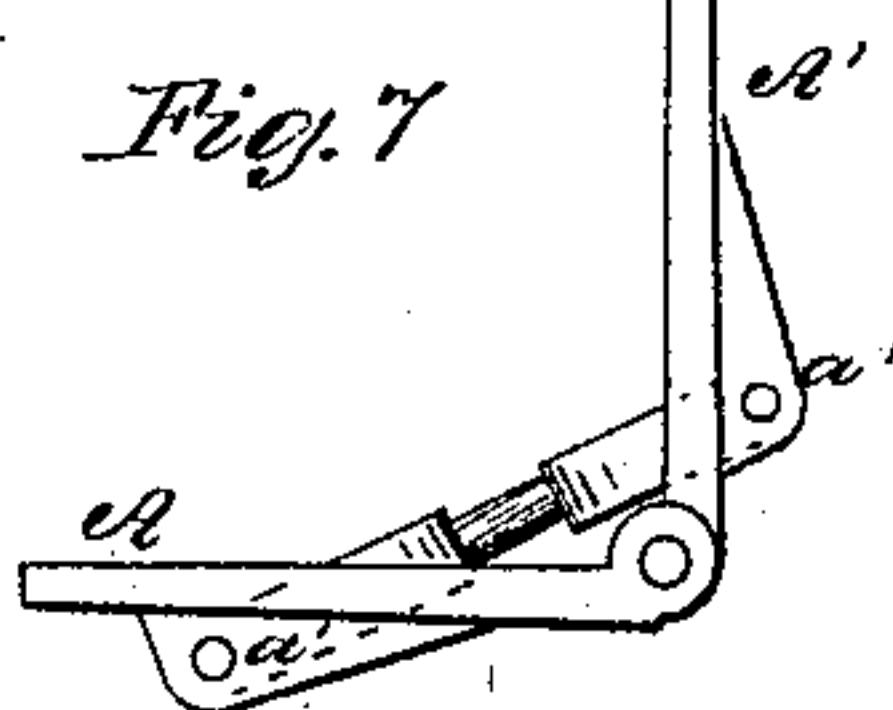
