

No. 680,218.

Patented Aug. 13, 1901.

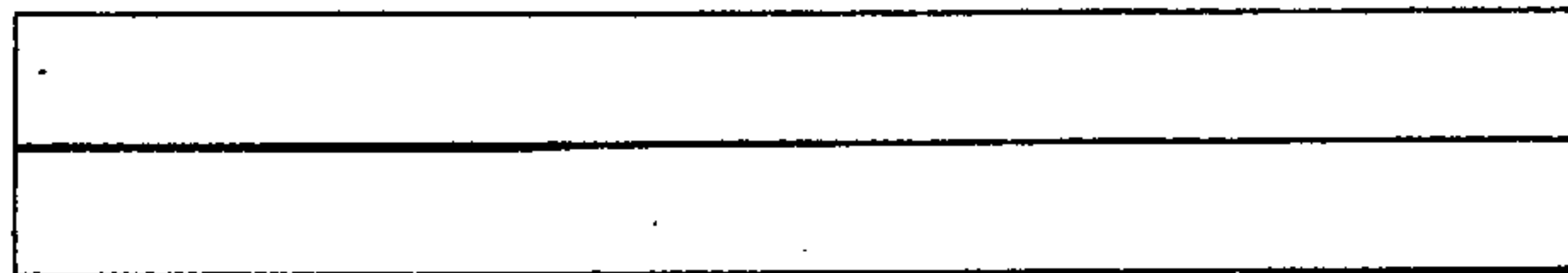
J. R. BLAKESLEE.  
METHOD OF MAKING JAW RODS.

(Application filed Mar. 3, 1900.)

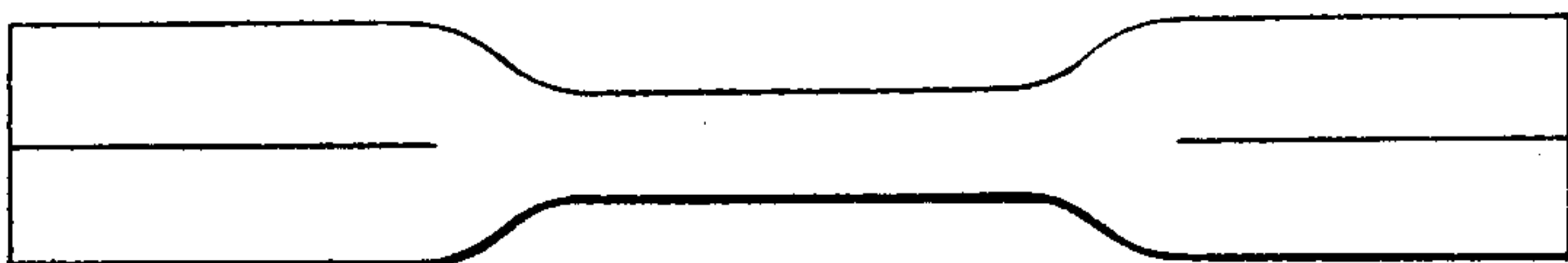
(No Model.)

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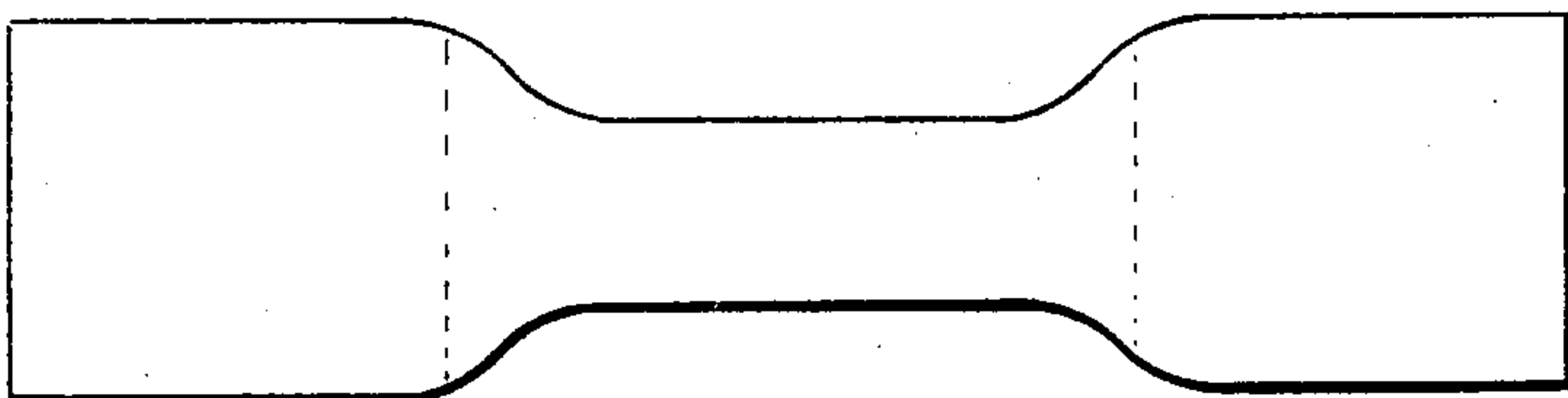
-FIG. I-



