

(No Model.)

G. VAN WAGENEN & J. GRAVES.
PROCESS OF MAKING WROUGHT METAL FLANGES.

No. 416,816.

Patented Dec. 10, 1889.

Fig. 1.

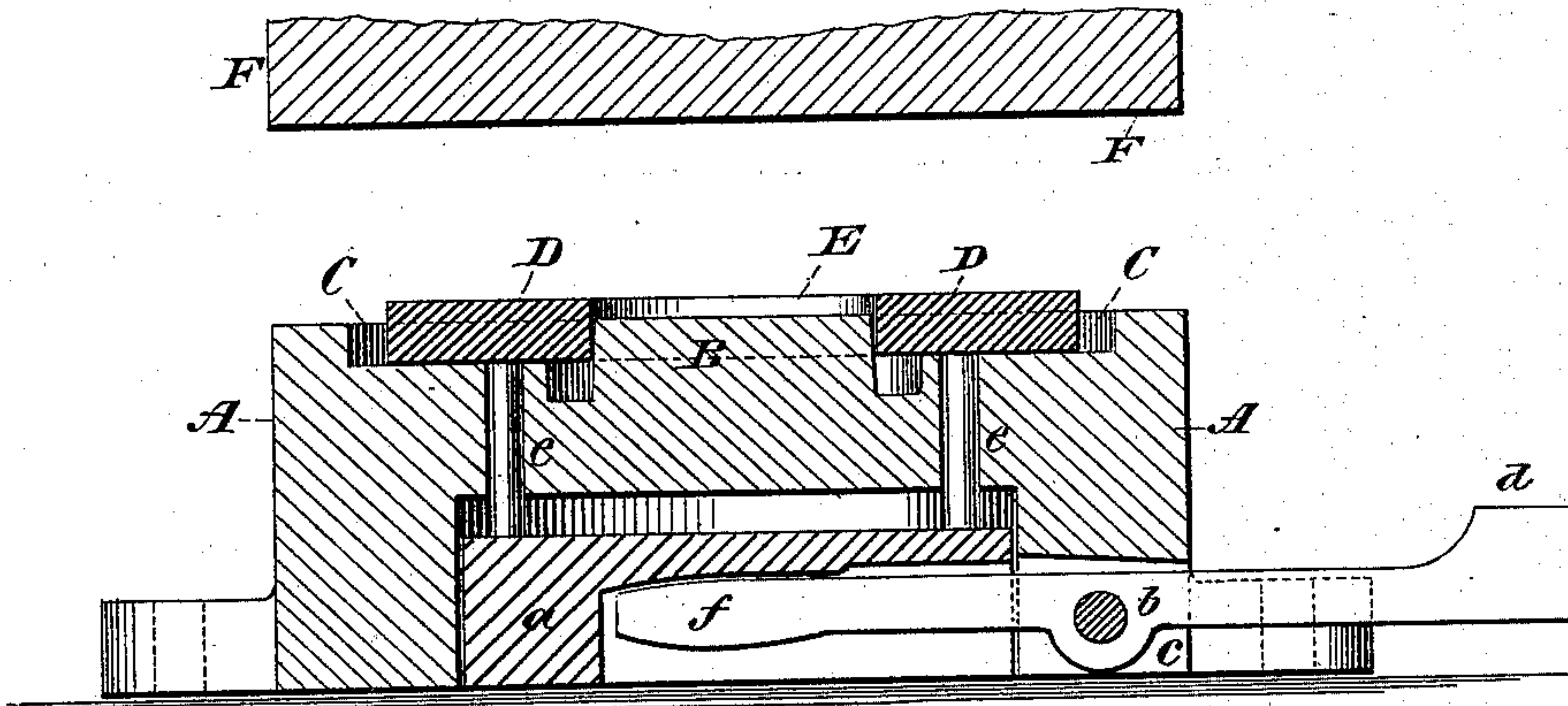


Fig. 2.

