

No. 685,389.

Patented Oct. 29, 1901.

J. B. TUPPER.
AUTOMATIC WRENCH.

(Application filed Apr. 29, 1901.)

(No Model.)

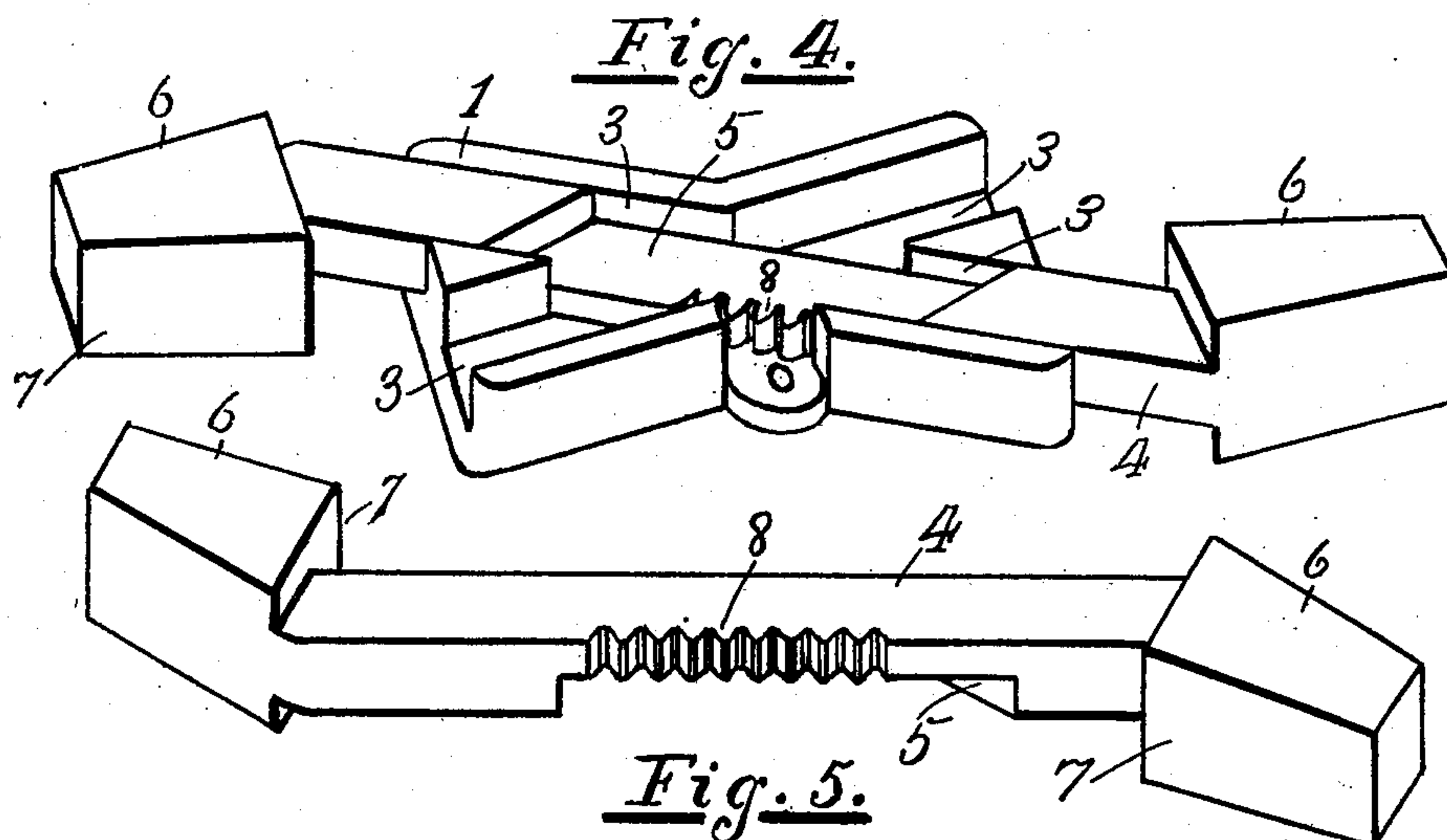
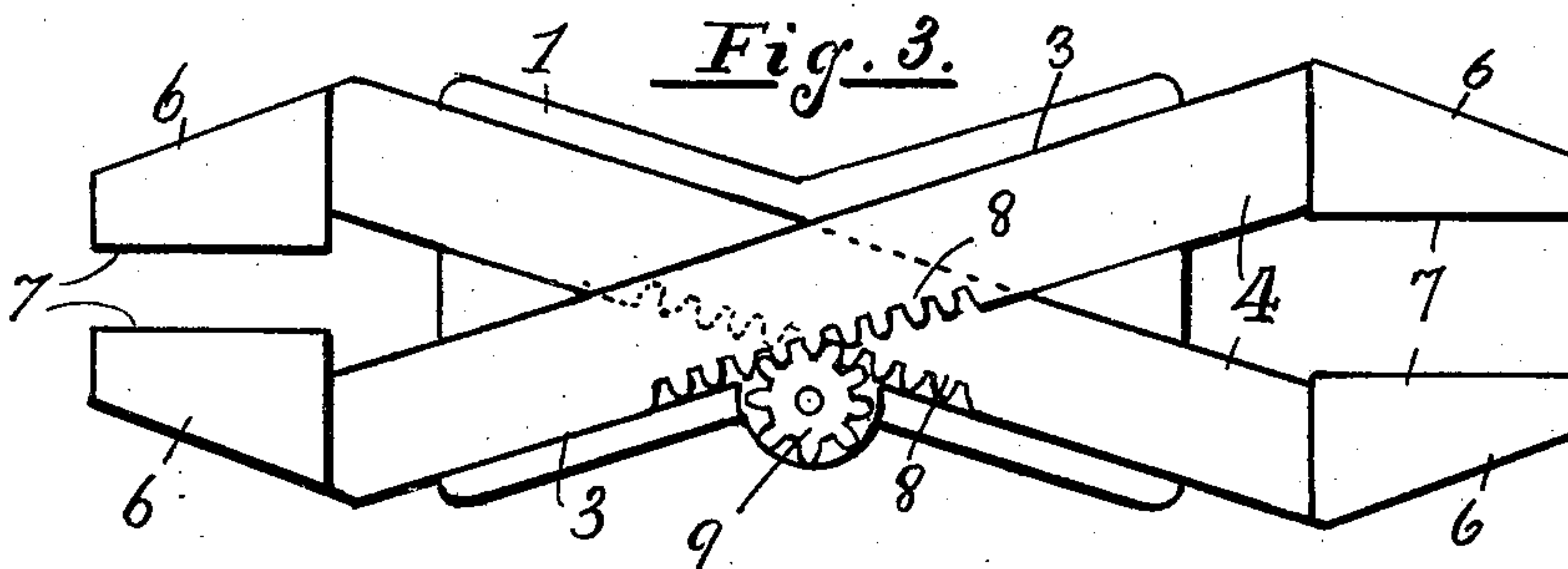
