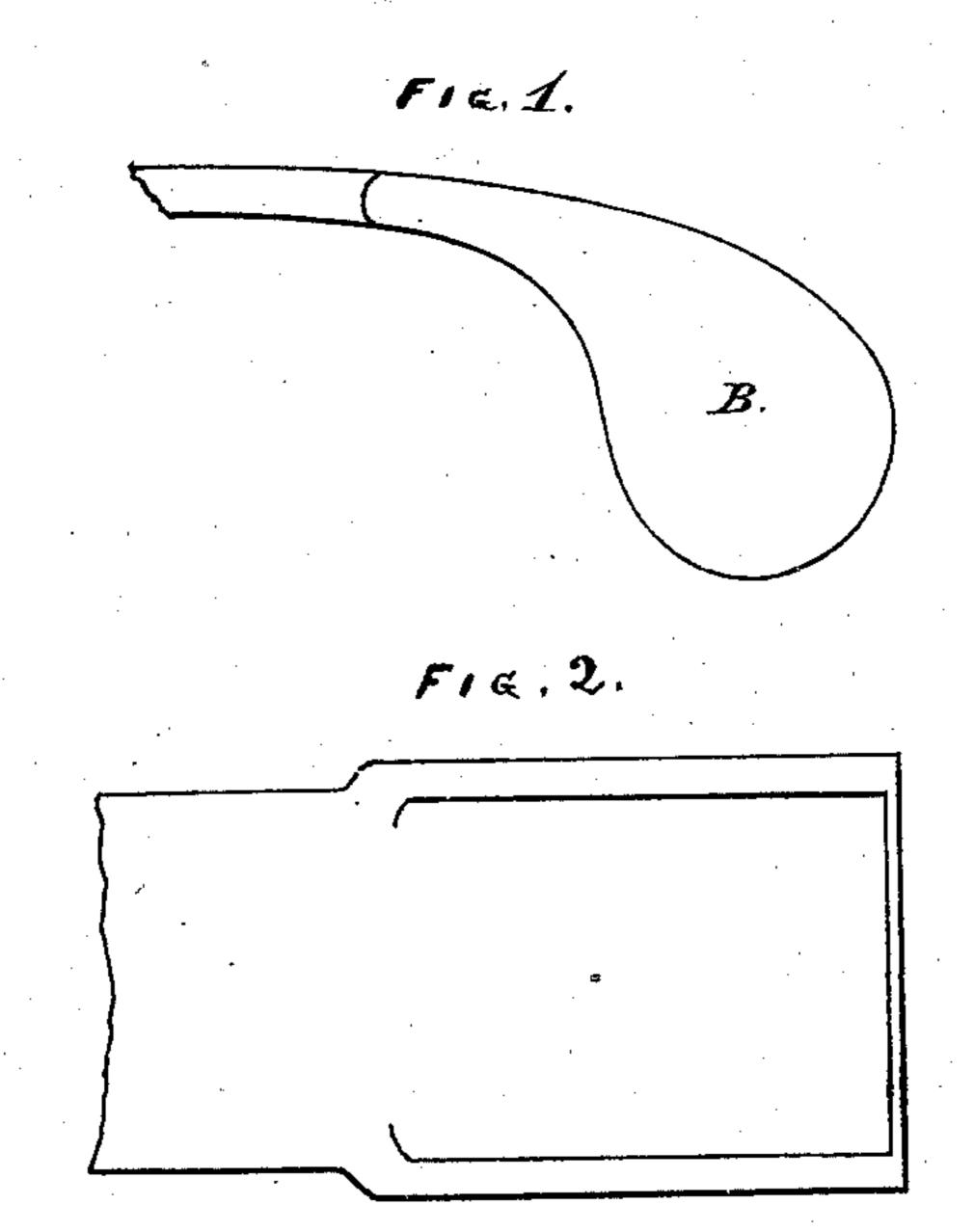
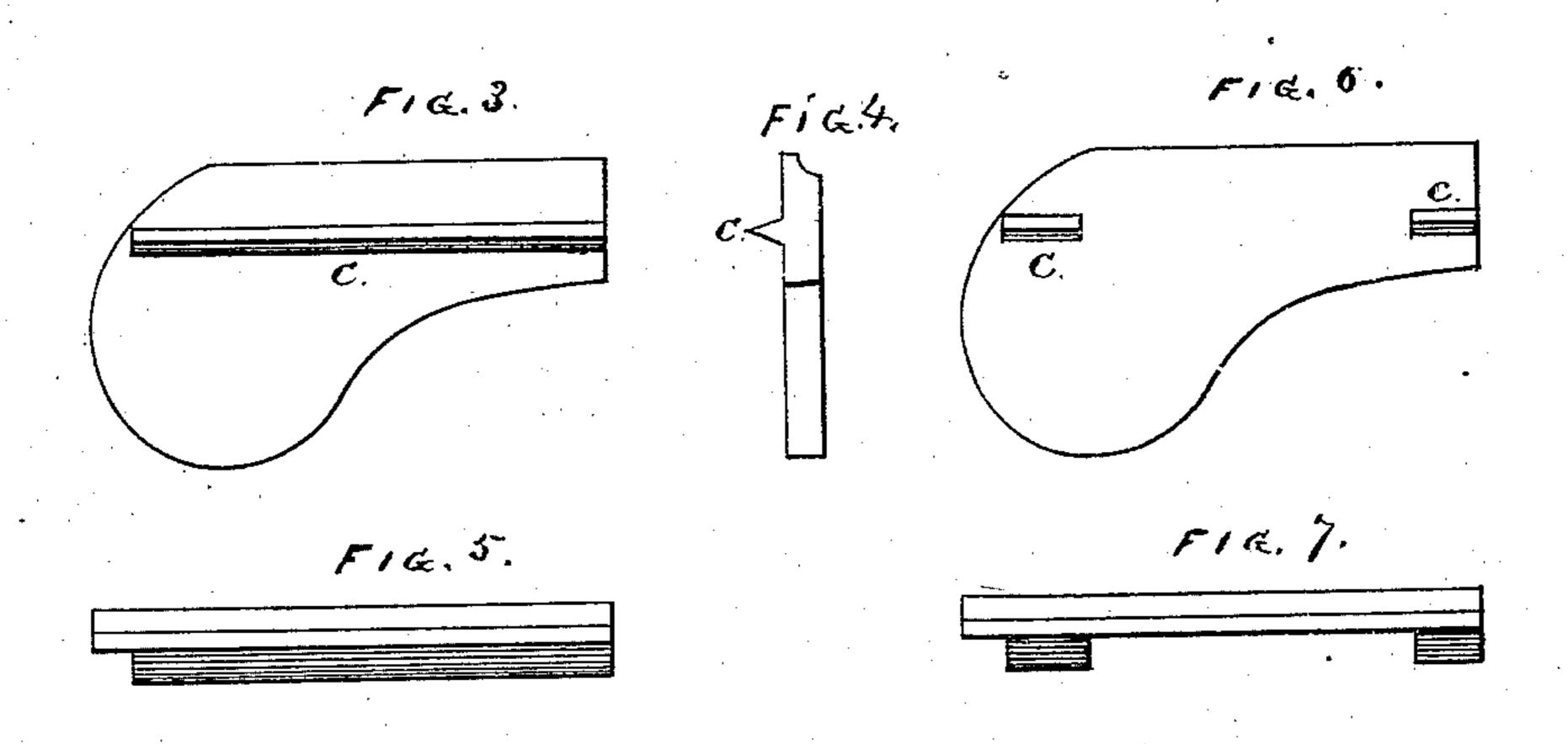
### W. R. PETRIE.

