

No. 764,742.

PATENTED JULY 12, 1904.

A. MARTENS.
CLAMP.

APPLICATION FILED SEPT. 24, 1903.

NO MODEL.

FIG. 1.

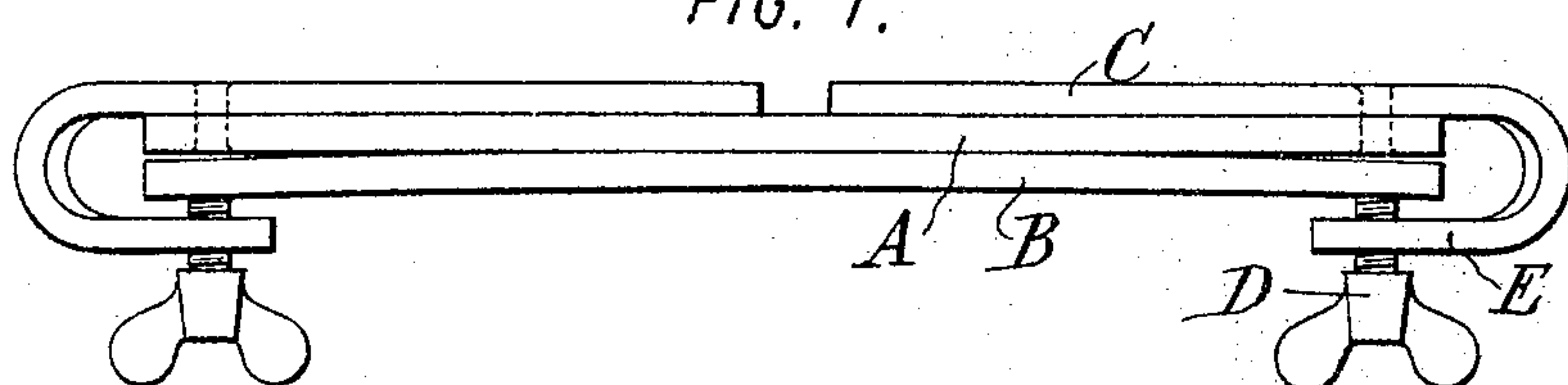


FIG. 2.

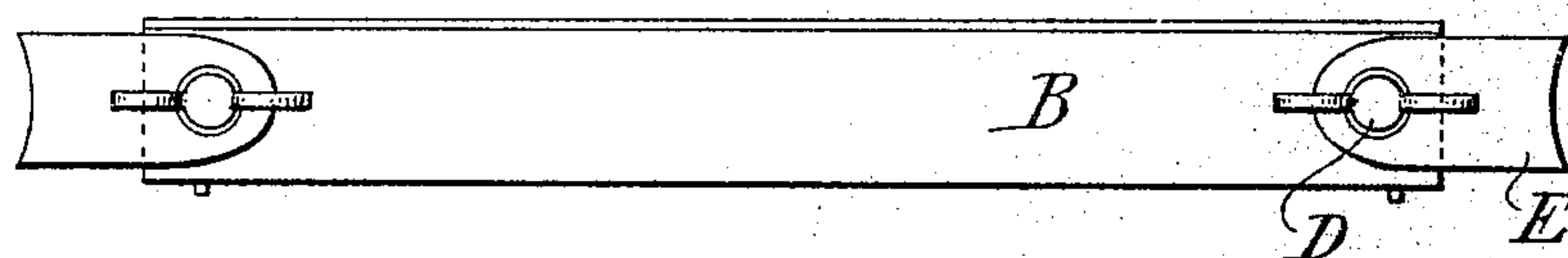


FIG. 3.

