

No. 702,257.

Patented June 10, 1902.

H. C. SWAN.
ELLIPTIC SPRING.

(Application filed Mar. 7, 1902.)

(No Model.)

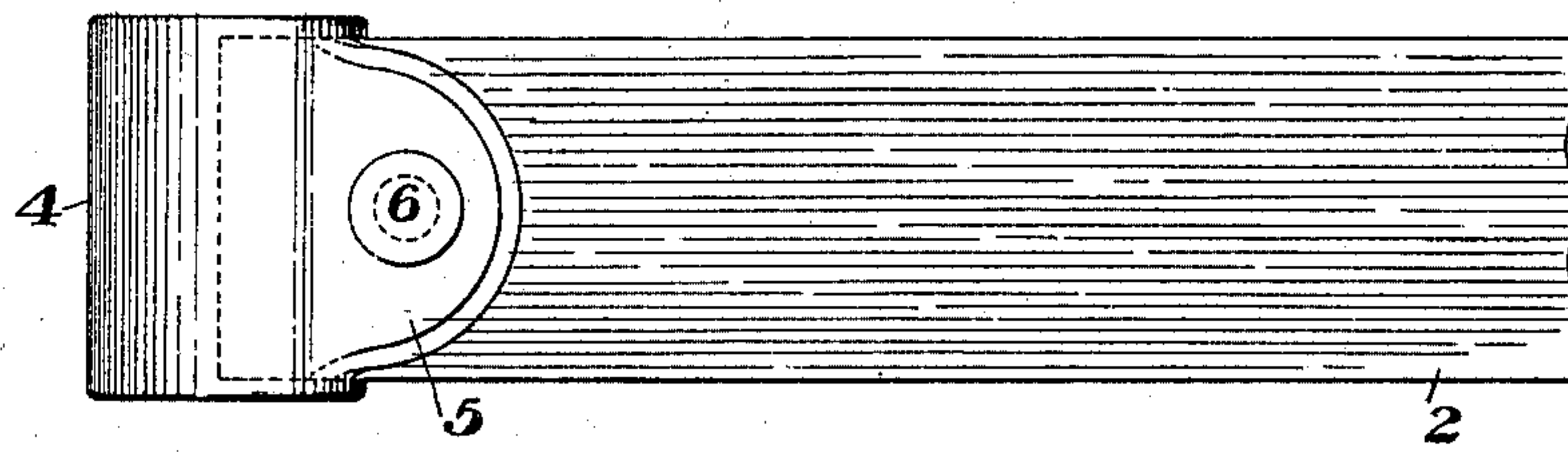


Fig. 2.

