

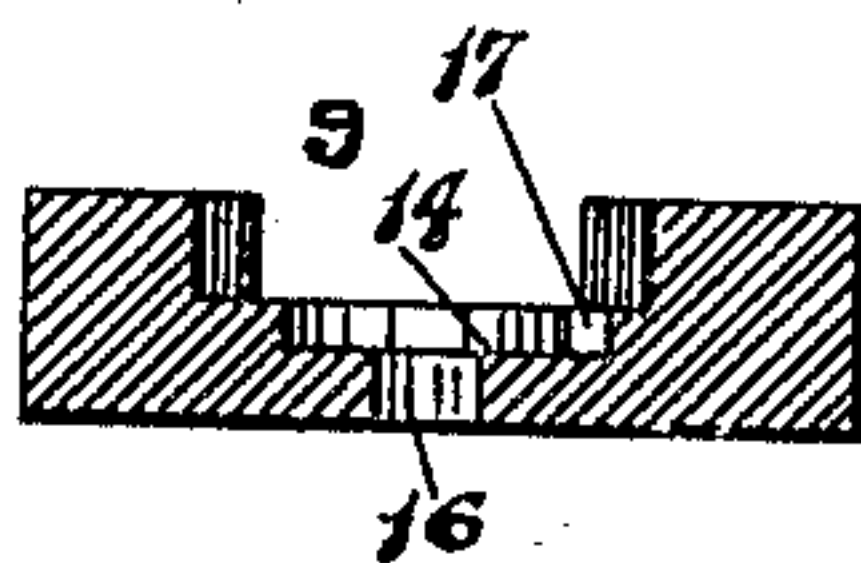
