

(Model.)

R. BELL.
Tool for Coring Dyers' and Bleachers' Shells.
No. 238,207. Patented March 1, 1881.

FIG. I.

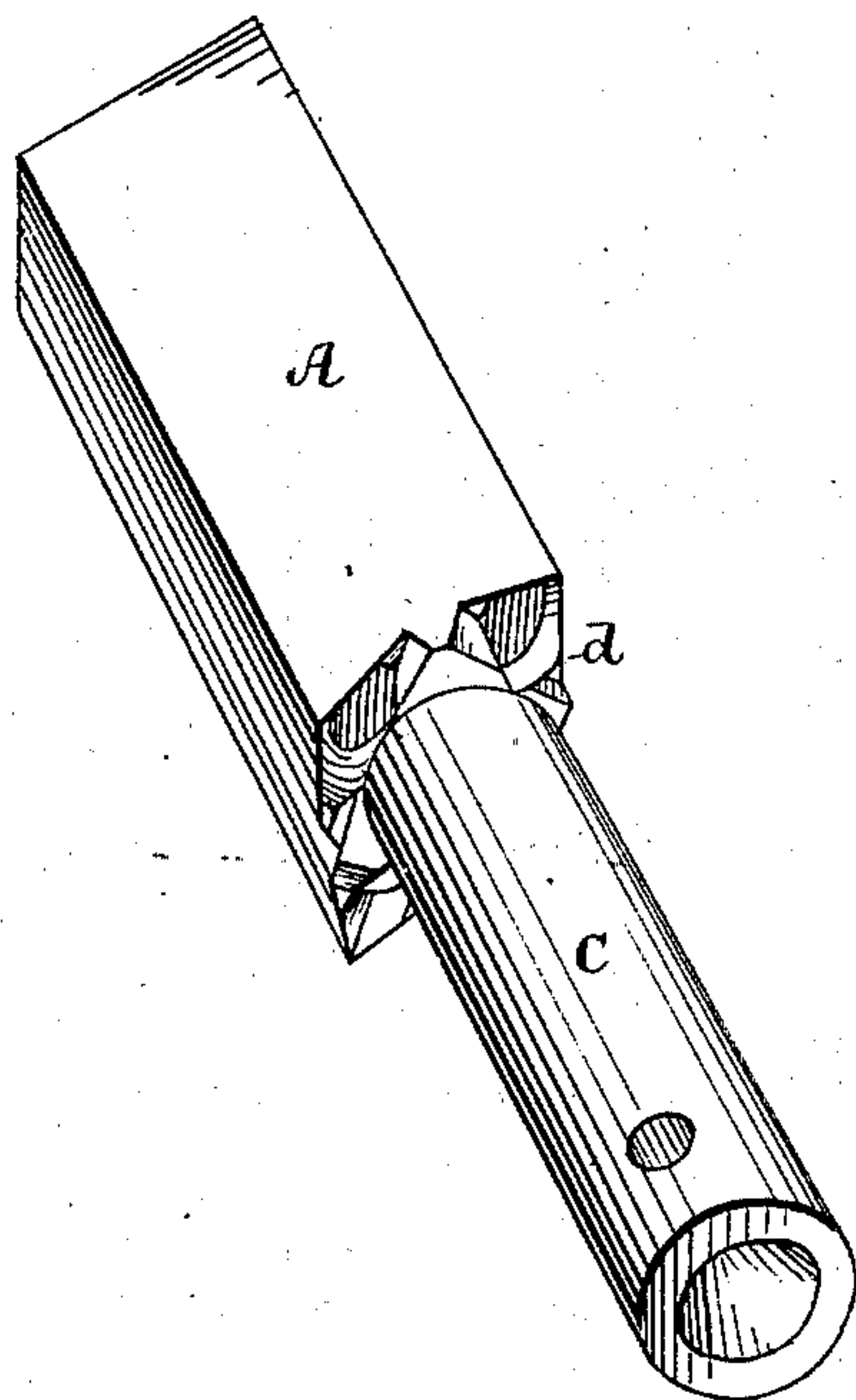


FIG. II.

