

(No Model.)

J. B. BAIRD & J. HOLLORAN.  
SAW GUMMER.

No. 452,157.

Patented May 12, 1891.

Fig. 1.

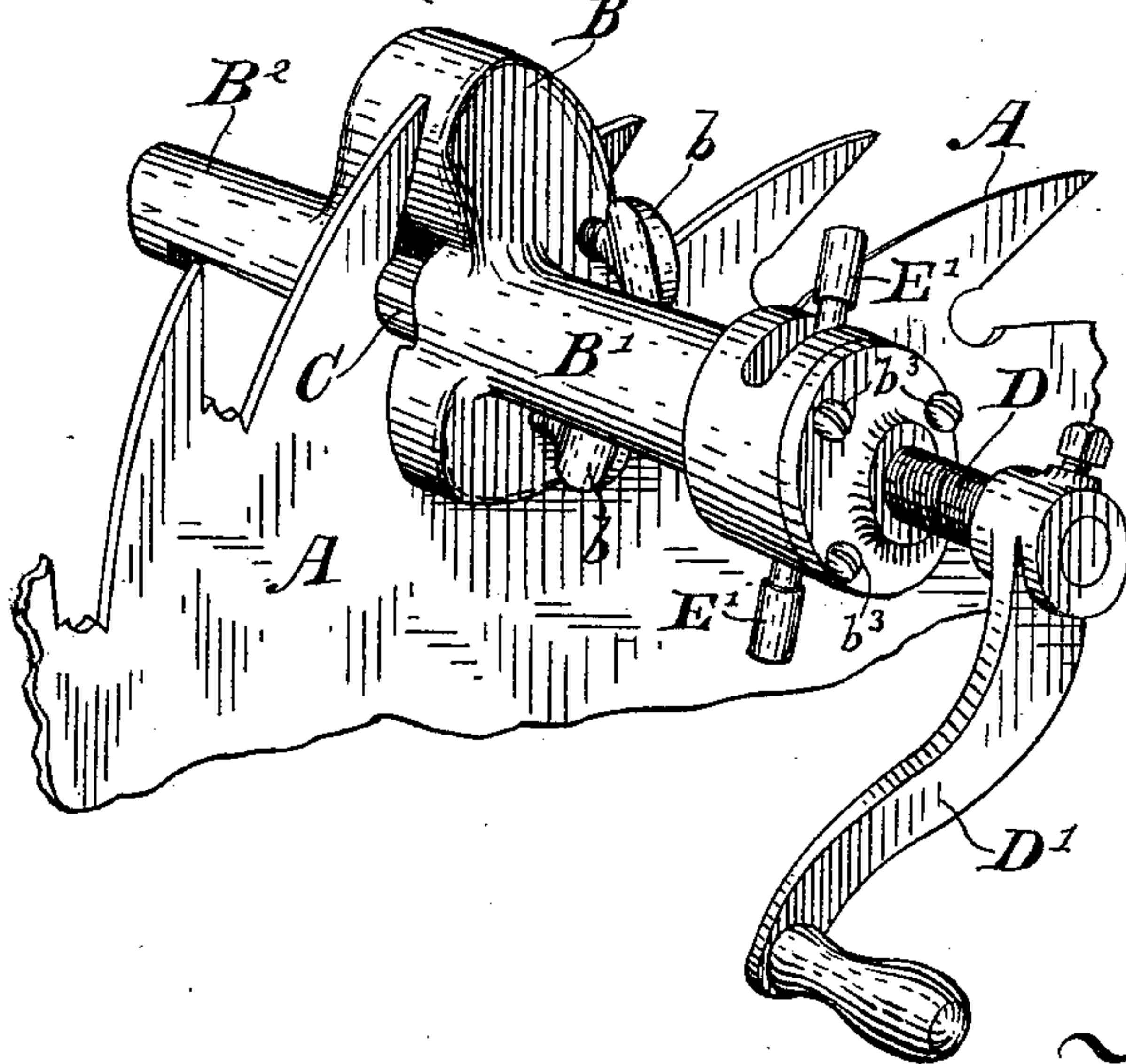


Fig. 2.

