

(No Model.)

A. MILNE.
WATCH CASE SPRING.

No. 453,202.

Patented June 2, 1891.

Fig. 1.

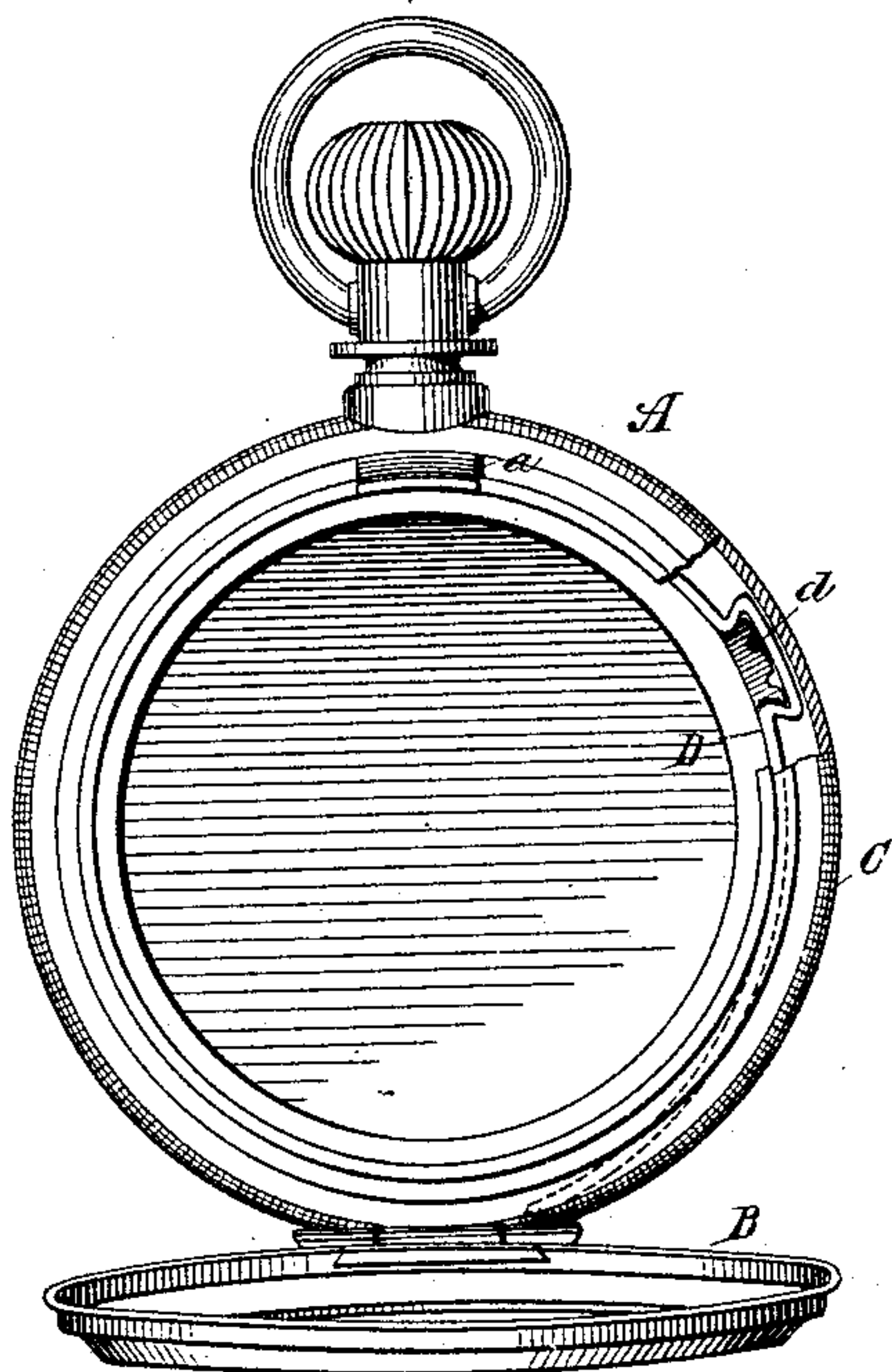


Fig. 2.

