

No. 803,804.

PATENTED NOV. 7, 1905.

P. F. BOLTON.
CUTTER BLADE.

APPLICATION FILED MAR. 10, 1904.

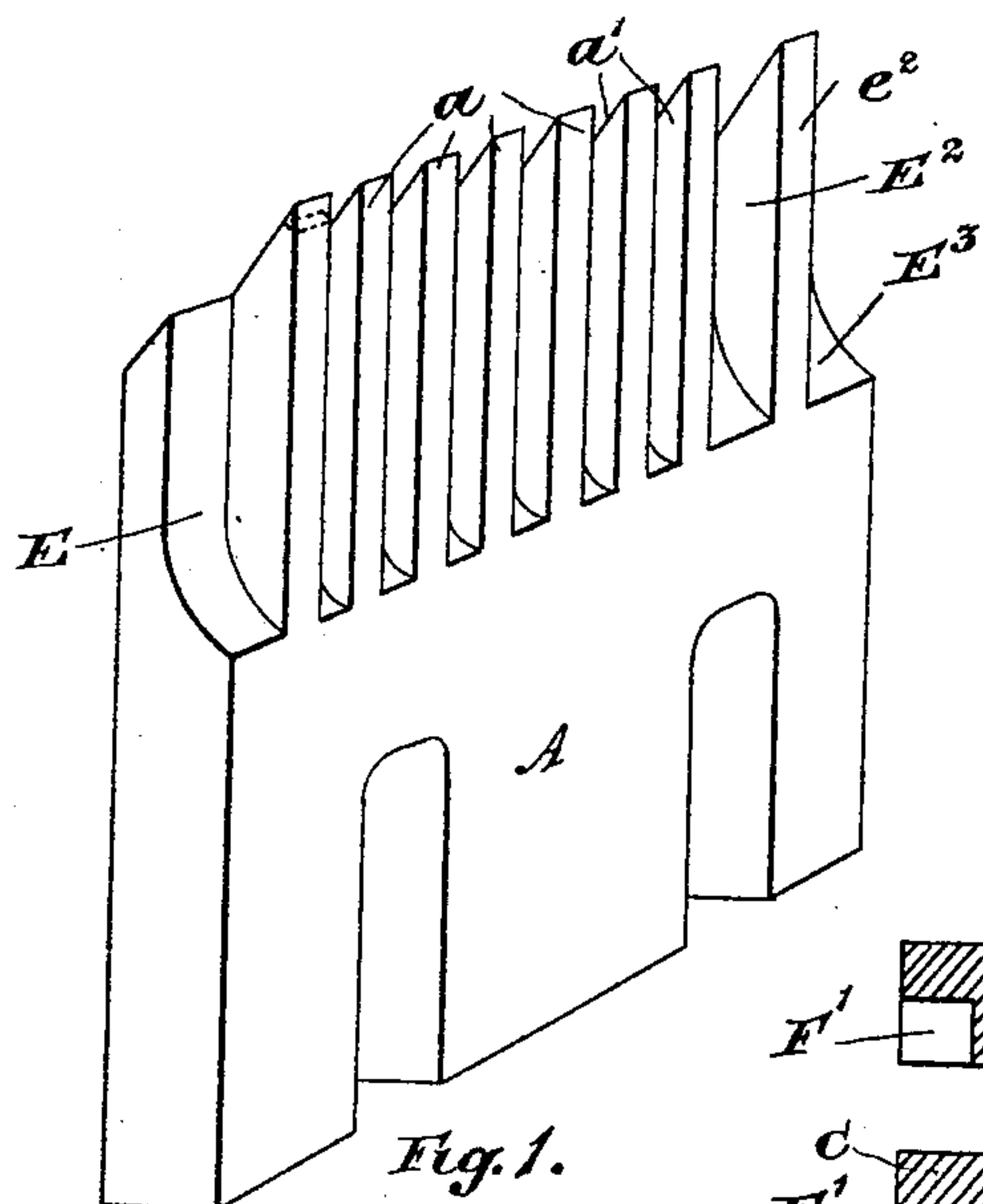


Fig. 1.

