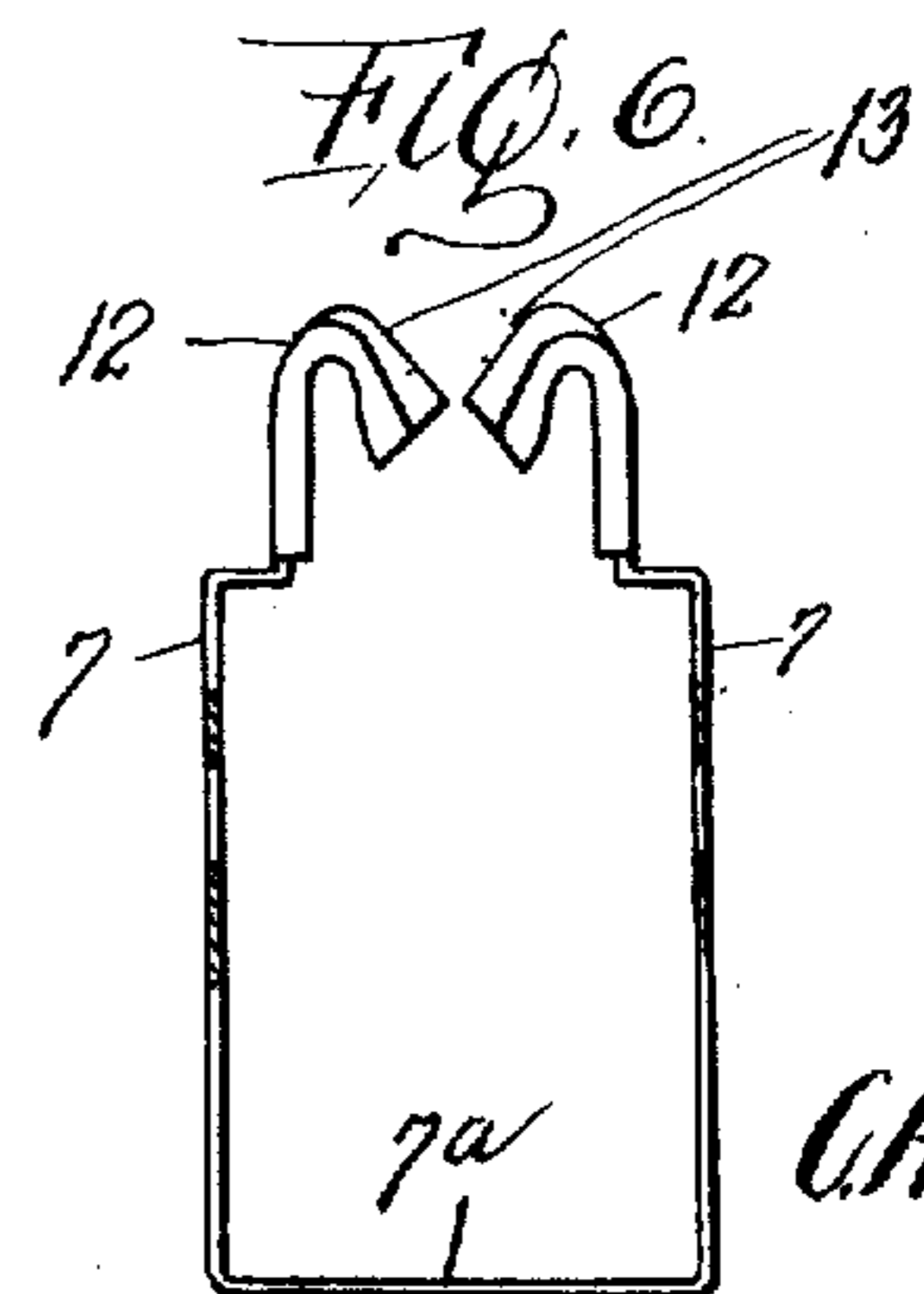