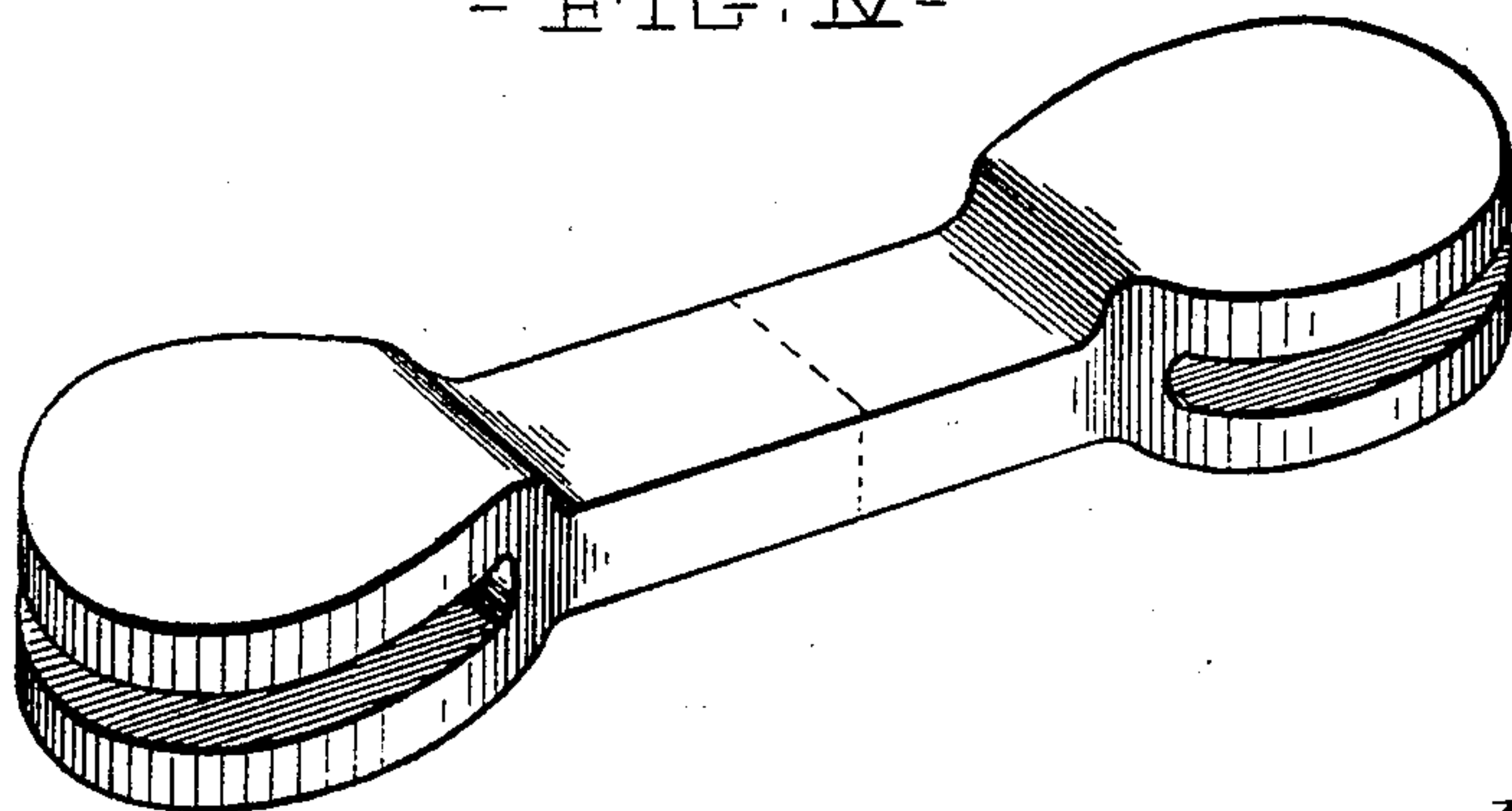
-FIG. II-



-FIG. III-



-FIG. IV-



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