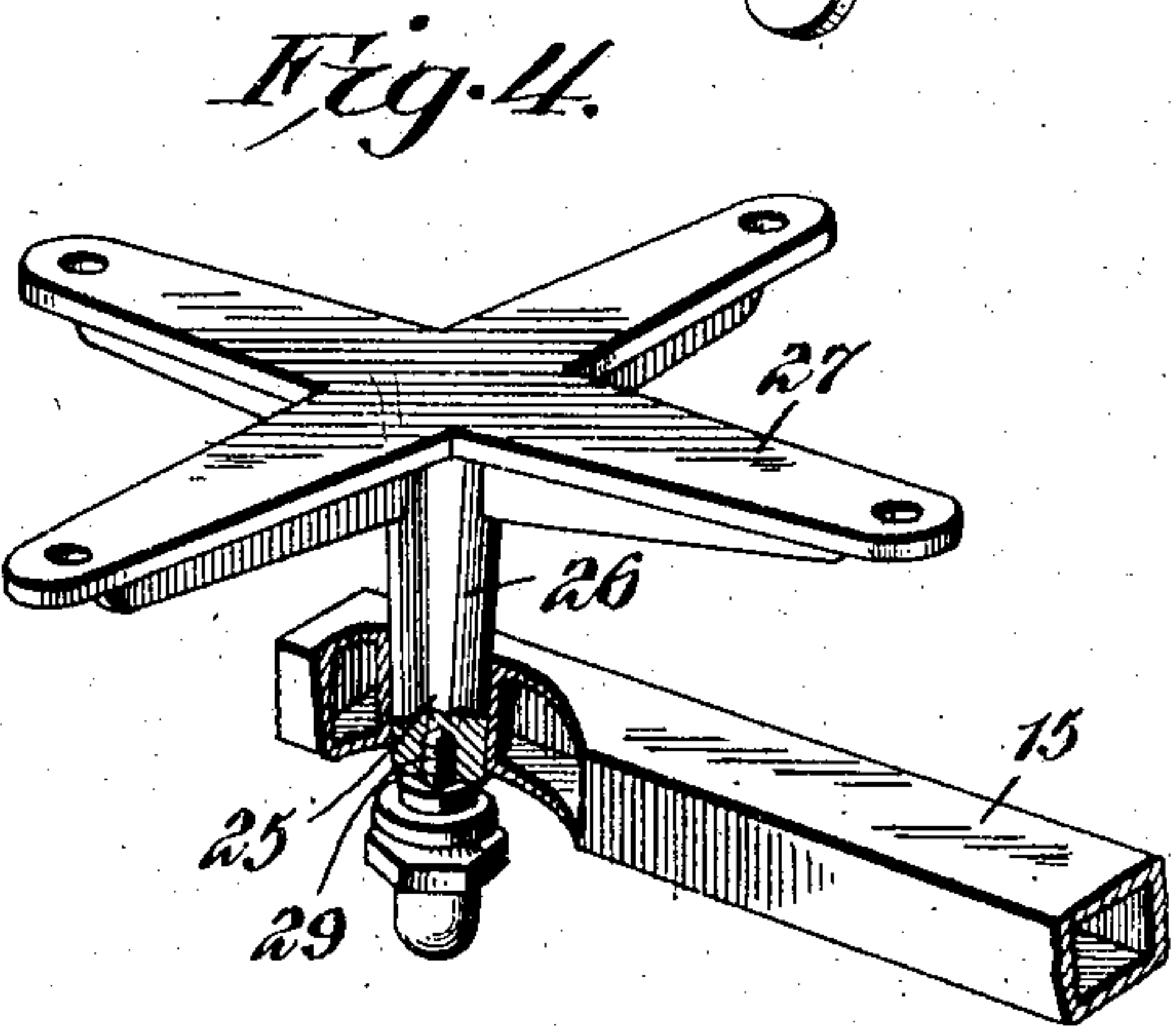