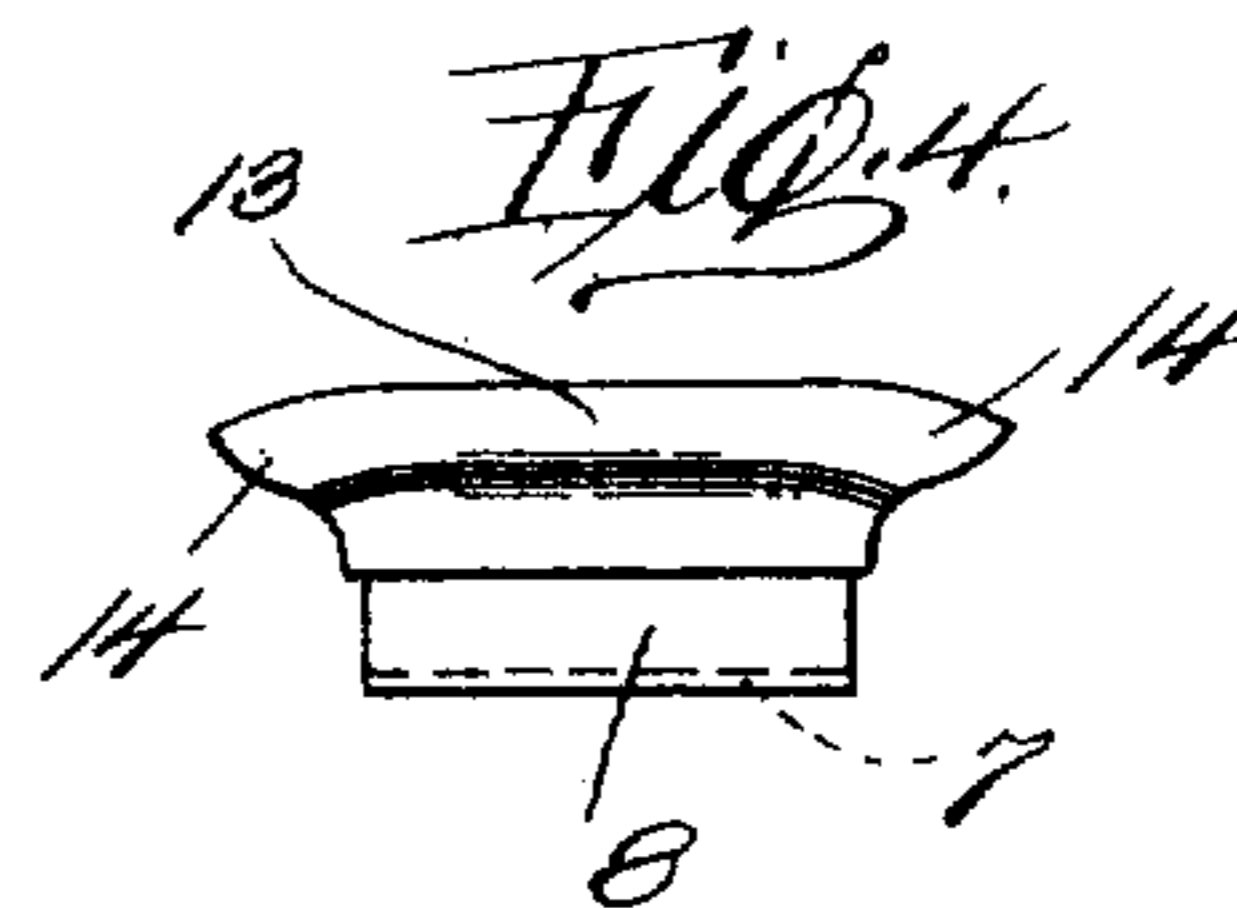
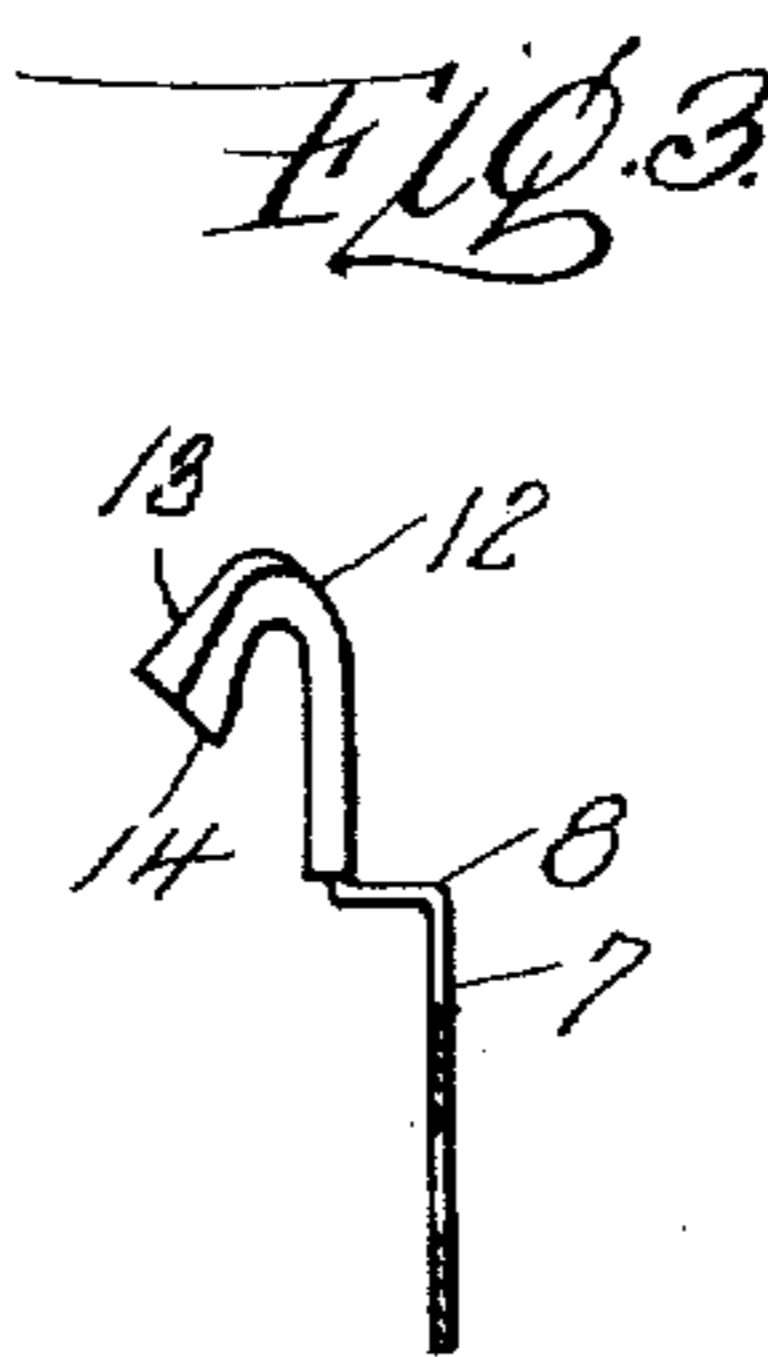
