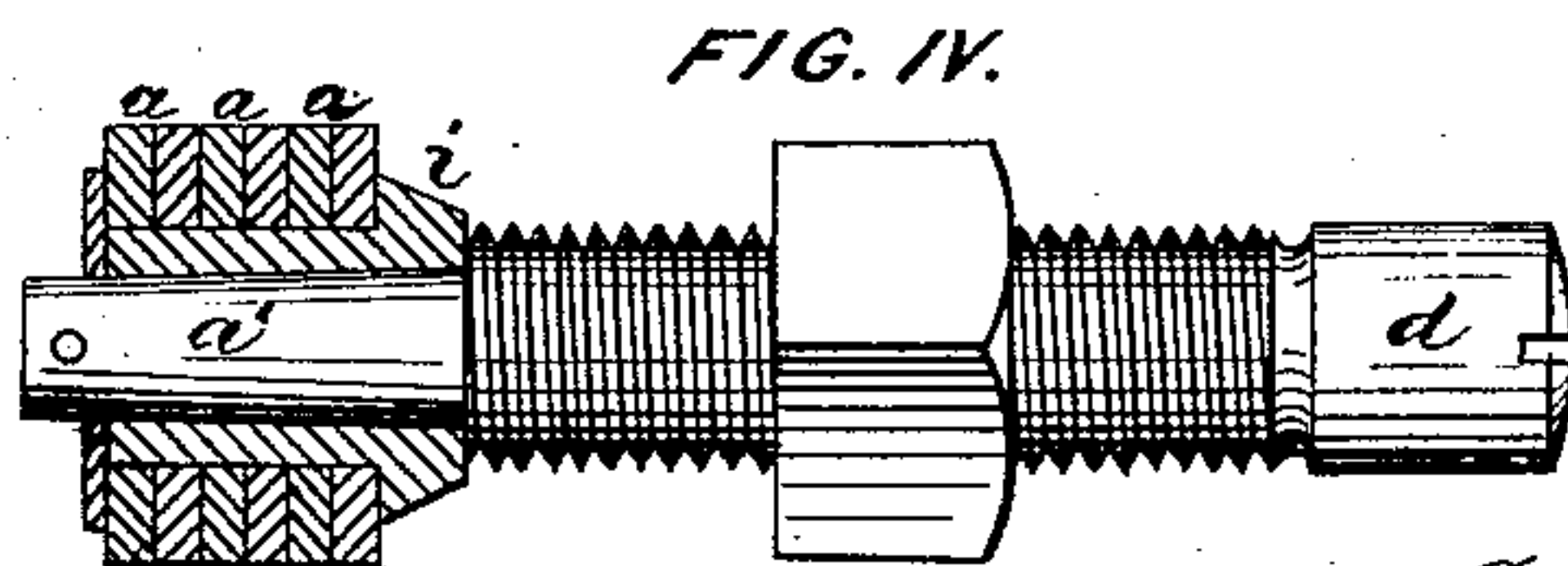
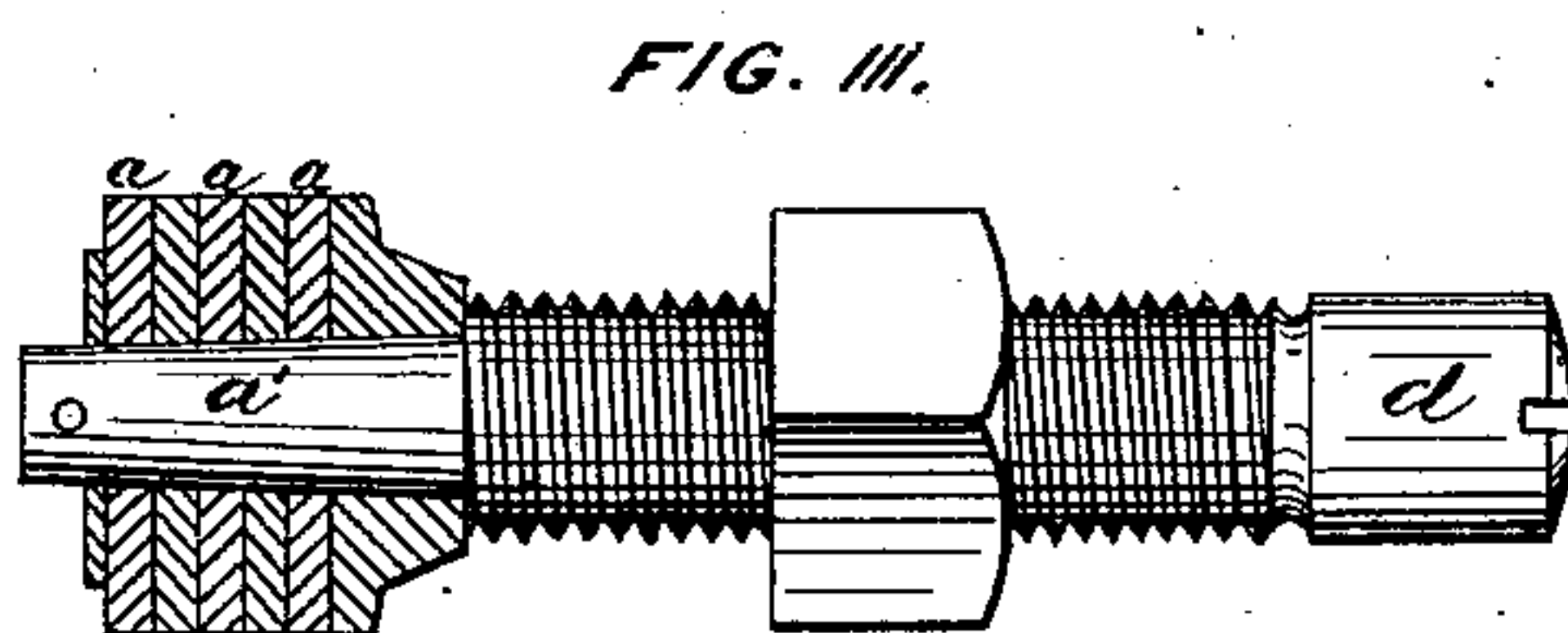
