

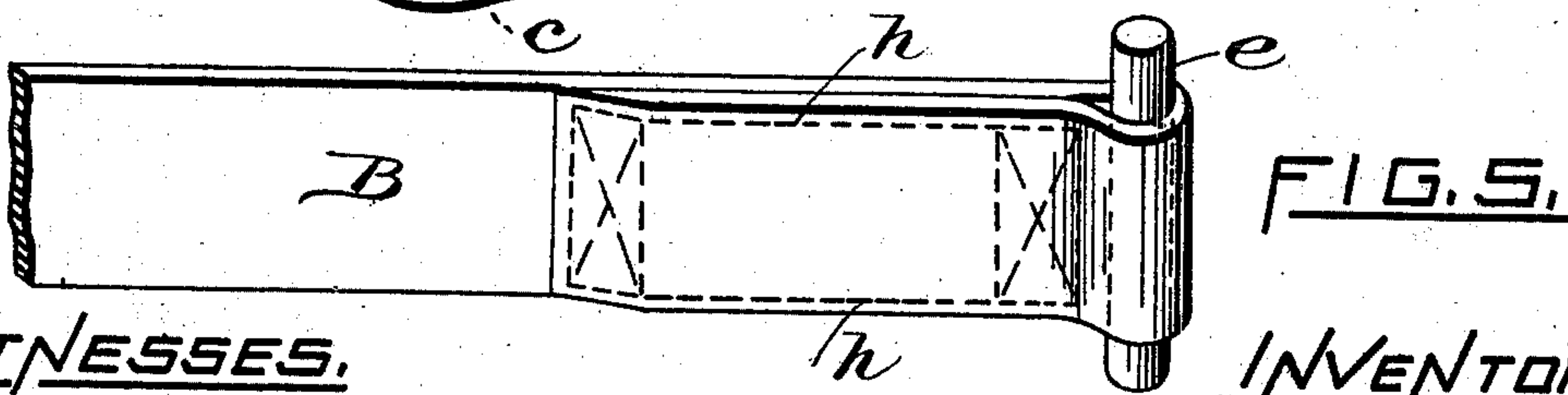
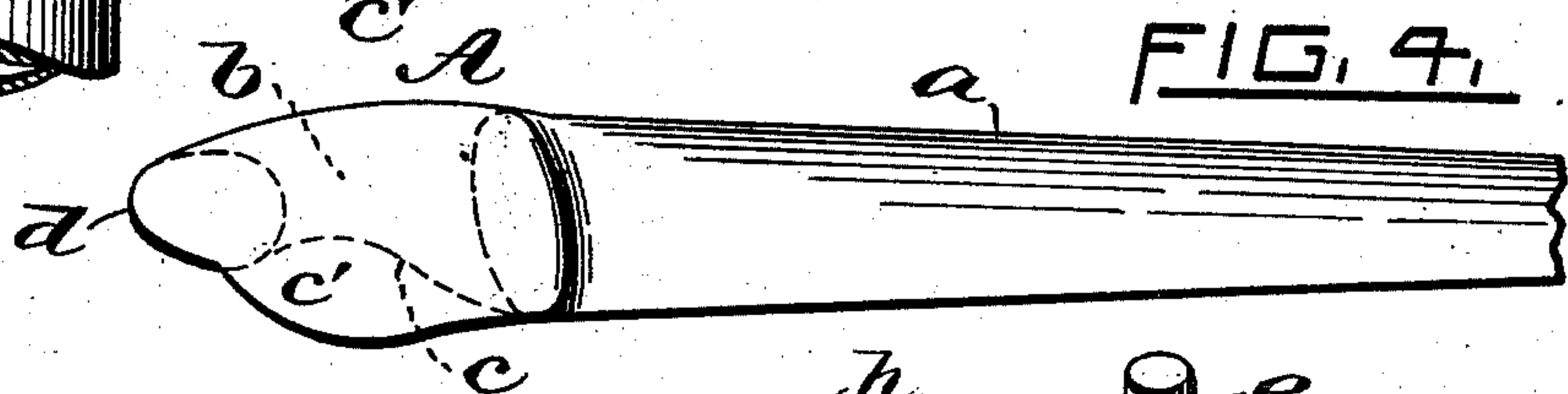