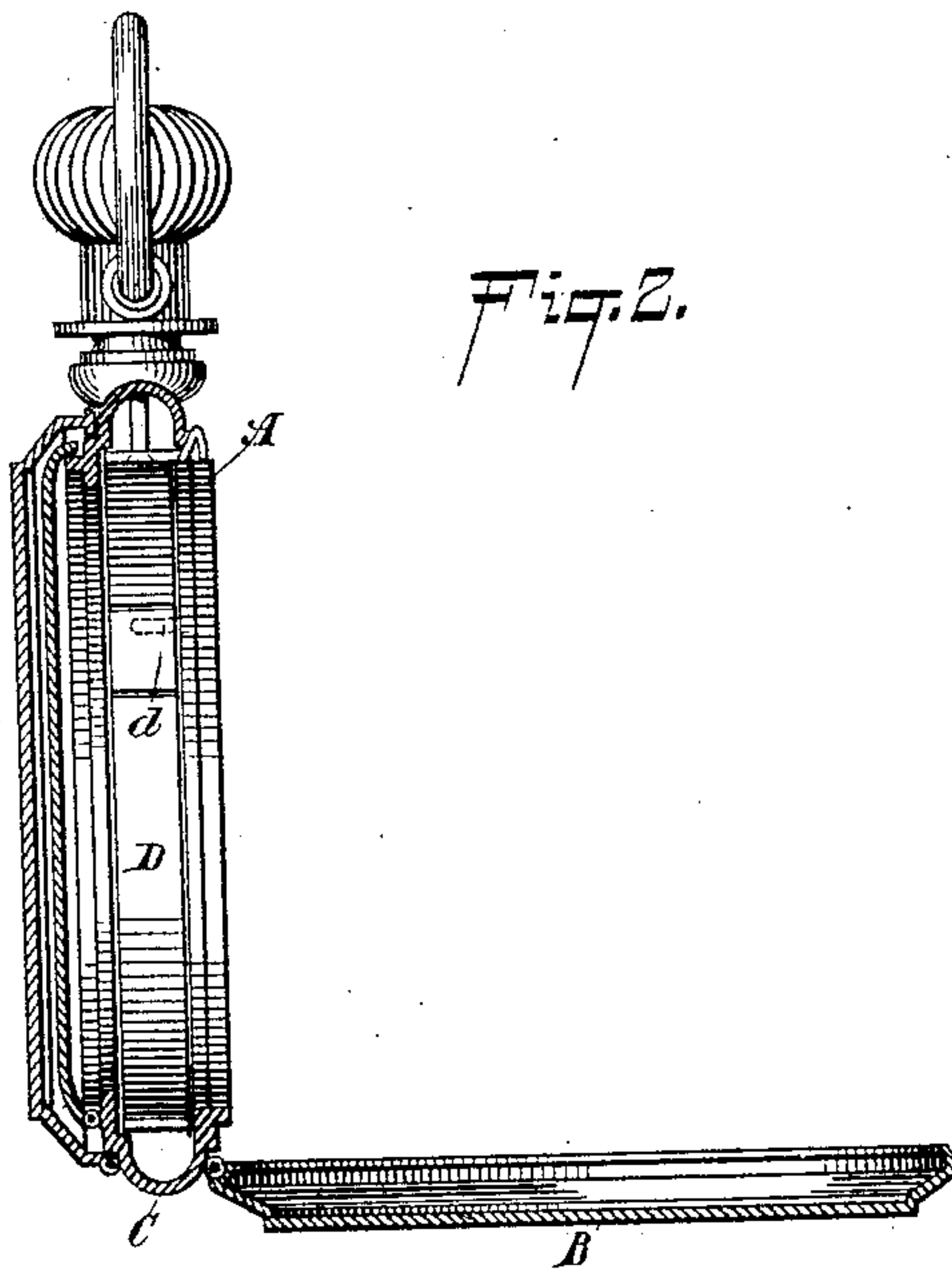


Fig. 3.

