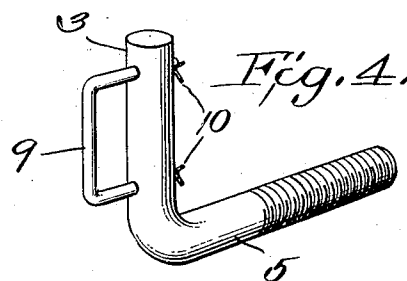
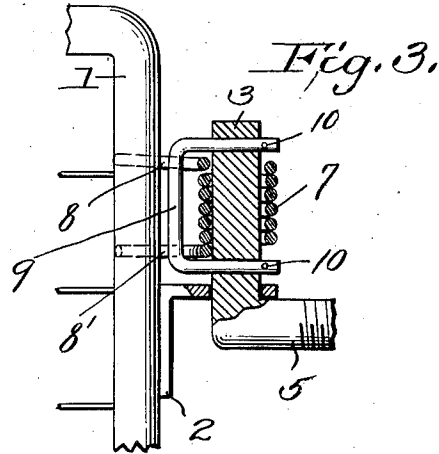
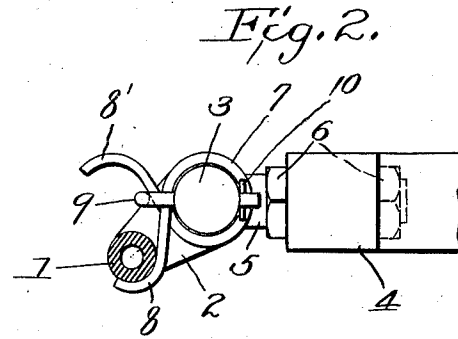
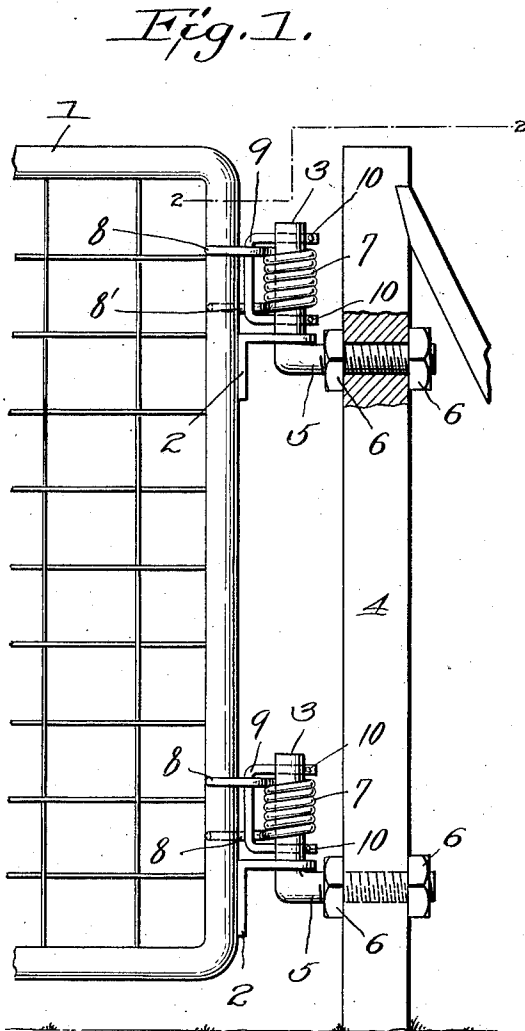


W. C. NOLTE.
 SPRING HINGE.
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1,016,515.

Patented Feb. 6, 1912.



WITNESSES

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UNITED STATES PATENT OFFICE.

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SPRING-HINGE.

1,016,515.

Specification of Letters Patent.

Patented Feb. 6, 1912.

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To all whom it may concern:

Be it known that I, WILLIS C. NOLTE, citizen of the United States, residing at Dazey, in the county of Barnes and State of North Dakota, have invented certain new and useful Improvements in Spring-Hinges, of which the following is a specification.

The present invention relates to certain new and useful improvements in the construction of spring hinges such as are commonly employed in connection with gates, doors and the like, for holding the same yieldingly in a closed position.

One of the objects of the invention is the provision of a spring hinge which is simple and inexpensive in its construction, which can be readily placed in position or removed therefrom, and which is so designed that the spring will always act freely without any tendency to bind.