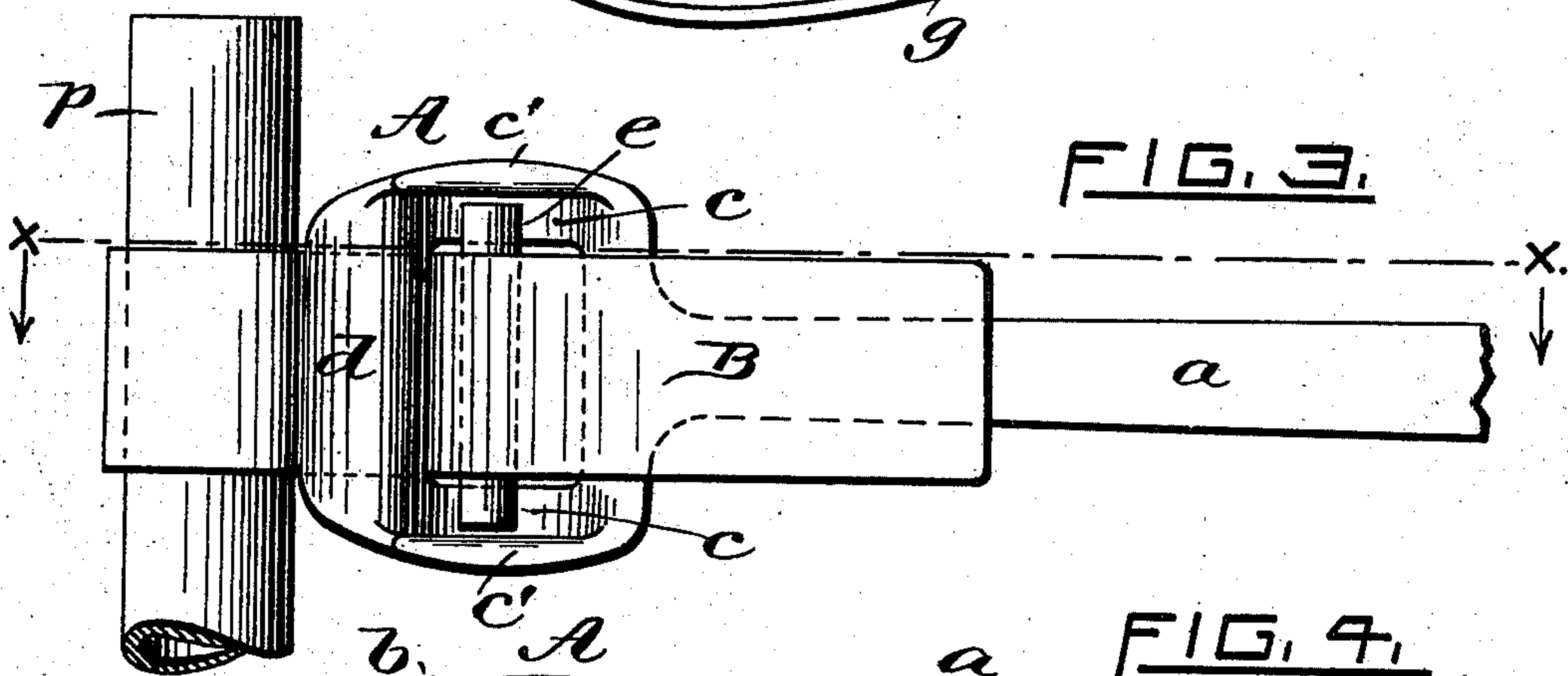
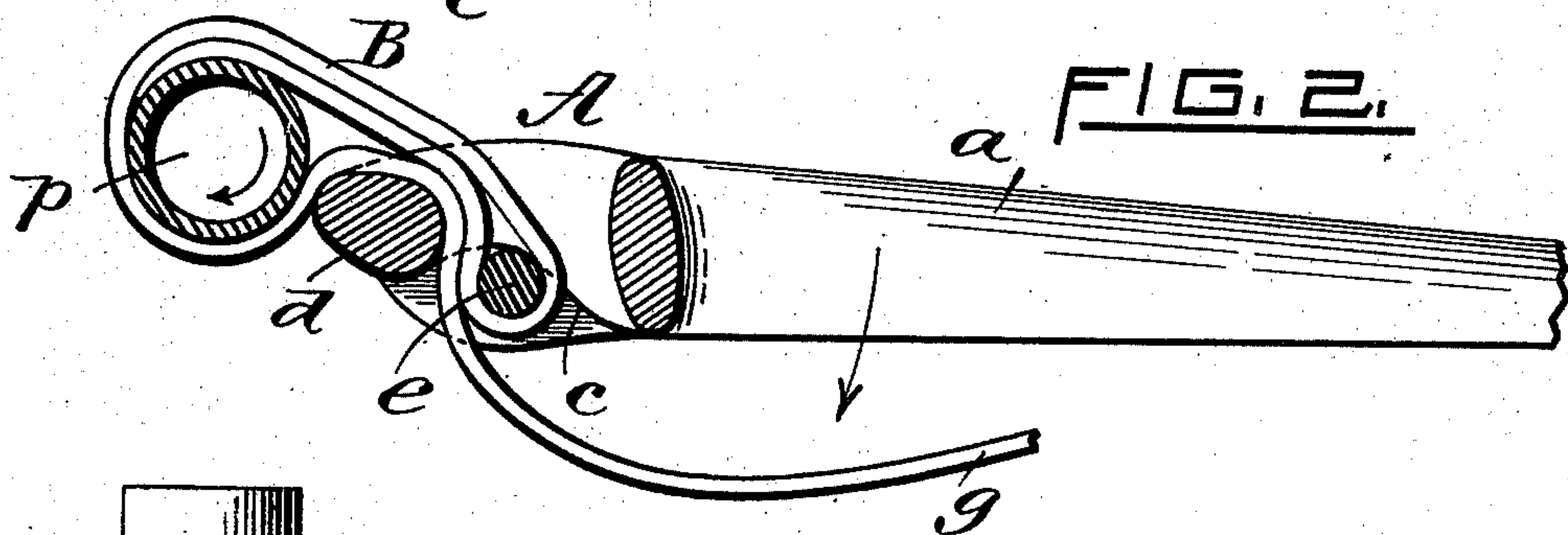