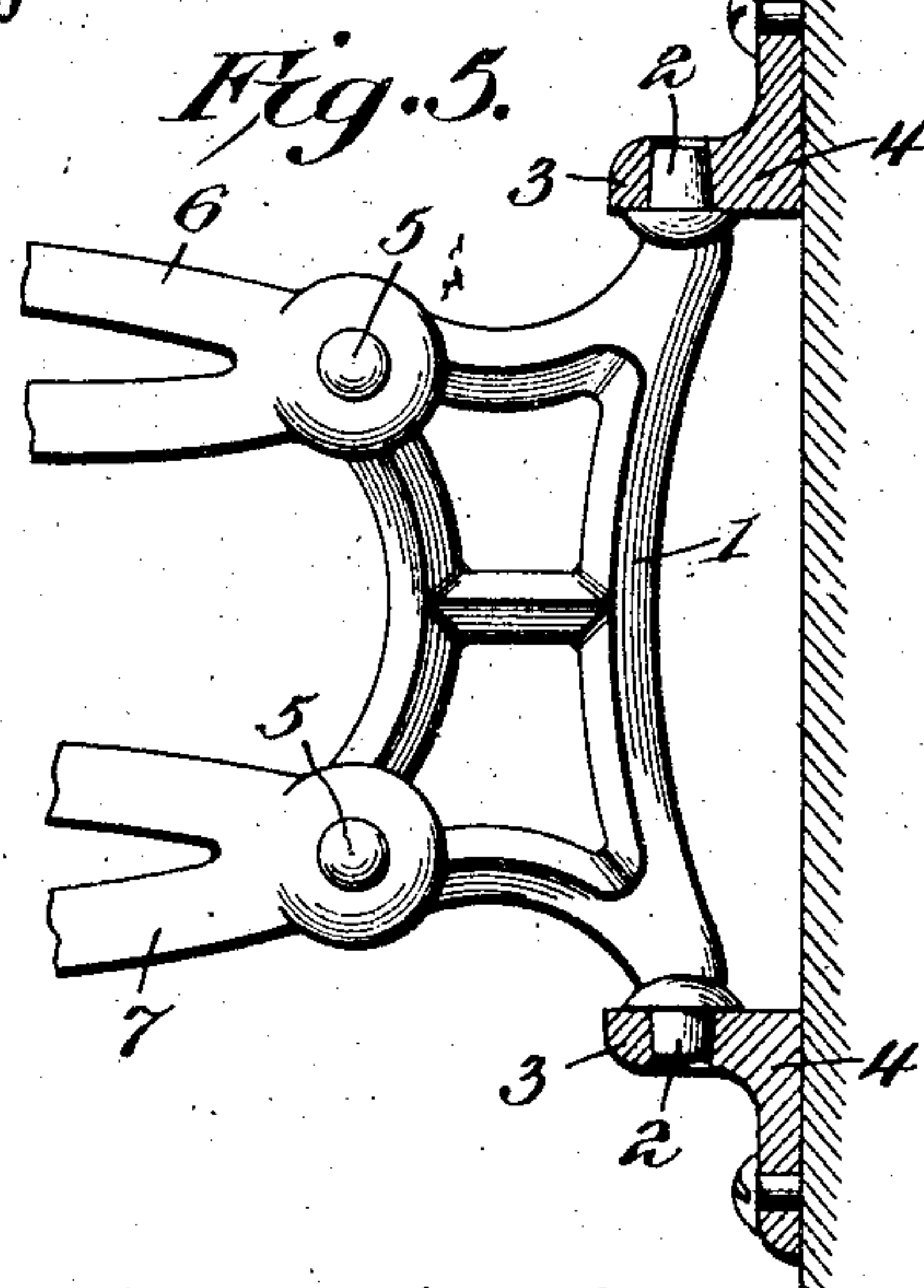
