

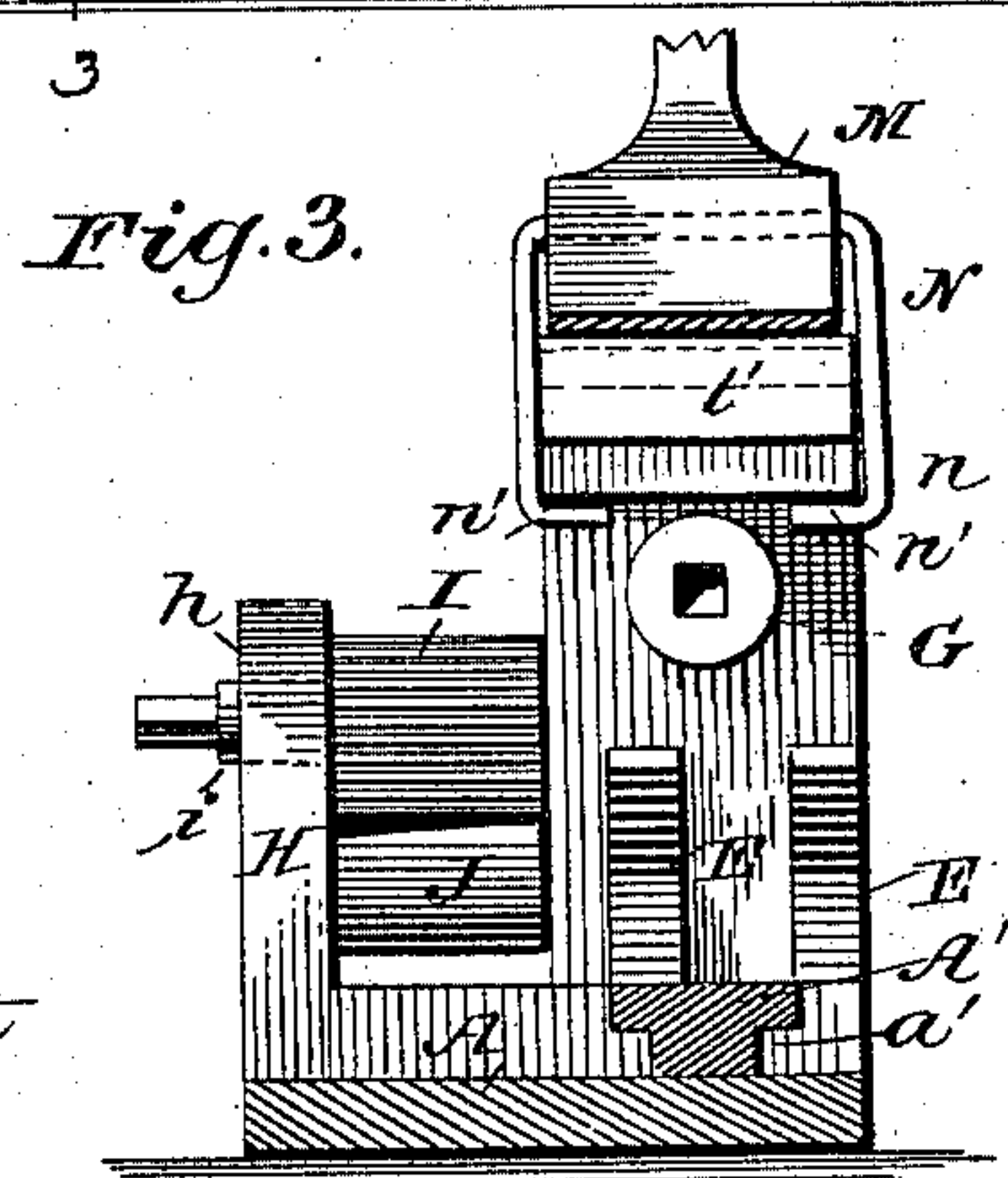
