A. S. BUCKELEW.

METHOD OF MAKING LIFT-SPRINGS FOR WATCHES.

No. 186,107. Patented Jan. 9, 1877.

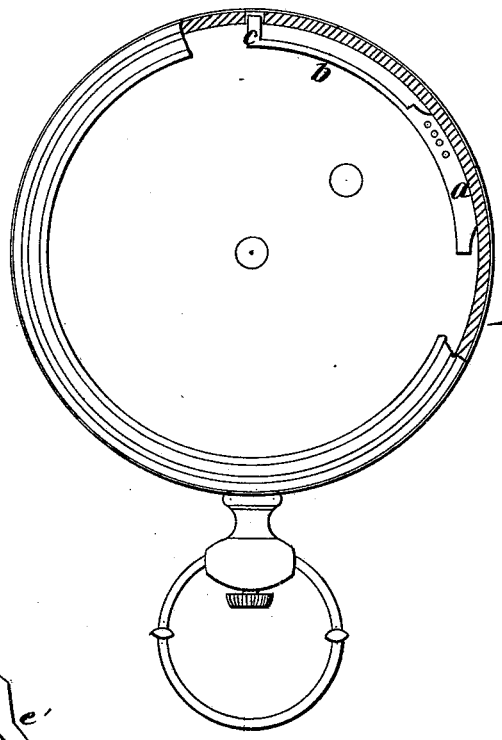

Fig. 1

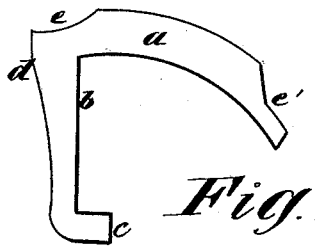

Fig. 2

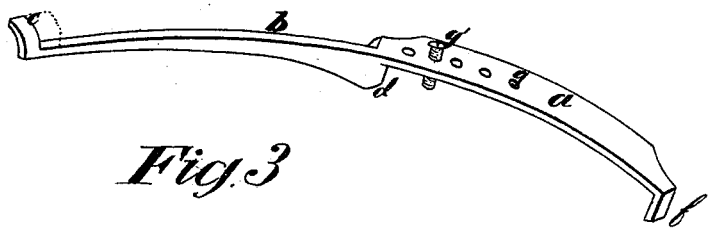

Fig. 3

Witnesses

Jos. P. Connolly

C. Sullivan

Inventor

Ansel S. Buckelew

By Connolly Bros.

Attorneys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ANSEL S. BUCKELEW, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN THE METHODS OF MAKING LIFT-SPRINGS FOR WATCHES.

Specification forming part of Letters Patent No. **186,107**, dated January 9, 1877; application filed May 22, 1876.

To all whom it may concern:

Be it known that I, ANSEL S. BUCKELEW, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Lift or Catch Springs for Watch-Cases; 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 use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a horizontal section of a watch-case containing one of my improved springs. Fig. 2 is a plan view of spring-blank; and Fig. 3 is a perspective view of the spring.

This invention has relation to lift-springs for watch-cases; and consists in the novel construction of the metal blank from which the spring is made, and in the peculiar method of bending said blank so that it shall conform to the shape of the watch-case, and be adapted to the filing and reduction of dimensions required in fitting it to different styles and sizes of watch-cases.

The spring-blank is cut from a sheet of metal of the required thickness, and has the form of a segment, *a*, from one end of which proceeds a radial arm, *b*, terminating in a perpendicular stud, *c*, and having a lateral enlargement or re-enforcement at *d*. At the ends of the segmental portion the outer angles are cut away, as shown at *e e'*.

To form the spring from this blank, the arm *b* is bent over until its surface is perpendicular to that of the segmental part, and is then bent outward to the same curve as, and flush with, the inner edge of the part *a*, the angle occurring at about the center of the enlargement. The rear end of the segment is then bent down to form a support, *f*, while the stud *c* is bent over to form the lift. Holes are pierced at *g* and a screw, *g'*, provided to adjust and fasten the spring.

The advantages of this spring are, chiefly, its cheapness, the slight degree of labor entailed in its manufacture, its strength, and its adaptability to watches of various styles and sizes.

It will be observed that the spring embodies a feature already the subject of patents granted to me, consisting in the provision of miniature supports at the end and center of the spring, by filing which the spring may be easily and speedily fitted to the different sizes of watch-cases.

To make a catch-spring instead of a lift-spring, it is only necessary to enlarge the part *c*, and slightly modify its shape, the end stud *f* being then bent upward instead of downward, and then laterally and beveled on the edge, the same as catch-springs usually are. The particular form of this part of the spring is not a part of my invention.

From the shape of the blank and the method of bending the same the complete spring acquires a peculiarity which distinguishes it from others, and particularly from that shown in my patent of November 23, 1875, No. 170,341.

The parts *a* and *b* of the spring are noticably parts of a single plate bent at *d* in two directions, so as to produce an approximately L-shaped support. In the patent referred to the spring is not bent from a plate, but is first cast or otherwise produced of nearly the required shape and afterward finished and fitted by filing.

What I claim as my invention is—

The method of forming a watch-case spring by cutting from a sheet of metal a blank, as shown in Fig. 2, having the segment *a*, arm *b*, and studs *e' c*, then twisting said arm at *d*, and curving it to coincide with the segment, and finally bending the studs *c e'*, substantially as described and shown.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of May, 1876.

ANSEL S. BUCKELEW.

Witnesses:
ANDREW W. KENT,
W. W. LAMAN.