

No. 685,050.

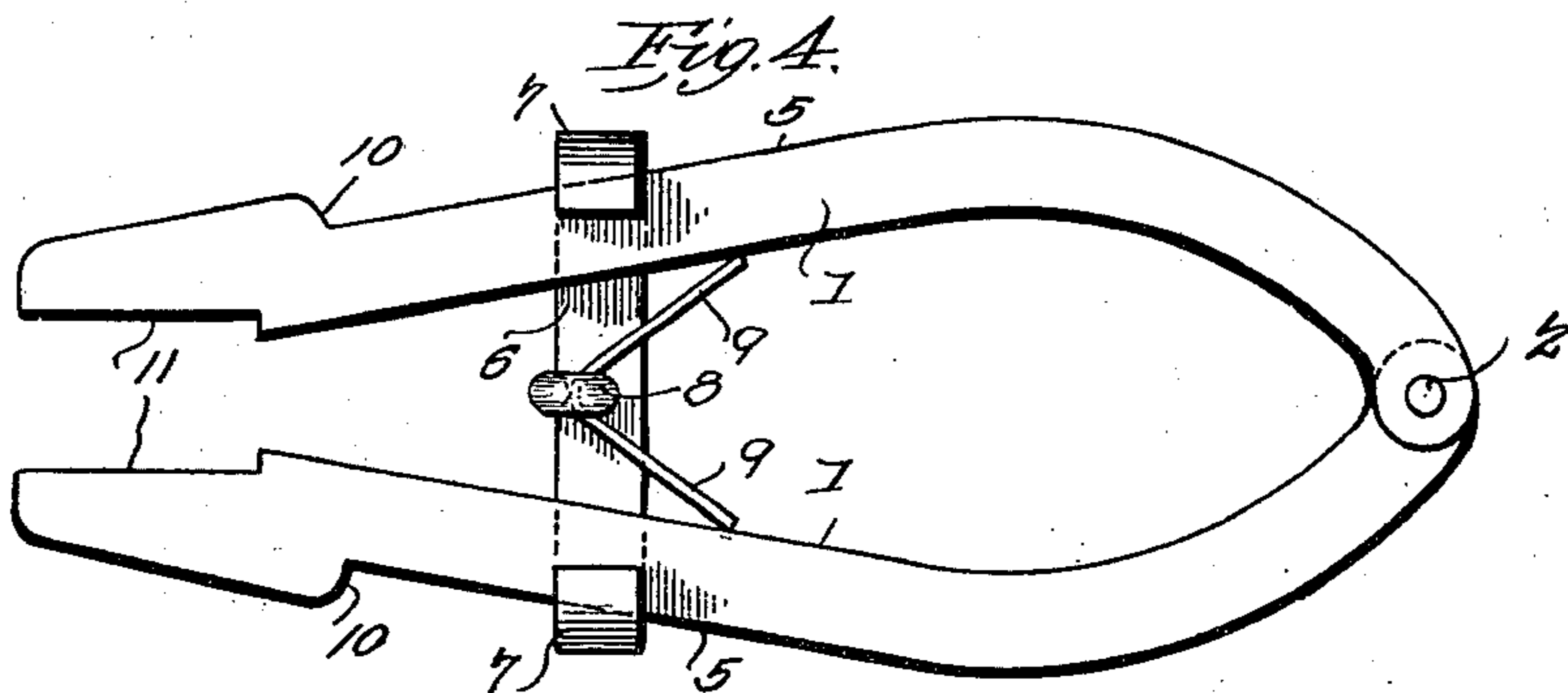