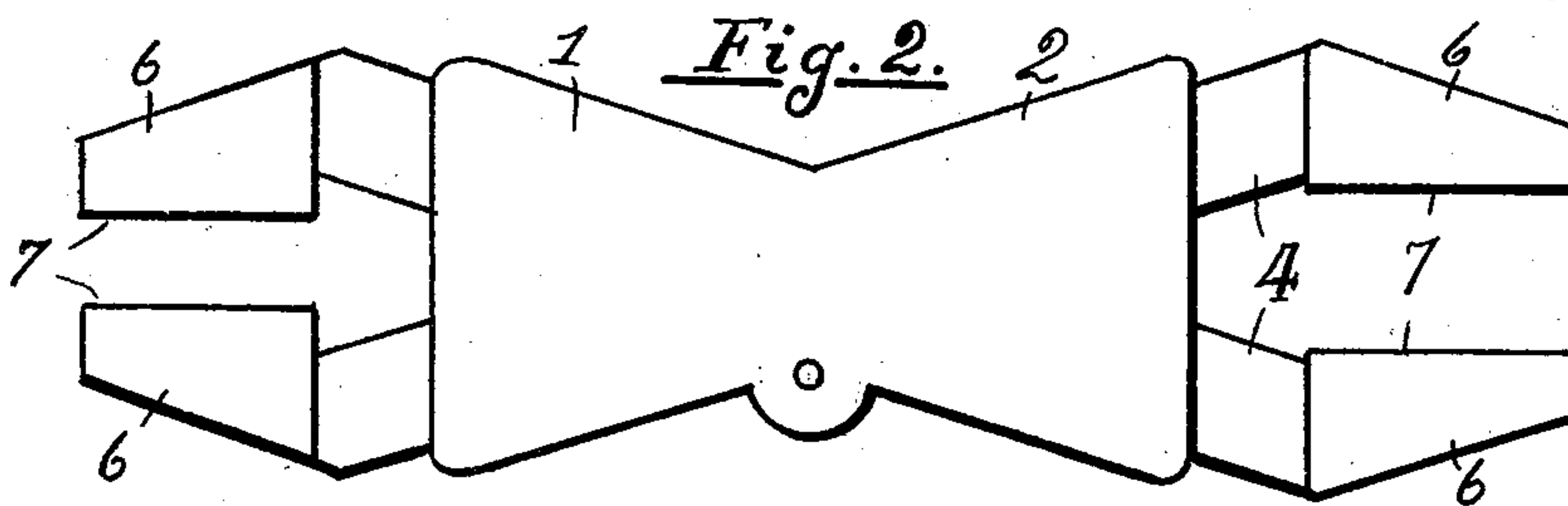
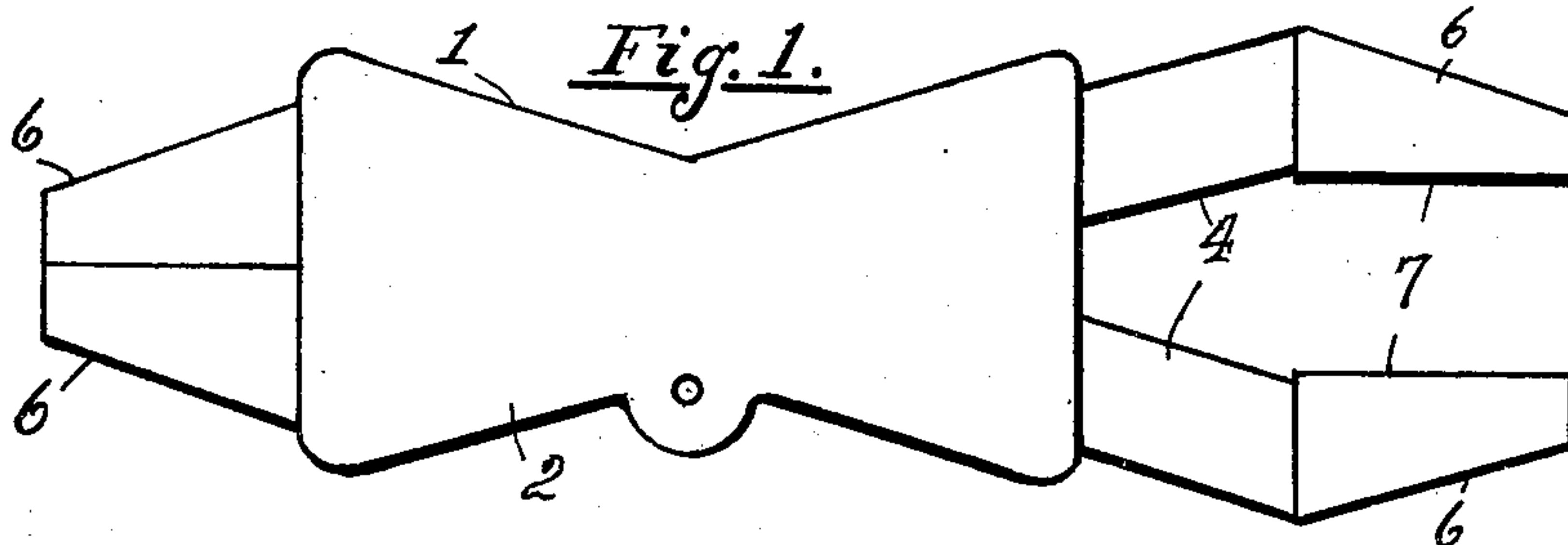