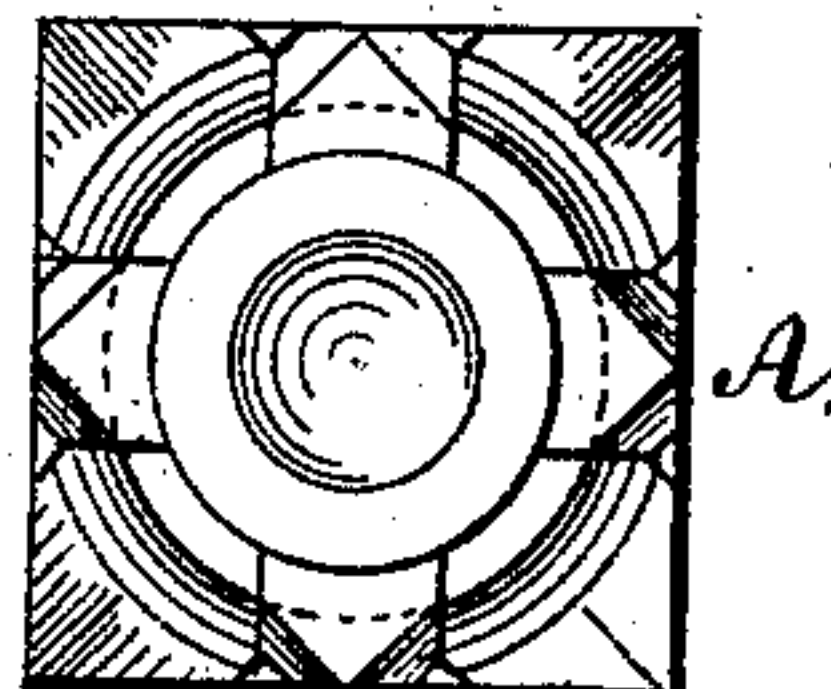


FIG. III.

