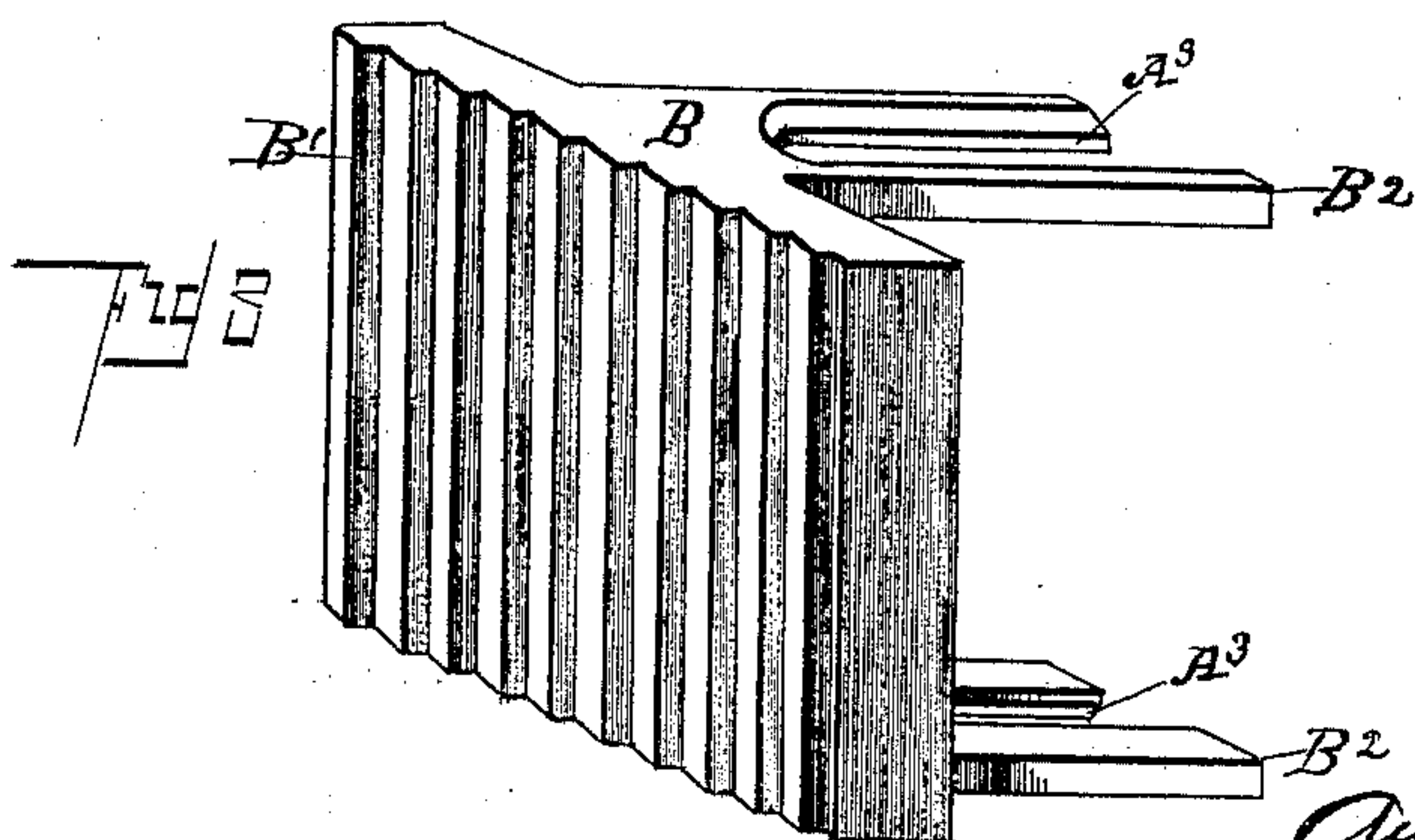
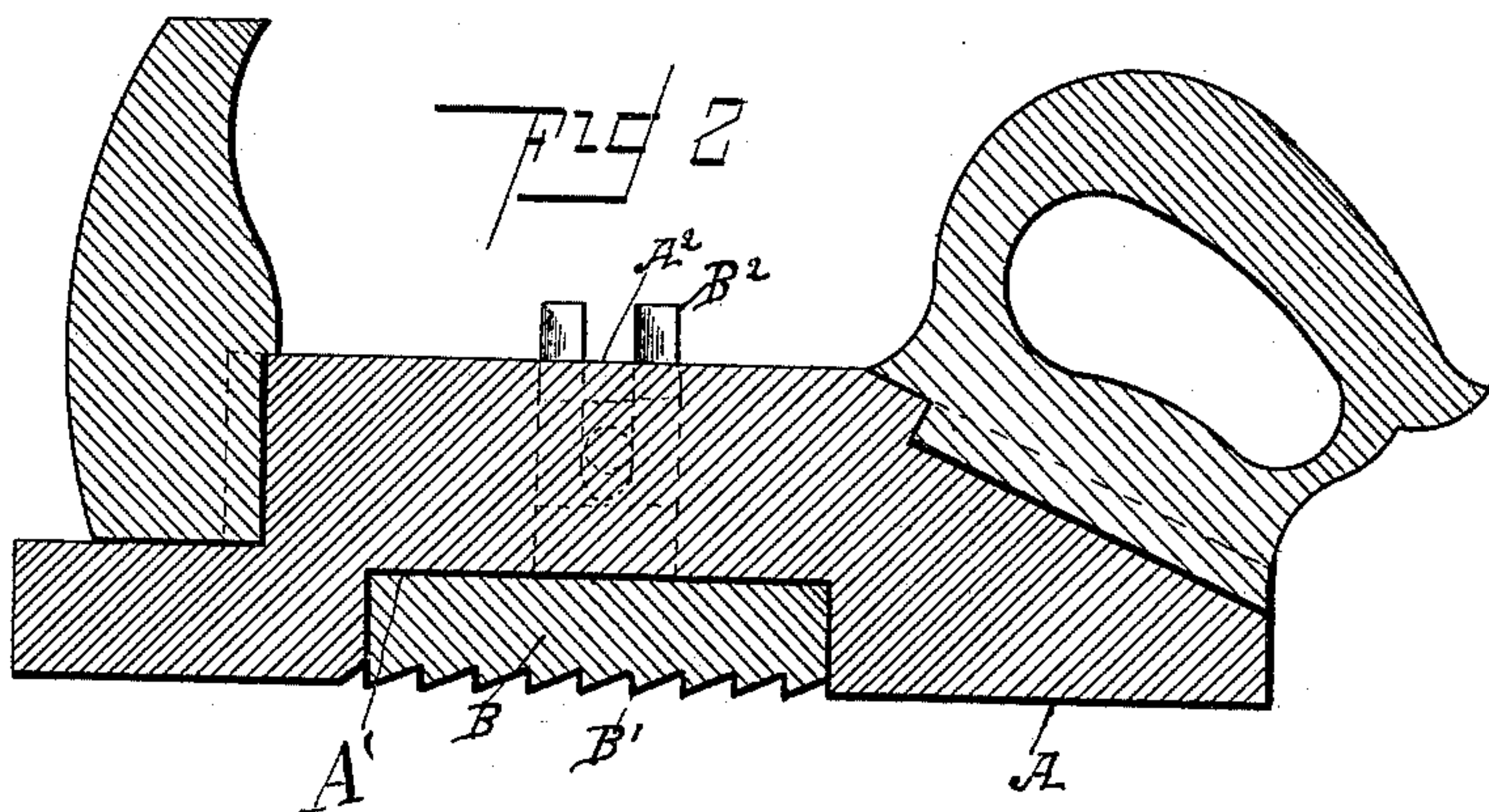