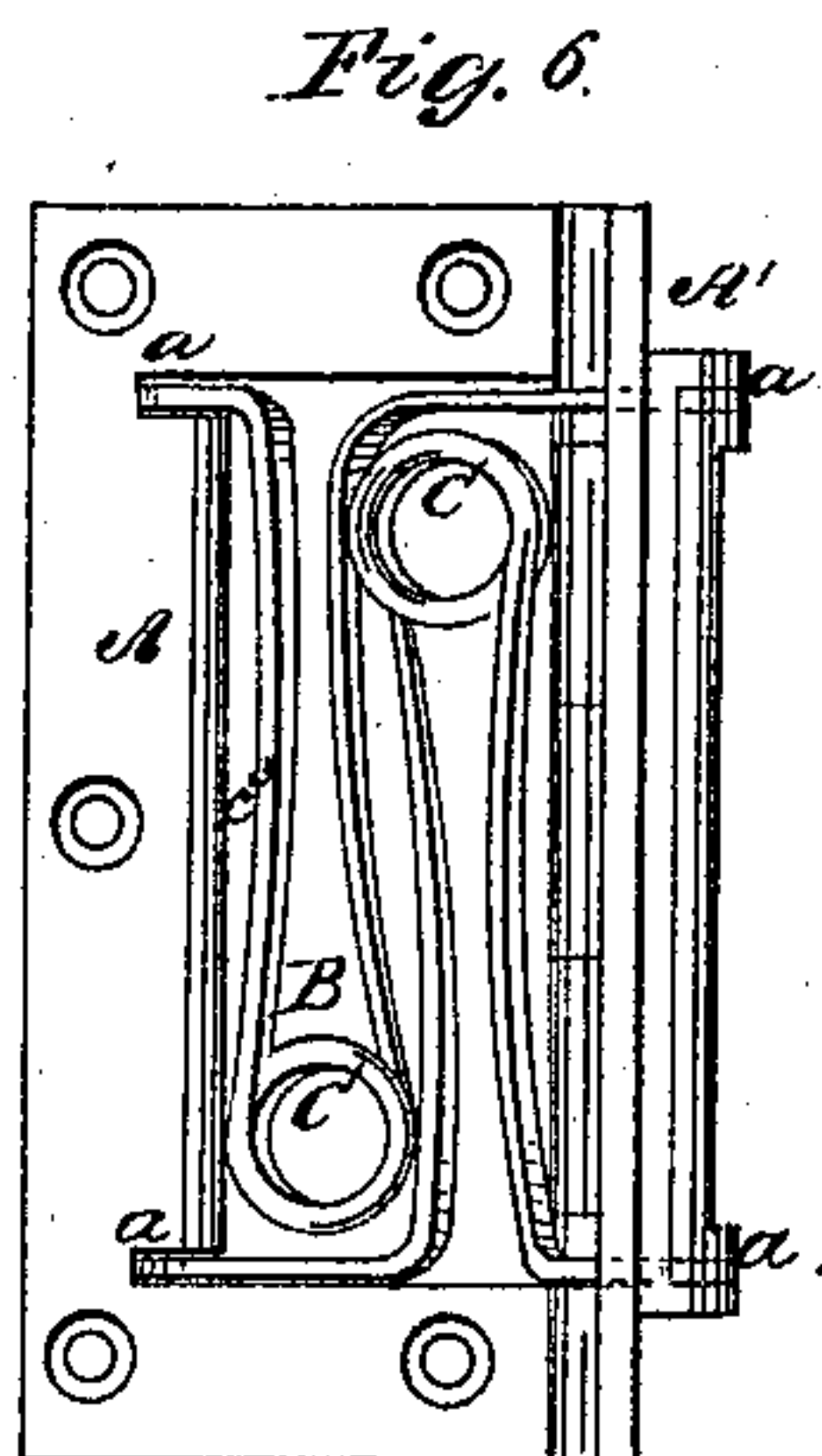
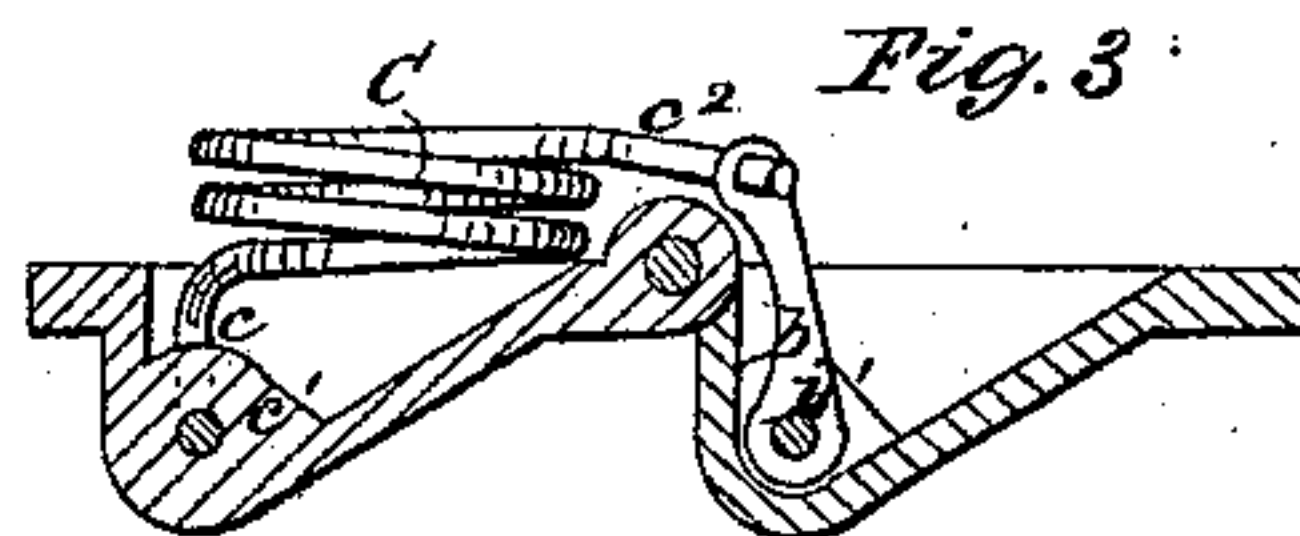