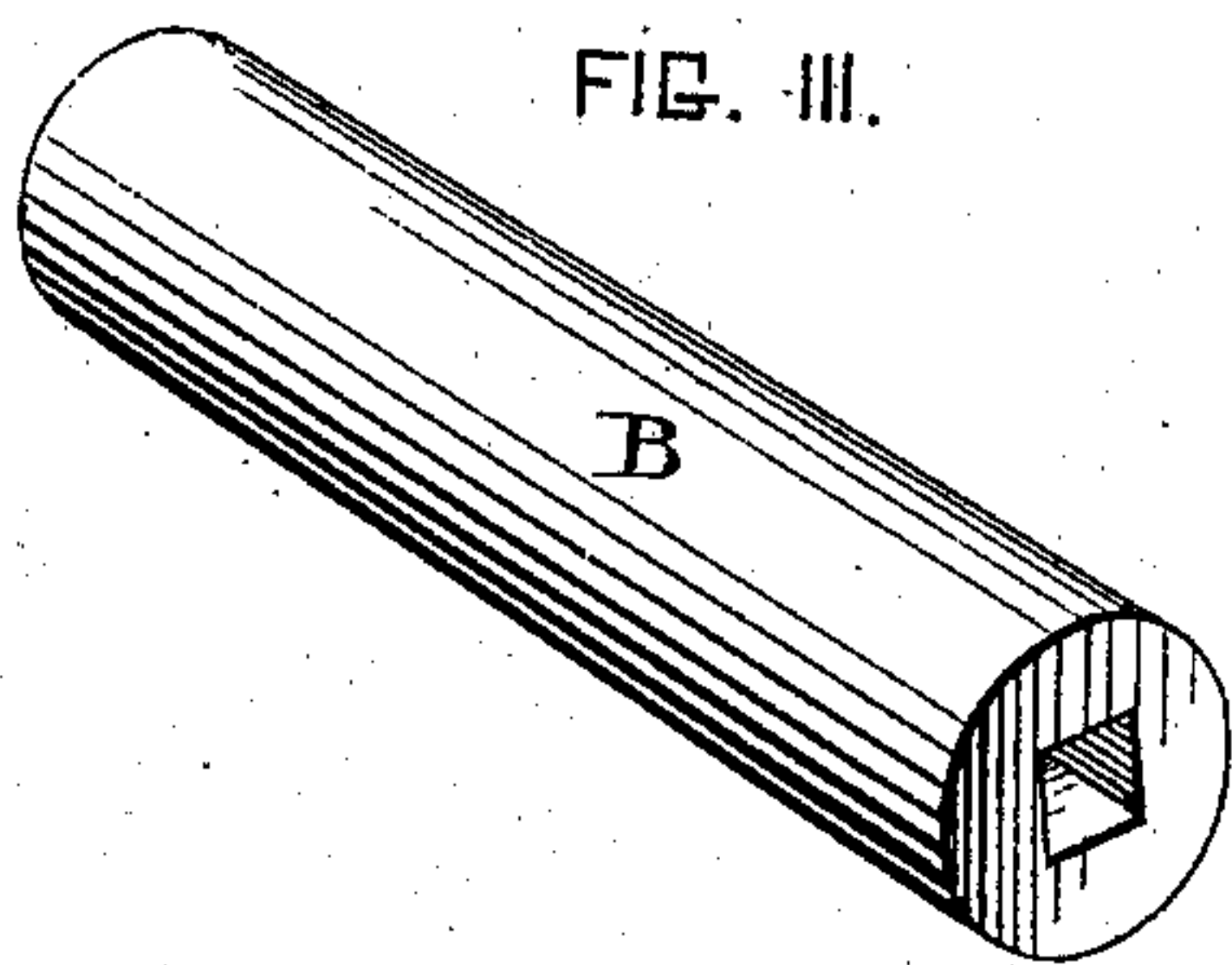
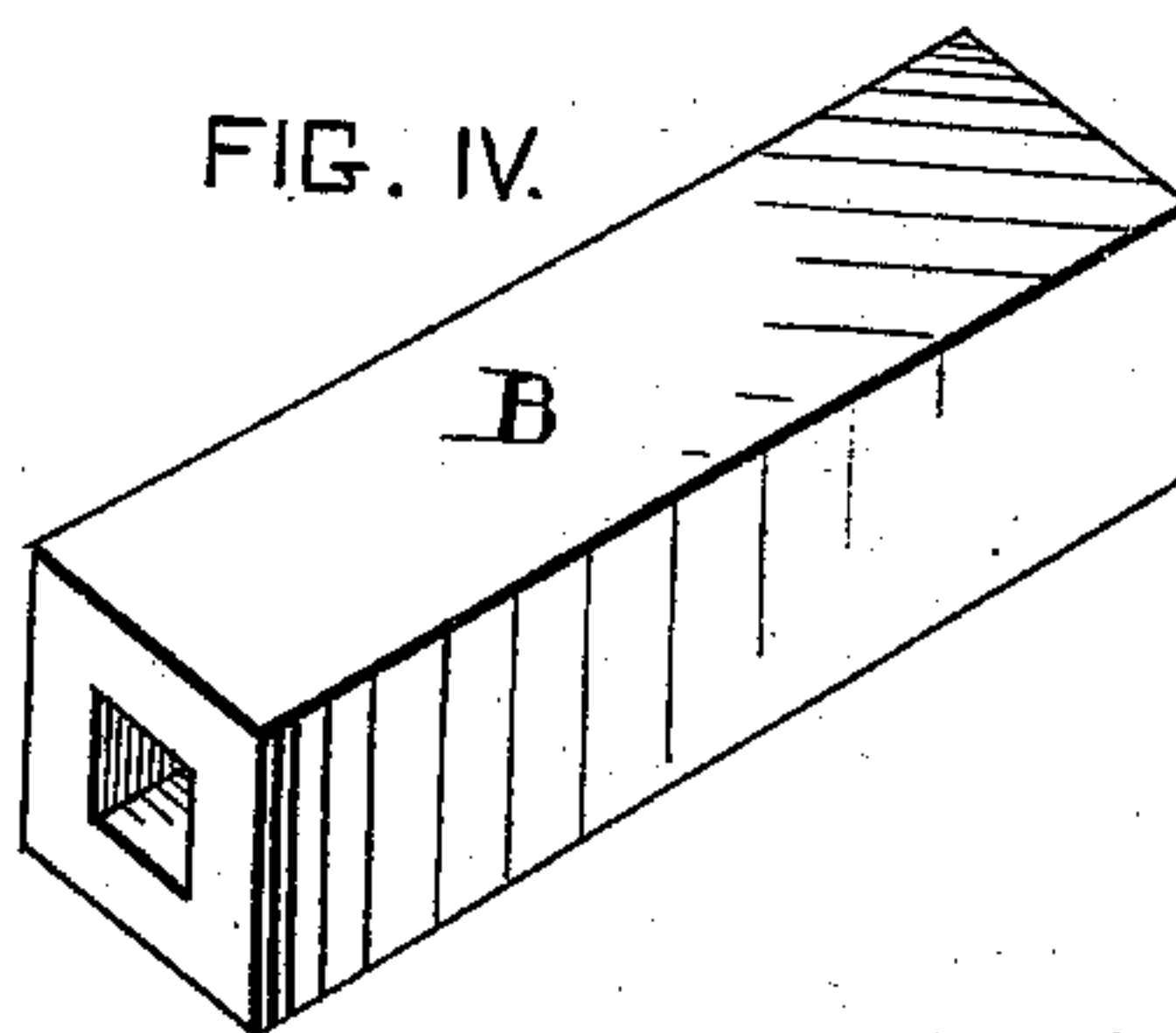