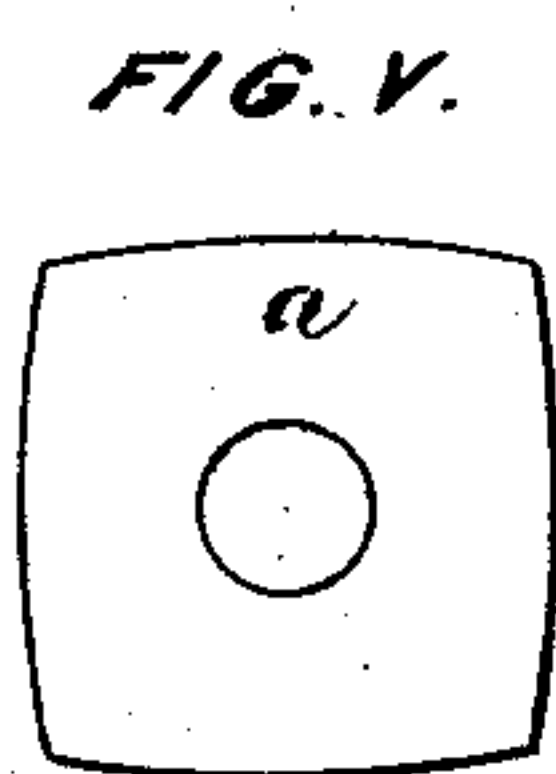