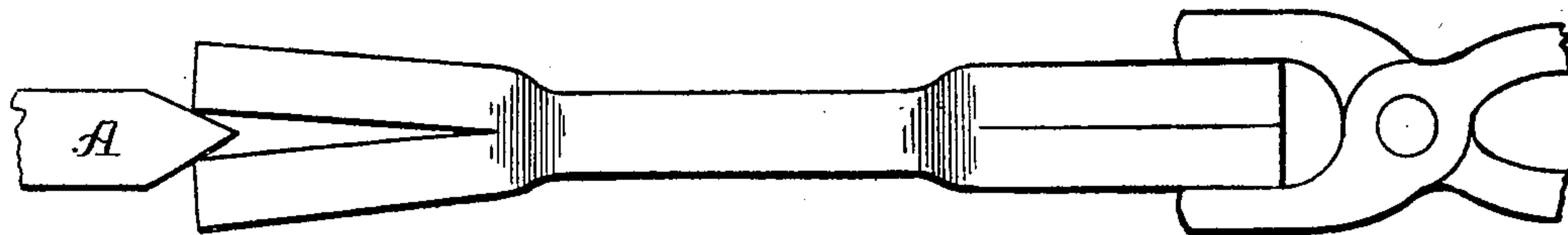
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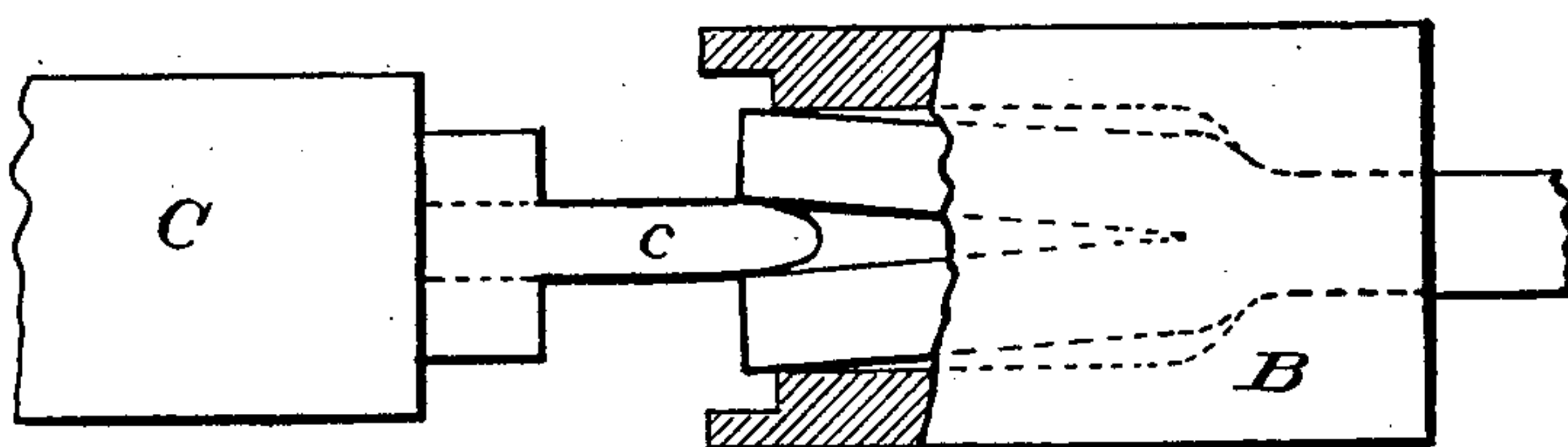
(No Model.)