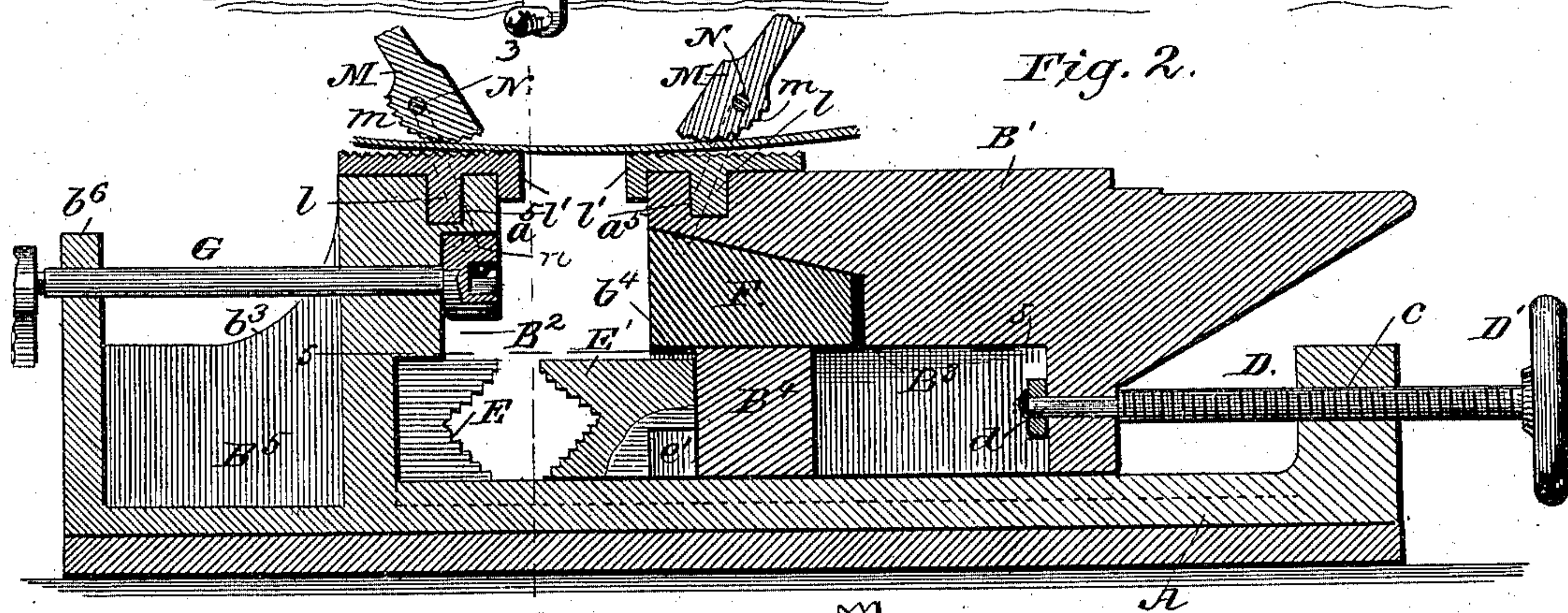