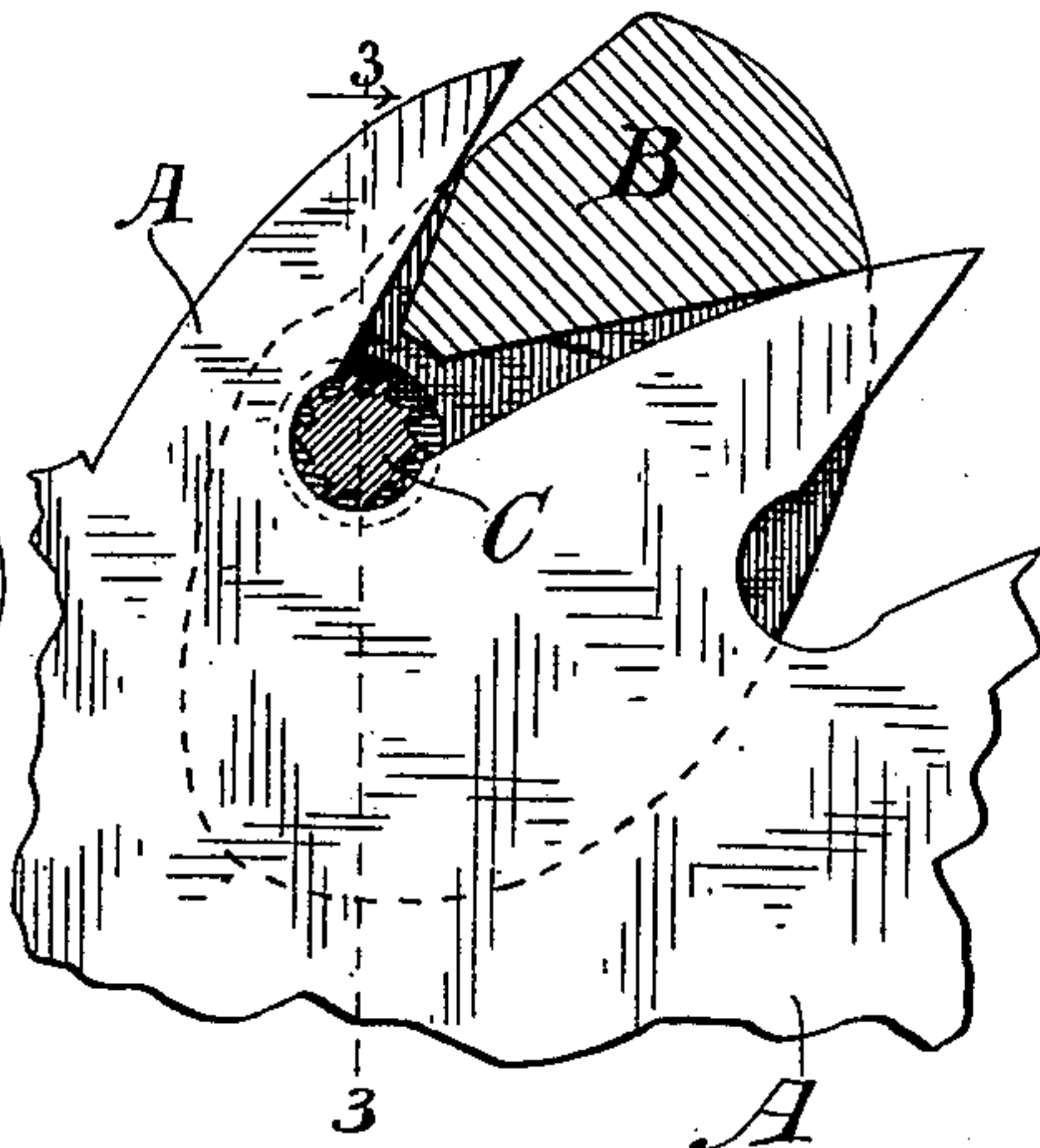


Fig. 3.

