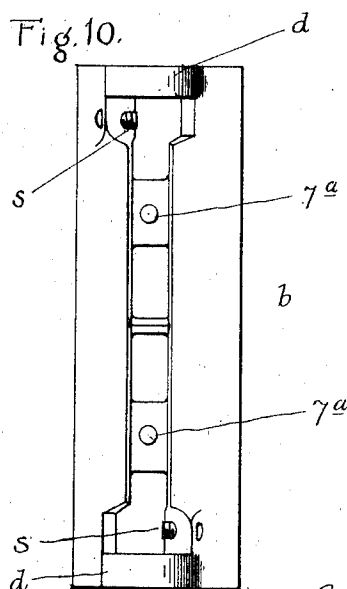


Fig. 10.



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UNITED STATES PATENT OFFICE.

ALEXANDER G. WILSON, OF CHICAGO, ILLINOIS.

HINGE.

No. 864,747.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed October 8, 1906. Serial No. 338,047.

To all whom it may concern:

Be it known that I, ALEXANDER G. WILSON, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have made
5 a certain new and useful Invention in Hinges; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accom-
10 panying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a side view of the hinge, as applied. Fig. 2 is a section on the line 2—2, Fig. 3. Fig. 3 is a section on the line 3—3, Fig. 1. Fig. 4 is a rear or end
15 view of the hinge. Figs. 5, 6, and 7 are detail views. Fig. 8 is a detail plan view of the inner hinge member. Fig. 9 is a detail end view of the outer hinge member. Fig. 10 is a detail end view of the inner hinge member.

The invention has relation to double acting spring
20 hinges, and it consists in the novel construction and combinations of devices, constituting improvements upon such hinges as are exemplified in the patent to Hochstrasser, No. 802,862 dated October 24, 1905.

In the accompanying drawings illustrating the invention, the letter *a*, designates one member of the hinge, and *b*, the other member. The longer or main
25 member *a*, is provided with end lugs *c*, *c*, and the shorter member *b*, with end lugs *d*, *d*, which extend along the inner surfaces of the lugs *c*, *c*, and are connected thereto by the pivot rod or pintle *e*.
30

On the pivot rod *e*, between the lugs *d*, *d*, are arranged the upper compound spring holder *f*, consisting of the parts *g*, and *h*, the lower spring holder *k*,
the spring *m*, and the spring barrel or sleeve *n*.

35 The spring *m* is a coiled spring, and is located within the barrel inclosure *n*, having its ends turned radially inward as indicated at *p*, these ends each serving to engage one of the diametrically opposite notches *v*, in the annular inward extensions *u*, of the spring holders, which pass into and engage the interior of the spring
40 at its ends. As the spring fits the barrel neatly, the latter, as well as the spring, is held in proper centralized position with relation to the end holders.

The end holders for the spring are each provided
45 with diametrically opposite catch teeth *t*, designed to engage bearings *s*, *s'* of the body portions of the hinge members *a*, and *b*, when such body portions are in normal or alined relation. These bearings are arranged near the inner ends of such body portions, and
50 are shown in the case of the hinge member *b*, to be in the form of set screws which can be adjusted in threaded perforations of the body portions in order to enable the alinement of the hinge to be rectified after it has been secured to the door and to the jamb, in the
55 plane of which the door is held normally closed by

the hinge. The bearings *s'* of the hinge member *a* are shown as a rigid part thereof.

The upper spring holder consists of the outer section *g*, which is provided with the opposite teeth *t*, and the inner section *h*, which is provided with the annular
60 inner extension *u*. This inner section is of circular form, and is provided with a series of notches *z*, which extend inward radially from its circumference, and are adapted to coincide under proper adjustment with a notch *w*, of the outer section *g*, which carries a piv-
65 oted key bar *j*. The upper face of the section *g* is recessed or has an open arcuate slot at 3, adapted to pivotally seat the reduced head 4, of this key bar, turned at right angles thereto, said head being re-
70 tained in position when the parts are assembled by the lug *d* of the hinge member *b*. The arcuate slot 3 is intersected at right angles by the radial notch *w* of the section *g*. The key bar can thus be readily swung
75 outward to disengage it from the section *h*, in such wise that it can be engaged with any one of the notches *z*, according to requirement in regard to the tension of the spring with reference to the opposite teeth of the spring holders.

As hinges of this character are especially desirable in connection with marble jambs, one of the members
80 of the hinge, as for instance the member *b*, is made in two parts, each having a cheek plate 5, and right angle lapping extensions 7 and 8. One of the lapping extensions, 8, has open notches 8^a, which engage set
85 screws 7^a, of the other lapping extension 7, to secure the parts together in an adjustable manner. Upon loosening the set screws, the parts may thus be adjusted laterally to increase or decrease the distance
90 between the cheek plates, for different thicknesses of jambs. The adjustable set screws *s* engage threaded perforations of the lapping flanges 7 of the hinge member *b*, such set screws being at right angles to the
95 cheek plates 5, and parallel with the lapping extensions.

Having thus described the invention, what I claim
and desire to secure by Letters Patent is:—

1. In a double acting spring hinge, the combination with two hinge members and a pivot pin connecting the same, of a coiled spring, a compound adjustable spring holder engaging one end of said spring and composed of an
100 outer section having a slot in its upper face, a radial notch at right angles to and communicating with said slot, and diametrically opposite catch teeth, an inner section having a series of radial notches in its circumference, and a pivoted key having a right angle head engaging said slot and adapted to engage the radial
105 notch communicating therewith and one of the radial notches of the inner section, and a spring holder engaging the other end of said spring and having diametrically opposite catch teeth, said hinge members having bearings
110 against which the diametrically opposite teeth of the spring holders normally abut.

2. In a double acting spring hinge, the combination

with two hinge members and a pivot pin connecting the same, of a coiled spring, a compound adjustable spring holder engaging one end of said spring and composed of an outer section having a slot in its upper face, a radial notch at right angles to and communicating with said slot, and diametrically opposite catch teeth, an inner section having a series of radial notches in its circumference, and a pivoted key having a right angle head engaging said slot, said key engaging the radial notch of the outer section and one of the radial notches of the inner section, and a spring holder engaging the other end of said spring and having diametrically opposite catch teeth, one of said hinge members having adjustable set screws against which the catch teeth of the spring holders at one side of the pivot pin normally abut, the other hinge member having also bearings against which the teeth of the spring holders at the other side of the pivot pin normally abut.

3. In a double acting spring hinge, the combination with two hinge members, and a pivot pin connecting the same, of a coiled spring, a compound adjustable spring holder engaging one end of said spring and composed of an outer section having a radial notch and diametrically opposite catch teeth, an inner section having a series of radial notches, and a pivoted key engaging the radial

notch of the outer section and one of the radial notches of the inner section, and a spring holder engaging the other end of said spring and having diametrically opposite catch teeth, one of said hinge members having adjustable set screws against which the catch teeth of the spring holders at one side of the pivot pin normally abut, the other hinge member having also bearings against which the teeth of the spring holders at the other side of the pivot pin normally abut.

4. In a double acting spring hinge, a hinge member having end lugs, a hinge member composed of two sections each of which includes a cheek plate and an extension at right angles to the cheek plate, such extensions having lapping engagement with each other, the extension of one section having set screws, and end lugs provided with a pivotal connection with the end lugs of the other hinge member, and the extension of the other section having horizontal open end slots having detachable engagement with said set screws.

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

ALEXANDER G. WILSON.

Witnesses:

F. C. HUFFMAN,
SCOTT O. EVERETTE.