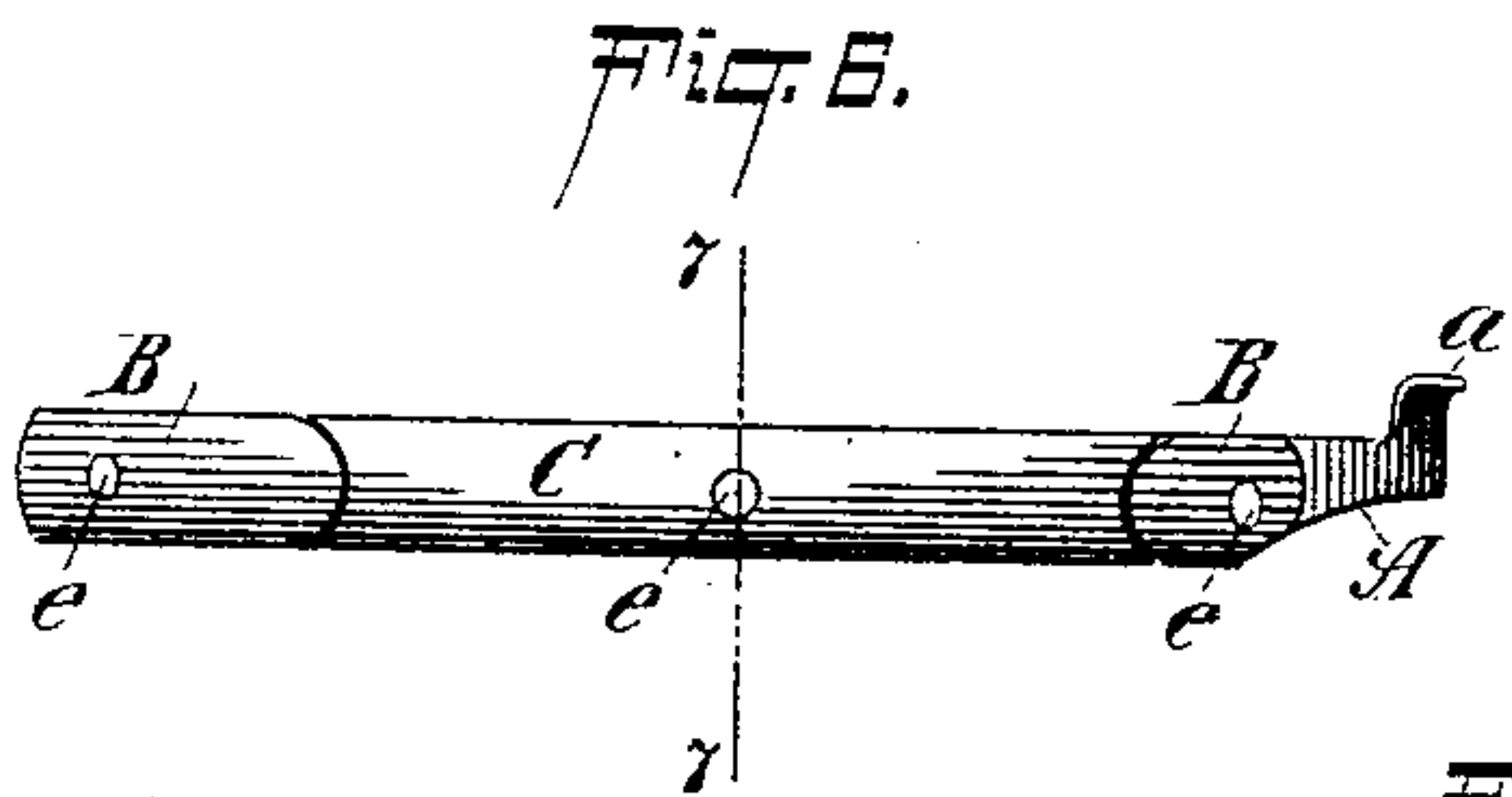