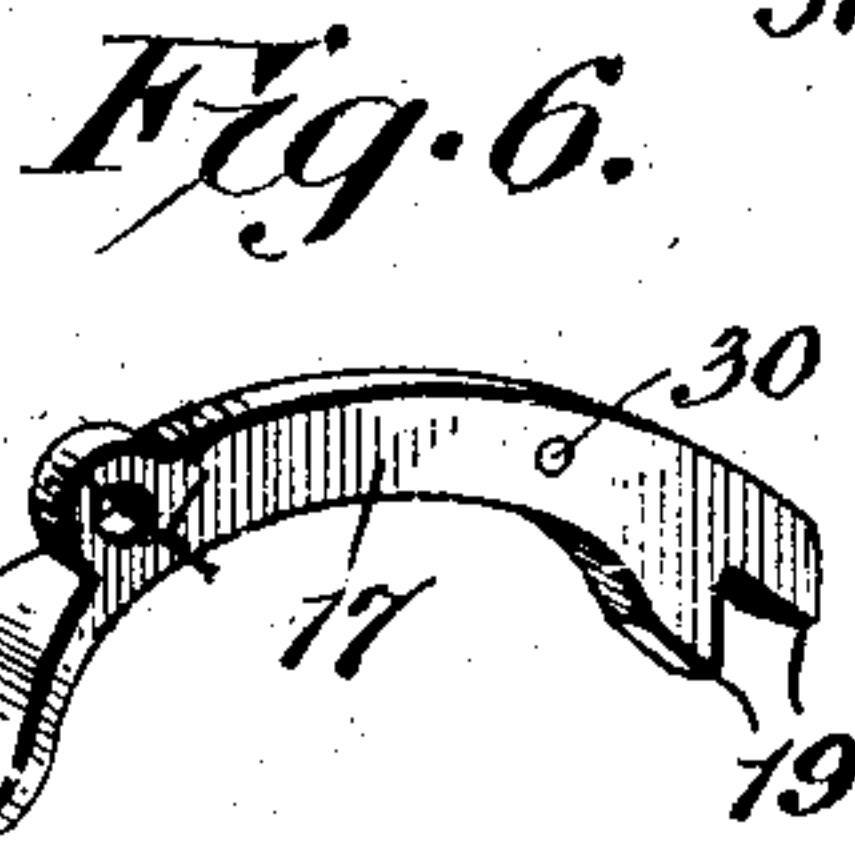
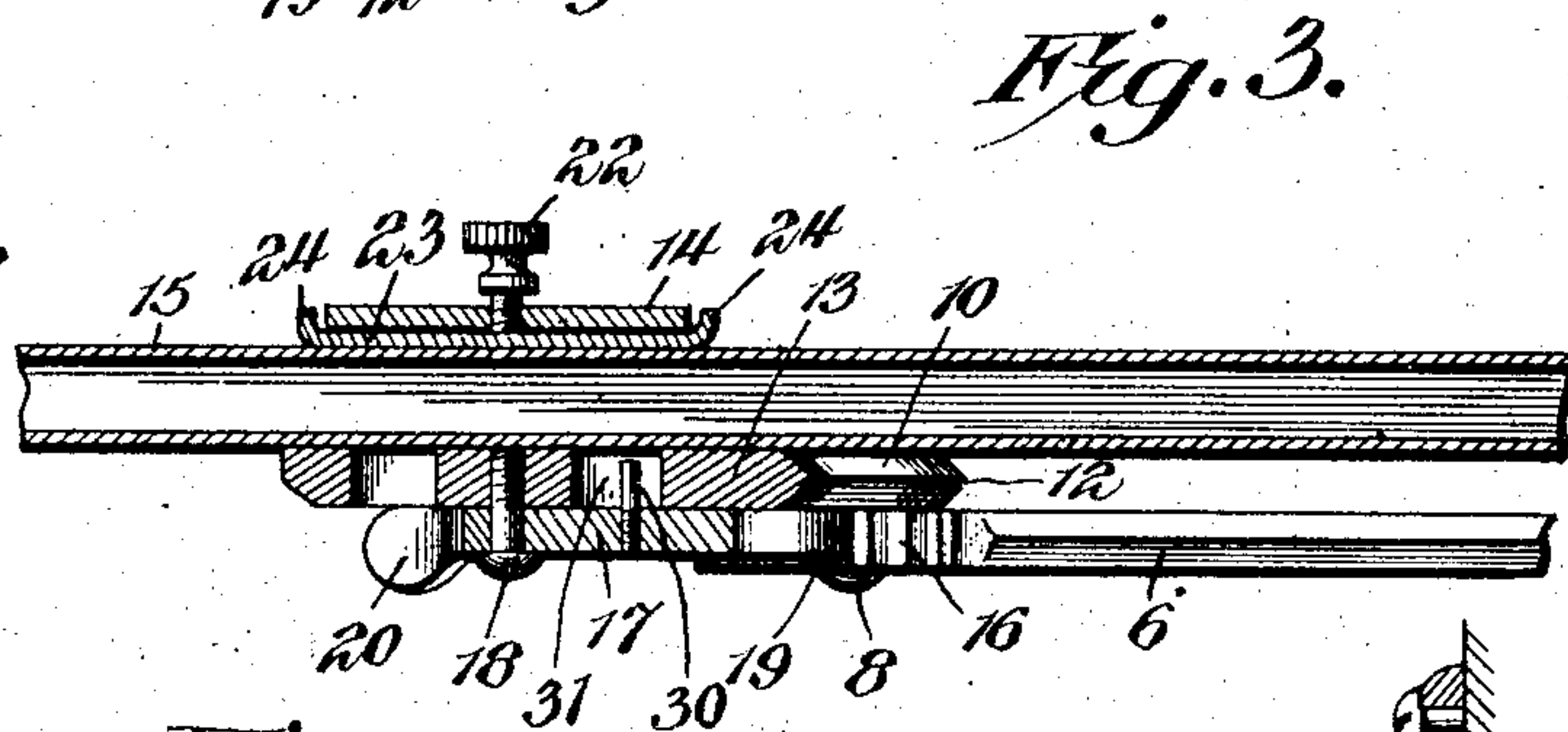