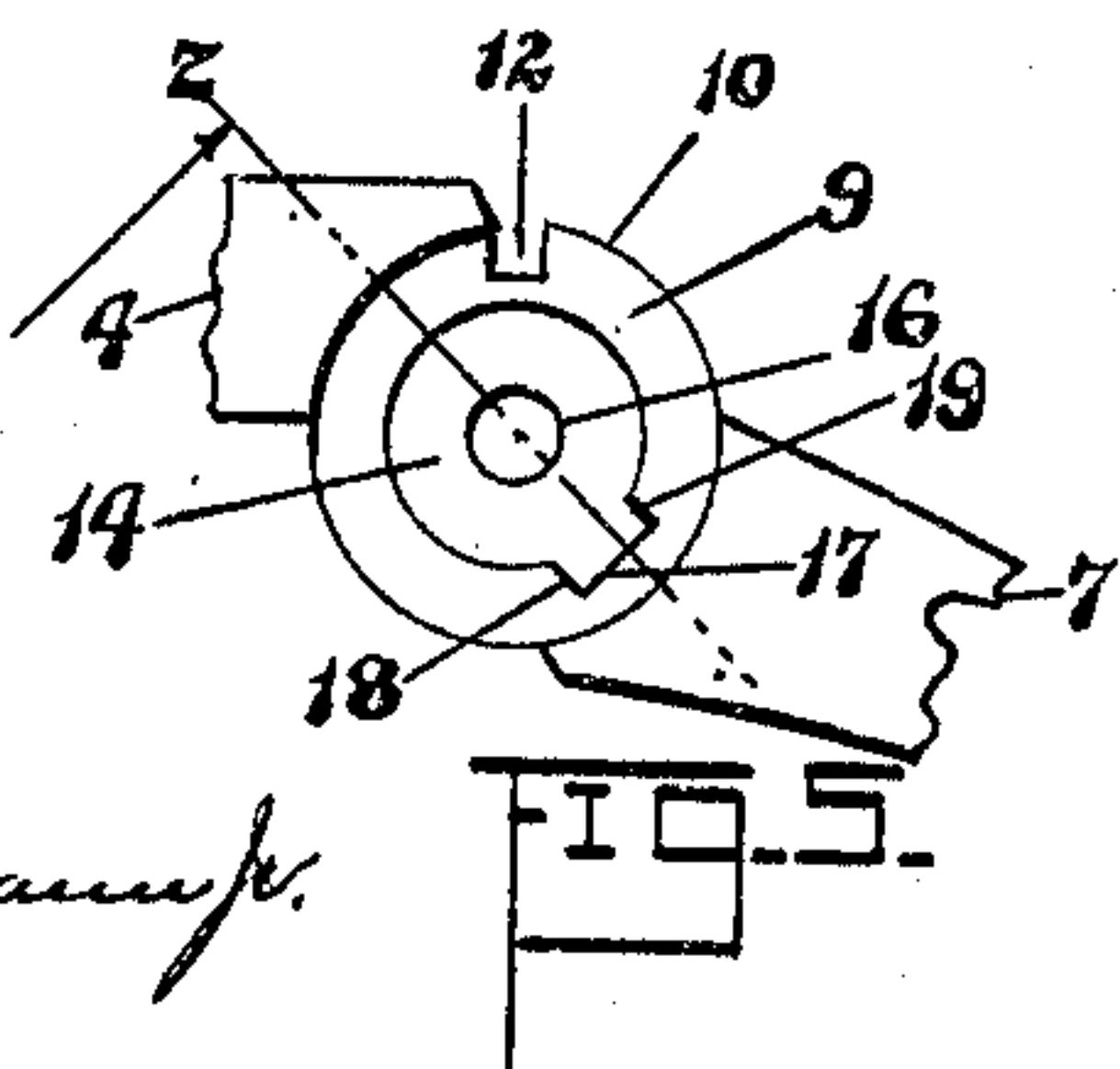
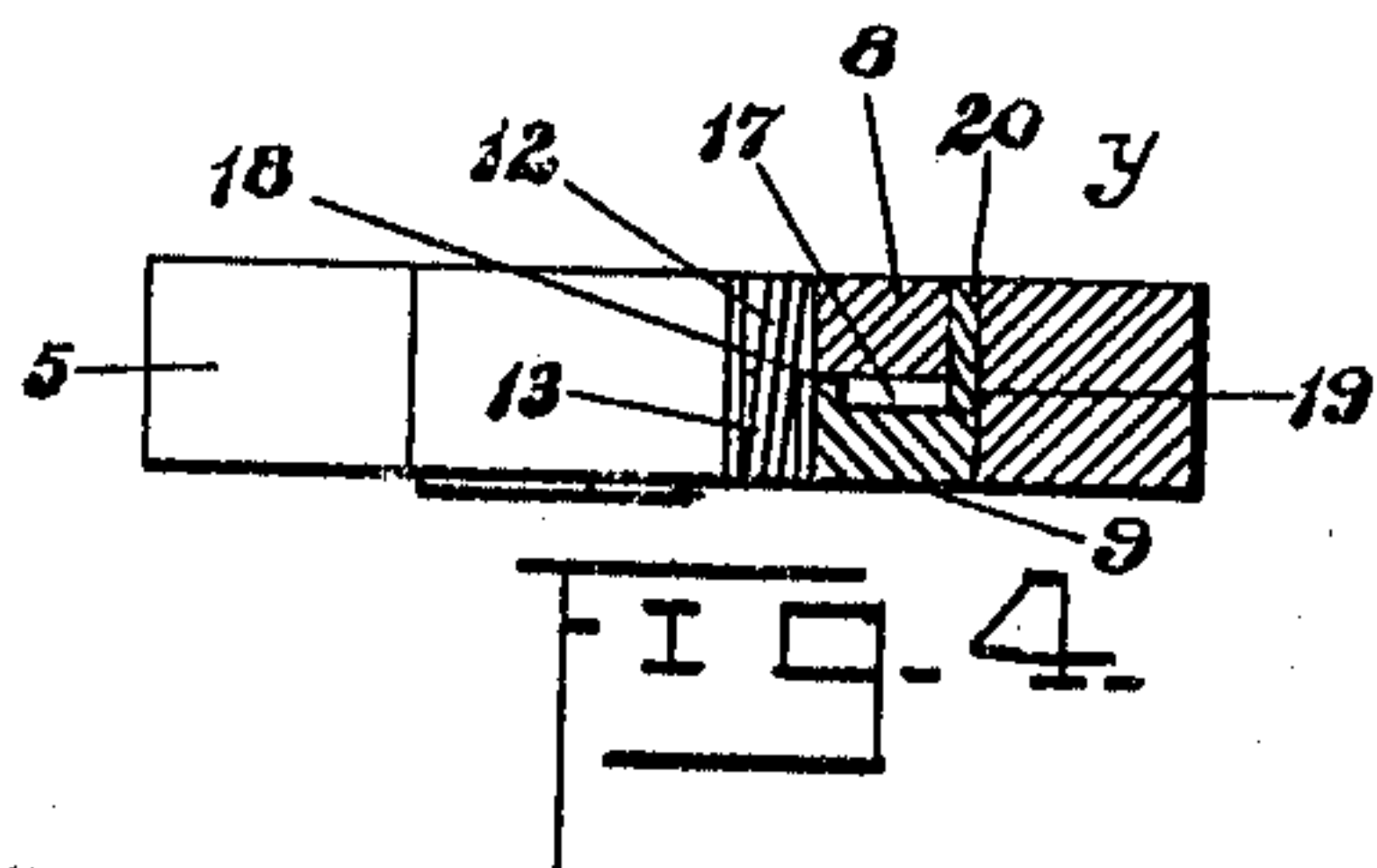