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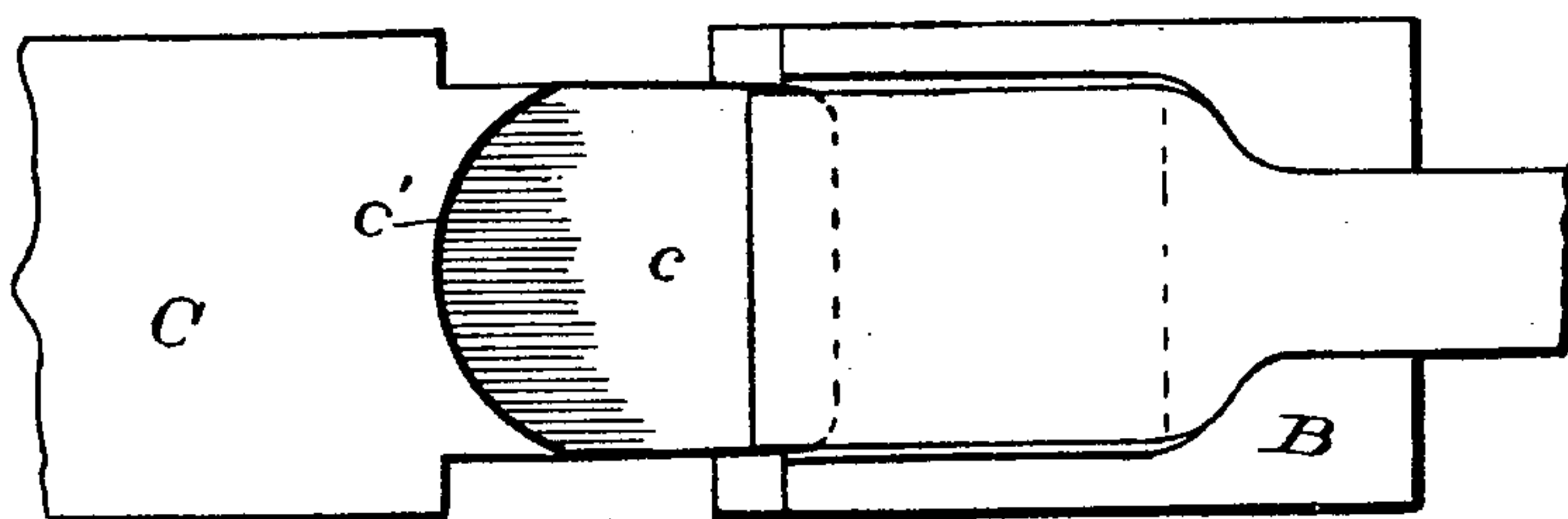
-FIG. V-



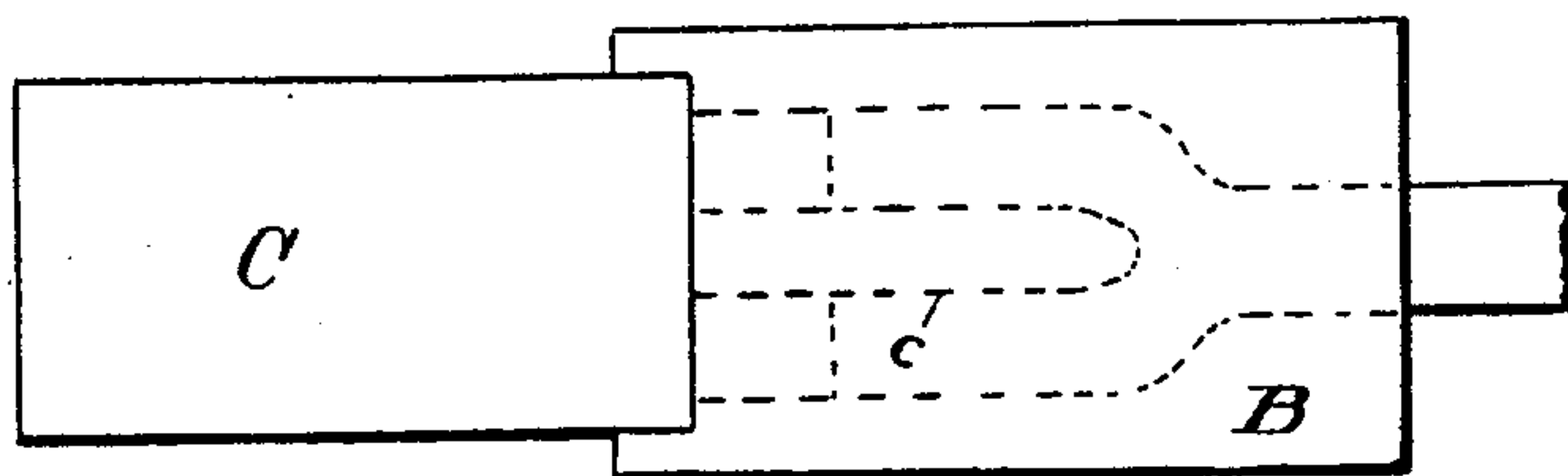
-FIG. VI-



-FIG. VII-



-FIG. VIII-



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# UNITED STATES PATENT OFFICE.

