

No. 736,964.

PATENTED AUG. 25, 1903.

E. HANSON.
CANNON PINION REMOVER.
APPLICATION FILED APR. 16, 1903.

NO MODEL.

Fig. 1.

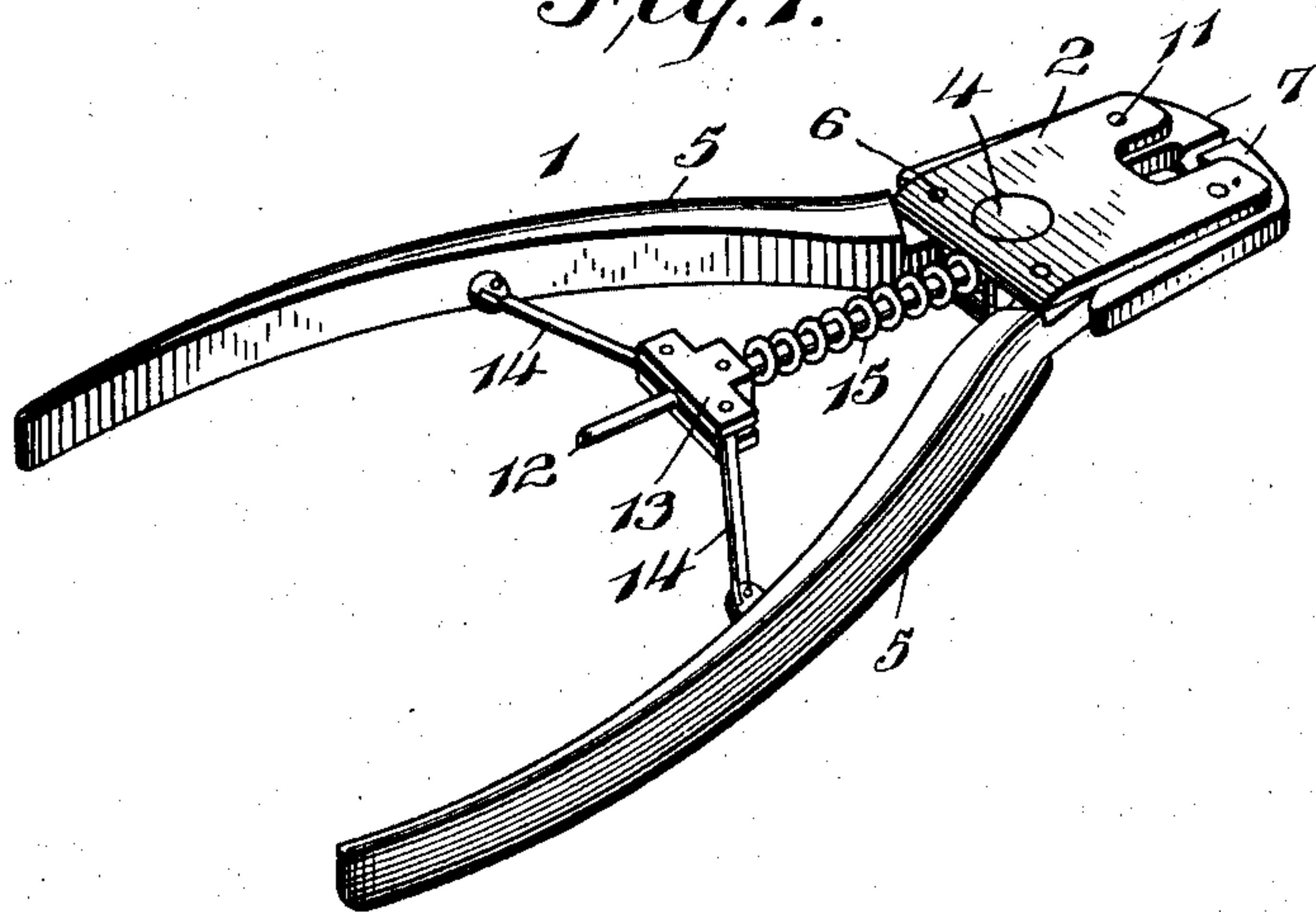


Fig. 2.