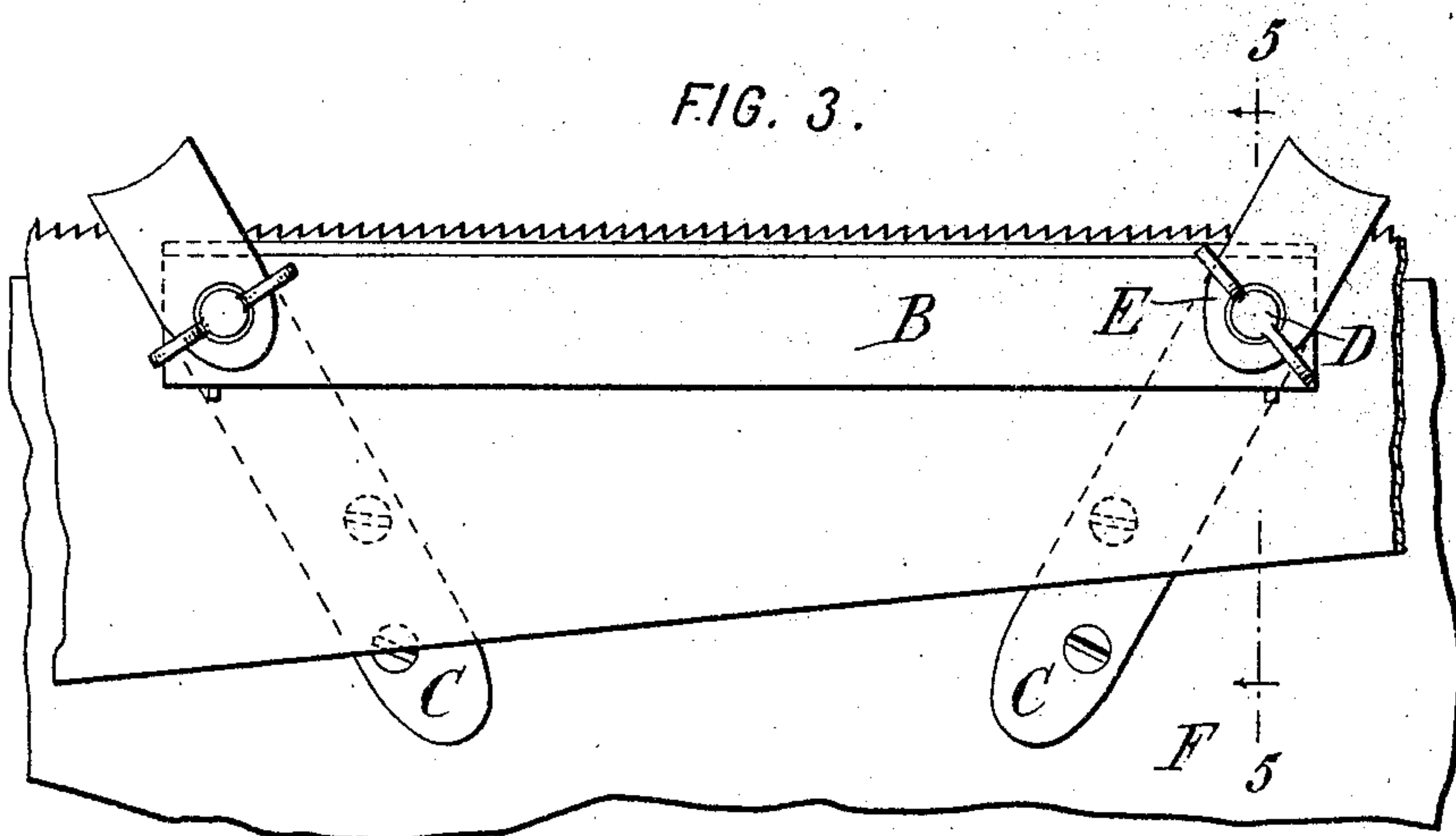


FIG. 4.