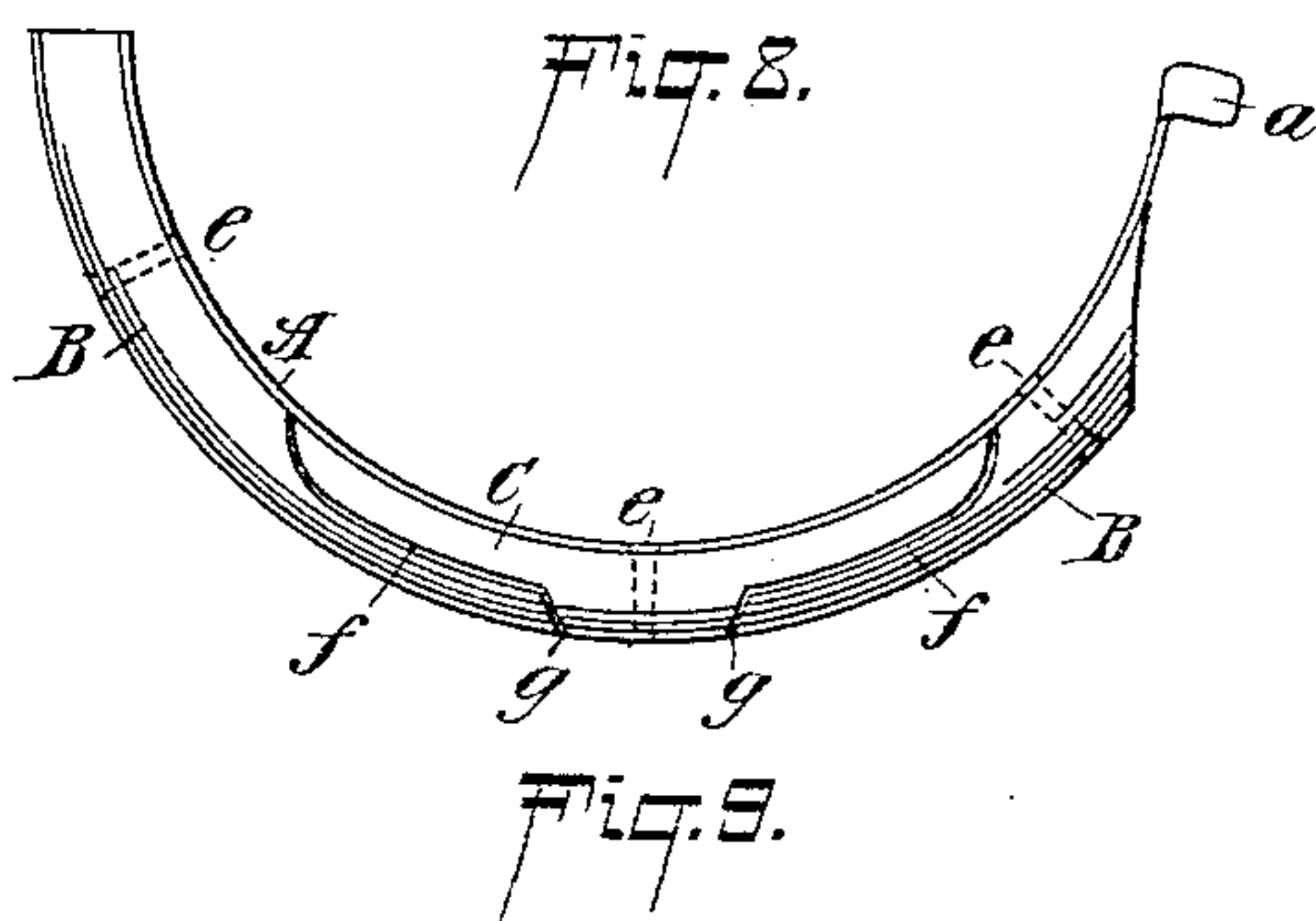