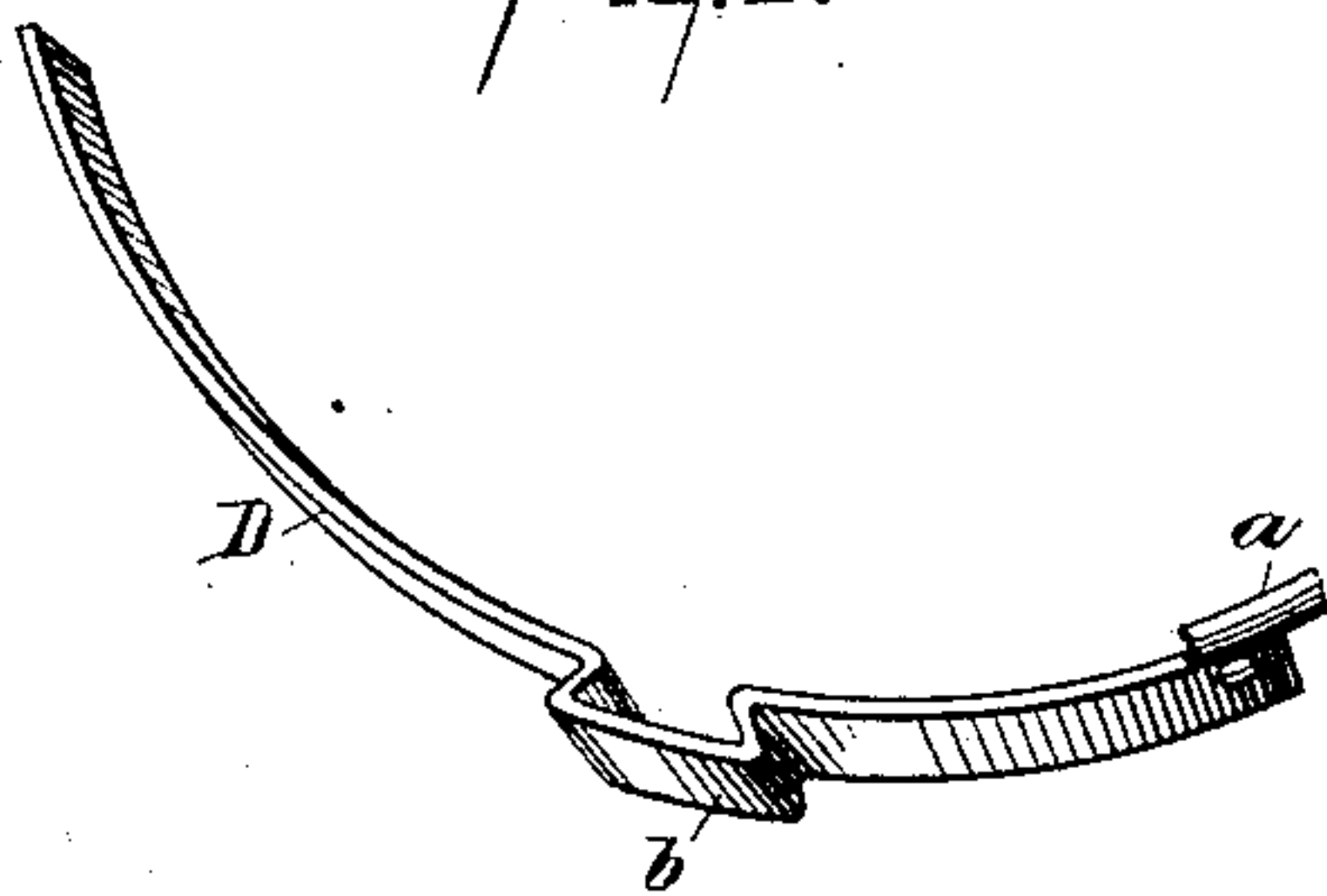


Fig. 4.