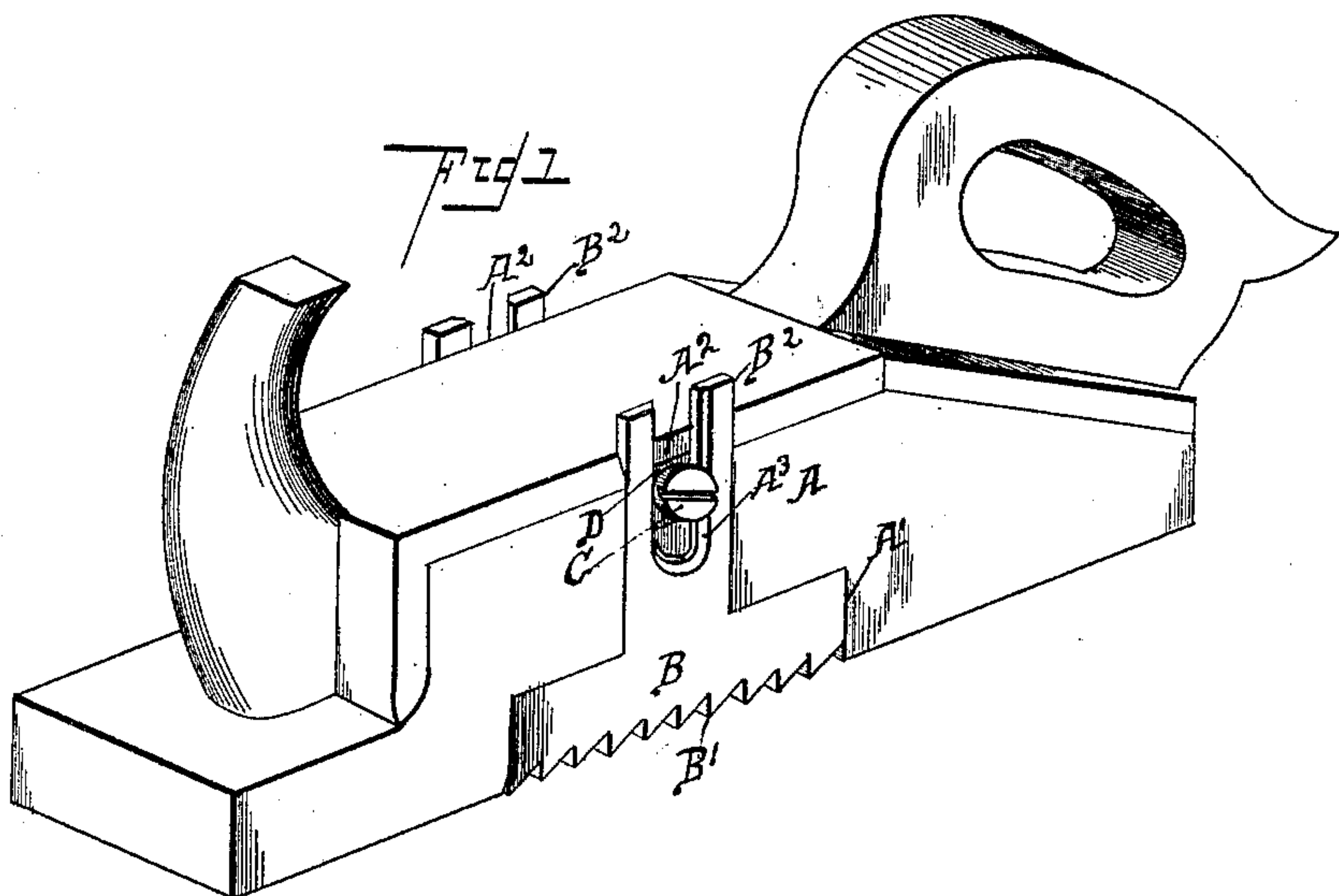