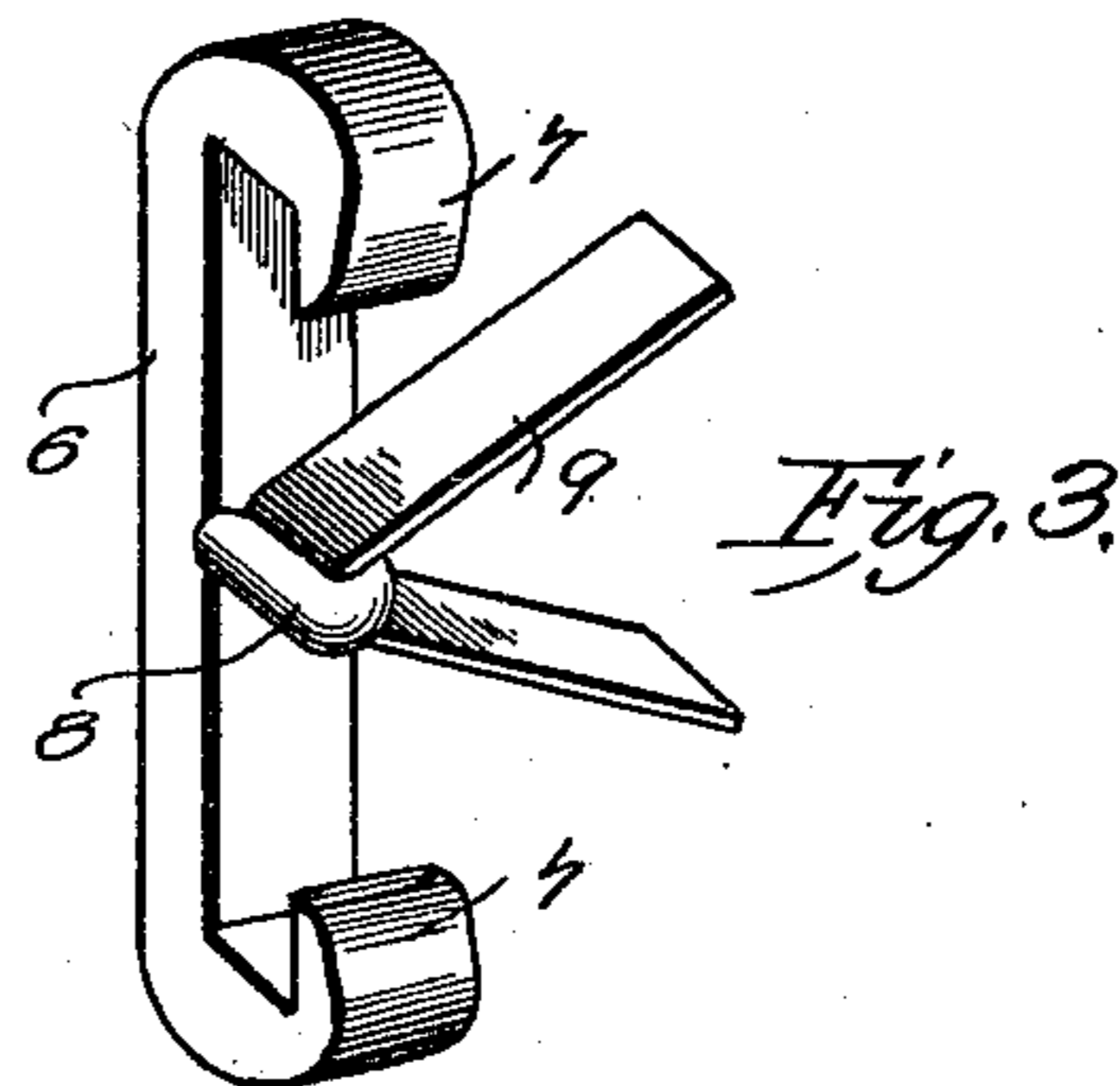
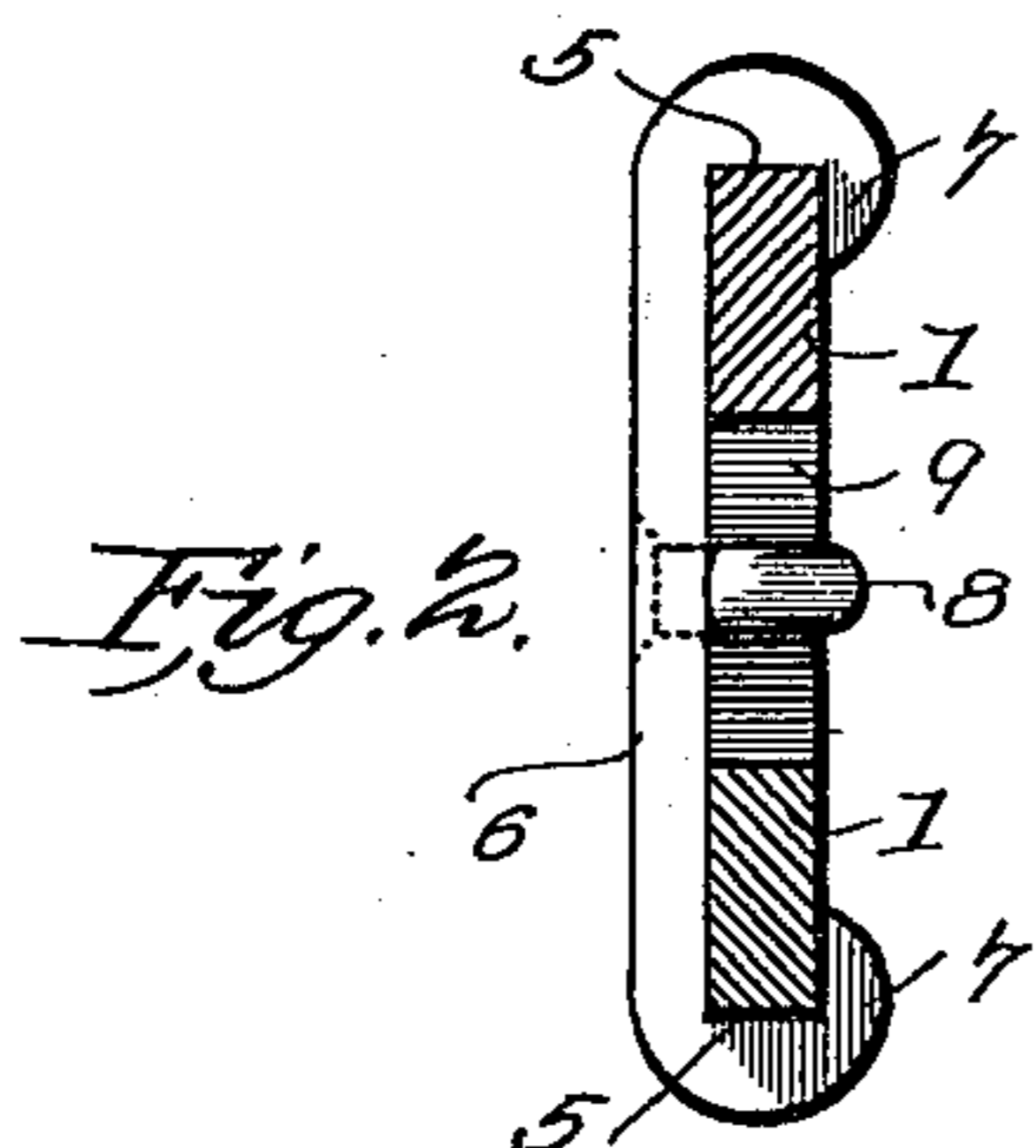