FIG. IV.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT BELL, OF PASSAIC, NEW JERSEY.

TOOL FOR CORING DYERS' AND BLEACHERS' SHELLS.

SPECIFICATION forming part of Letters Patent No. 238,207, dated March 1, 1881.

Application filed August 2, 1880. (Model.)

To all whom it may concern:

Be it known that I, ROBERT BELL, of the city of Passaic, Passaic county, State of New Jersey, have invented new and useful Improvements in Tools for Coring Dyers' and Bleachers' Shells; and I do hereby declare that the following is a correct and true specification thereof, reference being had to the accompanying drawings, wherein—

Figure I is a perspective of a tool used in coring the shells. Fig. II is a top view thereof, showing the core of the tool in dotted lines; and Figs. III and IV are perspective views of two varieties of shells.

In bleaching and dyeing, "wooden shells," as they are termed, being rolls or rods of wood suspended on a central core-rod of metal, are used in the baths and between the baths and the punting-machines to roll or wind the web upon and to carry the same to all the machines used in the processes. In the process these shells are subjected to the action of water and materials for bleaching and dyeing, and it has been found practically necessary that they should be constructed of wood. To obtain a square or polygonal bore through them, so that the central core-rod could be inserted, the shells have been constructed in two longitudinal halves, the inner sides being slotted, so that when joined the bore aforesaid is made. The two parts are united by glue and pins or other similar devices. The usage to which they are subjected soon destroys them.

The object of my invention is to cut holes of a square or polygonal cross-section in single solid pieces of wood, and especially in the shells referred to, so that the construction may be simplified and the durability greatly increased.

The nature of my invention consists in a tool of a particular character to produce a solid shell of wood.

In the drawings, A represents the tool, and B B the shells.

The tool A is constructed of steel, and consists of a solid shank, C, provided at its extreme end with means for attachment to any

mechanism which may be used for drawing the tool through the shell. The shank terminates at the other end in a cutting device, *d*, which, as shown, is square in cross-section. Radiating from the center of the device *d* are ribs extending to the centers of the sides thereof, which serve to connect the cutter to the shank. The outer edges of the upper end of the cutting device *d*, from the corners to the ribs, are knife-edged. These ribs extend downward in the cutting device *d* sufficiently to afford the necessary strength, and the interstices between the knife-edges and the ribs are narrowed by bevels from the knife-edges until they join to form a core which extends through to the end of the device.

The shells B B are simply wooden rolls, cylindrical, square, or polygonal in cross-section, with a central bore of square or polygonal cross-section.

In operation the shells are bored longitudinally by any mechanism which will produce a cylindrical hole. The shank of the tool is then introduced into this hole, having been coupled with any mechanism by which sufficient power can be exerted, and is then drawn through the said hole, followed, of course, by the cutting device, which cuts away the wood between the bore already made and the lines of the cutting-edges.

It will be apparent that this tool may be used for many purposes other than the coring of shells, and that the shape of the cutting-edges may be varied infinitely.

Having described my invention, what I claim as new is—

A cutting-tool for cutting holes of cross-section other than cylindrical, consisting of a shank terminating in a cutting device intended to follow it, to which it is attached by ribs constructed so as to leave interstices, which join to form a central passage for the chips, substantially as described.

ROBERT BELL.

Witnesses:

JAMES DEMAREST,
WILLIAM A. BARR.