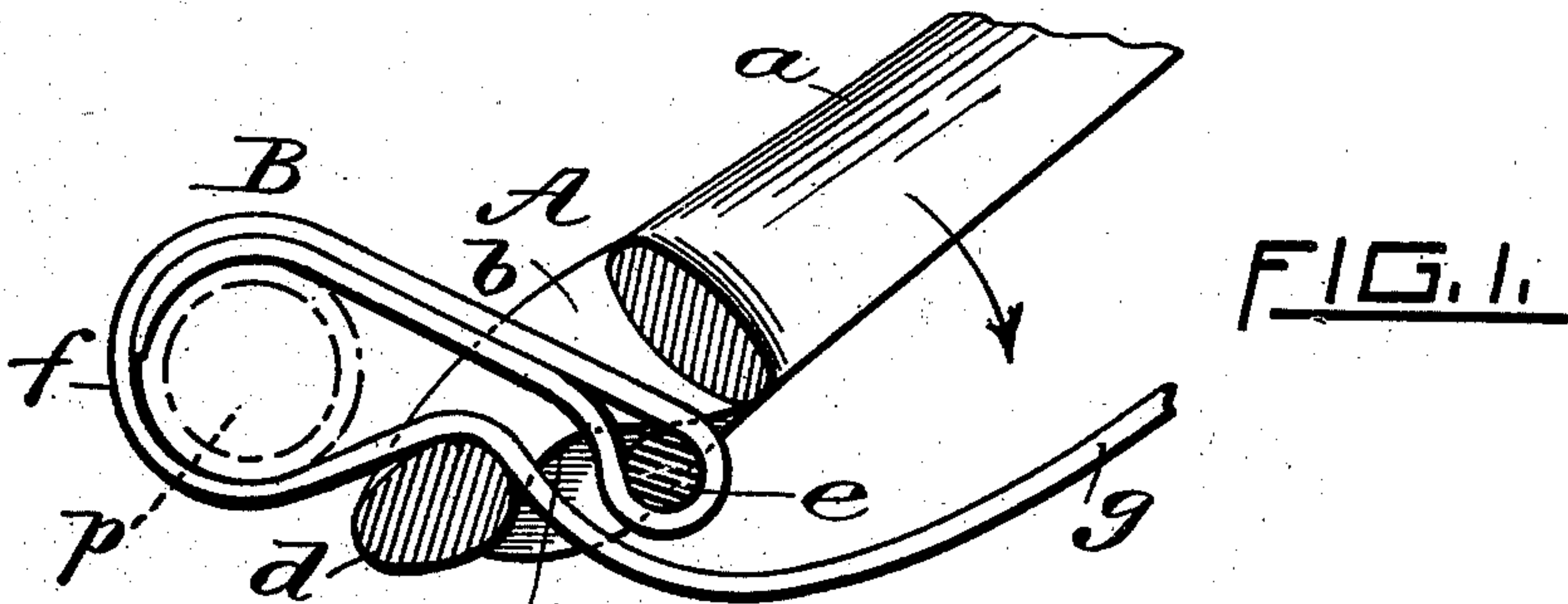
No. 714,610.