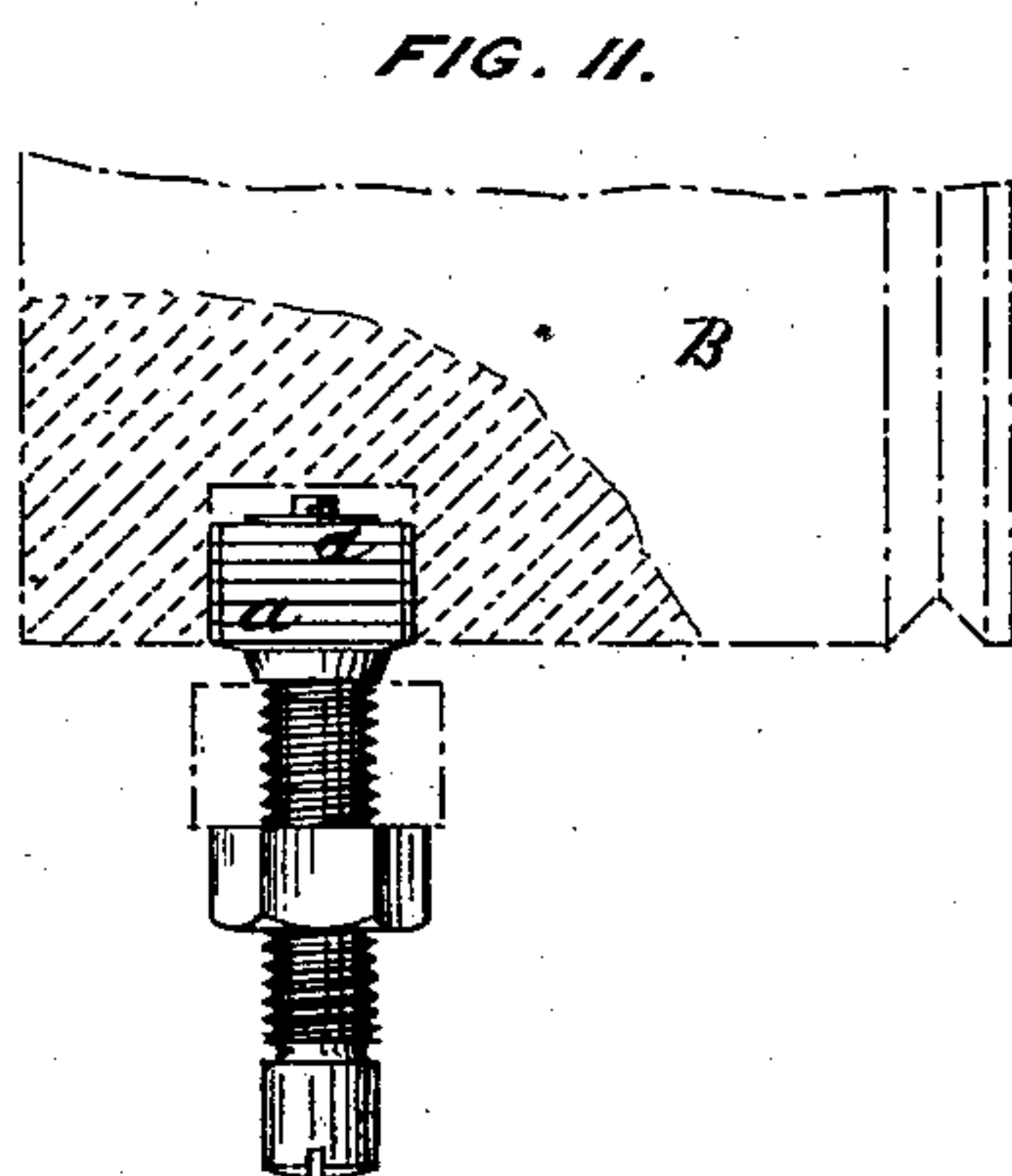
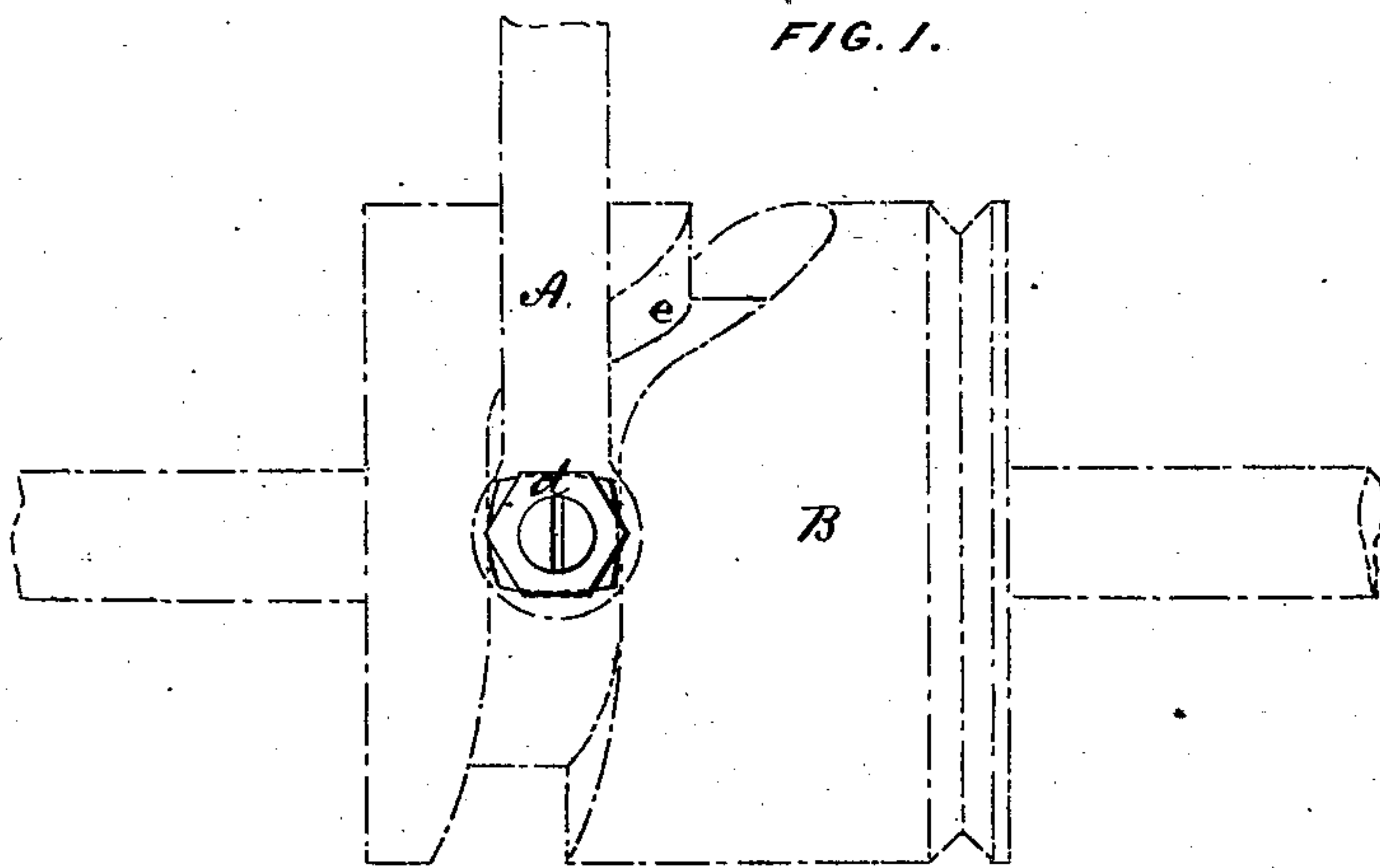