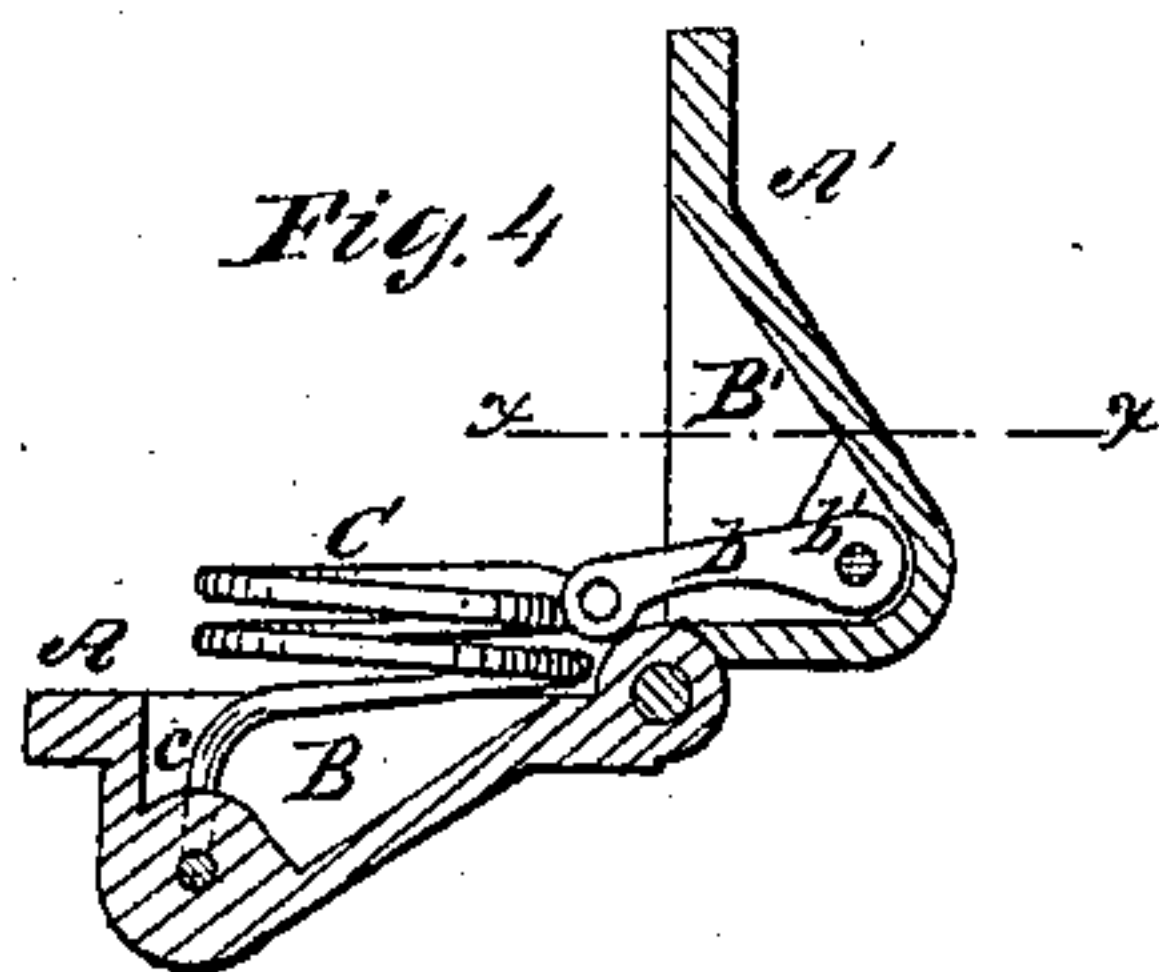