Patented Nov. 25, 1902.

W. H. RAWE.
PIPE WRENCH.

(Application filed May 31, 1902.)

(No Model.)



WITNESSES.

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UNITED STATES PATENT OFFICE.

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PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 714,610, dated November 25, 1902.

Application filed May 31, 1902. Serial No. 109,815. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. RAWE, a citizen of the United States, residing at the city of Pawtucket, in the county of Providence and State of Rhode Island, have invented a certain new and useful Improvement in Pipe-Wrenches, of which the following is a specification.

This invention relates to that class of pipe-wrenches that are provided with a flexible textile band to encircle pipes which have a highly-polished or nickel-plated surface; and the object of my invention is to provide a wrench in which the frictional contact between the surface of the pipe and that portion of the wrench in contact therewith will be increased, whereby the wrench will accomplish its function without marring the surface of the pipe to be turned.

My invention consists in a pipe-wrench having an enlarged head integral therewith and provided with a rectangular opening, said opening having recesses opposite each other and extending inwardly to the rear of the nose of said head. In combination therewith, of a band of flexible material to pass through the opening of said head and having a rod secured at one end thereof and adapted to move in the recesses of the head, and the free end of said band of a length to partially encircle a pipe and extending between itself and the nose of said head and thence through the opening of the same in the manner as hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a side sectional view of the wrench, taken in line *xx* of Fig. 3 and illustrating the normal position of the parts prior to making frictional contact on a pipe to be turned. Fig. 2 is a similar sectional view showing the position the parts assume when the pipe is turned. Fig. 3 is a front elevation view of the wrench as in use. Fig. 4 is a side elevation of the wrench member, and Fig. 5 is a perspective view of a portion of the band or encircling member of the wrench.

Like letters of reference indicate like parts in the different views of the drawings.

a denotes the handle of the wrench, having an enlarged head *A* integral at one end thereof and provided with a rectangular opening *b* and said opening having recesses opposite

each other and extending inwardly to the rear of the nose *d* thereof. The opening *b* of the head *A* is of a width sufficient to receive the flexible textile band *B*, one end of which is folded over and secured upon a circular rod *e*, which projects from each edge of the band, as shown in Fig. 5. This band is passed through the opening *b* of the head *A* until prevented by the rod *e*, which finds its bearing upon the inclined sides *c c* of the same. Thence the band is carried around in a half-circle and passed between itself and the nose *d* and with the free end portion *g* terminating on the front side of the wrench in the manner as seen in Fig. 1, this being the normal position of the band, and with its rod resting upon the upper portion of the inclined sides *c c* of the wrench.

The operation of my improved pipe-wrench is as follows: The loop portion *f* of the band is passed over the end of the pipe *p*, and the pressure exerted on the handle *a* will force the nose *d* against the band, holding the same at that point on the pipe, and the circular motion of the handle as it is carried in the arrow direction moves the rod *e* downwardly upon the inclined surfaces *c c* of the head *A*, and the greater the strain exerted on the handle the greater will be the binding force in holding the loop portion *f* of the band tightly against the pipe. The surface of the rod *e* within the folded end of the band is covered with wax to cause the band to adhere to it, and the end portion of the band beyond the rod is folded upon itself and stitched together, as *h h* in Fig. 5, and thus securing the rod rigidly to the encircling member.

In the drawings I represent two flanges *c'* *c'* integral with the head *A*, and each flange projects from the inclined sides *c c* for the purpose of retaining the rod *e* in position on the head of the wrench.

From the above description it will be readily seen that I have provided an extremely simple and durable pipe-wrench, and at the same time the economy of construction can be appreciated when it is observed that there are but two metallic parts to the wrench, including the rod.

What I claim, and desire to secure by Letters Patent, is—

In a pipe-wrench having an enlarged head integral therewith and provided with a rectangular opening, said opening having recesses opposite each other and extending in-
5 wardly to the rear of the nose of said head, in combination therewith, of a band of flexible material to pass through the opening of said head, a circular rod rigidly secured at one end of said band and adapted to move in
10 the recesses of said head and the free por-

tion of said band of a length to partially encircle a pipe thence extending through the opening of said head, substantially as shown and described.

In testimony whereof I affix my signature 15
in presence of two witnesses.

WILLIAM H. RAWE.

Witnesses:

THOMAS LOCKE,

THOMAS A. PRIOR.