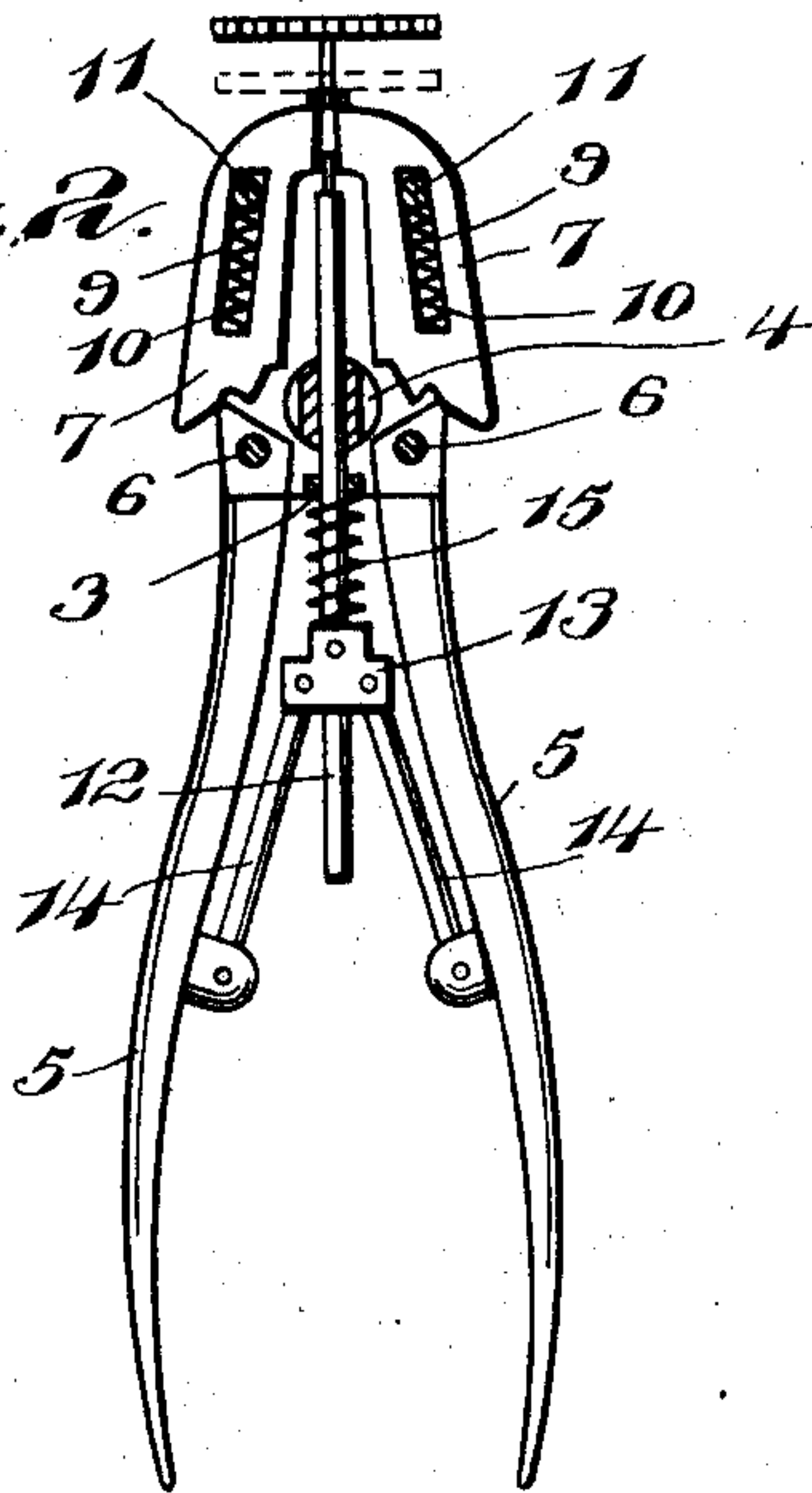
