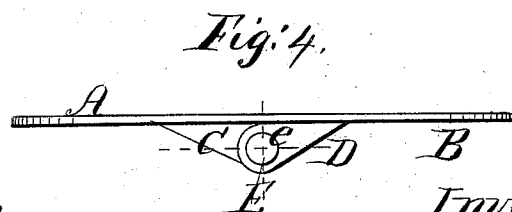
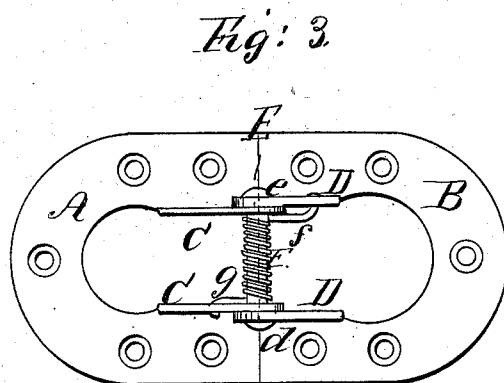
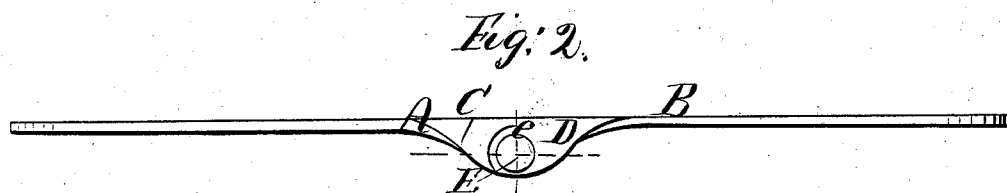
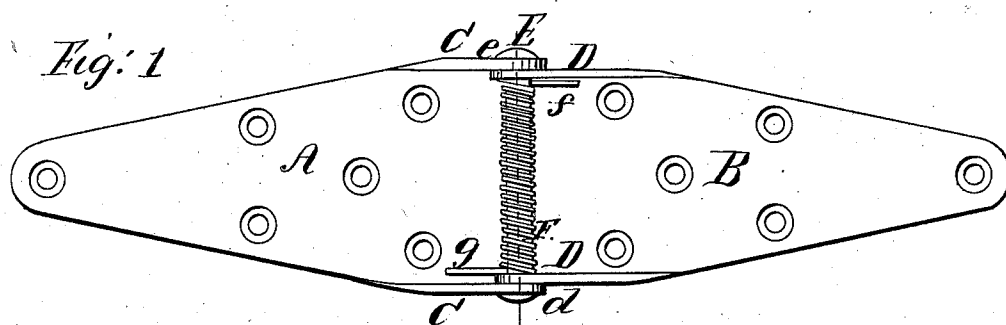


A. W. Walter,
Spring Hinge.
N^o 83,572. Patented Oct. 27, 1868.



Witnesses;
David Hammond
Ed. A. Beebout

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United States Patent Office.

ANTON W. WALTER, OF CANTON, OHIO.

Letters Patent No. 83,572, dated October 27, 1868.

IMPROVEMENT IN DOOR-HINGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ANTON W. WALTER, of Canton, in the county of Stark, and State of Ohio, have invented new and useful Improvements in Door-Hinges; and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawings, forming part of this specification, and to the letters of reference marked thereon, of which drawings—

Figure 1 is an elevation of a strap-hinge constructed on my improved plan.

Figure 2 is a plan of the same.

Figure 3 is an elevation of another form of hinge, constructed on my improved plan.

Figure 4 is a plan of the same.

The nature of my invention consists, first, in forming the eyes of the hinge by turning over the edges of the hinge-blanks, and drilling holes in said edges, through which the hinge-pin is passed, instead of forming bent eye-holes by rolling up the ends of the blanks, as has been heretofore the practice, whereby I obtain a hinge much stronger than the old form of hinges, and which can be manufactured at a less cost, both of labor and machinery, and also with little of the waste of material caused by the breaking of the iron in forming the eyes of the hinge, by the old plan of rolling up the ends of the blanks, thereby lessening the cost of the hinges, and adding considerably to their utility; second, in combining with a hinge formed as before shown, a spiral spring, which sets around the hinge-pin, and is connected at each end with one of the leaves of the hinge, in such a manner as to cause the two parts of the hinge to close or open by the action of said spring, as may be desired, whereby I obtain a very cheap and efficient spring-hinge.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The strap-hinge, shown in figs. 1 and 2, has the two leaves, A and B, of the usual form, but instead of having lips left at the joint-ends, to be turned into eyes, the lips C C and D D are left at the sides of said leaves, and are turned down at right angles to said leaves, as shown.

The hinge-pin E, having a head, e, formed at one end, is then put through suitable holes made in the lips C C and D D, and the head d being formed on said pin after its insertion in the hinge, the hinge-joint is completed.

The lips D D, on the leaf B, are arranged so as to come inside the lip C C on the leaf A, so that no strain of any great amount is brought on the heads d e of the hinge-pin E, by the weight of the door.

Where an open spring-hinge is to be made, the spiral spring F is inserted between the lips D D, the ends

f and g bearing against the leaves B and A, as shown when the hinge-pin E is passed through the eyes C C and D D, and the centre of the spring E, and the head d being riveted, as before, the spring-joint is complete.

When a closed spring-hinge is to be made, the ends f and g are secured to the leaves A and B, by turning their ends at right angles, and passing them into suitable holes in said leaves, where they are secured by riveting, or they may be secured in any other suitable manner.

The spring E, being made in this last case with the ends f and g parallel to each other, and extending in the same direction from the spring, it is easily seen that a closed spring-hinge would be formed, instead of an open hinge, as here shown.

In the hinge shown in figs. 3 and 4, the leaves A and B are made in a U-form, as shown, and the lips C C and D D are turned up from the inside of said U, as shown, the pin E being inserted and secured as before shown.

The spring F is arranged on the pin E, between the lips C C, in a manner precisely similar to that shown in figs. 1 and 2, and the ends f and g are secured to the leaves A and B by being inserted through holes in the lips D and C, as shown.

The manner of arranging the spring F, in order to obtain an open or closed spring-hinge, is too obvious to any mechanic to require particular description.

The leaves A and B may be made of wrought-iron, steel, brass, or any other malleable metal, of such quality that the eyes or lips C C and D D may be turned at right angles to the leaves A and B, as has been before shown.

Having thus fully described my improvements, I do not claim as my invention the leaves A and B, shown in figs. 1 and 2, nor the U-form of the leaves A and B, shown in figs. 3 and 4, nor the hinge-pin E, nor the spring F, taken separately, or in combination with other forms of hinges; but

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

1. A hinge, composed of two leaves, having eyes or lips turned up at their outer or inner edges, and combined with a hinge-pin, substantially in the manner and for the purpose herein specified.

2. In combination with a hinge, constructed as herein specified, a spiral spring, F, arranged and used substantially in the manner and for the purpose specified.

As evidence I claim the foregoing, I have hereunto set my hand in presence of two witnesses.

ANTON W. WALTER.

Witnesses:

JOB ABBOTT,

ED. N. BEEBOUT.