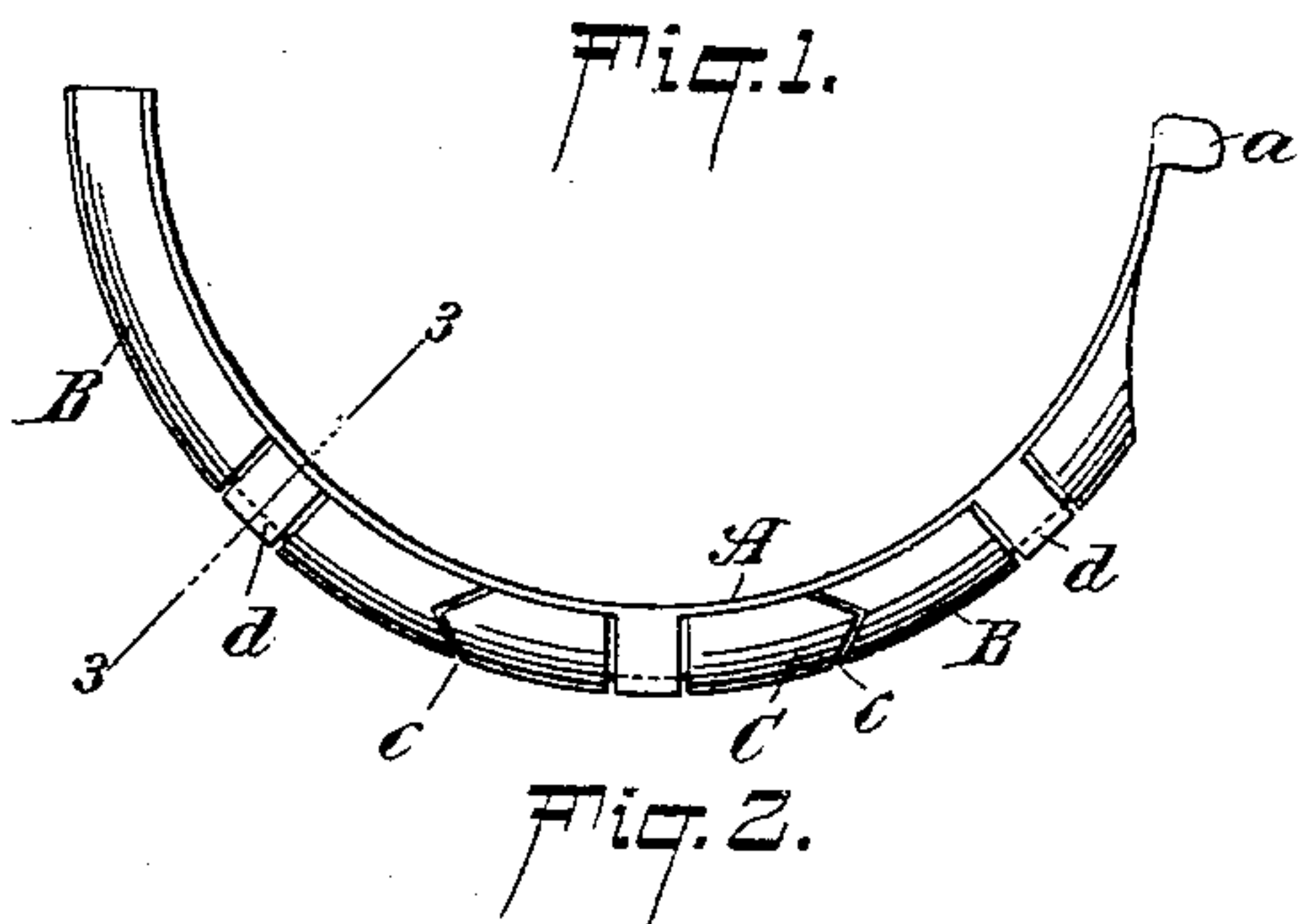