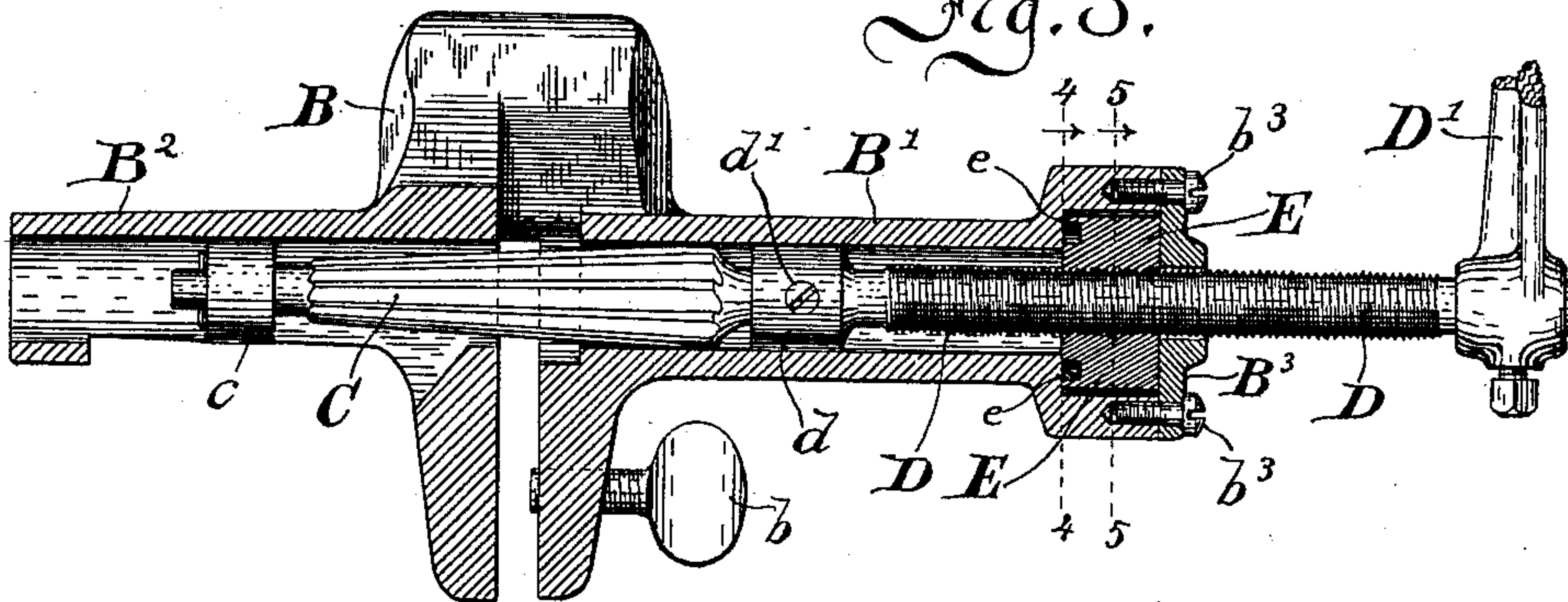


Fig. 4.