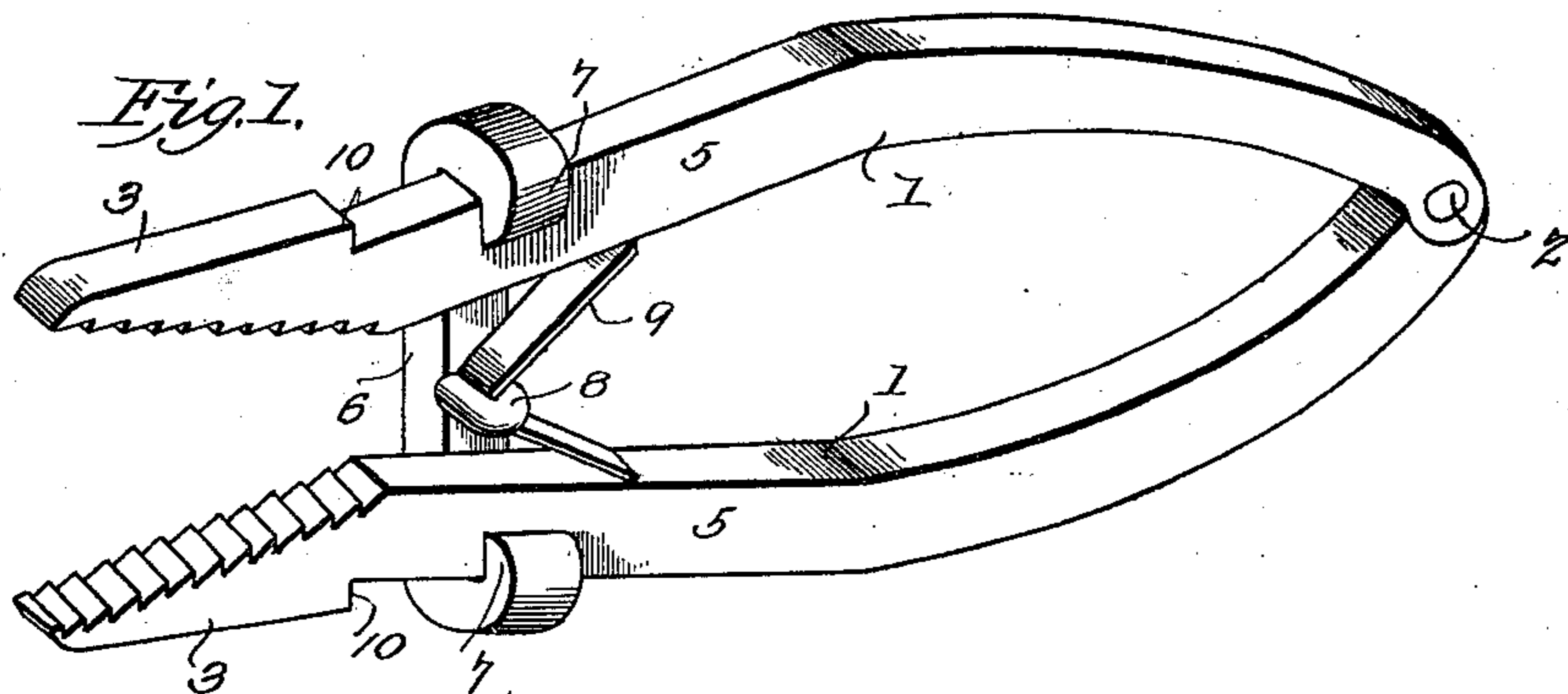
Patented Oct. 22, 1901.