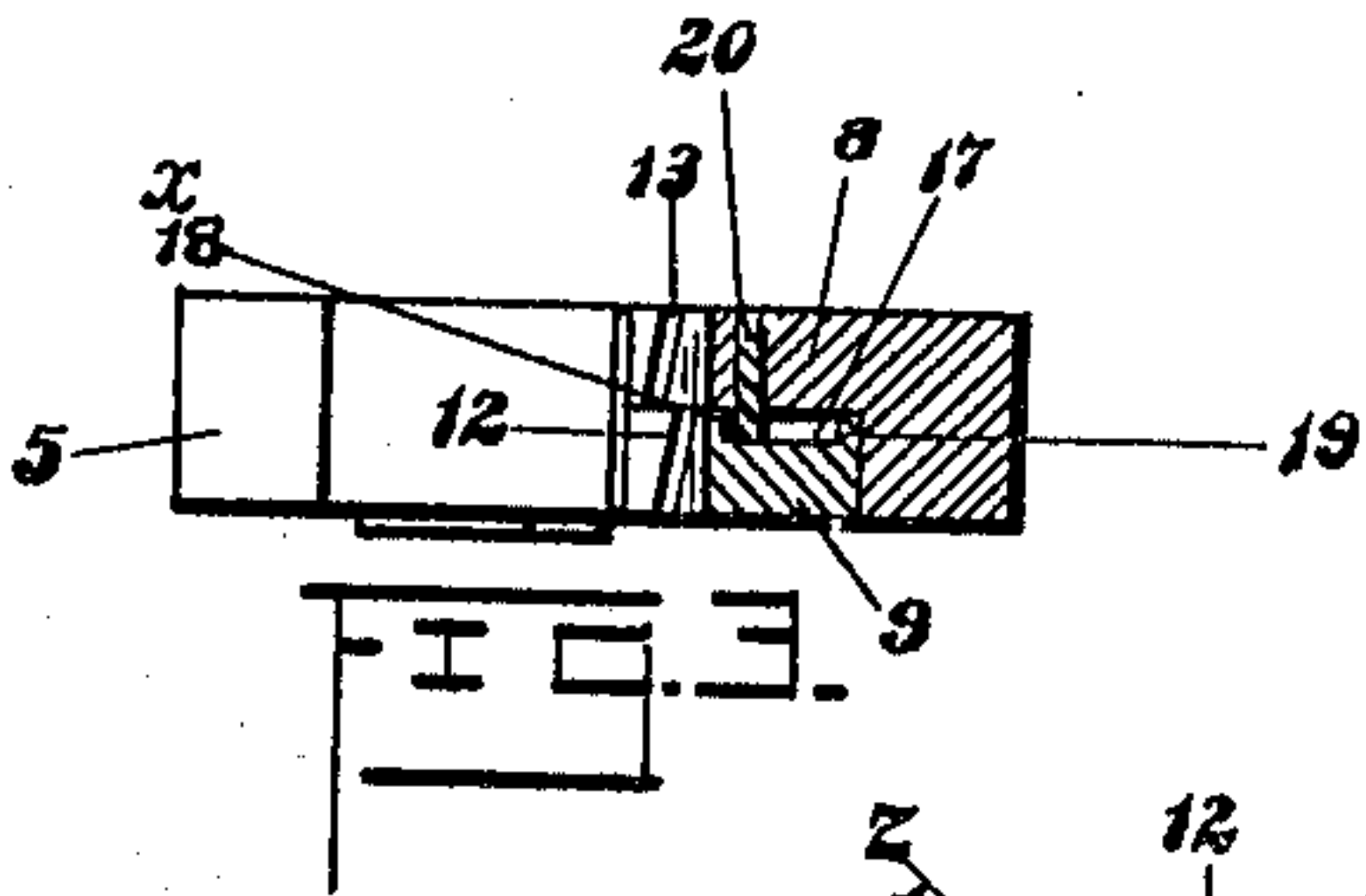