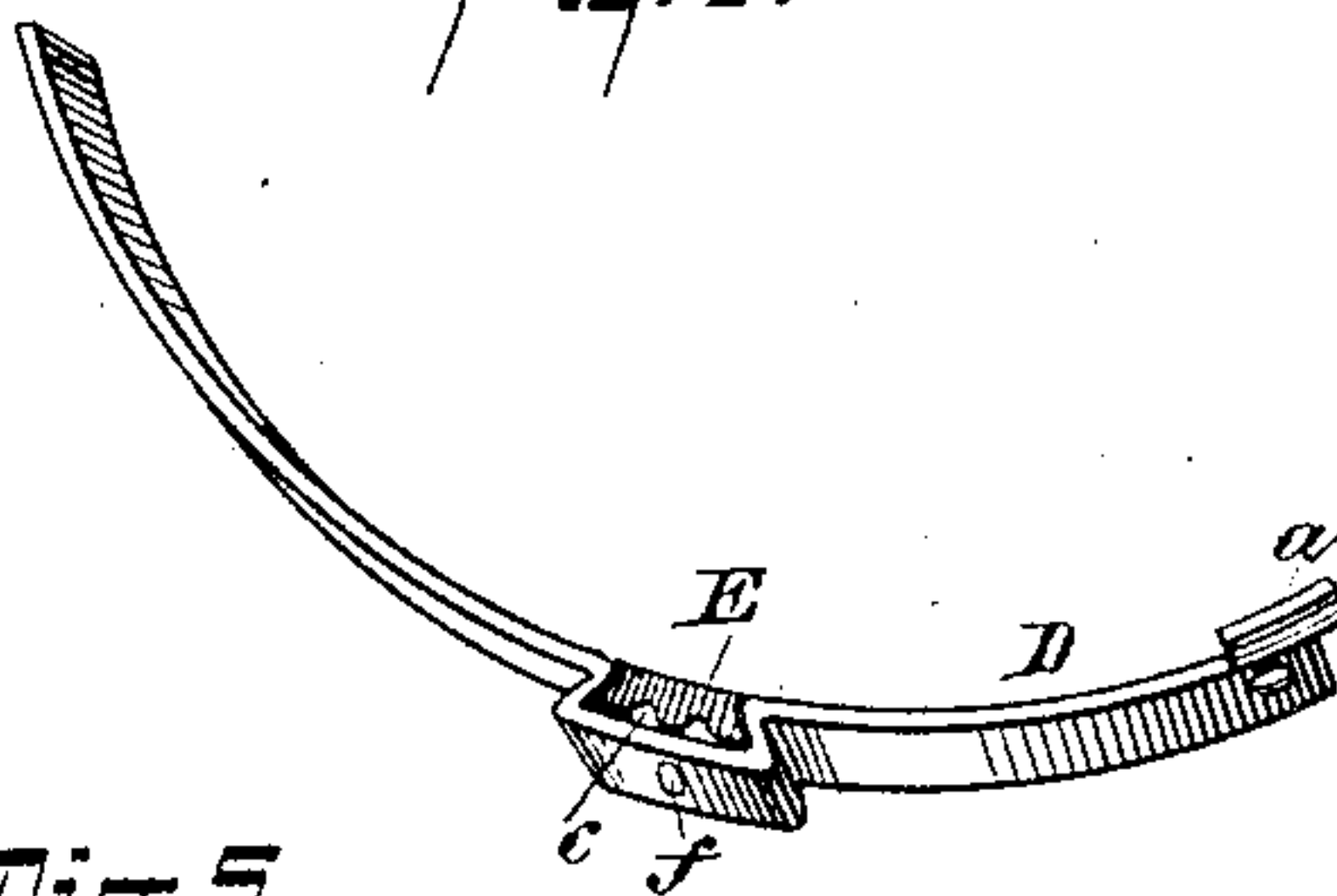
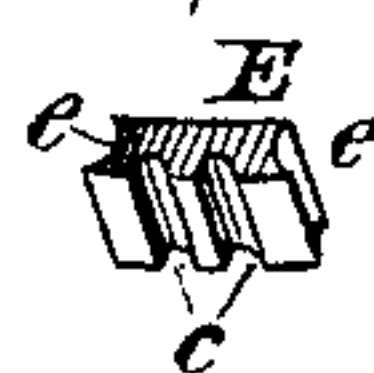


Fig. 5.