E. E. KETTELSSEN.

WRENCH.

(Application filed May 18, 1901.)

(No Model.)



Witnesses  
*James F. Brown.*  
*H. J. Riley*

*E. E. Kettelsen,* Inventor.  
by *C. A. Snow & Co.*  
Attorneys

# UNITED STATES PATENT OFFICE.

EVEN E. KETTELSEN, OF ALBANY, WISCONSIN.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 685,050, dated October 22, 1901.

Application filed May 18, 1901. Serial No. 60,932. (No model.)

*To all whom it may concern:*

Be it known that I, EVEN E. KETTELSEN, a citizen of the United States, residing at Albany, in the county of Green and State of Wisconsin, have invented a new and useful Wrench, of which the following is a specification.

The invention relates to improvements in wrenches.

10 The object of the present invention is to improve the construction of wrenches and to provide a simple, inexpensive, and efficient one designed to be provided with straight smooth jaws for engaging nuts and similar  
15 objects and with toothed angularly-disposed jaws to form an alligator-wrench for engaging pipes, rods, and the like and adapted to be readily adjusted to vary the distance between the jaws to arrange the wrench for op-  
20 erating on objects of different sizes.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed  
25 out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of an alligator-wrench constructed in accordance with this invention. Fig. 2 is a transverse sectional view. Fig. 3 is a detail  
30 perspective view of the slide or yoke. Fig. 4 is an elevation of a wrench, showing another form of jaw.

Like numerals of reference designate corresponding parts in all the figures of the draw-  
35 ings.

1 1 designate similar bars or members pivoted together by a rivet 2 or other suitable fastening device and provided at their outer ends with jaws 3, having inner engaging faces  
40 arranged at an angle to each other and provided with oppositely-shouldered teeth adapted to engage a pipe or rod to resist rotation of the same in either direction. The teeth will enable the wrench to engage a pipe or rod when it  
45 is oscillated in either direction, and they are preferably set at an angle. The sides or bars 1 are outwardly bowed, being provided with outwardly-converging portions 5, receiving a slide or yoke 6, which is adapted to be moved in-  
50 ward and outward to close the jaws and to permit them to expand, whereby the wrench

is adapted to receive objects of different sizes. The slide or yoke, which is open at one side, is provided at its ends with approximately L-shaped arms 7, and it has a central eye 8, re- 55  
ceiving a substantially V-shaped spring 9, which is interposed between the sides or bars and which is adapted to spread the same as the slide or yoke is moved outward on them toward the jaws. The jaws are enlarged to  
60 form shoulders 10, which limit the outward movement of the slide or yoke, and the L-shaped arms of the latter engage the outer side edges of the bars 1. The inner and outer  
65 portions of the bars are arranged at such an angle that the inner portions of the jaws will be brought together when the slide is moved to the angles formed by the said inner and outer portions. The eye 8 is preferably  
70 formed by a pin which is bent upon itself to form two sides or legs and which has one side or leg extended beyond the other to form a shank, the shorter side or leg abutting against the inner face of the yoke or slide. The apex  
75 of the spring is arranged in the eye, which has a narrow opening. The sides of the spring extend toward the inner ends of the sides or bars 1, and they are adapted to slide freely along the inner edges of the same.

In Fig. 4 of the drawings the bars or mem- 80  
bers are constructed the same as those shown in Fig. 1, with the exception that the jaws are provided with smooth faces 11, which are adapted to engage a nut or similar object.

It will be seen that the wrench is exceed- 85  
ingly simple and inexpensive in construction, that it possesses great strength and durability, and that it is easily operated to adjust it to open and close the jaws.

What I claim is— 90

1. A wrench comprising a pair of bars or members pivoted together at their inner ends and provided with converging outer portions having jaws, a slide or yoke receiving the outer portions of the bars or members and 95  
adapted to be moved longitudinally thereof to adjust the jaws, and a spring carried by the yoke or slide and adapted to spread the jaws, substantially as described.

2. A wrench comprising the bars or mem- 100  
bers having converging outer portions and provided with jaws, a slide or yoke provided

5 with approximately L-shaped arms receiving the converging portions of the bars or members, said slide or yoke being provided at its center with an eye, and a V-shaped spring supported by the eye and interposed between the bars or members, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EVEN E. KETTELSEN.

Witnesses:

C. H. FRANCIS,

V. S. KIDD.