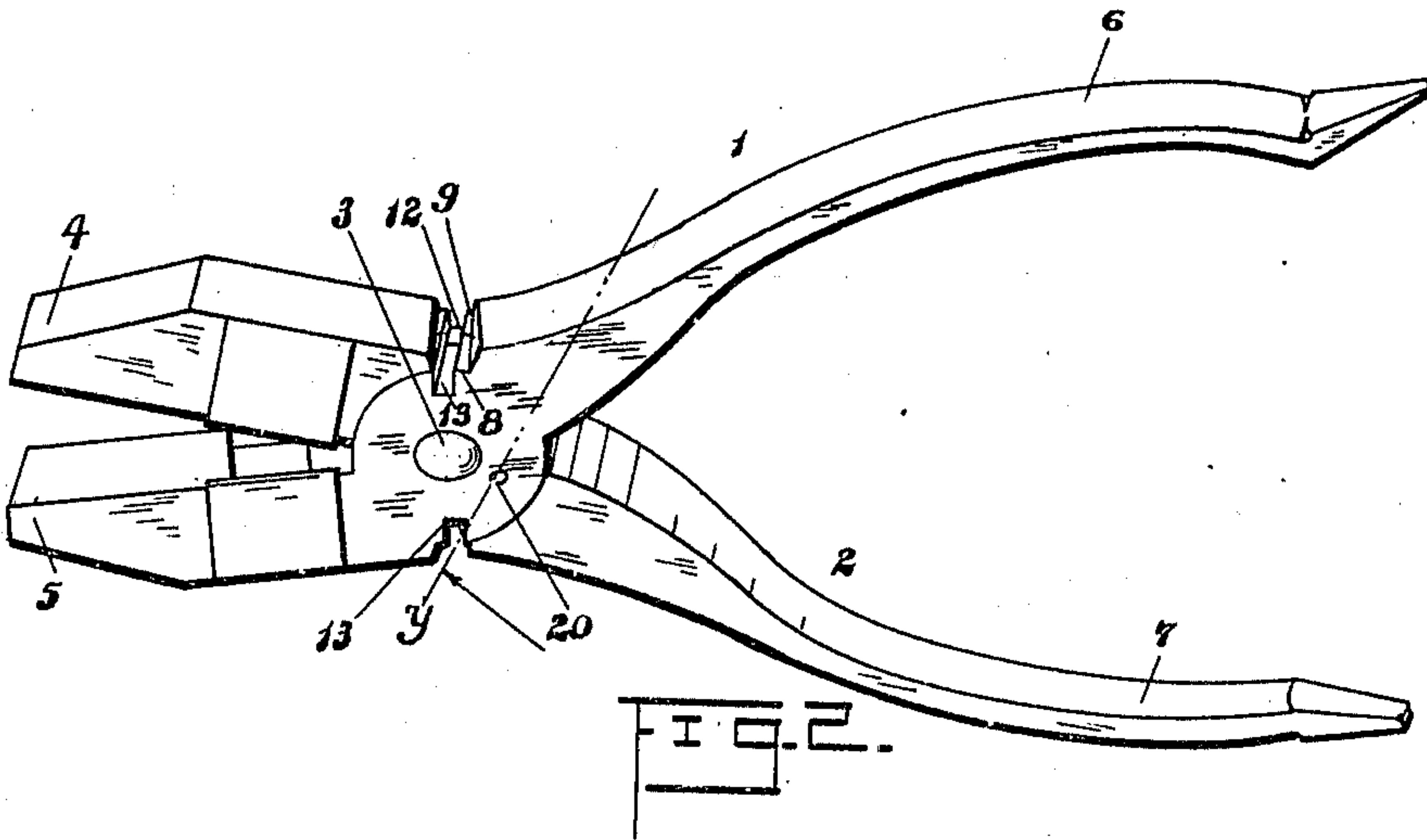