WITNESSES:

William Goebel.
Fred. C. Riekers

INVENTOR

Alexander Milne

BY

George Cook,
ATTORNEY.

UNITED STATES PATENT OFFICE.

ALEXANDER MILNE, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE NEWARK
WATCH CASE MATERIAL COMPANY, OF SAME PLACE.

WATCH-CASE SPRING.

SPECIFICATION forming part of Letters Patent No. 453,202, dated June 2, 1891.

Application filed March 6, 1891. Serial No. 383,977. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER MILNE, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Watch-Case Springs, of which the following is a specification.

My invention relates to an improvement in watch-case springs, the object being to provide an article of this kind so constructed that no slotting or boring of the spring will be necessary in pinning or otherwise securing it to the case-center.

With this end in view my invention consists in certain novel features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of a hunting-case watch, the lid being open and a portion of the center broken away to expose the spring. Fig. 2 is a sectional view thereof. Fig. 3 is a view of the spring with grooved piece removed. Fig. 4 is a view of the spring with the piece inserted. Fig. 5 is a detached view of the grooved block or piece of metal adapted to fit in the bend of the spring.

A represents a watch of the hunting-case type, provided with the hinged lid B and case-center C.

D represents the spring, made of a thin metal strip, curved to conform to the shape of the center and provided at one end with the lock or catch *a*, the spring illustrated being that known as the lock-spring; but I would have it understood that my invention is equally well adapted to be used as a lift-spring, the only difference in construction being the engaging end, which in such case is provided with a lug, this feature being well understood by those skilled in the art, and hence need not be more fully described.

At some point in its length I bend the spring into the shape shown in Fig. 3 of the drawings, the bend *b* being made outwardly, in order that the finished spring, when inserted in the case, may present a smooth and finished inner surface. The bend *b* I pref-

erably form as shown—that is, in the shape of a dovetail—the object being to confine within the bend a small metal piece or block E, made of a size and shape to nicely fit therein. The outer surface of this block or separable piece E is provided with the vertical grooves of a size to receive a pin or screw *d*, Fig. 1, adapted to enter the case-center and hold the spring securely therein, the vertical edges of the piece being slightly hollowed out, as at *e*, to fit over the bended corners of the spring, as shown in Figs. 4 and 5.

It will be understood from this construction and arrangement of parts that instead of boring, corrugating, or slotting the body of the spring, and thereby necessarily weakening it, in order to pin or otherwise secure it to the center the spring itself is left intact, the grooving occurring in the separable piece, upon which little or no strain falls. I have shown the block E provided with two grooves *c*, but one will answer; or, if desired, three or more may be provided, as such will allow of a wider range in the case-center in which to bore the hole for the reception of the locking-pin *d*. It will further be noticed that instead of weakening the spring I rather add to its strength, as the tendency of the bend *b* is to press against or bind the solid piece, overcoming all danger of breaking at that part.

If desired, a small pin *f* may be passed through the spring into the piece E for the purpose of preventing the latter from becoming separated, as the spring does not bend at such point, and hence there is weakening effect therefrom.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A watch-case spring provided with a bend at some point in its length, in combination with a grooved metal block or piece adapted to fit in said bend, substantially as set forth.

2. In a watch-case spring, the combination, with the spring proper constructed with a bend, of a separable piece or block adapted

to fit in said bend and provided with one or more vertical grooves, substantially as set forth.

3. In a watch-case spring, the combination,
5 with the spring proper D, provided with the bend *b*, of the piece E, fitting in said bend and provided with the vertical grooves *e* and *c*, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 7th day of 10 February, A. D. 1891.

ALEXANDER MILNE.

Witnesses:

BYRON P. STRATTON,
WILLIAM GOEBEL.