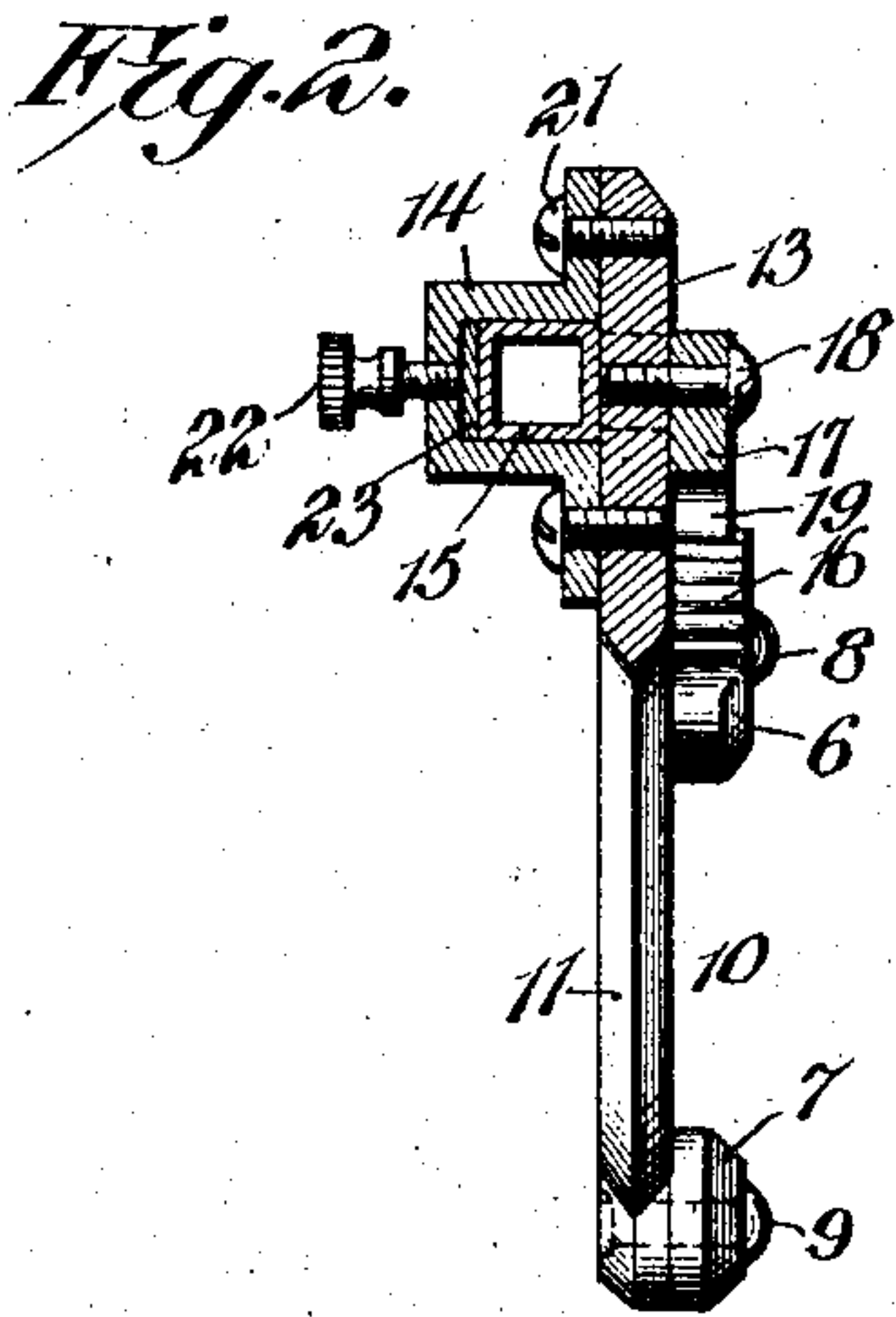