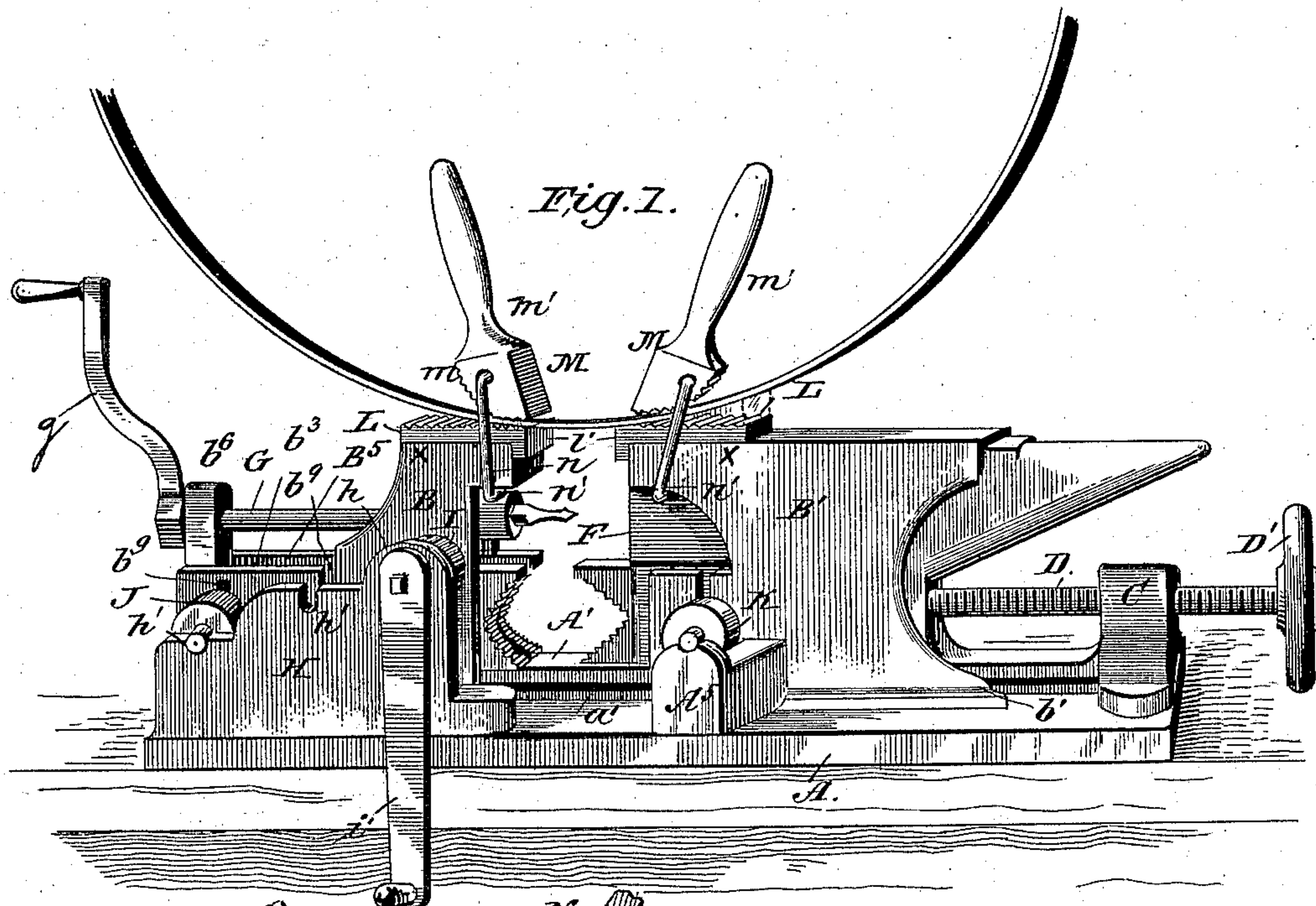
(No Model.)