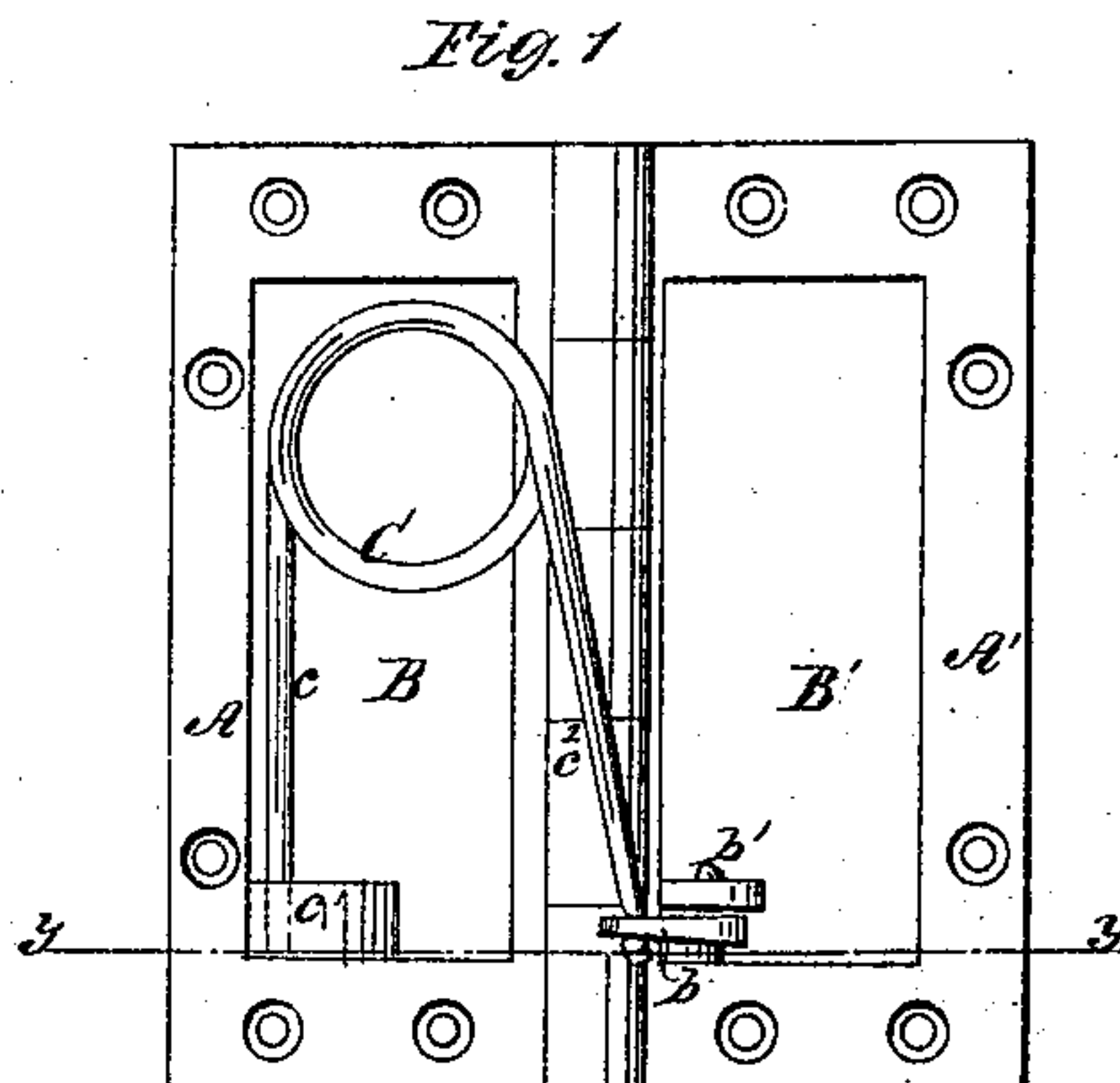
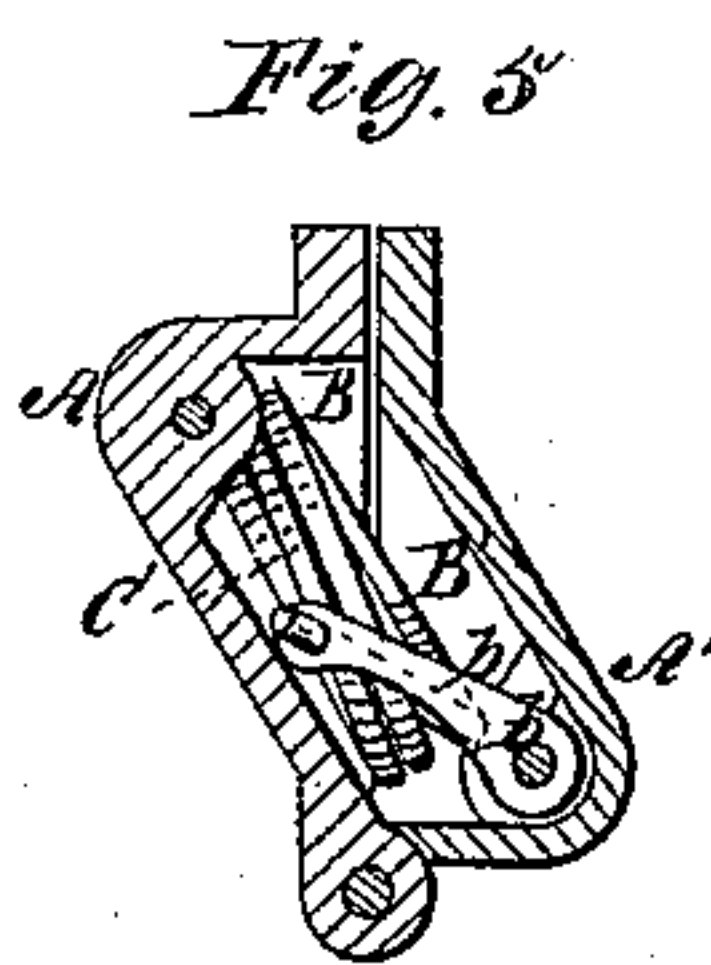