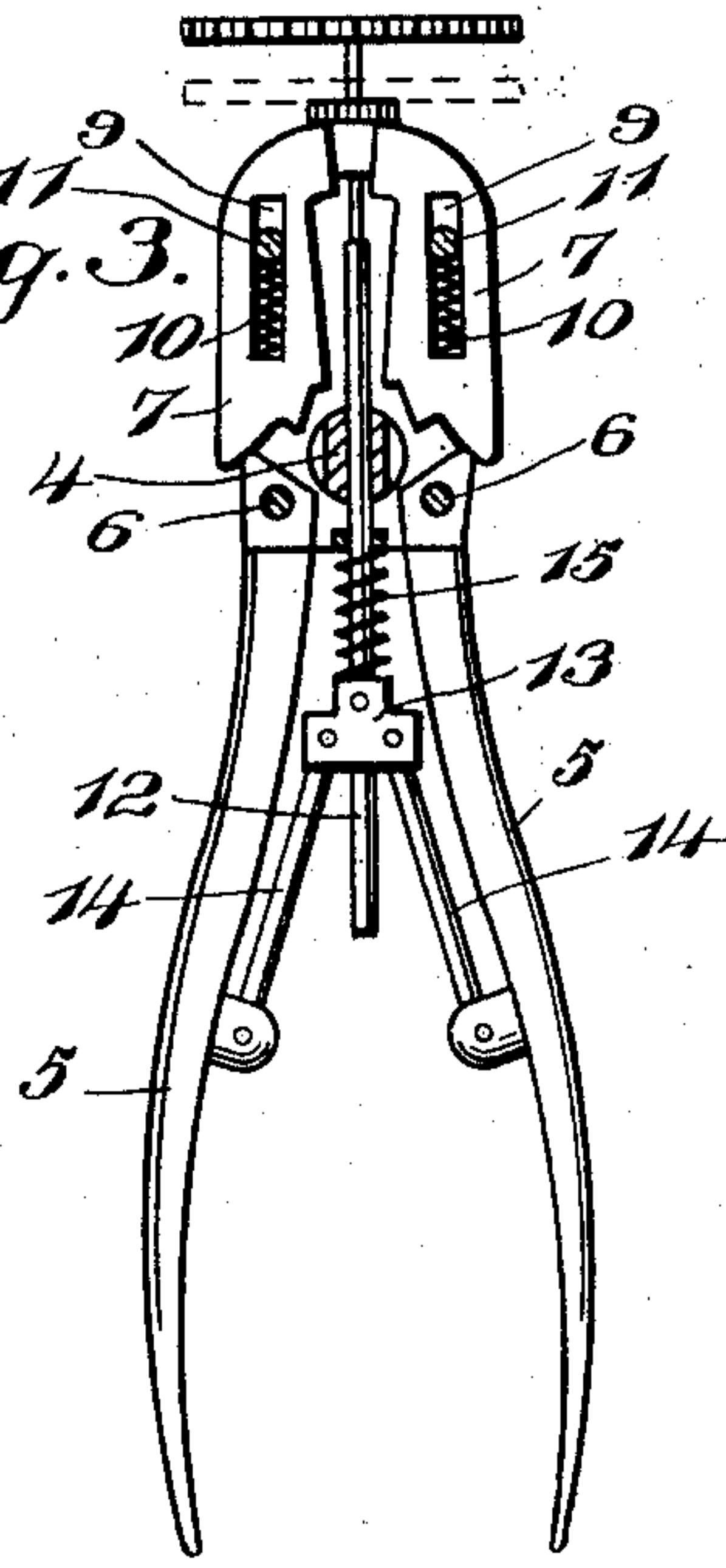