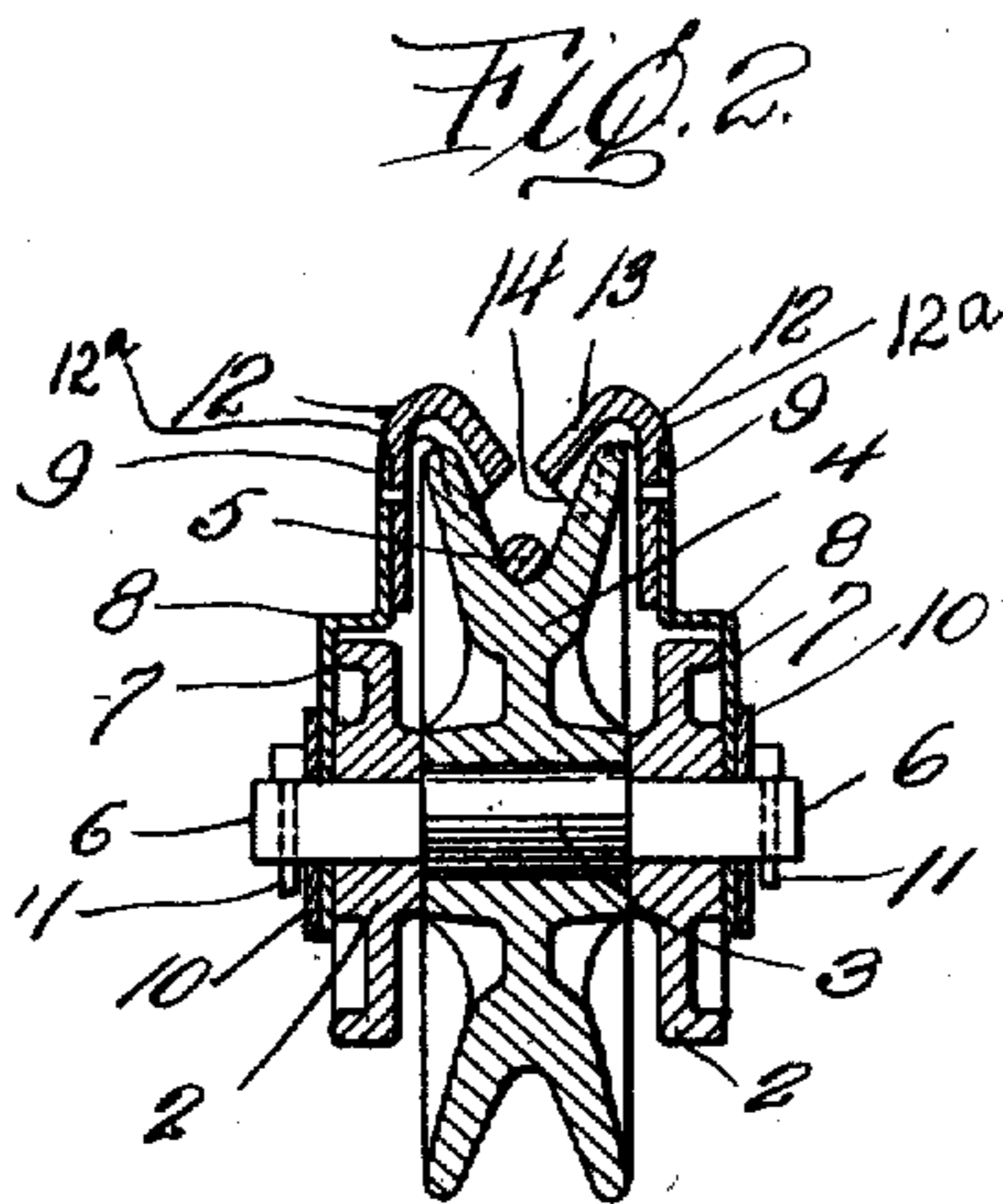