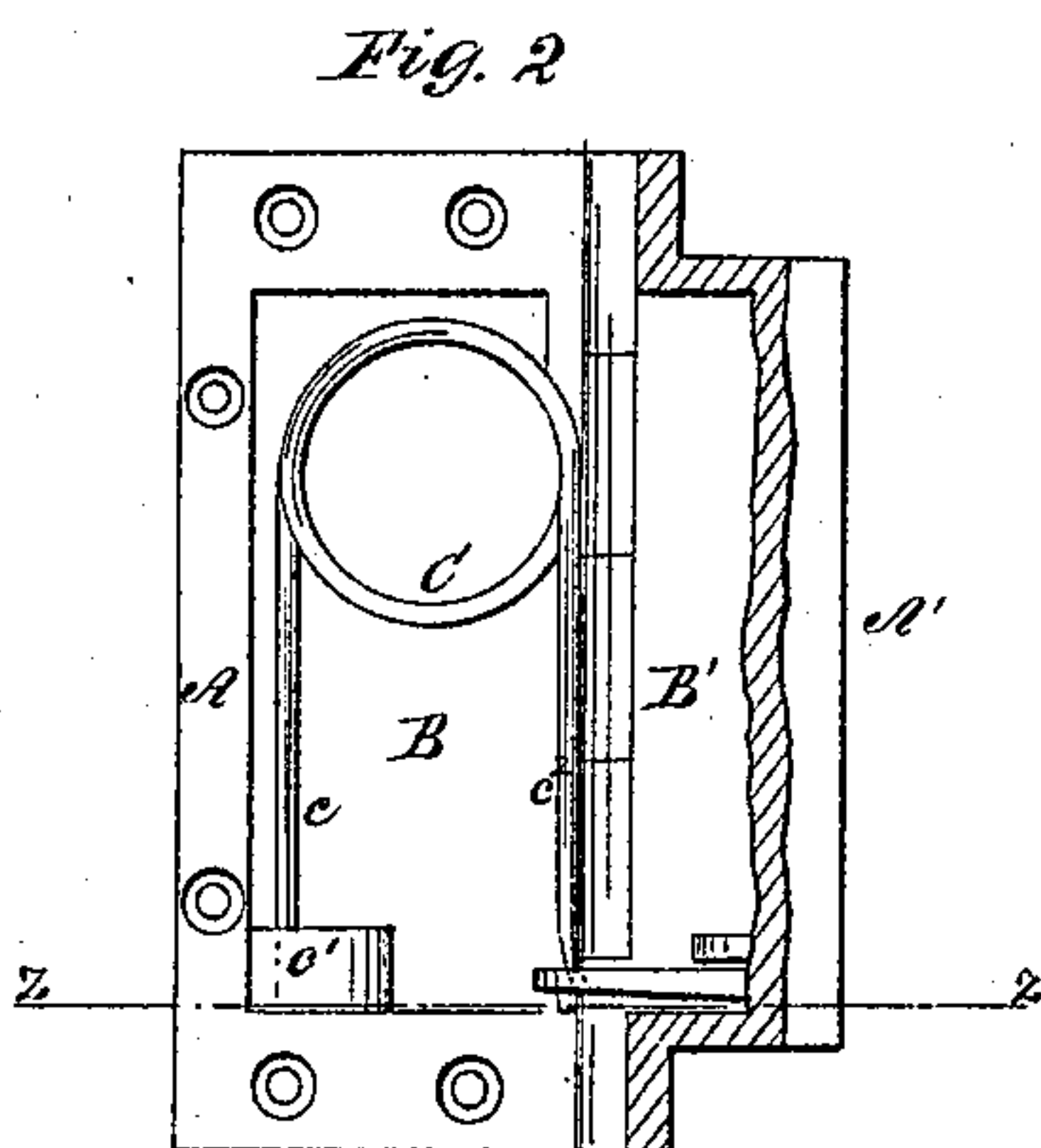