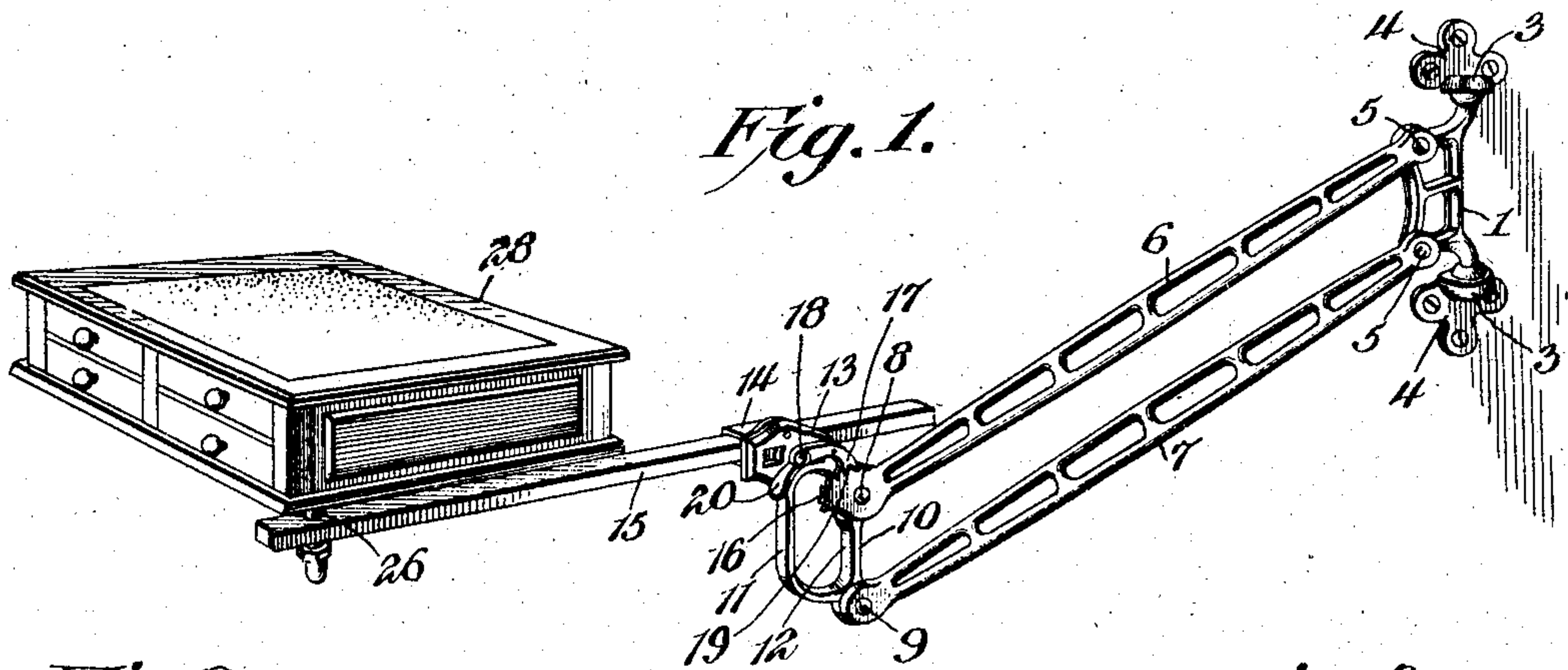