2 Sheets—Sheet 1.

R. N. & J. J. BOGGS.  
BLACKSMITH'S COMBINATION TOOL.

No. 575,293.

Patented Jan. 12, 1897.



WITNESSES:

J. Edw. Luchette  
J. B. Shaw

INVENTORS

R. N. Boggs

J. J. Boggs

BY

Fred G. Dieterich & Co.  
ATTORNEYS



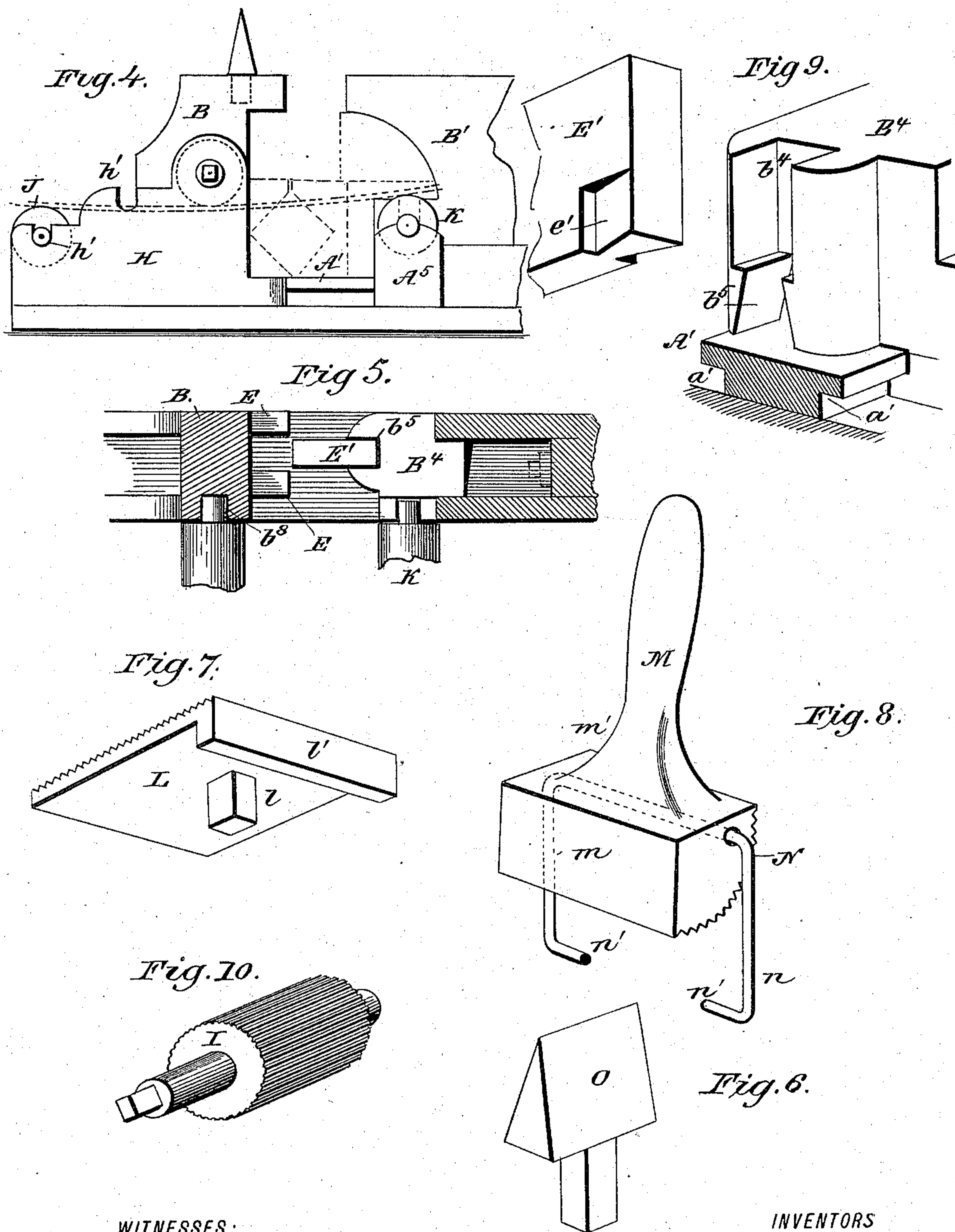
(No Model.)

2 Sheets—Sheet 2.

R. N. & J. J. BOGGS.  
BLACKSMITH'S COMBINATION TOOL.

No. 575,293.

Patented Jan. 12, 1897.



WITNESSES:

J. Edw. Lockett  
J. B. Shaw

INVENTORS

R. N. Boggs

J. J. Boggs

BY

Fred G. Dieterich & Co.  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

RICHARD N. BOGGS AND JOSEPH J. BOGGS, OF MOSSY CREEK, GEORGIA,  
ASSIGNORS OF ONE-HALF TO WILLIAM I. HOBBS AND JOHN E. REDWINE,  
JR., OF GAINESVILLE, GEORGIA.

## BLACKSMITH'S COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 575,293, dated January 12, 1897.

Application filed July 11, 1896. Serial No. 598,793. (No model.)

*To all whom it may concern:*

Be it known that we, RICHARD N. BOGGS and JOSEPH J. BOGGS, residing at Mossy Creek, in the county of White and State of Georgia, have invented a new and useful Blacksmith's Combination-Tool, of which the following is a specification.

Our invention is in the nature of a combined tool comprising joint tire shrinking and bending devices, a drill, anvil, ordinary vise, pipe-vise, and band-shrinking devices; and such invention primarily has for its object to provide a combination of devices of this character of a very simple and economical construction, in which the several parts are compactly and adjustably arranged in such a manner as to be easily manipulated and effectively serve for its intended purpose.