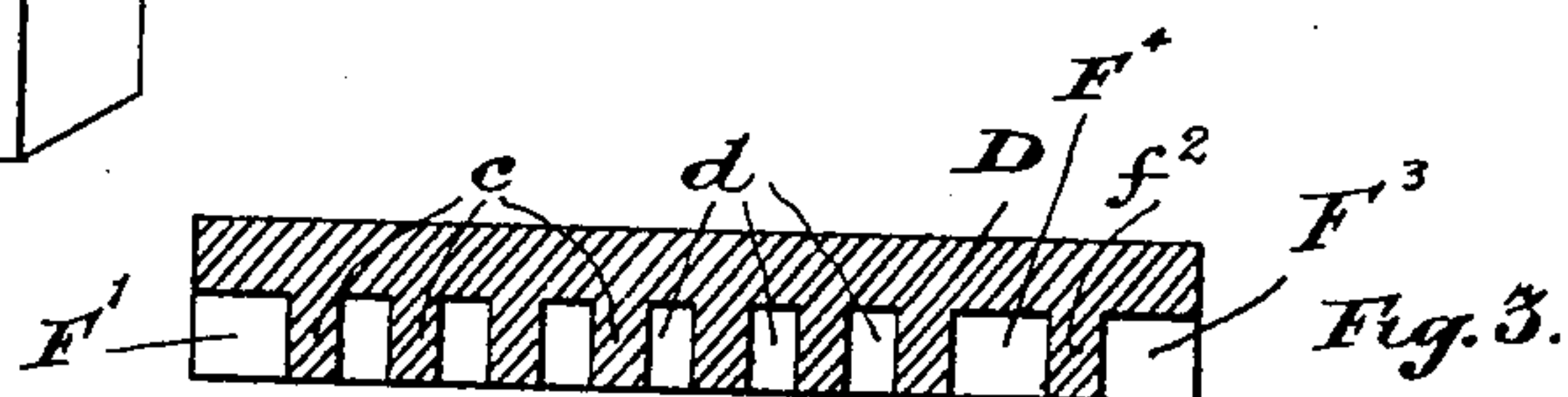


Fig. 3.

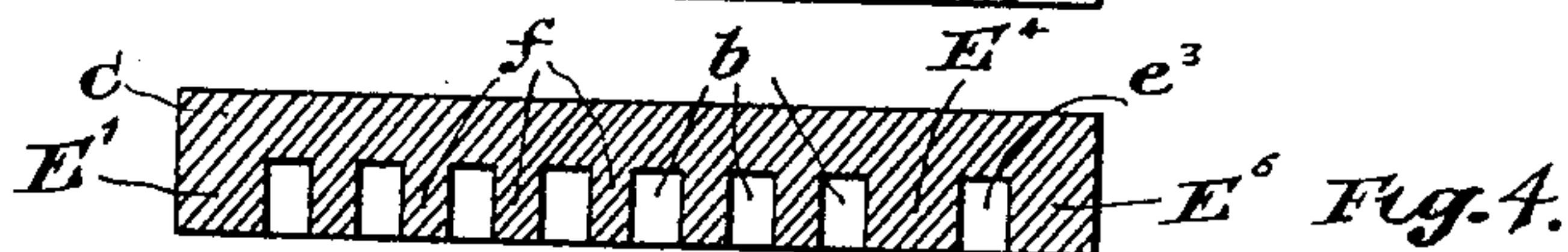


Fig. 4.