## Manufacturing Carriage Spring Heads.

No. 104,194.

Patented June 14, 1870.





Witnesses.

Halter & Petric Inventor,

Hayetto Hall

By Sanford & Frescott

atty's

# Anited States Patent Office.

### WALTER R. PETRIE, OF WESTVILLE, CONNECTICUT-

Letters Patent No. 104,194, dated June 14, 1870.

#### IMPROVEMENT IN MANUFACTURING CARRIAGE-SPRING HEADS.

The Schedule referred to in these Letters Patent and making part or the same

To all whom it may concern:

Be it known that I, Walter R. Petrie, of Westville, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Carriage-spring Head; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

Figure 1 is a side view of my improved spring-head. Figure 2 is a bottom view of the same.

Figure 3 is a face view of one of the ears before being attached to the body of the spring, and shows the projection extending across the same.

Figures 4 and 5 are end and top views of the same. Figures 6 and 7 show a different form where two projections are used instead of one continuous one.

Similar letters of reference, where they occur in the separate views, indicate like parts.

My invention relates to an improved method of forging the head upon a carriage-spring, and consists in forming a spur, lip, or other projection upon the ear of the spring-head, and, after the body of the spring has been sufficiently heated, the projection upon the ear is pressed into the solid metal of the spring, and the ear is thus retained thereon until a welding heat can be obtained. In this way a neat forging can be obtained, and one that is not liable to flake or crack, as is the case when the two pieces are halved together, and one much cheaper than the one now used, from the fact that less labor is required in drawing the head to the proper size.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same, reference being had to the accompanying drawing. A is the body of the spring.

B B are the two ears, placed one upon each side of the spring, to form the head.

Upon the lower inside surface of these ears a projection, C, is placed, which may be formed under the plainer, or in any other convenient way.

This projection may be continuous for its entire length, as shown in fig. 3, or it may be formed of a series of various projections, as shown in fig. 6. In either case the projections are made tapering, as shown in the drawing.

My invention is operated as follows:

The end upon which the head is to be placed is heated to the proper degree. The two ears are then put in place upon the spring, and by applying pressure the projections are forced into the heated iron of the spring, and securely held until the weld is made.

Having thus fully described my invention,

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

1. The method of uniting the spring-head to the spring, herein described, that is, by pressing the projections upon the head into the body of the spring while hot, thus forming a weld, as described.

2. The spring described, consisting of the ears with projections united to the spring by pressure and welding, as and for the purpose set forth.

This specification signed and witnessed this 2d day of April, 1870.

WALTER R. PETRIE.

Witnesses:

ALBERT MONSON, FRANK PRESCOTT.