With other objects in view, which will hereinafter be specifically referred to, our invention consists in a blacksmith's tool comprising the peculiar combination and novel arrangement of parts such as will be first described in detail and then pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of our invention, showing the parts arranged for shrinking tires. Fig. 2 is a longitudinal section of the complete devices, the several parts being in the position shown in Fig. 1. Fig. 3 is a transverse section taken on the line 3 3 of Fig. 2. Fig. 4 is a detail side elevation illustrating the manner in which the parts are used for bending tires. Fig. 5 is a horizontal section on the line 5 5 of Fig. 2, the parts being adjusted for use as a pipe-vise. Fig. 6 is a detail view of one of the detachable "hardy" members. Figs. 7 and 8 illustrate, respectively, the removable shrinker bed-plate and the cam-lever. Fig. 9 is a view illustrating the manner of connecting the removable pipe-vise section to the movable anvil-section, and Fig. 10 illustrates in detail one of the removable tire-bending rolls hereinafter referred to.

Referring now to the accompanying drawings, in which the same letters of reference indicate like parts in all the figures, A indicates a suitable base, upon one end of which

is held a fixed anvil-jaw B, while on the other end is mounted the movable anvil-jaw B', such jaw B' being held to slide on a longitudinal central guide member A', having undercut portions *a'*, in which the guide-lips *b'* of the jaw B' fit, as clearly shown in Fig. 9.

At one end the base A has a fixed bearing C, provided with an internally-threaded screw-way *c*, through which the screw-shaft D passes, which shaft has its inner end *d* swivelly connected to the anvil-jaw B', while its outer end has a hand-wheel or crank member D', as shown, it being obvious that by turning the shaft D in reverse directions the removable jaw B' can be slid back and forth on its guides.

By referring now more particularly to Fig. 2 of the drawings it will be seen the fixed jaw B has an offset portion B<sup>2</sup> to accommodate the projecting pipe-vise jaws E E, which are held spaced apart, so as to admit of the entrance therebetween of the single pipe-jaw E', secured to the sliding anvil-jaw B', and thereby admit of such jaws gripping a pipe of very small diameter when necessary.

The jaw E' is detachably connected to the jaw B', and for such purpose the said jaw B' has a chambered portion B<sup>3</sup> and a lower solid extended portion B<sup>4</sup>, which has a vertical groove *b<sup>4</sup>*, having at the lower end a dovetail portion *b<sup>5</sup>*, such grooved portions receiving the rear end of the jaw E', which is also provided with a dovetailed portion *e'* to engage the dovetail portion *b<sup>5</sup>*, as clearly shown in Fig. 9, such dovetail connections being provided to keep the jaw E' from pulling out of the member B<sup>4</sup>, such jaw E' when in use being held from pulling upward by the wedge-block F, which enters the chamber B<sup>3</sup>, as shown.

The fixed jaw B is formed with side extensions *b<sup>3</sup> b<sup>3</sup>*, which are joined by a cross member *b<sup>6</sup>* to form a chamber B<sup>5</sup>, which can be utilized to receive the bits, the hardy, or other attachments presently referred to.

G indicates a drill-shaft journaled in the inner end of the fixed jaw B and the cross member *b<sup>6</sup>*, the front end projecting out under the clamp-face of the said jaw B and provided with a bit chuck or socket, while the outer end has a suitable crank *g*, as shown,



it being manifest by reference to Fig. 2 that the clamp-block is so arranged as to also form the clamp or bearing member for the bit to work against.

5 H indicates a vertical extension secured to the base A or made integral with the fixed jaw portion B, and which is arranged parallel with the said jaw portion B, as clearly shown in Fig. 3. At the inner end the said  
10 extension H has an apertured bearing *h* to receive the pintle *i* of a corrugated roller *l*, the inner end of which is journaled in a bearing-socket *b*<sup>8</sup> in the jaw B, the said pintle *i* being extended to receive a crank *l'*. (See  
15 Fig. 1.) The extension H is also provided with one or more socket-bearings *h'*, in which and similar bearings *b*<sup>9</sup>, formed in the rear extensions of the anvil-jaw B, is detachably held a smooth-faced roller J. The rollers J  
20 and I are held in line with a single roller K, journaled in a bearing A<sup>5</sup>, formed integrally with the jaw B'.

The rollers I, J, and K serve as means for bending the tire, it being manifest that by  
25 passing the tire under the central roller and over the end rollers and adjusting the roll J and moving the anvil-jaw B' back and forth such tire-bending means can be set to make a large or small tire.

30 L L indicate a pair of grip-jaws which are adapted to be detachably secured to the top of the anvil-jaws B B', they being held securely in position by the pendent shank portions *l l*, which seat in sockets *a*<sup>5</sup> *a*<sup>5</sup> in the  
35 said jaws B B', and the pendent angle portions *l' l'*, which project over the clamp edges of such jaws B B', as clearly shown.