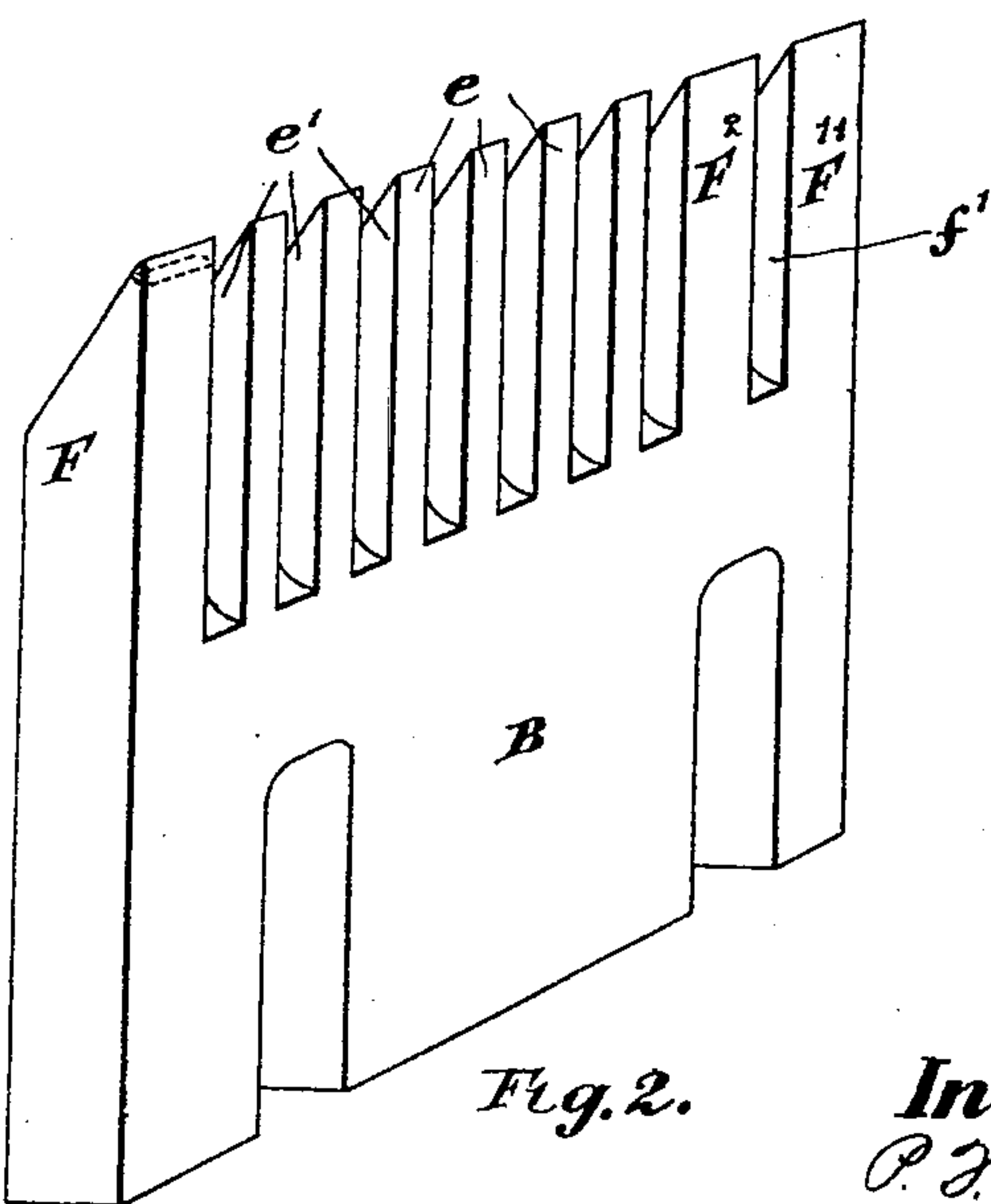


Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE

PAUL FRANKLIN BOLTON, OF SCARBORO JUNCTION, CANADA.

CUTTER-BLADE.

No. 803,804.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed March 10, 1904. Serial No. 197,600.

To all whom it may concern:

Be it known that I, PAUL FRANKLIN BOLTON, machinist, a subject of the King of Great Britain, residing in the village of Scarboro Junction, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Cutter-Blades, of which the following is a specification.

My invention relates to improvements in cutter-blades and articles produced thereby; and the object of my invention is to provide a cutter-blade that will tongue and groove different widths of stuff, thus rendering it unnecessary to have a number of separate knives for this purpose.

Another object is to provide a novel compound lumber manufactured thereby. I use the said cutter-blades to manufacture what is known as "compound lumber"—that is, lumber composed of a base of inferior wood provided with tongues and grooves and a facing of more valuable wood similarly constructed. The advantages or improvements possessed in compound lumber manufactured by my cutter-blades are as follows: first, additional strength on the face side and on the corners by providing the lumber with wide tongues and grooves at its edges; second, greater glue-surface on the sides of lumber, where it is required most; third, possibility to work the product to a finer finish by planing freely without the fear of exposing the base of inferior wood.

The construction of my cutter-blades will be hereinafter fully described.

Figure 1 is a perspective view of a small cutter-blade used for manufacturing the facing. Fig. 2 is a perspective view of a cutter-blade used for manufacturing the base. Fig. 3 is a cross-section through the base-stuff manufactured by the base-cutter blade, and Fig. 4 is a cross-section through the facing-stuff manufactured by the facing-cutter blade.

In the drawings like letters of reference indicate corresponding parts in each figure.

The cutter-blades are attached in any suitable manner to the ordinary cylinder-head, (not shown,) and said cylinder-head is longitudinally shifted in the ordinary manner, so that the cutter-blades may be adjusted for different widths of stuff.