(No Model.)

A. FRÖMMING.
PLANE.

No. 440,558.

Patented Nov. 11, 1890.



WITNESSES

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UNITED STATES PATENT OFFICE.

AUGUST FRÖMMING, OF LANHAM, KANSAS.

PLANE.

SPECIFICATION forming part of Letters Patent No. 440,558, dated November 11, 1890.

Application filed April 30, 1890. Serial No. 350,073. (No model.)

To all whom it may concern:

Be it known that I, AUGUST FRÖMMING, a citizen of the United States, residing at Lanham, in the county of Washington and State of Kansas, have invented certain new and useful Improvements in Planes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in a new and improved plane, which will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a perspective view of my new and improved plane. Fig. 2 is a central vertical sectional view of the same, and Fig. 3 is a perspective view showing the bit-iron separated from the plane-stock.

The same letters of reference indicate corresponding parts in all the figures.

The object of my invention is to provide a plane which will work to perfection and with ease and rapidity on rough boards and across the grain of lumber where the ordinary plane could not be used; and to this end my invention consists in the new and improved plane, which will be now described.

Referring to the several parts by letter, A indicates the wooden stock of my plane, this stock having formed in its lower side a recess A', which is usually rectangular in shape, while in each side of the stock are formed the vertical recesses A² A².

The body B of the bit-iron is in the form of a solid block or thick plate adapted to fit adjustably in the recess A' of the stock, and is formed at each side with the parallel upwardly-extending arms B² B², that fit movably in the side recesses A² of the stock. These arms B² are formed with the vertical slots A³, open at their upper ends, and set-screws C pass through these slotted arms and work in threaded apertures in re-enforcing plates D, which are let into the sides of the stock, as shown, and secured by small screws. The

lower working-face of the bit-iron is formed with a series of numerous transverse parallel cutting-teeth B', having the inclined rear sides, as shown, and it will be readily seen that when in use these numerous fine cutting-edges will work to perfection on rough boards or across the grain of lumber, cutting smoothly and evenly where it would be impossible to work at all with an ordinary plane. It will be further seen that the bit-iron can be adjusted in the recessed stock by loosening the set-screws C to cause the teeth or cutting-edges B' to project down farther below the lower face of the plane-stock.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my invention will be readily understood.

It will be seen that my new and improved plane is simple and strong in construction and exceedingly efficient in its operation. It will work perfectly on rough boards, across the grain of lumber, across knots, &c., and the bit-iron can be adjusted as required.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a plane, of a stock formed with the bottom recess A' and the bit-iron block B, adapted to fit in the said recess and formed with the series of parallel cutting-teeth B', extending transversely across the lower face of the block, substantially as set forth.

2. The combination of the stock A, formed with the bottom and side recesses, the bit-iron formed with the series of transverse cutting-teeth B' and having the slotted side arms B², and the set-screws C, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUST FRÖMMING.

Witnesses:

WILLIAM WIETERS,
TH. PEIPER.