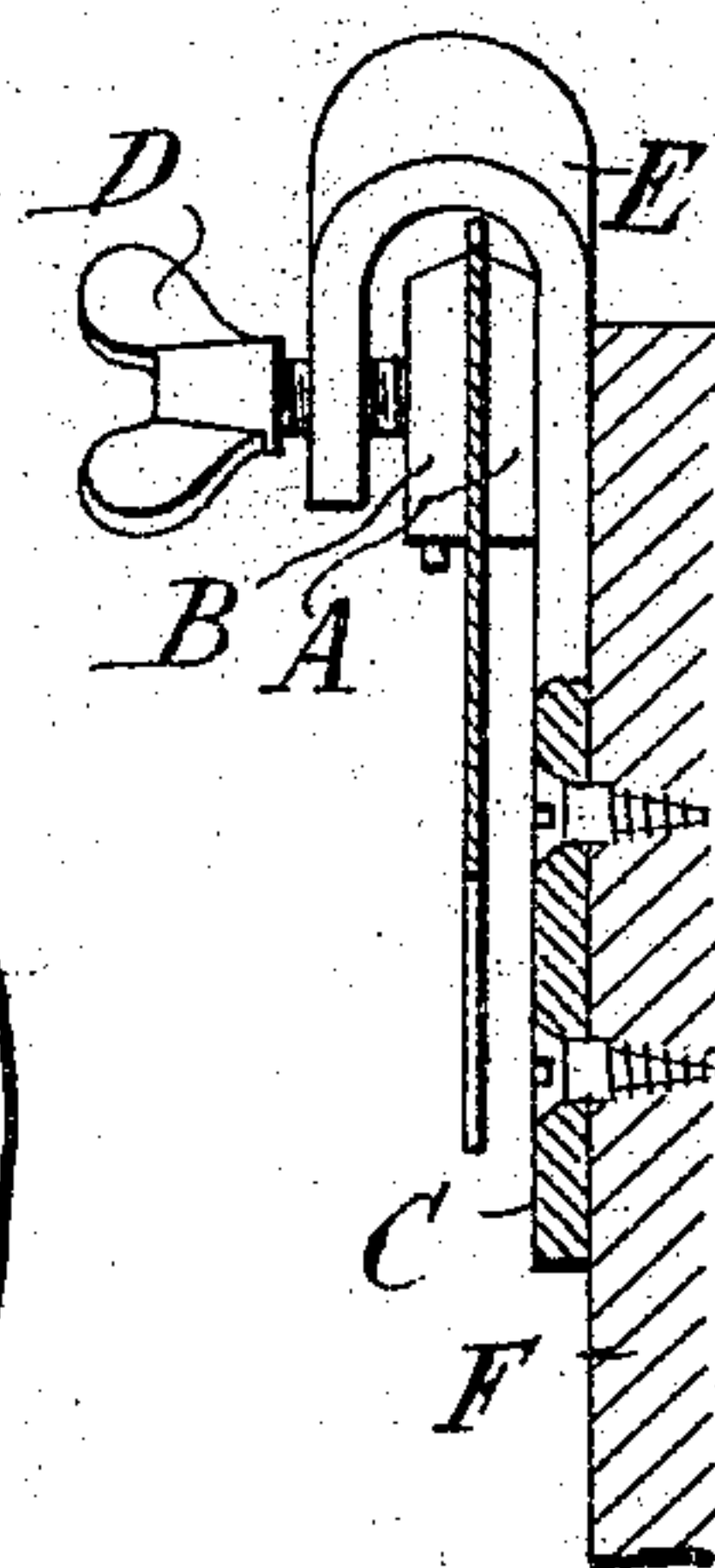