Fig. 3.



Inventor

Emilrik Hanson

Witnesses

J. P. Brett

C. D. Leckie

By

C. E. Duffey & Son

Attorneys

UNITED STATES PATENT OFFICE.

EMBRIK HANSON, OF FAIRFAX, MINNESOTA.

CANNON-PINION REMOVER.

SPECIFICATION forming part of Letters Patent No. 736,964, dated August 25, 1903.

Application filed April 16, 1903. Serial No. 152,999. (No model.)

To all whom it may concern:

Be it known that I, EMBRIK HANSON, a citizen of the United States, residing at Fairfax, in the county of Renville and State of Minnesota, have invented certain new and useful Improvements in Cannon-Pinion Removers; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to watchmakers' tools, and has for its object to provide a device for removing the cannon-pinions from wheels of watches or the like.

With this object in view my invention consists in the novel construction of my instrument and particularly in the engaging jaws.

My invention also consists in certain other novel features of construction and in combination of parts, which will be first fully described and afterward specifically pointed out in the appended claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a view, partly in section, showing the tool in operation as applied to a small cannon-pinion. Fig. 3 is a like view showing the tool acting on a larger cannon-pinion and automatically adjusting itself.

Like numerals of reference indicate the same parts throughout the several figures, in which—

1 is the tool, consisting of the body 2, which is provided with guide 3.

4 indicates a preferably circular metallic piece which is set in said body 2 and through which the plunger passes, thereby guiding the same.

5 indicates the handles, which are pivoted at 6 within the body 2 and which engage the jaws 7, as shown in Figs. 2 and 3. Said jaws are provided with rear inclined ends and are also provided with a slot 9, within which a spring 10 is located. Within said slot the jaws are pivoted on posts 11, against which the said springs bear.

The plunger 12 is carried in a central piece 13, which is pivoted to the links 14, leading

to the handles 5. A spring 15 is located between said central piece 13 and the body 2, which has a tendency to keep the handles in a spread position.

Having thus set forth the several parts of my invention, its operation is as follows: In order to remove a cannon-pinion from the staff of a watch-wheel, &c., the collar of the pinion is inserted between the jaws of the tool, and as the handles are brought together the jaws engage the collar, and the plunger is forced up in contact with the staff and entering the collar forces the staff out. Fig. 2 shows this operation and shows the tool engaging a smaller cannon-pinion, while Fig. 3 shows a larger pinion being removed. The jaws of my tool are automatically adjustable, as will now be set forth. When a larger pinion is to be removed, the collar thereof is inserted between the jaws in the usual manner and the handles brought together. As the jaws engage the collar and as the handles are being brought together the ends of said handles act on the inclined ends of said jaws and force the same forward, so that when the plunger is acting on the staff of the pinion the jaws are engaged by the handles at a point nearer the bottom of the inclined ends, which obviously allows a wider space between the engaging end of the jaws, so that the larger collar may be engaged and securely held thereby. The range of self-adjustment is of course not very great, as there is not a vast difference between the collars of the pinions on watch-wheels. It is sufficient, however, to make the tool universally applicable to all watch-pinion collars, so that a watch-pinion and collar of any size may be removed without adjustment other than the self-adjustment of the jaws.

Having thus set forth my invention, I do not wish to be understood as limiting myself to the exact construction herein set forth, as various slight changes may be made therein by those skilled in the art which would fall within the limit and scope of my invention, and I consider myself clearly entitled to all such changes and modifications.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a device for removing collars from staffs, the combination of a body, handles and

plunger, and automatically self-adjusting jaws secured to said body and adapted to be engaged and actuated by said handles.

2. In a device for removing collars from
5 staffs, the combination of the body, handles
and plunger, jaws pivoted to said body and
provided with slots therein and springs with-
in said slots and bearing against the pivots
for said jaws.
- 10 3. In a device for removing collars from
staffs, the combination of the body, handles

and plunger, of jaws on said body provided
with inclined ends, and means for allowing
said ends to be engaged at different points by
said handles.

In testimony whereof I have affixed my sig-
nature in presence of two witnesses.

EMBRIK HANSON.

Witnesses:

G. A. RIEKE,
A. V. RIEKE.