C. B. CURTIS.

Cam-Slides for Sewing-Machines.

No. 157,277.

Patented Dec. 1, 1874.



WITNESSES:

J. M. Hanson
J. G. Watkins

INVENTOR:

Carlos B. Curtis.

by B. F. James,
his atty.

UNITED STATES PATENT OFFICE.

CARLOS B. CURTIS, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN CAM-SLIDES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **157,277**, dated December 1, 1874; application filed November 3, 1874.

To all whom it may concern:

Be it known that I, CARLOS B. CURTIS, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Cam-Slides for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention consists in the construction of two or more series of metallic plates adjustable upon a pivot, or upon a sleeve revolving upon such pivot, around which such series of plates revolve freely, in order that the same may be attached to the needle-arm of a sewing-machine, or to any other arm in other machines, when desired, to work within a groove formed upon a cam, such plates, from their construction and arrangement, being allowed to run easily and smoothly within such cam, and permitting independent oscillating motion of such plates.

Figure 1 illustrates, in dotted lines, a cam, B, with its groove *e*, the needle-arm A, and the attachment thereto of screw-rod *d*, at whose opposite end is secured two or more series of metallic plates *a a a a*; Fig. 2, in cross-section, the relation of such series of plates to the screw-rod and to the cam-groove; Fig. 3, a cross-section, showing the connection of plates with their pivot or spindle and screw-rod. Fig. 4 shows a cross-section of the method employed of securing the series of plates upon a sleeve, the latter being adjusted upon a pivot or spindle. Fig. 5 shows the form of one of the plates.

In the drawings, A represents the needle-arm of a sewing-machine; B, the cam; and *e*, the cam-groove; *d*, the connection of the screw-rod with the needle-arm. *a a a a* are a series of metallic plates, the sides of which are slightly curved, so as to readily adapt themselves to the shape of the cam-groove, and move easily and freely within the same. These plates are adjusted upon the pivot or spindle *a'* or upon a sleeve, *i*, which latter may be adjusted upon such pivot or spindle. The said plates, being separate and distinct from each other, conform to the different positions and angles of the cam-groove in its revolution, and thereby cause an easy and steady movement.

From the mode and form of construction of said plates they can be easily replaced in case of injury or too much wear of the same, and at a very slight cost.

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

1. The combination of two or more series of plates, *a a a a*, with the stud *a'*, with or without the sleeve *i*, in the manner and for the purpose herein set forth.

2. The combination of two or more series of metallic plates, *a a a a*, adjusted transversely upon the stud *a'*, and with or without the sleeve *i*, with the cam and its grooves of a sewing or other machine, when constructed, arranged, and operated in the manner and for the purpose herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CARLOS B. CURTIS.

Witnesses:

AUGUSTA M. BURKE,
ANDREW BURKE.