

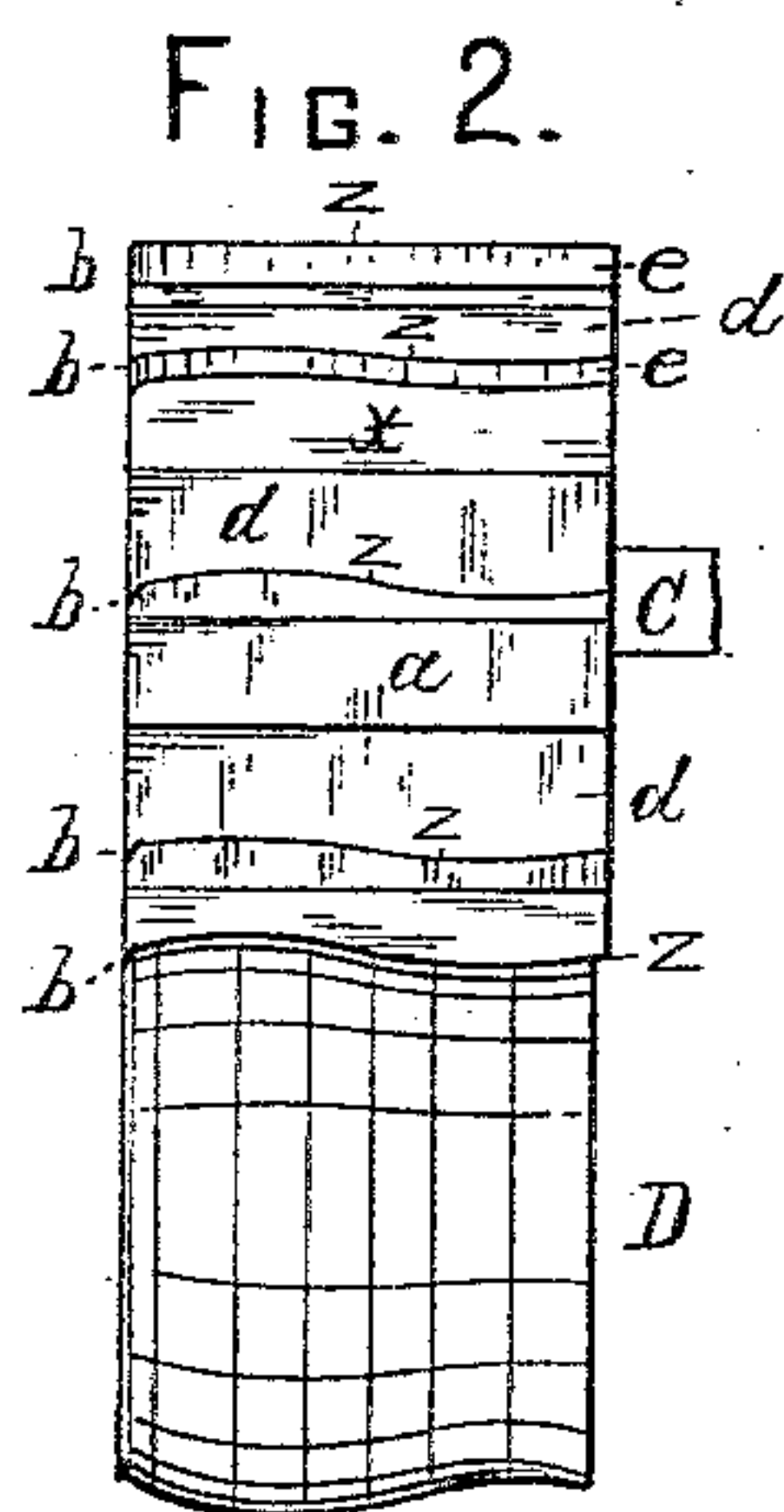
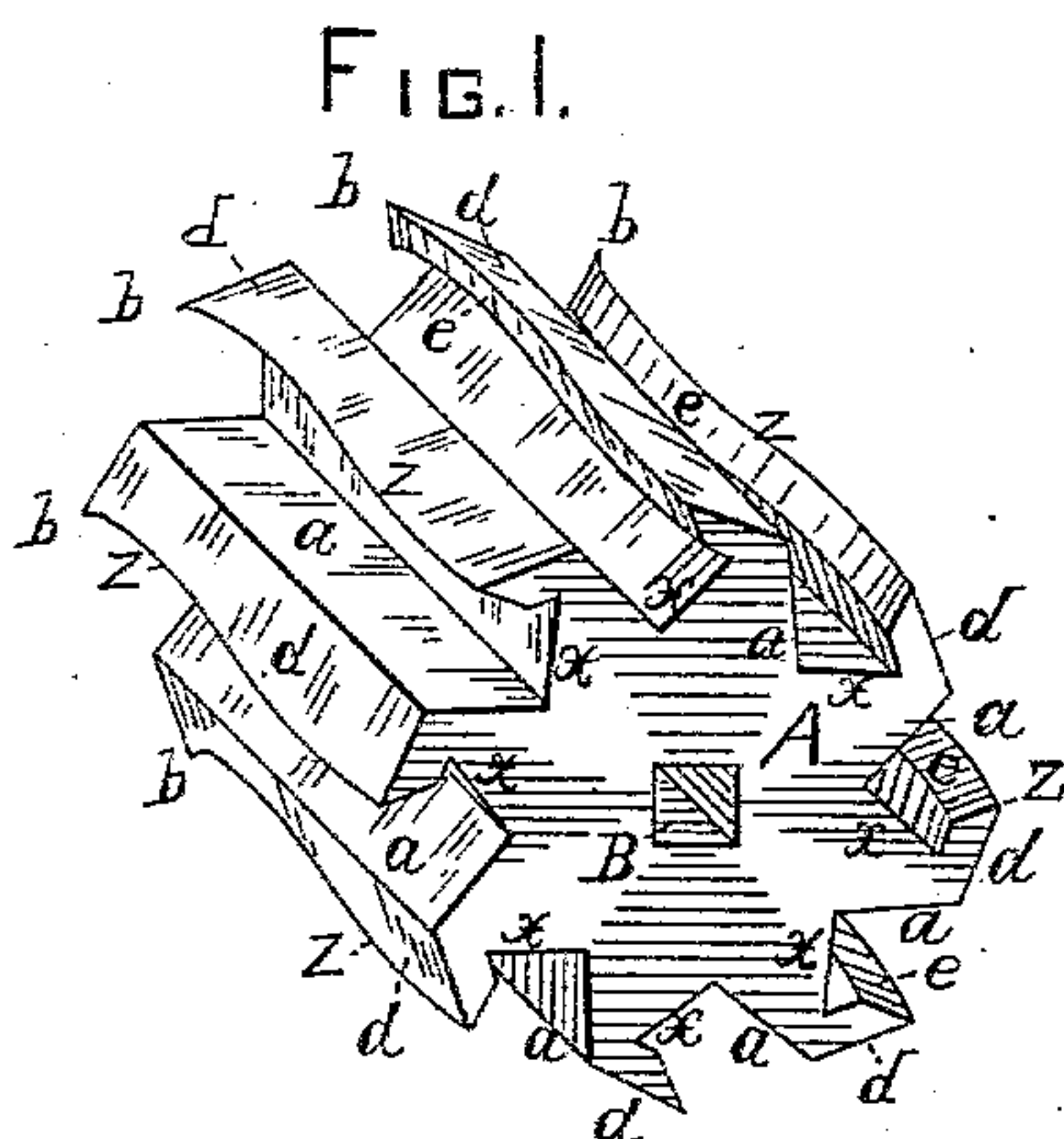
(No Model.)