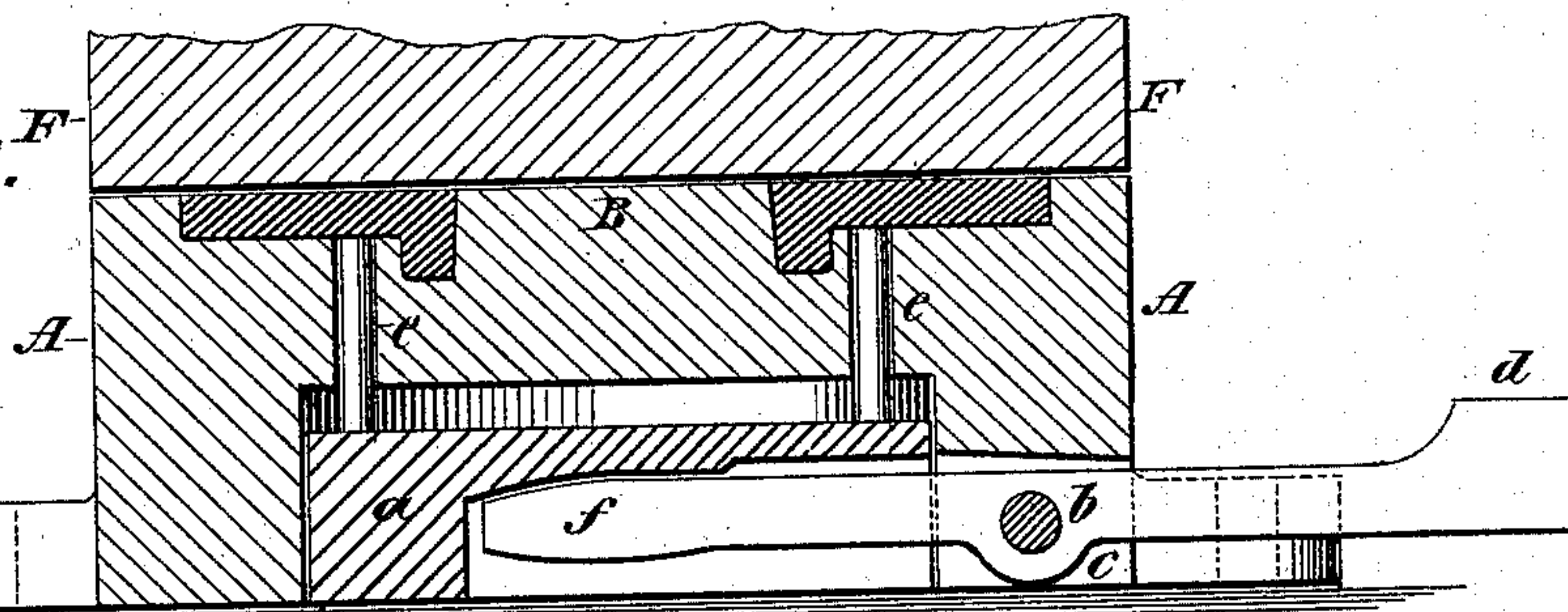


Fig. 3.

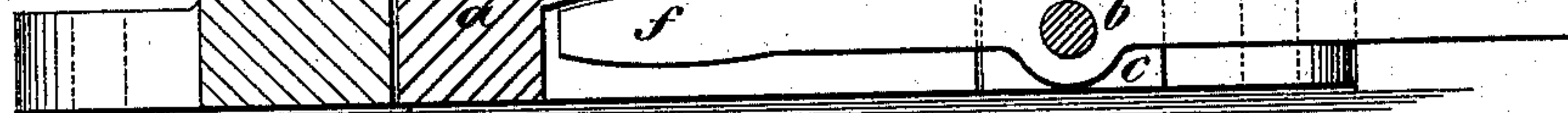


Fig. 4.