J. S. Arthur,

Spring Hinge.

N^o 43,660.

Patented Aug. 2, 1864.



Witnesses;
Chas Du Bois
Chas D Smith

Inventor;
J. S. Arthur

UNITED STATES PATENT OFFICE.

JAMES S. ARTHUR, OF CORDAVILLE, MASSACHUSETTS.

IMPROVEMENT IN HINGES.

Specification forming part of Letters Patent No. 43,660, dated August 2, 1864.

To all whom it may concern:

Be it known that I, JAMES S. ARTHUR, of Cordaville, in the county of Worcester and State of Massachusetts, have invented a certain new and useful Improvement in Hinges; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an interior view of my improved hinge, the same being represented in an open condition. Fig. 2 is a similar view, partly in section, representing the hinge as partially closed, the plane of section being indicated by the line $x x$, Fig. 4. Fig. 3 is a transverse section in the line $y y$, Fig. 1. Fig. 4 is a transverse section in the line $z z$, Fig. 2. Fig. 5 is a transverse section of the hinge as closed. Figs. 6 and 7 illustrate a modification of my invention.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to that class of butt-hinges in connection with which are employed springs which act upon the hinges in such manner as to automatically close the door, to which they may be applied.

The object of my present invention is to produce a hinge of simple and cheap construction which is formed or cast in such a way that upon the two parts of such a hinge are brought in juxtaposition, the spring or springs will be completely inclosed or incased, and thus I am enabled to produce a hinge which is not superior in strength and durability, but in that it constitutes a much more compact article than those hitherto devised, and occupies a considerably smaller space than the ordinary hinges of equal capacity or strength.

In order that others skilled in the art to which my invention appertains, may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

In the accompanying drawings, A A' may represent the two sections of a hinge, which

may be connected together by a pivot, a , and provided with apertures a' for the reception of the screws, by which it may be attached to the door and a stationary part of the building or structure in customary manner. These sections are formed or cast with interior cavities, B B', which, taken together, form a sufficiently capacious chamber to contain a spring, C, which may be stationarily secured in the cavity B by having one of its arms, c , inserted into a box, e .

The arm c^2 of the hinge C is connected to a small arm, b , which is pivoted within the cavity B' by a pin or pivot, b' . The arm c^2 acts to draw the face of the section A' in juxtaposition with that of A, so that when the section A is fastened to the jamb of a door, to which the section A' is secured, said door will be automatically closed by the spring C after it has been released by the hand.

In the modification illustrated in Figs. 6 and 7 two springs, C C, are represented, which differ somewhat in form from the spring illustrated in the other figures, and which are placed side by side in the cavity B, their arms $c^3 c^3$ being deflected and flattened in the manner shown in, or to adapt them to enter corresponding apertures a in the section A A', in which they may be securely retained by pivots a' .

It is manifest that various forms of springs may be placed within the hinge above described.

Having thus described my invention, I do not claim the application of a spring to a hinge, by which it can be opened or closed automatically, but—

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

A hinge, A A', having an interior chamber, B B', for the reception of a spring or springs, C, substantially as herein described, and for the purpose explained.

JAS. S. ARTHUR.

Witnesses:

CHAS. DU BOIS,
OCTAVIUS KNIGHT.