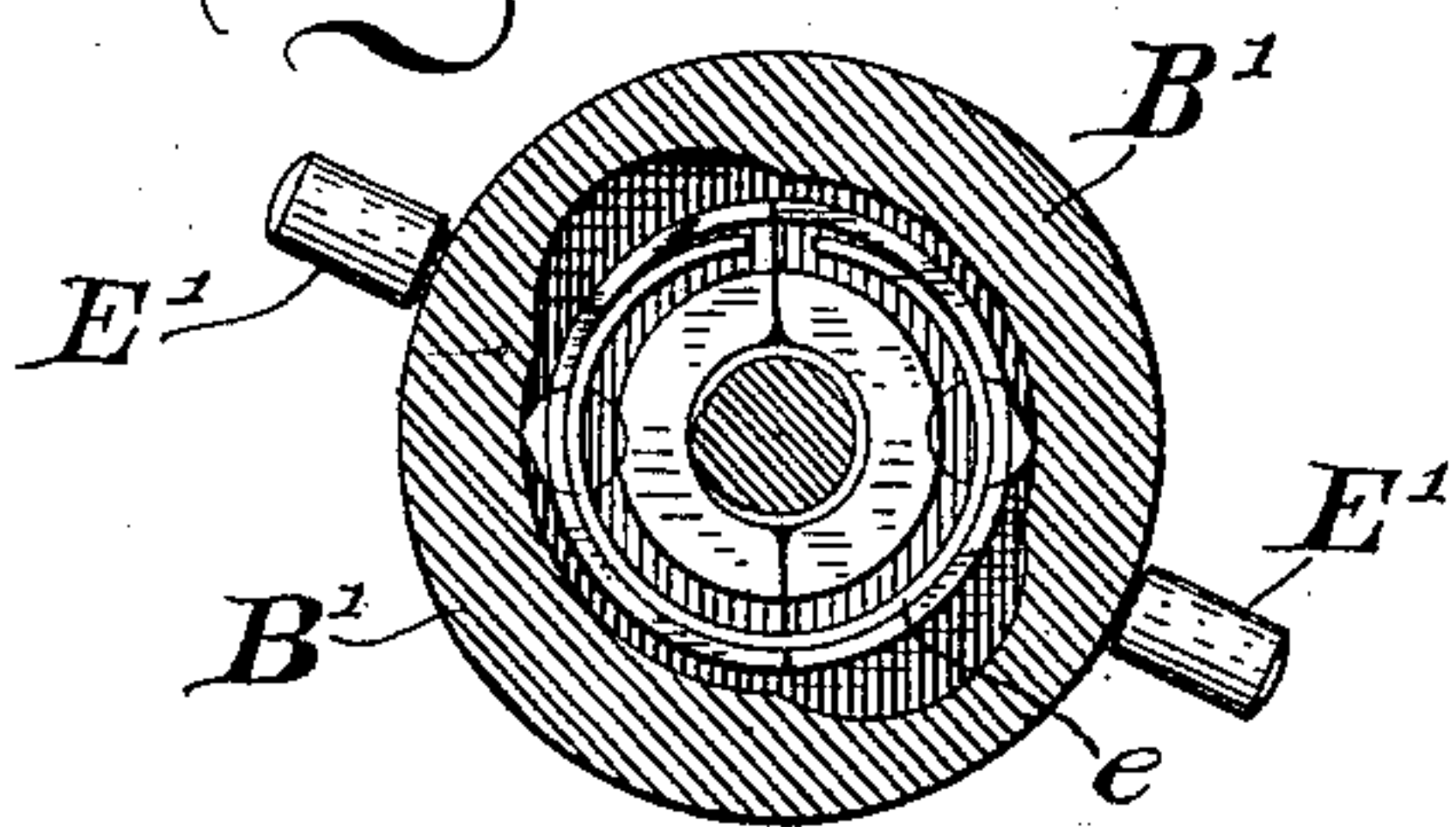
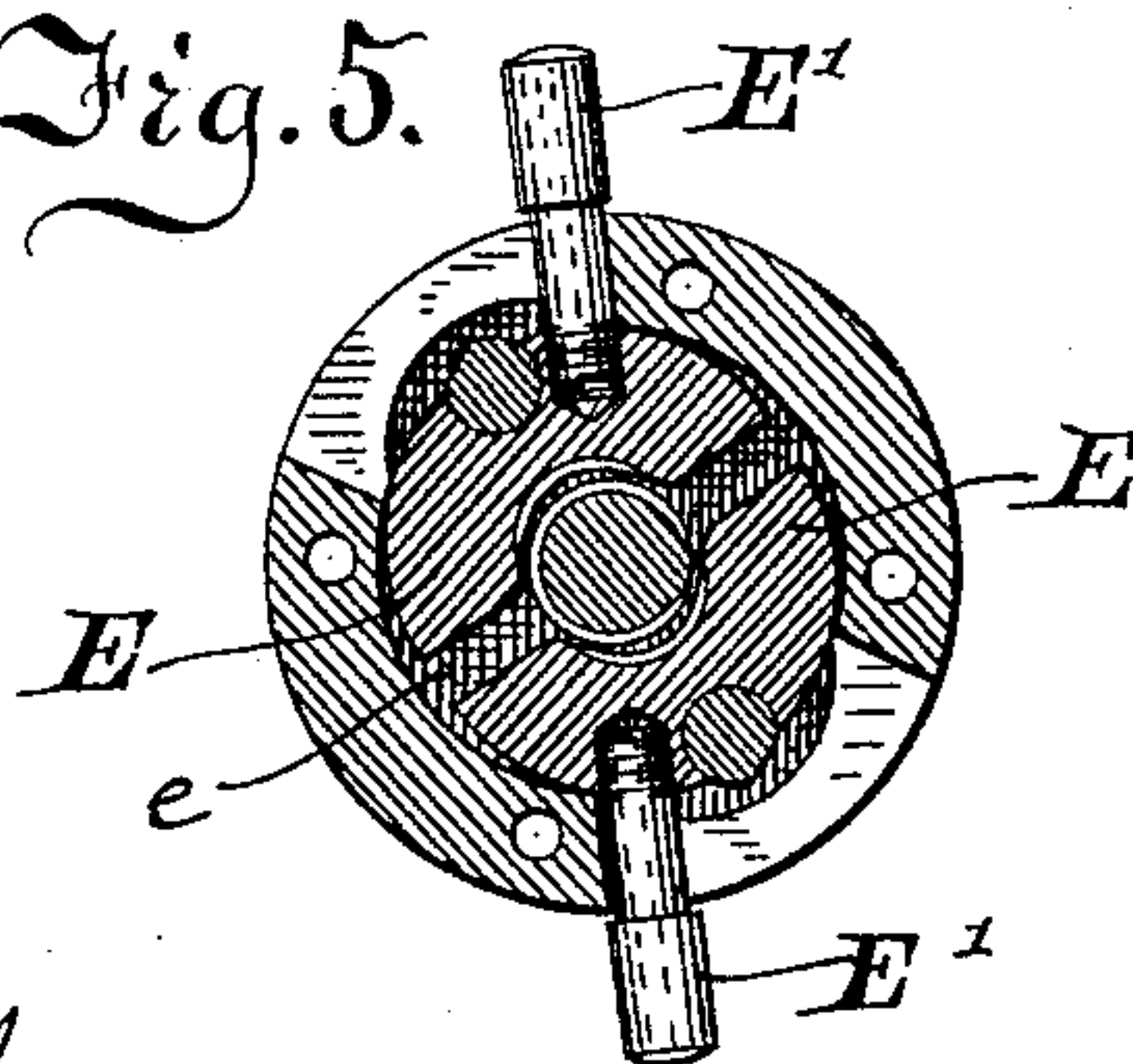