No. 790,207.

PATENTED MAY.16, 1905.

G. HOLTZ.  
DENTAL BRACKET.  
APPLICATION FILED AUG. 27, 1904.



Gustav Holtz, Inventor,

By

*E. J. Siggers*

Attorney

Witnesses  
*Howard W. Orr*  
*J. F. Riley*



# UNITED STATES PATENT OFFICE.

GUSTAV HOLTZ, OF GOULDSBORO, PENNSYLVANIA.

## DENTAL BRACKET.

SPECIFICATION forming part of Letters Patent No. 790,207, dated May 16, 1905.

Application filed August 27, 1904. Serial No. 222,469.

*To all whom it may concern:*

Be it known that I, GUSTAV HOLTZ, a citizen of the United States, residing at Gouldsboro, in the county of Wayne and State of Pennsylvania, have invented a new and useful Dental Bracket, of which the following is a specification.

The invention relates to improvements in dental brackets.

The object of the present invention is to improve the construction of dental brackets and to provide a simple, inexpensive, and efficient one of great strength and durability capable of ready adjustment to swing it vertically and horizontally and to vary its length for arranging the table at the proper elevation and in the proper position.

A further object of the invention is to improve the construction of the locking mechanism for holding the bracket in its adjusted position and to arrange both the gravity-pawl and the clamping means for holding the sliding bar adjacent to the handpiece, whereby either locking device may be adjusted or manipulated without releasing the hold on the handpiece.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claim may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a dental bracket constructed in accordance with this invention. Fig. 2 is a transverse sectional view of the central portion of the bracket. Fig. 3 is a horizontal sectional view of the same. Fig. 4 is a sectional view illustrating the manner of mounting the table. Fig. 5 is a detail view illustrating the manner of pivotally mounting the inner section. Fig. 6 is a detail view of the gravity-pawl.

Like numerals of reference designate corre-

sponding parts in all the figures of the drawings.