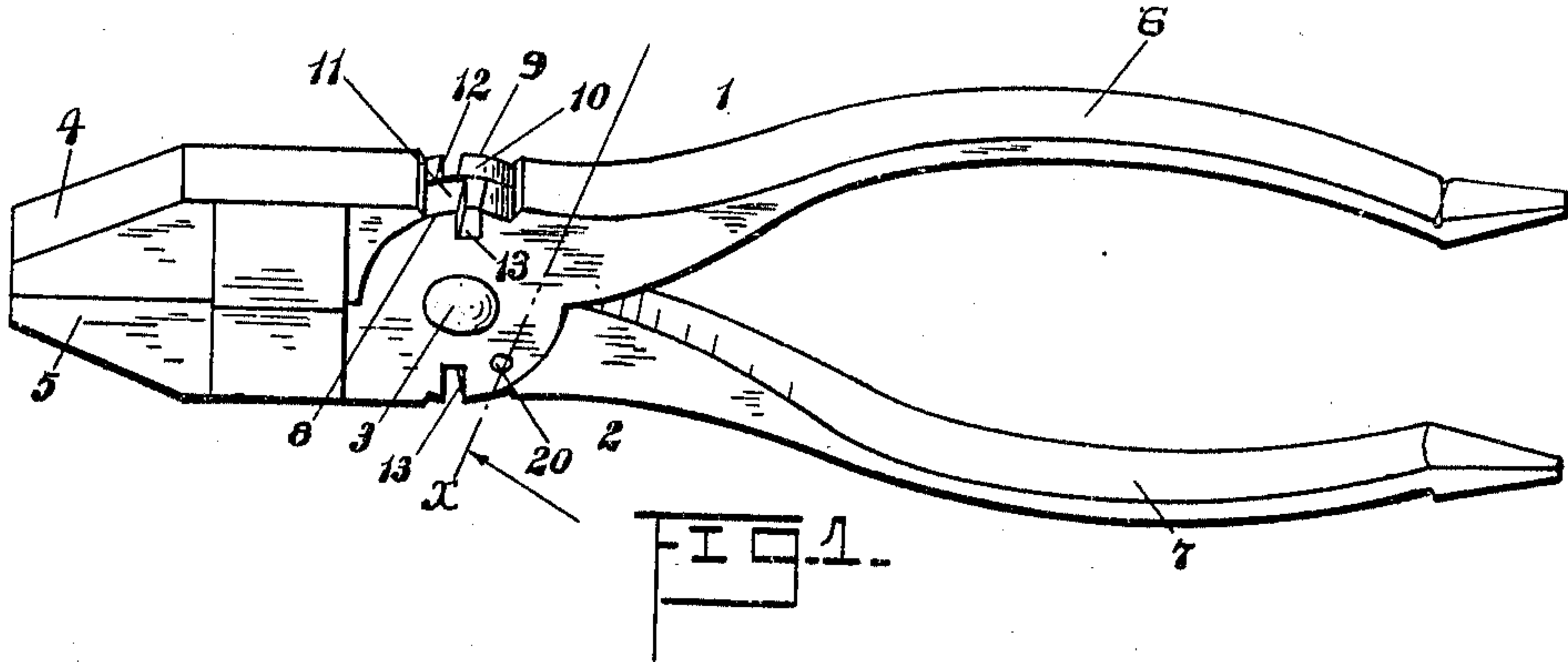
A. A. KRAEUTER.