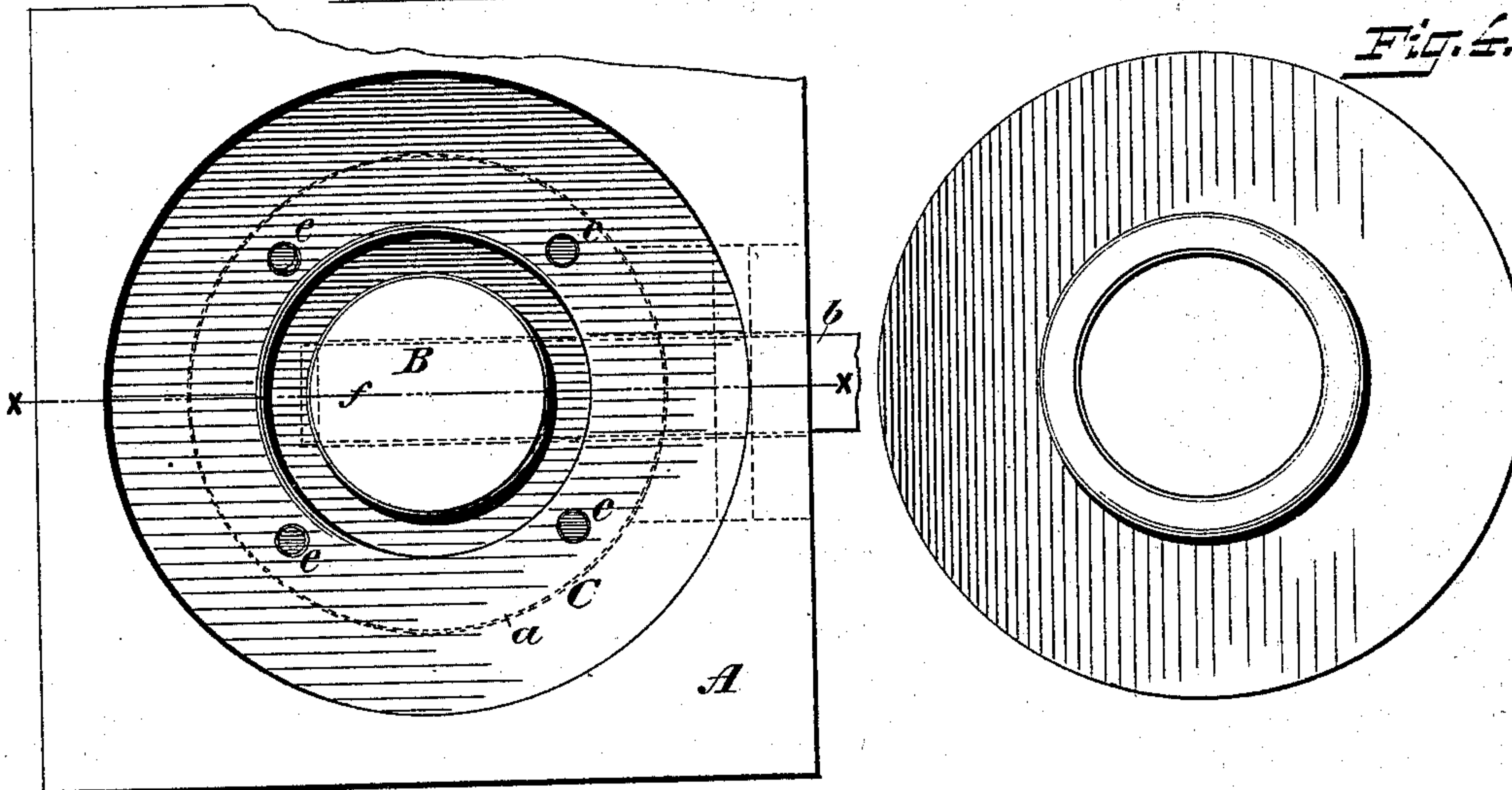
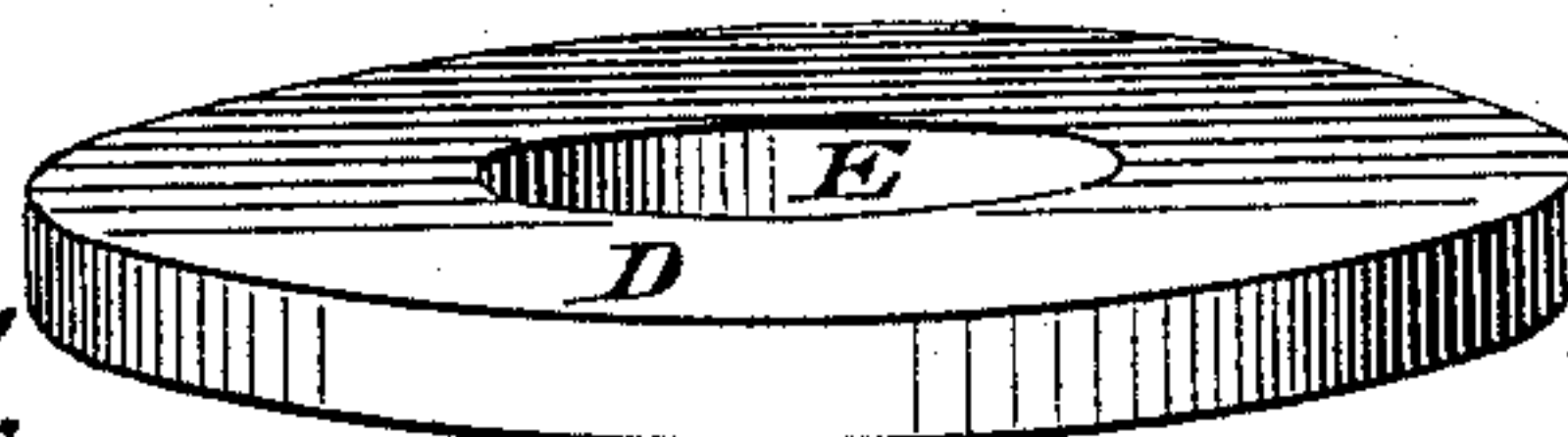