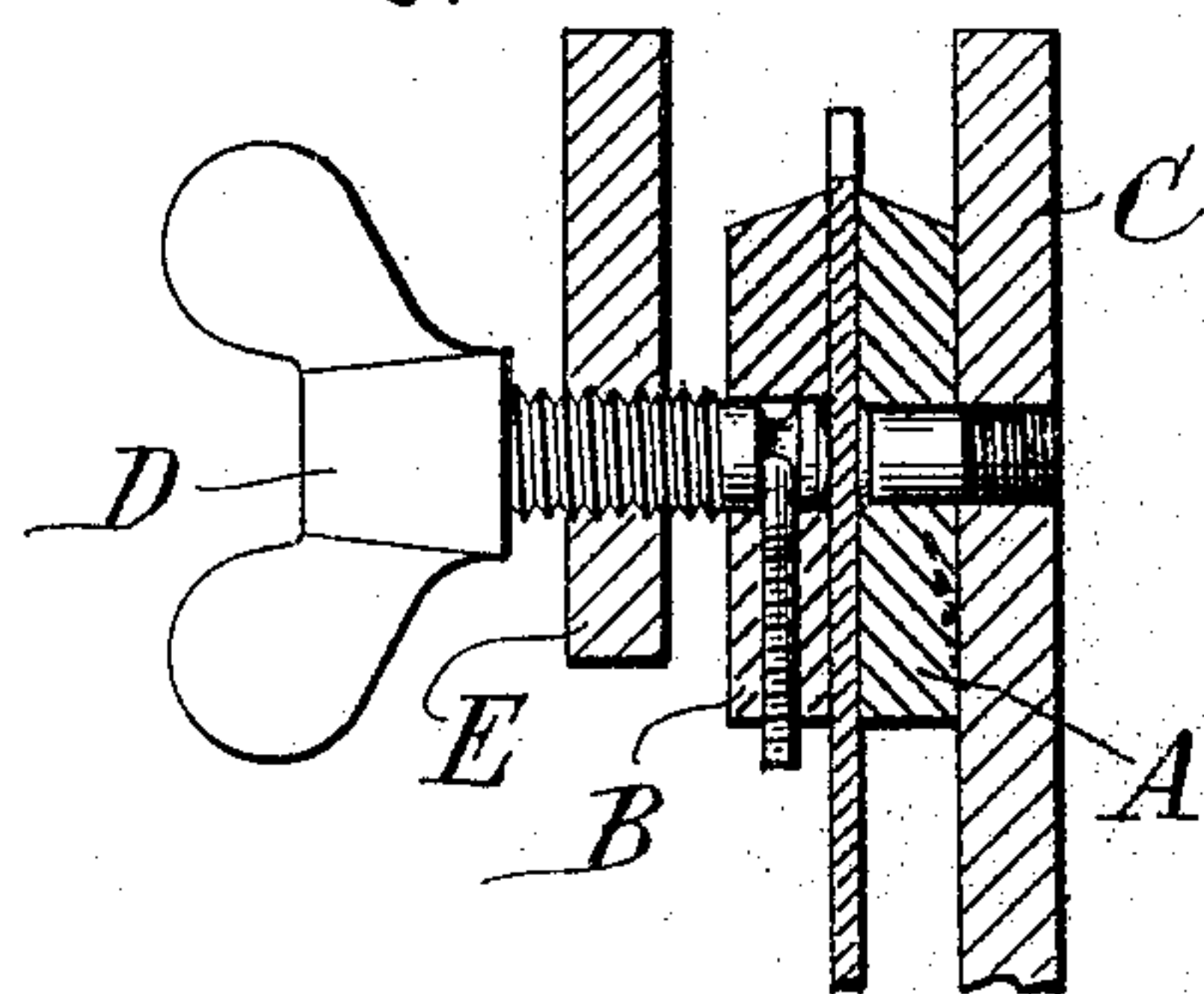