(No Model.)

N. J. FELIX.  
WATCHCASE SPRING.

No. 495,628.

Patented Apr. 18, 1893.



WITNESSES:

William Goebel.  
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# UNITED STATES PATENT OFFICE.

NUMA J. FELIX, OF BROOKLYN, NEW YORK.

## WATCHCASE-SPRING.

SPECIFICATION forming part of Letters Patent No. 495,628, dated April 18, 1893.

Application filed December 8, 1891. Serial No. 414,407. (No model.)

### *To all whom it may concern:*

Be it known that I, NUMA J. FELIX, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Watchcase-Springs, of which the following is a specification.

My invention relates to an improvement in watch-case springs, the object of the same being to provide an article of this kind which shall have a backing extending nearly the entire length of the spring proper, and at the same time so constructed that it may be easily and readily inserted into the case center without scratching or marring the same.

A further object of my invention is to so construct the watch case spring that the extended backing may be secured to the blade or spring proper without the necessity of drilling the latter for the reception of pins or rivets, and with these and other ends in view my invention consists in certain novel features of construction as will be hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of my improved form of spring. Fig. 2 is a side view of the same. Fig. 3 is a sectional view thereof taken on the line 3—3 of Fig. 1. Fig. 4 is a similar view of a modification. Fig. 5 is a plan view of a modification. Fig. 6 is a side view of the same. Fig. 7 is a sectional view taken on the line 7—7 of Fig. 6. Fig. 8 is a plan view of another modification. Fig. 9 is a side view of the same.

As will be hereinafter understood, my invention may be applied to either the fly or catch spring of a watch case, the only difference being the form of the projection on the end of the spring proper, as is well understood, and hence I have herein shown and described but one spring, viz. the fly or lift spring.

A represents the spring proper, made of thin metal, properly tempered, and curved to conform to the shape of a watch case center, one end thereof being provided with the lip or projection *a* to bear against and lift the lid of a watch case when released by the catch spring.

B represents a backing made in three sections and extending nearly the entire length of the blade proper A. The inner ends of the

two outer sections B are preferably formed with recesses of V shape as shown at *c*, to contain the V-shaped ends of the central section C. Each of these sections is preferably recessed to receive the lugs or projections *d*, formed on the upper edge of the spring proper A, said lugs being bent outwardly, downwardly and inwardly as shown in Fig. 3 of the drawings, in order to fit the dove-tailed recesses formed in the sectional backing, and hold the latter in position without the use of pins or screws. If desired however, the lug may be bent down straight as shown in Fig. 4, and a pin or screw inserted through the vertical side of the lug into the backing. Instead of having the adjacent ends of the sections B, C formed V-shaped, they may be slightly beveled as shown in Fig. 5, and the ends of the outer section seated upon the ends of the central section, and pins or rivets *e* pass through the blade proper in the several sections of the backing; or as shown in Fig. 8 the central section may be formed with the seatings *f*, and shoulder *g* on which rest and strike, respectively, the inner ends of the two outer sections. In all these instances it will be noticed that the backing is formed in three sections having the inner ends of the outer sections seated upon the ends of the central section, whereby the extreme ends of the spring proper may be sprung slightly inward to reduce the diameter thereof, and the inner ends of the outer sections sprung outwardly to also reduce the diameter of said backing in order that the spring as a whole may be readily inserted into a watch case center, and in order to have the several sections of the backing fit perfectly on the spring after such insertion, and present a smooth, uniform surface to said backing.

I am aware that it is not new to form a spring having a sectional backing or to lock the ends of said sections by means of a retaining pin or screw, and hence I make no claims to such; but:—

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

The herein-described watch case spring, comprising the spring proper A, made of thin properly tempered metal, curved to conform to the shape of the watch case center and



formed at one end with the lip or projection  
a, the backing B made in three sections and  
extending nearly the entire length of the  
spring proper, the inner ends of the two outer  
5 sections being formed with V-shaped recesses  
as shown at c to contain the correspondingly-  
shaped ends of the central section C, each  
section being recessed to receive the lugs or  
projections d formed on the outer edge of the  
10 spring proper A, said lugs being bent out-  
wardly, downwardly and inwardly as shown,

in order to fit the dovetailed recesses formed  
in the sectional backing and hold the latter  
in position without the use of pins or screws,  
substantially as described.

15

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

NUMA J. FELIX.

Witnesses:

GEORGE COOK,  
WILLIAM GOEBEL.