A is the body of the facing-cutter blade, which is provided with a series of narrow cutters a , preferably of the same width which manufacture the grooves b in the facing-piece C, into which fit the tongues c of the base-

piece D, manufactured by the base-cutter blade B. The base-cutter blade B is provided with a series of narrow cutters e , equal in width to the cutters a , which manufacture the grooves d in the base-piece D and into which fit the tongues f of the facing-piece C, manufactured therein by the facing-cutter blade A. The spaces a' between the cutters a are equal in size to the spaces e' between the cutters e , and it will of course be understood that the tongues f are manufactured by the facing-cutter blade A because of the spaces a' and that the tongues c are manufactured by the base-cutter blade B because of the spaces e' . Preferably at the guard end of the facing-cutter blade A is a space E , which is wider than the spaces a' and by means of which the large tongue E' is manufactured in the facing-piece C.

e^2 is a cutter preferably of the same width as the cutters a , which is separated therefrom by a space E^2 wider than the spaces a' . Between the cutter e^2 and the end of the facing-cutter blade A is a space E^3 wider than the spaces a' . Because of the spaces E^2 and E^3 the wide tongues E^4 and E^5 are manufactured in the facing-piece C, and because of the cutter e^2 the groove e^3 is manufactured in said facing-piece.

Preferably at the guard end of the base-cutter blade B is a cutter F , which is wider than the cutters e . The cutter F manufactures the groove F' in the base-piece D, into which fits the tongue E' . At the opposite end of the base-cutter blade B is a cutter F'' wider than the cutters e .

F^2 is a cutter wider than the cutters e and separated from the cutter F'' by a space f' , preferably of the same width as the spaces e' .

Because of the cutters F'' and F^2 the grooves F^3 and F^4 are manufactured in the base-piece D, and into which fit the tongues E^5 and E^4 . Because of the space f' the tongue f^2 is manufactured in the base-piece D and same fits into the groove e^3 . By reason of the wide tongues E' , E^4 , and E^5 fitting in the grooves F' , F^4 , and F^3 it will be understood that the facing-piece C—for instance, oak—will overlap part of the sides of the base-piece D, which may be made of pine or some other soft wood. By reason of the said wide tongues and grooves it will be understood that I give the compound lumber additional strength at the corners.

The cutter-blades just described will manufacture stuff two and three-eighths inches and two and thirteen-sixteenths inches wide without necessitating the use of two separate cut-

ter-blades for this purpose, nor is it ordinarily necessary when cutter-blades similar to the ones just described are used to shift same.

Although not essentially so, the spaces E, E², and E³ are of the same width and the cutters F, F², and F'' are of equal width. Each cutter-blade must be provided with one wide tongue or cutter at one end and two wide tongues or cutters at the other end. I preferably construct the cutters *a* and *e* and *e*² and the spaces *a'*, *e'*, and *f'* so that they will manufacture narrow tongues and grooves, so as to increase the glue-surface for the compound lumber to insure the facing and base being firmly held together.

It will of course be understood that to manufacture my compound lumber a pair of cutter-blades similar to those before described must be used.

By manufacturing the lumber with the wide tongues and grooves I am enabled to provide a valuable product possessing the advantages before enumerated. These advantages will be at once apparent to one skilled in this art, and I claim that my compound lumber is greatly superior to that now on the market.

I of course do not confine myself to using the number of cutters *a* and *e* shown.

Of course it will be understood that cutter-blades embodying my invention may be made much wider than those illustrated.

I do not confine myself to the exact construction shown and described, as obvious changes can be made therein without departing from the spirit of my invention.

What I claim as my invention is—

1. As a new article of manufacture, interrelated cutter-blades one of which has cutter-blades of equal width, spaced unequal distances apart and the other of which has cutter-blades spaced equal distances apart and of unequal width.

2. In apparatus for cutting interlocking

tongues and grooves the combination with a facing-cutter blade comprising a body provided with a series of cutters separated by spaces, and a space, wider than the space between said series of cutters, at one end of said cutter-blade, and two spaces, wider than the space between said series of cutters, at the other end of said cutter-blade, and separated from each other by a cutter-blade, of an interrelated base-cutter blade comprising a body provided with a series of cutters separated by spaces, and a cutter wider than the said series of cutters at one end of said cutter-blade, and two cutters, wider than the said series of cutters at the other end of said cutter-blade, and separated from each other by a space.

3. A cutter-blade for grooving lumber having a wide cutter at one end and two wide cutters, of equal width to the first-named cutter, at the other end and a series of narrower intermediate cutters, all the cutters being spaced apart a distance equal to the width of said intermediate cutters.

4. In an apparatus for cutting interlocking tongues and grooves in lumber, the combination of two blades interrelated in the production of an article, one cutter-blade having a plurality of teeth of equal width and an additional tooth equal in width to one of said plurality of teeth but differently spaced, the other cutter-blade having a plurality of teeth of equal width spaced equal distances apart and a plurality of teeth of greater width than the first-named teeth, and spaced apart the same distance as the spacing of the first-named teeth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PAUL FRANKLIN BOLTON.

Witnesses:

EGERTON R. CASE,
B. D. CASE.