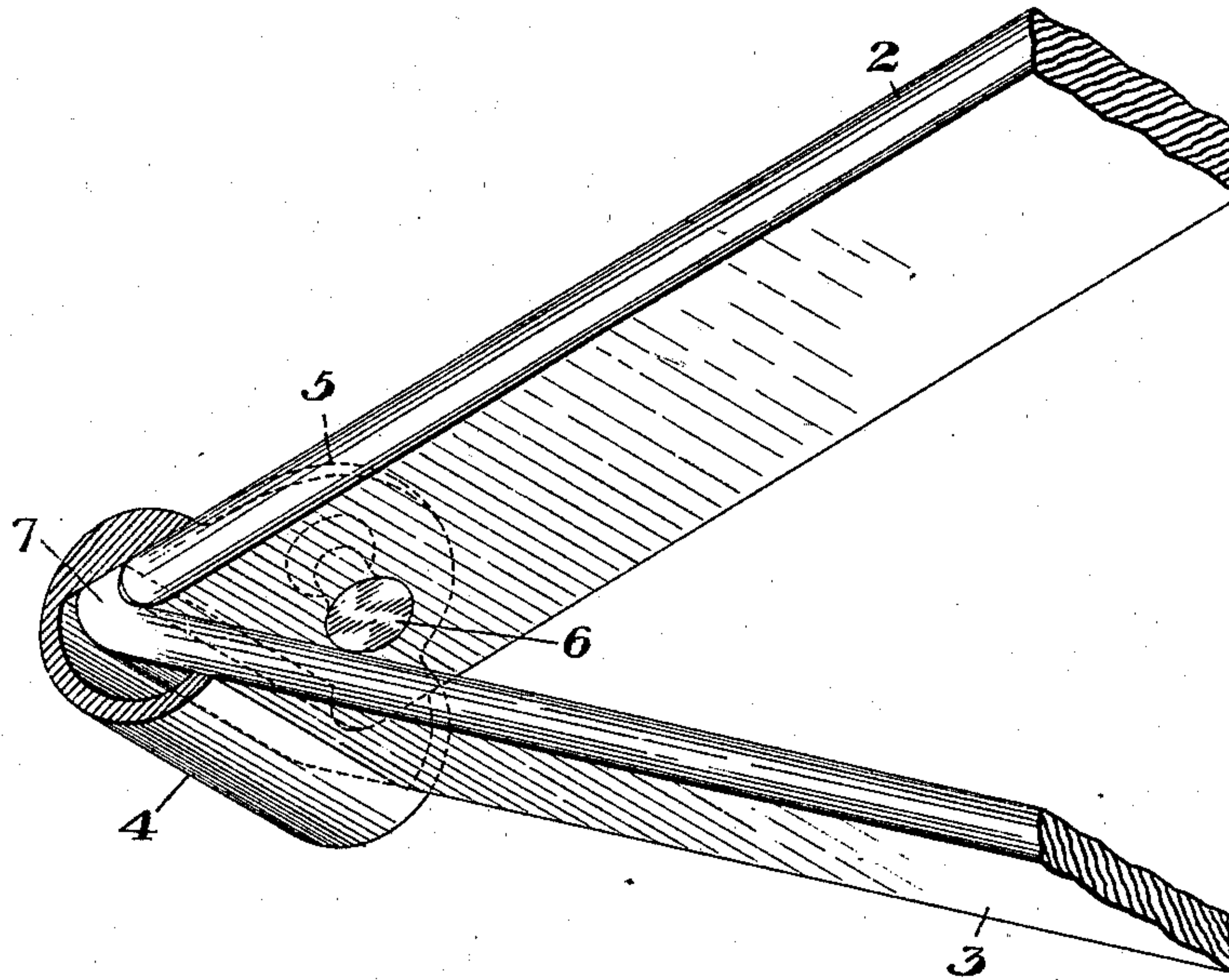


Fig. 1.

WITNESSES

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INVENTOR

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his attys.

UNITED STATES PATENT OFFICE.

HENRY C. SWAN, OF OSHKOSH, WISCONSIN.

ELLIPTIC SPRING.

SPECIFICATION forming part of Letters Patent No. 702,257, dated June 10, 1902.

Application filed March 7, 1902. Serial No. 97,111. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. SWAN, of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented a new and useful Elliptic Spring, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a perspective view of my improved elliptic-spring connection, the end of the cap being broken away; and Fig. 2 is a bottom plan view of the same.

15 My invention relates to the end connections of the top and bottom members of elliptical springs, and is designed to provide a simple and neat connection which will prevent detaching of the spring members except when desired.

20 To that end it consists in securing an inclosing end cap to one leaf of the spring and providing a hook upon the other leaf of the spring which engages the end of the first leaf within the cap.

25 It also consists in the construction and arrangement of the parts, as hereinafter more fully described, and set forth in the claims.

30 In the drawings, 2 represents the upper leaf, 3 the lower leaf, and 4 the end cap, of an elliptical spring. The cap is provided with a projecting lug 5, which is secured to the leaf, having a plain end, the securing means being a rivet 6 or any other suitable device. The end portion of the upper leaf is bent to form a hook 7, which rests within the cap and engages the rounded end of the other leaf. The cap is closed at both ends, as in the usual form, and hence the hook-leaf cannot be dis-

connected except by disconnecting the cap from the other leaf.

40 The advantages of my invention result from the simplicity of the connection, by which separation of the parts is prevented and the necessary freedom of movement obtained. The shell of the cap prevents elongation of the hooked leaf, while the hook prevents displacement of its leaf.

45 Many variations may be made in the form and arrangements of the leaves, the inclosing cap, and the means for securing the leaf to the cap with the plain end without departing from my invention.

I claim—

1. An elliptic spring having an upper and a lower leaf, one of said leaves having a straight uncurved end portion, the other leaf having a hook end engaging said straight end portion of the first leaf, and a cap free from through-bolts and inclosing said ends, said cap being secured only to the leaf having the plain end; substantially as described.

2. An elliptic spring having an upper and a lower leaf, one of said leaves having a plain rounded end, the other leaf having a hook portion engaging said rounded end, and a cap having closed ends and inclosing the ends of the leaves, said cap being unconnected with the leaf having the hooked end and having a projection secured to the leaf with the rounded end; substantially as described.

70 In testimony whereof I have hereunto set my hand.

HENRY C. SWAN.

Witnesses:

ELLIOTT S. BRUSH,
ERICH KATH.