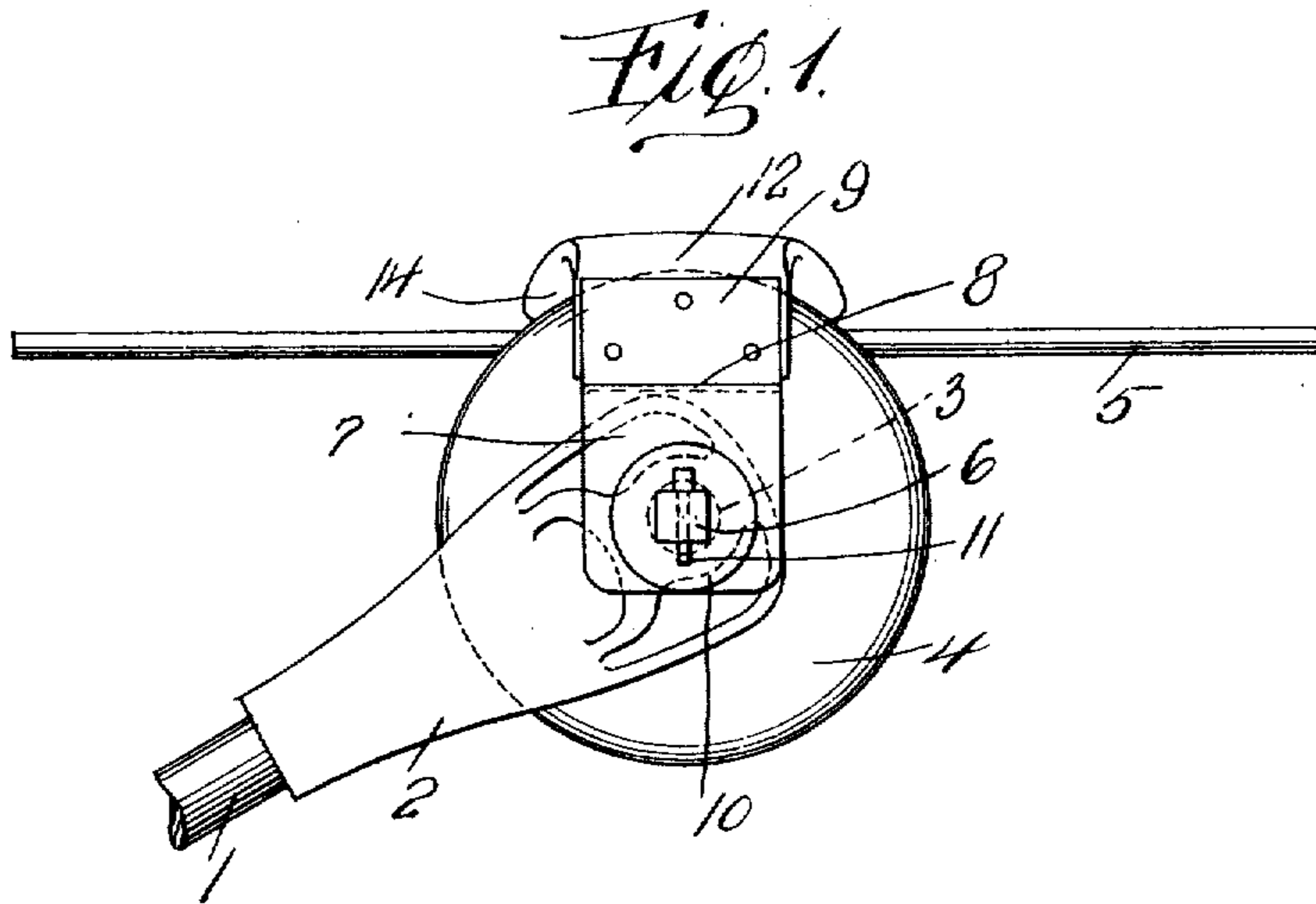