Fig. 5.



WITNESSES.

Chas. H. Leonard  
Gruenewald

James B. Baird and John Holloran, INVENTORS.  
Chas. W. Bradford, ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JAMES B. BAIRD AND JOHN HOLLORAN, OF NOBLESVILLE, INDIANA.

## SAW-GUMMER.

SPECIFICATION forming part of Letters Patent No. 452,157, dated May 12, 1891.

Application filed January 30, 1891. Serial No. 379,657. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES B. BAIRD and JOHN HOLLORAN, citizens of the United States, residing at Noblesville, in the county of Hamilton and State of Indiana, have invented certain new and useful Improvements in Saw-Gummers, of which the following is a specification.

Our said invention relates to that class of saw-gummers which are secured directly upon the saw-blade, and in which the cutting-tool is tapered and arranged to advance transversely of the saw-blade as the operation of cutting progresses, thus bringing continually a larger portion of said cutting-tool into operation.

It consists in certain details of construction, whereby the tool is enabled to be more expeditiously removed or replaced, and also whereby it is supported with great firmness and steadiness while in operation, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of a fragment of saw with our improved gummer attached thereto; Fig. 2, a transverse sectional view alongside the fragment of saw-blade; Fig. 3, a longitudinal sectional view showing the tool in elevation; Fig. 4, a transverse sectional view looking toward the right from the dotted line 4 4 in Fig. 3, and showing an elevation of the inner end of the clamping-nut, and Fig. 5 a similar sectional view on the dotted line 5 5.

In said drawings, the portions marked A represent a fragment of saw-blade; B, the main casting or frame of our improved gummer; C, the cutting-tool; D, the screw-shaft by which said tool is driven, and E the clamping-nut which engages with said screw-shaft.

The fragment of saw A is of course only shown for purposes of illustration, and needs no special description.

The casting or frame-work B is only peculiar in minor details. It has two barrels B' B<sup>2</sup> extending out in opposite directions from its central portion, and that barrel B' which incloses the screw-shaft is entirely closed, so

that dirt is effectually excluded, while that barrel B<sup>2</sup> in which the cutting-tool travels is open on its lower side, thus permitting the ready egress of the chips which are formed by said tool in gumming the saw. An enlarged portion upon the end of the barrel B', having a cap B<sup>3</sup>, contains the clamping-nut for the screw-shaft, as will be presently described. Two heavy clamping-screws *b b* are provided, by which the gummer may be clamped rigidly upon the saw.