PLIERS.

APPLICATION FILED JUNE 17, 1908.

953,170.

Patented Mar. 29, 1910.



WITNESSES

Frederick Germann Jr.

John W. Aamper.

INVENTOR

Arthur A. Krauter,

BY

Russell M. Everett,
ATTORNEY.

UNITED STATES PATENT OFFICE.

ARTHUR A. KRAEUTER, OF SOUTH ORANGE, NEW JERSEY.

PLIERS.

953,170.

Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed June 17, 1908. Serial No. 438,895.

To all whom it may concern:

Be it known that I, ARTHUR A. KRAEUTER, a citizen of the United States, and a resident of South Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Pliers, of which the following is a specification.

The objects of this invention are to provide means for bringing into positive alignment certain wire-cutting slots in the outer edges of the members of the pliers; to thus save time in, and avoid the necessity for close attention to, the manipulation of the pliers in cutting wire; to provide a construction which is simple and convenient to manufacture and which is strong, durable and not likely to get out of order, and to obtain other advantages and results which may be brought out in the following description.

Referring to the accompanying drawings, in which like numerals of reference indicate the same parts in the several figures, Figure 1 is a perspective view of a pair of pliers of my improved construction in closed position, and Fig. 2 is a similar view of the same in open position; Figs. 3 and 4 are detail cross-sections on line *x*, Fig. 1 and line *y*, Fig. 2, respectively, looking in the direction indicated by the arrows, and illustrating the different positions of a certain stop pin; Fig. 5 is a view from the inside of the fulcrumal portion of the pliers member having the slot for said stop pin, and Fig. 6 is a section of the same on line *z*.

In said drawings, 1 and 2 indicate the two members of the pliers pivotally connected as at 3, and having jaws 4, 5 and handles 6, 7, respectively. At said pivotal connection each pliers member has a flat disk-like portion 8, or 9, which disk-like portions lie flatwise together and receive the pivot 3. Edge portions 10, 11 of these disks are exposed, as usual, and provided with transverse slots 12, 13, which are adapted to come into alinement when the pliers are opened as in Fig. 2, and to shear past each other into the staggered relation shown in Fig. 1, when the pliers are closed.

When the pliers are to be used as a wire cutter, the slots 12, 13 must be brought into alinement as shown in Fig. 2 to receive the wire, and in pliers as heretofore constructed considerable care has been necessary in

order to open the pliers to exactly the right point and hold them so while the wire is being inserted. It is to obviate this and to limit the opening of the pliers to exactly that point where the slots will be brought into alinement, which is the purpose of my present invention.

A central and preferably circular chamber 14 is formed in the inner face of one of the pliers members as 2, concentric with the pivot hole 16 and disk like portion 9, and a segmental radial extension 17 of this recess 14 provides a chamber whose end walls 18, 19 form stops. A pin 20 inserted through the other pliers member 1, at a suitable point of its disk-like portion 8, projects at its inner end into the said extension or chamber 17, and is adapted to engage one end wall thereof as the pliers are opened and thus limit such opening. The location of the parts described is such that the said stop pin limits the opening of the pliers at exactly the right point to bring the wire cutting slots 12, 13 into alinement. The stop pin of course never touches the opposite end or wall of its chamber 17, and said stop pin is in the completed pliers fixed in the member 1 either by being driven in tight, as shown, or by any other equivalent means. The shank of said pin is thus fast in the hole in the member 1, while its extremity projects into the recess 17 to serve as a stop. Said extremity is adapted to pass freely through the hole in the member 1, so that the pin can be inserted from the outside of the pliers. This enables the members of the pliers to be finally assembled before the stop pin 20 is inserted. Before the said stop pin 20 is inserted in the pliers, their members can therefore be opened wider than to bring the wire cutting slots into alinement, and this enables certain finishing operations which are necessary to be done on the jaws of the pliers after they are assembled to be performed before their opening is limited.

Having thus described the invention, what I claim as new is:

In pliers, the combination of members having overlapping portions with cooperating wire-cutting slots at their outer edges, a pivot through said overlapping portions, one of said members having at the inner face of its said overlapping portion a recess with a closed bottom and the other member

having a transverse hole clear through its overlapping portion in registration with said recess, and a stop pin having a shank fast in said hole with respect to the member having the hole and an extremity projecting into said recess, said extremity adapted to pass freely through said hole

whereby the pin may be inserted from the outside after the pliers members are assembled.

ARTHUR A. KRAEUTER.

In the presence of—

BERTHA S. FULTON,
ETHEL B. REED.