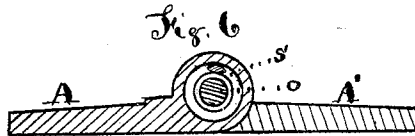
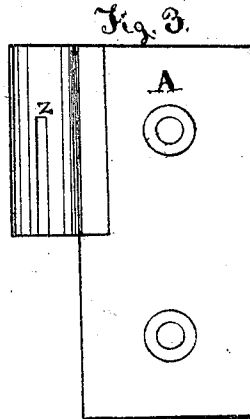
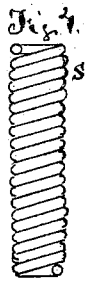
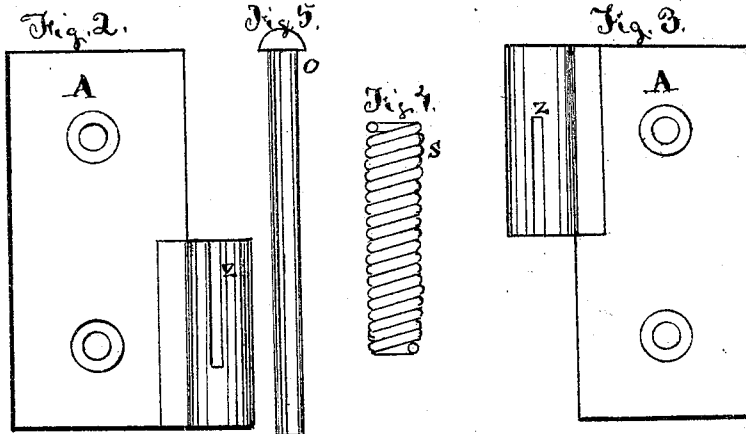
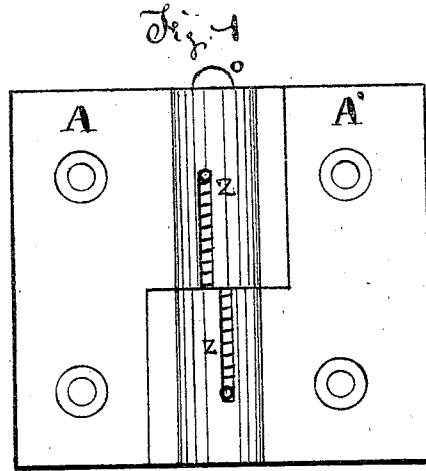


D. B. HAWKES.

Improvement in Spring-Hinges.

No. 114,813.

Patented May 16, 1871.



witnesses.

James Arnold  
Frank H. Arnold

Inventor.

David B. Hawkes  
By his Attorney  
Benjamin Arnold

# UNITED STATES PATENT OFFICE.

DAVID B. HAWKES, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO GEORGE E. LUCAS, OF SAME PLACE.

## IMPROVEMENT IN SPRING-HINGES.

Specification forming part of Letters Patent No. **114,813**, dated May 16, 1871.

*To all whom it may concern:*

Be it known that I, DAVID B. HAWKES, of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Spring-Hinges; and do hereby declare the following to be a full and correct description thereof, reference being had to the accompanying drawing, making part of this specification, and to the letters and numbers of reference marked thereon, similar letters and numbers being used in all the figures to denote the same part.

The object of this invention is to furnish a hinge with a spring to close a door, that shall be simple and not liable to get out of order, and that will not prevent the door from being lifted off, as in the ordinary open butt-hinge, to which class of hinges this improvement is intended to apply.

The invention relates more particularly to the manner of holding the ends of the spring, which is done by means of slots in each part of the hinge, as will be seen in the accompanying drawing, in which—

Figure 1 shows the hinge open; Figs. 2 and 3, the two leaves of the hinge separate. Fig. 4 is a view of the spring. Fig. 5 is a pivot of the hinge. Fig. 6 shows a cross-section of the hinge, taken through line *x x*, Fig. 1.

A A' are the two leaves of what is called an "open butt-hinge," excepting that the fast pivot that is usually put in such hinges is not

used, but instead of it a movable pin, *o*, is inserted in them.

The knuckles or barrels are bored out large enough, except a small portion near each outer end, to receive a coiled-wire spring, *S*, which is inserted in the hole around the pin *o*, and a slot, *z*, is cut in the knuckle of each leaf, from the middle outward nearly to the ends, to receive the ends of the spring *S*, which are bent outward for that purpose. This, it will be seen, allows the hinge to be taken apart readily and the spring removed when not wanted, or replaced by another, if broken. The two ends of the spring being held, one in one leaf and one in the other, when they are turned to or from each other the spring is coiled or uncoiled.

I am aware that spiral springs have been applied to hinges before, and therefore do not claim that application; but

What I do claim is—

The combination and arrangement of the spring and the parts of the open butt-hinge, the parts not being riveted together, and being made with the slots to hold the ends of the spring, as described, the whole being constructed and operating substantially as herein set forth.

DAVID B. HAWKES.

Witnesses:

GEO. I. LUCAS,  
JOSEPH MEEGON.