A still further object of the invention is the provision of a spring hinge which can be quickly assembled or taken apart, which comprises few and durable parts such as are not liable to get out of repair, and which is positive in its operation.

With these and other objects in view, the invention consists in certain novel combinations and arrangements of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a side elevation showing the improved hinge as applied to a gate, portions being broken away and shown in section. Fig. 2 is a transverse sectional view on the line 2—2 of Fig. 1. Fig. 3 is an enlarged side elevation of the hinge, the pintle and spring being shown in section, and Fig. 4 is a detail view of the pintle and spring retaining yoke.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawing, which serves to illustrate one embodiment of the invention, the numeral 1 designates a gate which is provided with a pair of laterally projecting hinge members 2, the said hinge members being perforated and fitting loosely

over the pintles 3 carried by the gate post 4. These pintles are normally disposed in a vertical or upright position, and are formed at their lower ends with the lateral arms 5 which engage the gate post. In the present instance these lateral arms 5 extend through the gate post and have nuts 6 threaded thereon, the said nuts bearing against opposite sides of the gate post so as to have a clamping action and hold the pintle securely in position.

The hinge members 2 turn freely upon the lower ends of the respective pintles 3 and rest upon the lateral arms 5 so as to support the gate and prevent sagging thereof. A coil spring 7 is slipped removably over each of the pintles 3, the two ends of the coil spring being extended laterally at 8 and bearing loosely against opposite sides of the gate 1. The springs are formed by coiling a length of wire continuously in the same direction and then extending the extremities thereof outwardly, and each of the springs is engaged by a retaining yoke 9. The cross bar of each of the yokes 9 is arranged parallel to the pintle 3 and received between the laterally extended ends 8 of the spring, while the arms of the yoke extend through suitable openings in the pintle 3 disposed respectively above and below the spring.

The extremities of the arms of the spring retaining yoke may be perforated and project beyond the opposite side of the pintle so as to be engaged by keys or cotter pins 10. These spring retaining yokes 9 serve the double function of supporting the springs upon the pintles so that they will not rest directly upon the hinge members 2 and have a tendency to cause a binding action, and also of providing a stop adapted to engage the ends 8 of the spring when the gate is opened.

When the gate is opened in one direction, one of the ends 8 of the spring will engage the yoke 9 and be held against movement, while the opposite end of the spring will be moved around with the gate so as to tighten the convolutions of the spring and produce tension therein. As soon as the gate is released, this tension in the spring will swing the gate back into a closed position, and when the gate is opened in the opposite direction the action of the spring is merely reversed. Attention may be direct-

ed to the fact, however, that the entire spring is placed under tension when the gate is opened in either direction, and this is a distinct advantage over those springs in which one spring is flexed when the gate is opened in one direction, and another spring flexed when the gate is opened in the opposite direction.

The spring and retaining yoke 9 may be very readily removed from the pintle at any time, and these members may be applied to many gate hinges already in use, it being merely necessary to provide openings in the pintle for the reception of the yoke.

It will thus be obvious that a spring hinge has been provided which is very simple in its construction, which will not bind or get out of repair, and which will always tend to hold the gate in a closed position.

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

1. A spring hinge including a pintle, a support for the pintle, a swinging closure hinged upon the pintle, a coil spring slipped upon the pintle and having the ends thereof extended laterally so as to bear against opposite sides of the swinging closure, and a spring retaining yoke carried by the pin-

tle and projecting from one side thereof, the said spring being received between the arms of the yoke and being thereby supported out of engagement with the swinging closure, while the cross bar of the yoke is positioned between the two ends of the spring so as to form a stop for engagement with either end of the spring when the gate is opened.

2. A spring hinge including a pintle having openings therein, a swinging closure hinged upon the pintle, a coil spring arranged upon the pintle and having the ends thereof extended into engagement with opposite sides of the swinging closure, and a spring retaining yoke removably applied to the pintle receiving the spring between the arms thereof so as to support the spring, the said arms of the yoke extending through the openings of the pintle, while the cross bar of the yoke is received between the two ends of the spring so as to form a stop for engagement with either end of the spring when the gate is opened.

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

WILLIS C. NOLTE.

Witnesses:

E. C. DUFF,
J. B. SHEARER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."