The cutting-tool C, as shown in Fig. 3, is tapered and grows gradually larger from its point to its heel. It is provided at the ends with supporting-collars *c d*, which fit closely in the barrels of the main casting or frame, and said cutting-tool is thereby rigidly supported. The collar *c* may be mounted loosely upon the forwardly-projecting stem on the cutting-tool; but the rear collar *d* is commonly or preferably formed integrally with the screw-shaft, and thus forms also the socket on said screw-shaft, into which the rearwardly-projecting stem on the cutting-tool is inserted, and to which it is secured, preferably by a set-screw, as shown.

The screw-shaft D carries the cutting-tool, having a socket *d* therefor, as just described, and, preferably, a set-screw *d'* by which a rigid union is effected. When it is turned, it not only turns the cutting-tool, but forces it forward at the same time, thus continually bringing a larger and larger portion of said cutting-tool into operation, as will be readily understood. This feature, however, is not of our invention. Any ordinary crank D' may be secured to the end of this shaft, by which it may be turned.

The clamping-screw E is composed of two parts placed in a chamber in the outer end of the barrel B' of the main frame or casting, and its outer surface is eccentric in formation, as is also the interior surface of said chamber. Pins or thumb-pieces E' extend through slots in a circumferential wall of said chamber to the outside, so that the two halves of said nut may be manipulated without opening the chamber, which is generally closed by a cap B<sup>3</sup>, secured in place by screws *b<sup>3</sup>*. A suitable spring *e* is suitably connected to the halves of the nut, preferably by being in-



serted in a groove cut in one end thereof, and serves to throw the halves of the nut apart when turned to the position which permits it. When turned to this position, the screw-shaft  
 5 may be passed freely through the nut, and it and the cutting-tool may be withdrawn altogether from the machine or returned to position for a new operation without disturbing any other part. When, however, the nut is  
 10 turned in the other direction, the two halves will be closed in against the screw-shaft, and said screw-shaft then runs therein in the same manner that it would if this were a solid nut. The operator, therefore, only has to turn the  
 15 halves of this nut in one direction or the other by means of the projecting pins or thumb-pieces E' in order to insure that the screw-shaft shall be held by or released therefrom.

20 Having thus fully described our said invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a saw-gummer, of the main frame or casting having barrels in  
 25 which the cutting-tool is placed, and said cutting-tool provided with collars or enlarged portions at both ends which fit closely within said barrels, whereby said cutting-tool is rigidly supported, substantially as set forth.

30 2. The combination, in a saw-gummer, of the main frame or casting, the cutting-tool, a screw-shaft for driving said cutting-tool, a chamber in the frame having an interior cam formation, and a nut composed of two parts  
 35 and similarly formed and thereby adapted to clamp or release said screw-shaft, substantially as set forth.

3. The combination, in a saw-gummer, of the main frame or casting, the cutting-tool, a screw-shaft for driving said cutting-tool, a  
 40 cam-chamber in the frame surrounding said screw-shaft, a parted nut located within said chamber, a cam formation on the exterior, and pins or thumb-pieces extending through slots, whereby it may be operated, substan- 45  
 tially as set forth.

4. The combination, in a saw-gummer, of the main frame or casting, the cutting-tool, a screw-shaft for driving said cutting-tool, a  
 50 cam-chamber in the frame surrounding said screw-shaft, a parted nut located within said chamber, a cam formation on the exterior, pins or thumb-pieces extending through slots, whereby it may be operated, and a spring  
 55 adapted to engage with and separate the halves of the nut when released.

5. The combination, in a saw-gummer, of a main frame or casting having barrels in which the cutting-tool and its driving-shaft are placed, and said cutting-tool and shaft, that  
 60 bearing into which the cutting-tool travels as the gumming progresses having an opening or slit through its side through which the chips formed by the tool in operation are discharged, substantially as set forth. 65

In witness whereof we have hereunto set our hands and seals, at Indianapolis, Indiana, this 26th day of January, A. D. 1891.

JAS. B. BAIRD. [L. S.]  
 JOHN HOLLORAN. [L. S.]

Witnesses:

CHESTER BRADFORD,  
 E. W. BRADFORD.