U. D. BYRON.

CUTTER HEAD.

No. 300,305.

Patented June 10, 1884.



WITNESSES:

A. G. Morey;
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INVENTOR

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UNITED STATES PATENT OFFICE.

ULDERIC D. BYRON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
ALBERT E. DIKE, OF SAME PLACE.

CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 300,305, dated June 10, 1884.

Application filed October 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, ULDERIC D. BYRON, of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Cutter-Heads, of which the following is a specification, reference being had to the accompanying drawings illustrating the invention, in which—

Figure 1 is a perspective view of a cutter-head embodying my improvements. Fig. 2 is a face view of the same in position, as when trimming a boot-heel.

The present invention consists in solid rotary cutter-heads whose cutters are flat on their outsides and molded on their faces to give the required contour to the articles which are to be cut, whether leather or wood, whereby the cutters are sharpened by means of any stone which is suitable for cutting flat surfaces, and forming a sharp edge, in contradistinction to solid cutters which have molded outsides and require molded stones to sharpen them. It will be understood that these cutter-heads, where used to cut leather—such as trimming boot and shoe heels—have to be of great strength, so much so that detachable knives are not only difficult to adjust, but more difficult to be held in place without vibration, and also understood that it is practically impossible to grind the molded faces of non-removable cutters by any of the ordinary tool-sharpening devices, so as to retain uniform cutting-surfaces. Therefore, after the cutter leaves the machinist the sharpening has to be done on the flat outsides, and in doing this the cutting edges or faces are not changed as to form of their contour. Further than this, in tools for trimming boot or shoe heels there must be room between the cutters for the shavings to pass out without choking. To attain this end I find that substantially the form given between the cutters in my device is not only the best for solid heads, but the only form that will operate successfully on leather. Cutters in the form of saw-teeth will not in anywise answer the purpose, because the grinding of the teeth lessens the interspaces to such an extent that such spaces fill

with chips, which prevent the operation of the cutters.

A represents the body of the cutter-head, and B the hole therein to receive the drive-shaft C. The bottoms of the grooves between the cutters are shown at X X, &c., and the backs of the knives are shown at *a a*, &c. The outsides *d* of the cutters are formed flat and inclined inward, that the edges *Z* may be presented to the material to be cut. The inner faces, *e*, are curved, as shown, so as to cut the desired contour on the boot-heel. The cutters, however, may be formed on other curves, to cut the form desired. *b b*, &c., represent how the cutters terminate in points by means of sharp curves that that portion of the heel adjoining the counter or upper may have an inward bevel. In the manufacture I find that the cutter-head can be cast as shown, except that the faces *e* of the cutters have to be curved by grinding. The cutters of the head thus formed are to be sharpened by grinding the flat parts *d* of the cutters, the curves *e* remaining the same until worn out. It is customary to make cutter-heads for this and like purposes by attaching bits to the body or head by screws and to grind the curved faces of the bits to sharpen them.

The advantage of my improvement over such construction is that it requires but little skill to grind the flat surfaces *d*, while it is very difficult for the ordinary operator to grind the curves on a series of knives uniformly and reset them on the head.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

As an improvement in solid cutter-heads for molding leather or wood, the cutters formed with curves on their faces *e*, to cut the desired contour, with flat outsides *d*, for the purpose of sharpening them without changing their shape, and with enlarged recesses between the cutters for the escape of chips, as specified.

ULDERIC D. BYRON.

Witnesses:

A. G. MOREY,
A. E. DIKE.