1 designates an inner horizontally-swinging pivotally-mounted head or bracket consisting of a vertical frame provided at its top and bottom with cone-shaped pivots 2 and extending outward therefrom. The cone-shaped pivots fit in sockets 3 of attachment-plates 4, which are perforated for the reception of screws or other suitable fastening devices for securing the plates to a wall or other support. The cone-shaped pivots fit in conical openings of the attachment-plates, and this construction will enable the wear of the parts to be readily taken up. The inner horizontally-swinging frame is pivoted by horizontal rivets 5 or other suitable fastening devices to the inner or rear ends of a pair of parallel connecting-bars 6 and 7, arranged one above the other and pivoted at their outer ends by rivets 8 and 9 to an outer frame or section 10. The outer frame or section 10 is composed of front and rear portions 11 and 12 and top and bottom connecting portions. The front portion forms a grip or handle for enabling the bracket to be readily lifted to remove the weight from the locking mechanism, and its lower portion curves downward and rearward and merges into the bottom connecting portion. The top connecting portion 13 is enlarged and extended outward and has secured to it a box or casing 14, which forms a guide for a sliding bar 15. The top and bottom connecting-bars are preferably constructed of openwork, as shown, and the upper one is provided at its front or outer end with an approximately semicircular ratchet consisting of a curved series of teeth 16, which is arranged concentric with the upper pivot or rivet 8. The curved ratchet is engaged by a gravity-pawl 17, pivoted by a screw 18 or other suitable fastening device to the top of the outer frame or section 10 and provided at its engaging end with a pair of teeth 19 for engaging the ratchet of the upper connecting-bar. The engaging portion of the gravity-pawl is located at the center of the curved ratchet when the parallel connecting-bars are in a horizontal position, and the bracket is capable of an equal adjustment above and below such position. The



gravity-pawl is provided with a depending arm 20, which extends downward to the upper end of the front or handle portion of the frame or section 10, and it is arranged in convenient position to be engaged by the thumb of the operator while grasping the front of the frame 10. When the depending thumb-receiving portion of the gravity-pawl is pressed rearward by the thumb of the operator, the rear end or engaging portion will be lifted out of engagement with the curved ratchet, and the bracket will be free to swing upward and downward. As soon as the gravity-pawl is released it will drop into engagement with the ratchet.

The box or casing 14 is provided with upper and lower flanges, which are secured by screws 21 or other suitable fastening devices to the top portion of the outer frame or section. The slidable bar 15, which passes through the box or casing, is rectangular in cross-section, and it is held at any desired adjustment by a clamping-screw 22. The clamping-screw 22 is mounted on the box or casing in a threaded perforation thereof, a plate 23 being preferably interposed between the clamping-screw and the slidable bar. The plate, which is engaged by the clamping-screw, extends longitudinally of the box or casing, and its ends are bent outward to form flanges 24 for engaging the front and rear edges of the box or casing. The slidable bar is provided at its outer end with a tapered or conical opening in which is arranged a conical portion 25 of a stem or shank 26 of a spider 27, upon which is mounted a table 28. The lower end of the shank or stem of the spider is provided with a threaded perforation to receive a screw 29, having an enlarged head for engaging the shank and for preventing the same from being withdrawn from the opening of the slidable bar. The arms of the spider or rotary support for the table are perforated for the reception of suitable fastening devices for securing the table to them; but any other means may be employed for mounting the table on the rotary

support. The dental bracket will permit the table to be rotated, to be swung horizontally, and to be raised and lowered, and the said table is firmly supported at the proper elevation by the locking mechanism, which is readily operable to change the position of the table.

The gravity-pawl is provided with a projecting pin 30, extending from its inner side and arranged in an opening 31 of the top portion 13 of the outer frame or section, as clearly illustrated in Fig. 3 of the drawings. The pin is preferably threaded and has its threaded portion arranged in a threaded perforation of the gravity-pawl.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a device of the class described, the combination of an outer frame or section having a grip or handle portion and provided at one side with a box or casing located above the grip or handle portion, upper and lower parallel connecting-bars pivoted to the frame or section, the upper connecting-bar being provided with a curved ratchet arranged concentric with the pivot, a gravity-pawl mounted on the upper portion of the frame or section and arranged to engage the said ratchet and provided with a depending thumb-piece located adjacent to the upper portion of the grip or handle of the frame, a slidable bar operating in the box or casing and adapted to support a table, and means located at the side of the frame or section opposite that at which the pawl is arranged for holding the slidable bar in its adjustment, 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.

GUSTAV HOLTZ.

Witnesses:

G. G. SMITH,  
M. E. SMITH.