W. G. BARRY.
Spring-Hinge.

No. 216,777 Patented June 24, 1879.

Fig. 1.

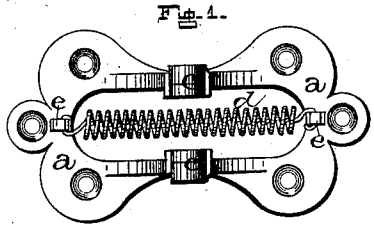


Fig. 2.

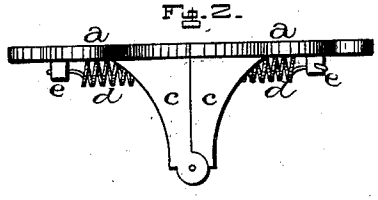
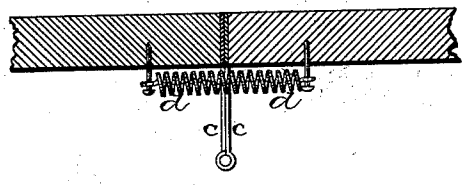


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM G. BARRY, OF PARIS, TEXAS.

IMPROVEMENT IN SPRING-HINGES.

Specification forming part of Letters Patent No. **216,777**, dated June 24, 1879; application filed May 5, 1879.

To all whom it may concern:

Be it known that I, WILLIAM G. BARRY, of Paris, in the county of Lamar and State of Texas, have invented certain new and useful Improvements in Hinges; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in spring-hinges; and it consists in forming an opening or space through the back of the hinge, so that all strain will be removed from the spring after the door or gate has been opened or closed past an angle of forty-five degrees, and so that the spring, which is placed between the extensions at right angles to the plane of motion of the hinge, will either open or close the door or gate after it has passed an angle of forty-five degrees, as will be hereinafter more fully described and claimed.

The accompanying drawing represents my invention.

a a represent the two halves of the hinge, such as is used upon doors and gates, which hinge may be cast or made from sheet-metal, as shown. Each half of the hinge, at its inner end, has the extension *c* formed upon it, and through the outer ends of these extensions are passed the separate pivot-pins by which the two halves of the hinge are fastened together. These extensions are formed for the purpose of throwing the pivotal point of the hinge a suitable distance outward from the post of the gate or frame of the door, so as to allow the door or gate to move some distance outward in opening and closing, as shown in the accompanying drawing. Between these extensions upon the hinge is fastened the spiral, rubber, or other suitable spring, *d*, which has its ends fastened to studs or projections *e*, formed upon the top of the hinge or sides of the door or gate and their frame.

When the gate or door is closed or opened backward to its full extent, there is no strain whatever upon the spring; but from the time when the gate or door begins to open outward or to close, the spring is being stretched until the door or gate has reached an angle of forty-five degrees, at which point the greatest strain is brought to bear upon the spring. As soon as the door or gate passes this point, then the spring begins to contract, and draws the door or gate either open or shut.

When this opening is not made between the extensions upon the hinge, there is a constant strain upon the spring, which in a very short time injures it to such an extent that it becomes useless; but where the opening is made through the center of the hinge, there is only a strain upon the spring in opening or closing the door or gate and the spring is made to draw the gate shut or to open it fully outward after it has passed an angle of forty-five degrees.

As here shown, the spring serves to hold the door either open or shut, as may be desired, and without the slightest strain upon the spring.

We are aware that springs have been used in connection with hinges, but not where there is an opening made through the center of the hinge and the pivotal point of the hinge is thrown outward from the post or the fastening, so that the hinge will act to open or to close the door or gate after it has passed an angle of forty-five degrees.

Having thus described my invention, I claim—

A hinge, *a*, provided with the right-angular extensions *c*, through the outer ends of which extensions the separate pivots are passed, in combination with the spring *d*, having one end fastened to each leaf, and placed between the extensions *c* at right angles to plane of motion of the hinge, substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of February, 1878.

WILLIAM G. BARRY.

Witnesses:
J. P. MORRIS,
S. G. HUDDLE.