Fig. 5.

WITNESSES:

H. Lockwood Merine.
May T. Begley.

INVENTOR.

BY *John B. Tupper*
Francis M. Wright
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN B. TUPPER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO B. B. HERR, OF SAN FRANCISCO, CALIFORNIA.

AUTOMATIC WRENCH.

SPECIFICATION forming part of Letters Patent No. 685,389, dated October 29, 1901.

Application filed April 29, 1901. Serial No. 58,057. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. TUPPER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Automatic Wrenches, of which the following is a specification.

My invention relates to improvements in wrenches, the object of my invention being to provide a wrench of cheap and simple construction which will fit nuts of varying sizes and which can be automatically adjusted to the size of the nut in the operation of grasping the same.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of the wrench, showing one pair of jaws closed. Fig. 2 is a similar view showing both pairs open. Fig. 3 is a plan view with the cover of the case removed. Fig. 4 is a perspective view showing the same, the cover, the upper jaw-carrier, and the gear-wheel being removed. Fig. 5 is a similar view of the upper jaw-carrier.

Referring to the drawings, 1 represents the case or frame for the wrench closed by a removable cover 2. Said case is so configured as to provide two slideways or guides 3, crossing each other at a sharp angle, as shown. In said slideways 3 slide the upper and lower jaw-carriers 4, each cut away in thickness in the central portion where they cross each other, as shown at 5. Each carrier has formed thereon two jaws 6, the jaws of the two carriers at each end of the wrench having oppositely-facing parallel grasping-surfaces 7. A movement of the carriers in the slideways in one direction will open the jaws at one end and close those at the other end, and vice versa in the other direction.

In order to insure a simultaneous and equal movement of the two carriers, said carriers have formed on their edges the racks 8, meshing simultaneously with a small gear-wheel 9, journaled in the case or cover. A longitudinal movement of one carrier in either direction will rotate the gear-wheel, and thereby cause an equal movement of the other carrier in the same direction, thus spreading or contracting the two jaws equally. The gear-wheel also insures that the two jaw-carriers shall remain stationary while in operation, because any movement of one carrier could not take place without a similar movement of the other carrier.

I have herein shown the wrench as having jaws at both ends, the capacity of said jaws being different to accommodate different sizes of nuts. However, the wrench may be made with jaws at only one end without departing from the spirit of my invention.

I claim—

1. A wrench provided with two jaw-carriers having jaws at their ends and sliding in guides arranged at an angle with each other, whereby a longitudinal movement of the carriers spreads or contracts the jaws, racks on said carriers, and a gear-wheel engaging both racks, substantially as described.

2. A wrench provided with two jaw-carriers sliding in guides arranged at an angle with each other and having jaws at both their ends, racks on said carriers and a gear-wheel engaging both racks, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

J. B. TUPPER.

Witnesses:

F. M. WRIGHT,
M. T. BEGLEY.