Fig. 5.



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GEORGE VAN WAGENEN AND JOHN GRAVES, OF NEW YORK, N. Y.

PROCESS OF MAKING WROUGHT-METAL FLANGES.

SPECIFICATION forming part of Letters Patent No. 416,816, dated December 10, 1889.

Application filed August 14, 1889. Serial No. 320,716. (No model.)

To all whom it may concern:

Be it known that we, GEORGE VAN WAGENEN and JOHN GRAVES, citizens of the United States, and residents of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Processes of Manufacturing Wrought-Metal Flanges, of which the following is a specification.

The invention relates to an improved method of manufacturing wrought-metal flanges for use as pipe-couplings and other purposes, and involves the employment of a die which is made the subject of a separate application for Letters Patent bearing even date and filed herewith.

The invention will be fully understood from the description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical longitudinal section of the die with a ring of wrought metal placed in the matrix preparatory to being transformed into a flange. Fig. 2 is a like view of same, illustrating the second step in the process of the manufacture, the flange at this stage being completed and in condition to be removed from the die and subjected to the threading-machine, whereby the usual internal thread may be applied to its hub portion; Fig. 3, a top plan or face view of the die; Fig. 4, a plan view of the flange after its removal from the die shown in Fig. 3, and Fig. 5 a perspective view of the ring or blank of wrought metal from which the flange is to be formed.

In the drawings, A designates the die, having the central elevated portion B surrounded by the matrix C, whose outline is that of the flange to be produced.

According to the present invention the flanges are to be manufactured from rings or blanks D, of wrought metal, said blanks being of suitable thickness to completely fill the matrix upon the application of pressure thereto.

In the use of the die the ring or blank D of wrought metal is placed in the matrix C, the projection B passing into the central opening E in the ring or blank D, after which the upper section of the die F or other means

of pressure is applied upon the upper surface of the ring or blank D for the purpose of displacing the metal to fill the matrix C, and thereby form the flange, as illustrated in Fig. 2. The ring of wrought metal D is greater in thickness than the depth of the matrix, and hence when pressure is applied the metal will be extended laterally, completely filling the matrix. After the flange has been formed by the application of pressure the upper section of the die F is elevated and the flange removed and subjected to the usual threading-machine.

The removal of the flanges from the die may be effected by the ejector-pins *e*, secured to the disk *a* and extending upward through apertures in the die to the lower surface of the matrix C. The disk *a* is placed within a recess formed in the die A, as shown, and said disk is slotted to loosely receive the inner end of the lever *f*, which is pivoted at *b* in the slot *c* and has a head *d* at its outer end. After the flange has been formed and the hammer or upper section of the die elevated a light blow on the head *d* will cause the inner end of the lever *f* to force the disk *a* and pins *e* upward and eject the flange from the matrix.

What we claim as our invention, and desire to secure by Letters Patent, is—

The method hereinbefore described of manufacturing flanges for pipe-couplings and other purposes from wrought metal, which consists in placing a ring or blank of the wrought metal in a die having a matrix in the contour of the flange and a central upwardly-projecting portion therein to enter the opening in said ring and form walls for the hub portion of the flange, and then applying pressure for the purpose of extending the metal to fill said matrix, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 12th day of August, A. D. 1889.

GEORGE VAN WAGENEN.
JOHN GRAVES.

Witnesses:

CHAS. C. GILL,
HERMAN GUSTOW.