M M indicate a pair of clamp or cam levers, each of which consists of a segmental corrugated clamp portion *m*, a handle member *m'*,  
40 and a strong spring-wire bail member N, which is eccentrically hung in the cam portion *m* and has its ends *n n* formed with inturned fingers *n'*, adapted to project under the nose  
45 or extended clamp ends of the anvil-jaws, as clearly shown in Fig. 1.

O indicates one of the hardies, which are adapted to fit the sockets in the top of the anvil-jaws when the grip members are removed.

50 The manner in which the tire-shrinking devices are used will be clearly understood by reference to Fig. 1. It will be observed that as the tire is gripped between the serrated faces of the members L and M the serrations or teeth will bite the tire as it is being shrunk, it being manifest that, as the tire is firmly gripped, by moving up the jaw B' and hammering the tire at the points *x x* will  
55 create a kink in the tire and thereby make it shorter without cutting it, thereby avoiding one of the greatest troubles there is in the operation of shrinking tires of any kind. It should be stated that a block of wood or metal can be placed on the member L above  
60 the point *x* and under the tire when it is desired to hammer it while red-hot at this point.

From the foregoing description, taken in

connection with the accompanying drawings, it is thought the advantages and complete operation will be readily apparent.

Our invention combines a series of tools such as is now required in a well-equipped blacksmith-shop, combined in such a manner as to take up a minimum amount of space and admit of an easy and effective operation.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. An anvil having a fixed and a sliding jaw, said jaws having their clamp portions projected, and having grip members on their upper face and a hand-operated cam-lever, having bails hung eccentrically thereon, said bails having extensions adapted to extend under the projecting ends of the anvil-jaws as set forth.

2. The combination in a blacksmith's anvil as described, with the fixed jaw and the sliding jaw, said jaws having projecting clamp ends, and sockets in the upper face, of the grip-plates having shanks adapted to fit the jaw-sockets, and the cam-levers, having pendent bail members eccentrically hung in the said cam members and having inturned portions adapted to extend under the projecting ends of the anvil-jaws as and for the purposes shown and described.

3. As an improvement in blacksmiths' anvils, the combination of the fixed anvil-jaw, having a grip-plate detachably secured upon the upper face, of a longitudinally-movable jaw having a grip-plate on its upper face, and clamp-levers having bail portions adapted to straddle the said grip members and provided with pendent members adapted to hook under the anvil-jaws substantially as shown and described.

4. In an appliance as described, the combination with the fixed jaw having stationary vise members, of the sliding jaw, having a recess or pocket, a vertical channel-way opposing the fixed vise members, a vise detachably held in the said channel-way and the wedge-block for holding such detachable vise member from vertical movement, as and for the purposes set forth.

5. The combination with the fixed anvil-jaw having fixed vise members, of the movable jaw, having a vertical channel-way having a horizontal inwardly-extending wedge portion, a detachable vise member having its rear end made to slide vertically in the said channel-way and having dovetail recesses in the lower end to receive the aforesaid wedge portions and the clamp-block for holding the said detachable vise member from vertical movement all being arranged substantially in the manner and for the purposes described.

6. A blacksmith's tool or appliance, consisting of a base having a fixed member having an anvil-jaw portion a pocket and a bracket, and two or more rolls disposed horizontally at one side of the fixed member, said walls having their axis in different planes, a drill-shaft



5 journaled in the bracket and the anvil and  
jaw and having its drill-socket disposed be-  
low the front end of such jaw, said base mem-  
ber having a longitudinal flanged guide, a  
movable anvil-jaw held to slide on the said  
guide, screw-operated means for adjusting the  
said movable jaw such jaw having at one side  
a horizontally-disposed tire-bending roll, each  
anvil-jaw having a socket, grip-plates having  
10 shanks adapted to fit such sockets, and hand-  
lever clamp devices having bail portions ec-

centrically hung therein, having projecting  
members adapted to straddle the anvil-jaws  
and extend thereunder all being arranged  
substantially as shown and for the purposes 15  
described.

RICHARD N. BOGGS.  
JOSEPH J. BOGGS.

Witnesses:

C. H. SAUNDERS,  
W. I. HOBBS.