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## METHOD OF MAKING JAW-RODS.

SPECIFICATION forming part of Letters Patent No. 680,218, dated August 13, 1901.

Application filed March 3, 1900. Serial No. 7,147. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN R. BLAKESLEE, a citizen of the United States, and a resident of Glenville, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Methods of Manufacturing Jaw-Rods, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to methods of forming jaw-rods having two parallel jaw members and a shank integral therewith; and it consists of a series of steps hereinafter fully described.

In the annexed drawings, Figure I represents a side elevation of two bars or pieces of metal, illustrating their relation during the first step of the process of construction. Fig. II represents a similar elevation illustrating the form of the structure after the second and third steps have been carried out. Fig. III illustrates a plan view of same. Fig. IV represents a perspective view of said structure, illustrating its form after having been submitted to the fourth step of the operation and prior to the last step. Fig. V represents a blank at one stage and illustrating a secondary step. Fig. VI represents a partial vertical cross-section of a two-part female die, showing the blank jaw-rod therein and a side elevation of the combination male and female die used in conjunction therewith. Fig. VII represents a plan view of the lower half of said female die, the blank located therein, and the combination male and female die. Fig. VIII represents a side elevation of the dies and blank located therein.

Two metal bars are first taken and laid longitudinally upon and parallel with one another, as shown in Fig. I. The portions of said bars intermediate of the extremities so formed are then welded to each other, forming thereby a structure having two bifurcated extremities, each of which consists of two parallel contiguous and unwelded members. Said intermediate portion is then reduced in cross-section, as shown in Figs. II and III, which may be accomplished in any of the well-known ways in which such operations are performed. The double-end blank so formed is then

grasped at one end, as illustrated in Fig. IV, and is forcibly brought against a wedge-shaped anvil A, by means of which the bifurcated end may be separated, as shown. Said end is then laid in a suitably-constructed two-part female die B and then operated upon by a die C, having a male portion *c* and a female portion *c'* of semicircular conformation. The male portion *c* is permitted to enter the previously-opened end blank, as shown in Fig. VI, and then inserted so as to spread the bifurcations and cause the semicircular portion *c'* to upset the metal of the extreme ends of the two parts, whereby the rod is given its rounded finished form. (Shown in Fig. IV.) The dimension of the final two-part die and the combination-die are made such as to properly effect the desired result, such proper portioning being well understood by those skilled in the art. After the above-described operation the finished rod is withdrawn from the die B, turned around and grasped at such finished end, and the remaining unfinished end treated as above described. Upon completion of the above operation the rod is withdrawn and the structure divided at the welded portion, as indicated by the dotted lines, Fig. IV, thereby forming two jaw members having an integral shank.

The operation above described permits of the complete formation of both the jaws on each end of the blank before dividing the structure, thereby greatly increasing the facility of handling, and reducing the cost of manufacture to a marked extent.

What I claim is—

1. The method of forming jaws of jaw-rods, which consists in welding together two parallel pieces of metal intermediately of their extremities whereby the two rod portions will be formed by a single welding operation and each extremity of the structure so formed is caused to consist of two parallel unwelded portions, separating the two parallel members of each such extremity to form the two jaw members, and dividing the structure at the welded portion, substantially as set forth.

2. The method of forming jaws of jaw-rods, which consists in welding together two parallel pieces of metal intermediately of their extremities whereby the two rod portions will

be formed by a single welding operation and each extremity of the structure so formed is caused to consist of two parallel unwelded portions, reducing the cross-section of such  
5 intermediate welded portion, separating the two parallel members of each such extremity to form the two jaw members, and dividing

the structure at the welded portion, substantially as set forth.

Signed by me this 1st day of February, 1900. 10  
JOHN R. BLAKESLEE.

Attest:

D. T. DAVIES,  
A. E. MERKEL.