FIG. 5.



WITNESSES:

Fred White
J. P. Wallace

INVENTOR:

Abraham Martens,

By Attorneys,

Arthur C. Chase & Co.

UNITED STATES PATENT OFFICE.

ABRAHAM MARTENS, OF NEW YORK, N. Y.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 764,742, dated July 12, 1904.

Application filed September 24, 1903. Serial No. 174,531. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM MARTENS, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Clamps, of which the following is a specification.

My invention aims to provide an improvement in clamps especially adapted for holding saws while sharpening or setting the teeth thereof, and the most important feature of which is its portability. It is adapted to be compactly folded and carried in a workman's tool-chest and to be set up readily and firmly on a work-bench, table, or other suitable structure wherever desired. It is very simple, cheap, and strong and permits a very quick insertion of a saw and also holds the saw very rigidly. It provides improvements in other details hereinafter referred to.

The accompanying drawings illustrate an embodiment of the invention.

Figures 1 and 2 are respectively a plan and face elevation of a clamp folded for transportation. Figs. 3 and 4 are respectively a side elevation and end view of the same clamp in use. Fig. 5 is a section approximately on the line 5 5 of Fig. 3.

Referring to the drawings, the complete clamp comprises a pair of clamping members A B, preferably of the narrow elongated shape shown and between which the saw to be sharpened or set is clamped, supporting means preferably in the form of two elongated supports C, pivoted to the clamping member A at opposite ends, respectively, and a pair of thumb-screws D, swiveled to the clamping member B and screwing through the ends of the supports C. The supports C preferably extend a short distance above the clamping members when in use and are then curved and bent down to provide end portions E at the front of the clamp for carrying the thumb-screws D. The clamping-face of the clamping member B is preferably slightly convex in plan, as shown in Fig. 1, and is of slightly-elastic material, such as cast-iron.

In use the supports C are screwed or otherwise fastened on the face of any convenient

stationary structure, which I call generically a "work-bench," as indicated at F in Fig. 4. The supports C are preferably arranged with their upper ends diverging, as shown, so as to expose as great a length of the saw as possible. Since the connection between the two clamping members A and B is above them and the space between them is entirely open from the bottom, the saw is introduced from below. The distance which the saw projects above the clamp is very slight, and therefore the connection does not need to extend very far above the clamping members, and is for that reason much more rigid than would be a connection at the under side extending sufficiently below the clamping member to make room for nearly the entire width of the saw-blade. Furthermore, it is more convenient in use to insert the saw from below, as the workman can get a better hold on the saw in this way and can more quickly adjust it in proper position in the clamp. When the clamp is finally secured in place on the bench, the saw is placed in position between the jaws and the two thumb-screws D are screwed up. The arranging of the two screws to bear against the clamping member at two separate points provides a long steady bearing and prevents wobbling of the saw, which occurs with clamps which operate with only a single bearing-point. The wobbling referred to, even when not perceptible to the eye, is readily detected by the sound made in filing the teeth. The same advantage would appear, of course, with other pressing means than the particular thumb-screws shown.

Another feature of construction for securing a long and close fit of the clamping members against the saw-blade is the making of one of them, preferably the movable member B, convex on its bearing-face. This insures that the saw shall be closely held not only at the points of action of the thumb-screws D, but also intermediate between such points and substantially throughout the length of the clamping member B. The same advantage might be secured in various types of clamps, the essential point being the curving of the inner or clamping face of the clamping mem-

ber and the application at the thumb-screw or other pressure device at the point of widest separation of the clamping members.

For greater compactness in folding the supports C extend when folded not quite to the center line of the clamping member A, Fig. 1. This length is sufficient to give a firm bearing when the supports are mounted on a bench, as shown in Fig. 3; but obviously these supports could be made longer, if desired, their ends overlapping each other when folded without any great sacrifice of compactness.

Though I have described with great particularity of detail a complete apparatus embodying my invention, yet it is to be understood that the invention is not limited to the specific form disclosed. Various modifications in details and in the arrangement and combination of the parts may be made by those skilled in the art without departure from the invention. For example, the dimensions and proportions of the parts may be varied in order to adapt the apparatus for clamping other devices than saws.

What I claim is—

1. In a clamp in combination, a pair of parallel elongated clamping members, a pair of

elongated supports pivoted to one of said members at its opposite ends, and carrying the second member, said supports having provisions for fastening them to a work-bench, whereby the device is held firmly in position without other means of support, and separate additional means for adjusting the distance between said clamping members.

2. In a clamp in combination, a pair of elongated clamping members A and B, a pair of elongated supports C pivoted to the member A and having fastening provisions at their free ends, and adjusting-screws at the pivoted ends of said supports coinciding with the points of connection of said ends with the member A, said screws carrying the member B at an adjustable distance from the member A, and permitting the folding of said supports toward both said members.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ABRAHAM MARTENS.

Witnesses:

FRED WHITE,
DOMINGO A. USINA.