C. A. DEAN.
TROLLEY.
APPLICATION FILED JULY 13, 1908.

917,556.

Patented Apr. 6, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

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TROLLEY.

No. 917,556.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed July 18, 1908. Serial No. 443,184.

To all whom it may concern:

Be it known that I, CHARLES A. DEAN, a citizen of the United States of America, residing at Homestead, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Trolleys, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to attachments for trolleys, and the primary object of my invention is to provide a novel attachment for preventing a trolley wheel from becoming disengaged from the trolley wire, when a
15 trolley car passes around a curve, under a bridge or travels at a considerable rapidity.

Another object of this invention is to provide a trolley attachment that will not interfere with the overhead work of an electric
20 railway.

A still further object of the invention is to provide a simple, durable and inexpensive trolley attachment that can be applied to the present type of trolley harp by simply
25 lengthening or providing a longer journal pin than the pin at present used.

With the above and other objects in view which will more readily appear as the invention is better understood, the same consists in the novel construction, combination
30 and arrangement of parts to be presently described and claimed.

In the drawings:—Figure 1 is an elevation of a trolley equipped with my attachment, Fig 2 is a vertical sectional view of the same, Fig 3 is an edge view of approximately
35 one-half of the attachment, partly broken away and partly in section, Fig. 4 is a view looking down upon the guard as shown in Fig. 3. Fig. 5 is an edge view of a modified form of the attachment, and Fig. 6 is a
40 similar view of still another modified form of attachment.

In the accompanying drawings, 1 designates a trolley pole having a harp 2 of a conventional form. This harp is provided with a transverse journal pin 3 upon which is
45 journaled a trolley wheel 4 adapted to engage a trolley wire 5 or a similar electrical conductor. The journal pin 4 is provided with rectangular protruding ends 6 and
50 mounted upon the ends of said pin are vertical plates 7 having their upper edges bent inwardly, as at 8, and upwardly as at 9, for

a purpose that will presently appear. The
55 plates 7 are retained upon the rectangular ends 6 of the pin 3 by washers 10 and pins 11.

Riveted or otherwise secured to the ends 9 of the plates 7 are retainer elements. Each of these elements consists of a vertically
60 extending body portion 12 shouldered on its outer face near its top as at 12^a to form a seat for the mounting of the body portion upon the top edge of the end 9. Each of
said elements further comprises an inwardly
65 extending and downwardly inclined arm 13 with the terminus thereof beveled as at 14. The beveled terminus of the arms 13 allow of the arms to easily glide by a trolley wire hanger. The plates 7 are made of a resilient
70 material, whereby the retainer elements can be sprung apart when the trolley wheel is to be removed from the trolley wire, the resiliency of said plates being sufficient, however, to retain the retainer elements in prox-
75 imity, and thereby prevent accidental displacement of the trolley wire. In making the plates and the retainer elements separate pieces and securing the same together, I can renew the retainer elements without entirely
80 discarding the entire attachment, as the retainer elements are susceptible to wear and tear by contacting with the trolley wire and its supports.

In Fig. 5 of the drawings, I have illustrated
85 a modification of my invention wherein the plates 7 are located upon the inner side of the trolley harp, while a still further modification is illustrated in Fig. 6 wherein the lower
ends of the plates are connected by a stir-
90 rup 7^a.

It is thought that the operation and utility of my invention will be fully understood from the foregoing description, taken in connection with the drawings, and while I have
95 herein illustrated the preferred embodiments of my invention, the same are susceptible to variations without departing from the spirit of the invention.

Having now described my invention what
100 I claim as new is:—

The combination with a trolley harp, a journal mounted in said harp and having protruding rectangular ends, and a trolley
wheel mounted upon said journal, of resilient
105 plates mounted upon the rectangular ends of said journal and having the upper portions thereof extending in a different plane with

respect to the lower portions, shouldered retainer elements seated upon the top edge of said plates, means for securing the retainer elements to the plates, and said retainer elements further embodying inwardly extending and downwardly inclined arms each having its lower terminus beveled.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES A. DEAN.

Witnesses:

HORACE W. DEAN,
MAX H. SROLOVITZ.