

(No Model.)

W. L. E. KEUFFEL.
PENCIL SHARPENER AND POLISHER.

No. 547,925.

Patented Oct. 15, 1895.

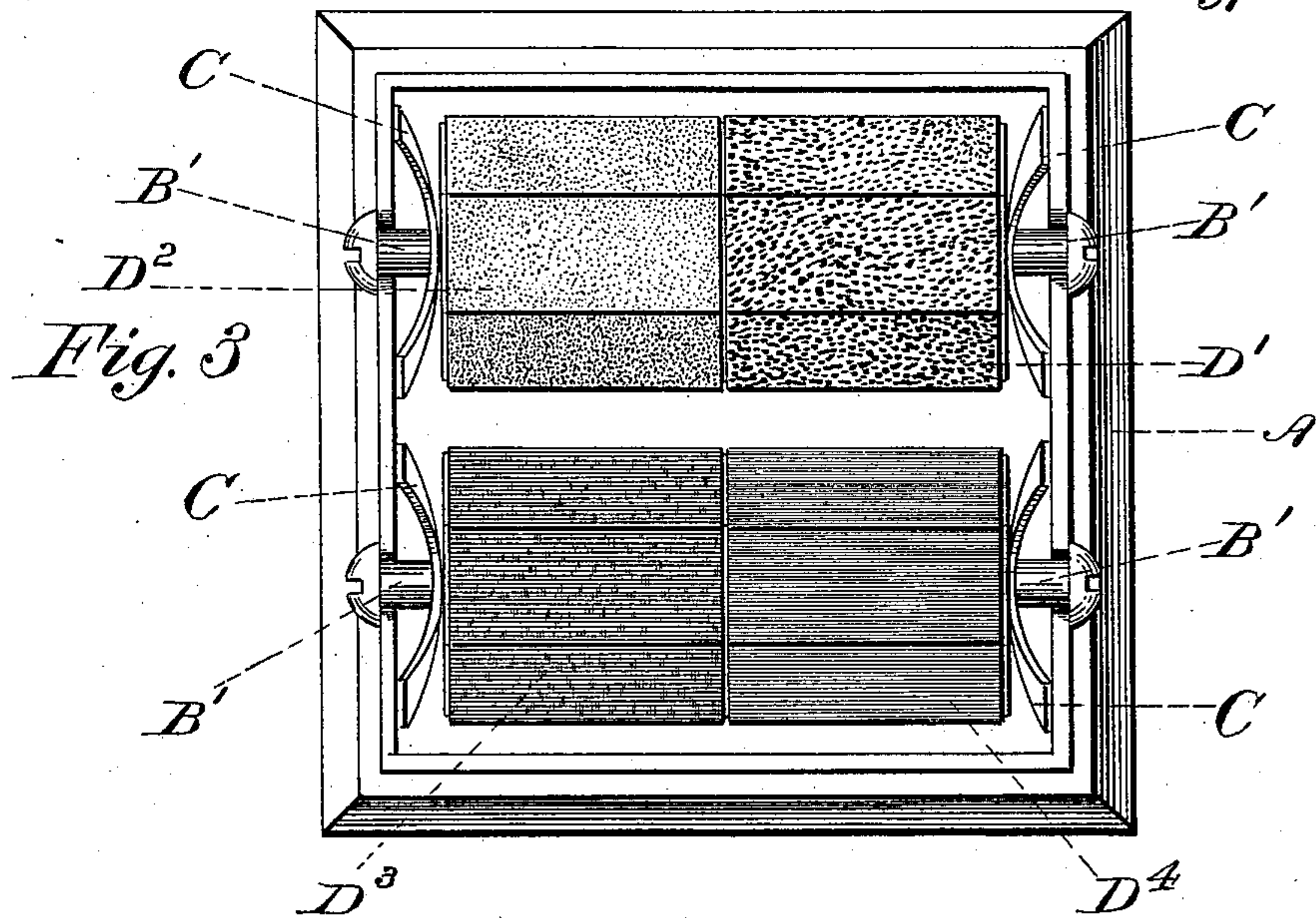
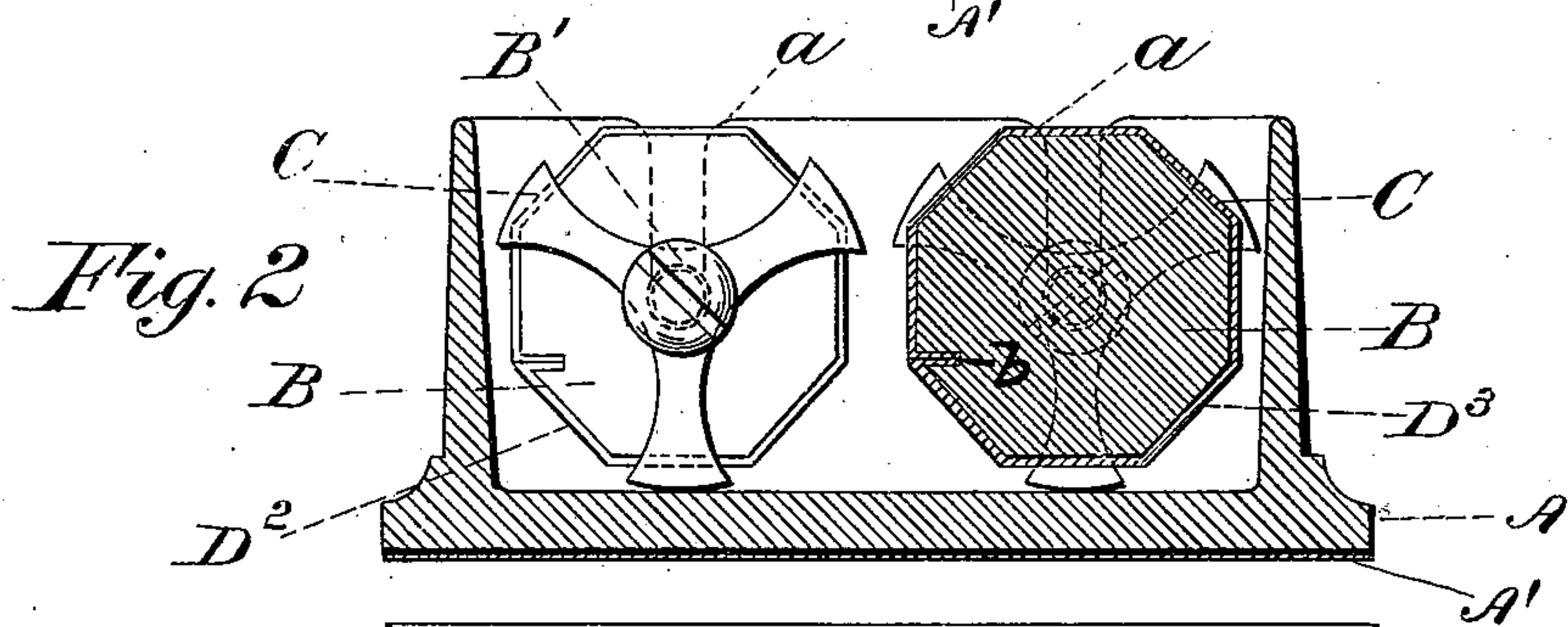
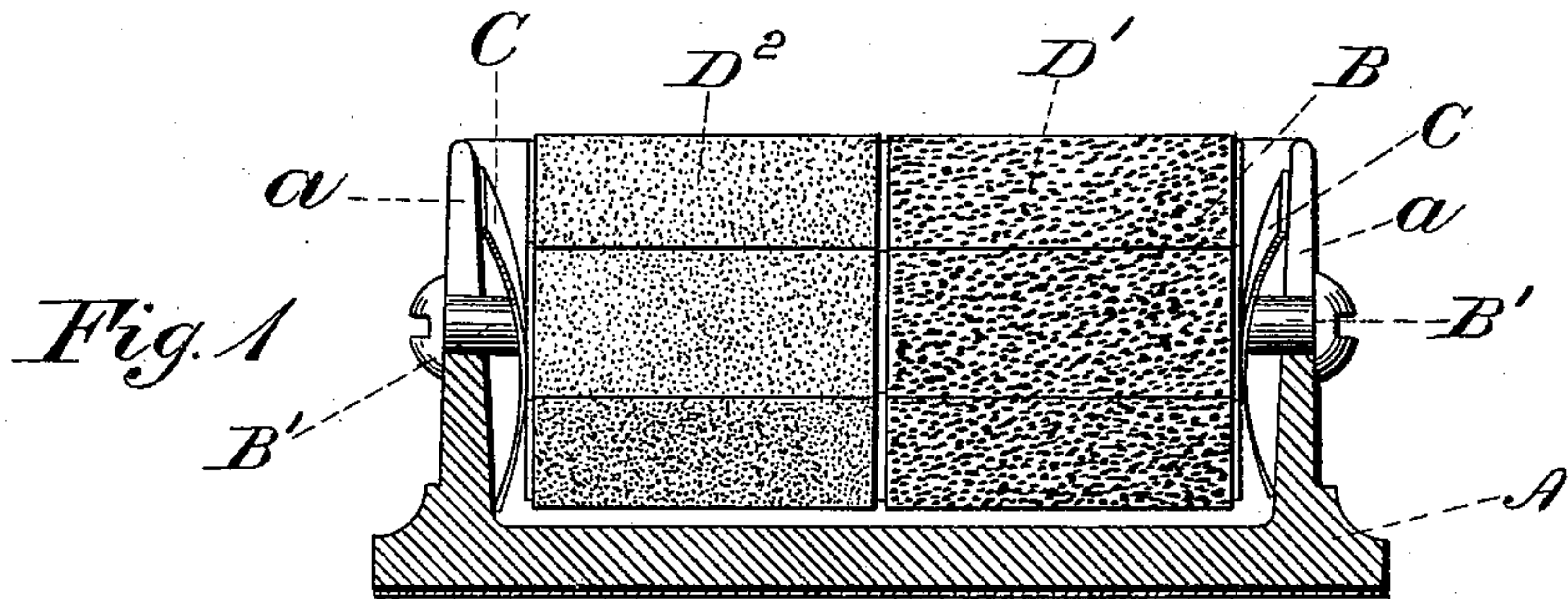
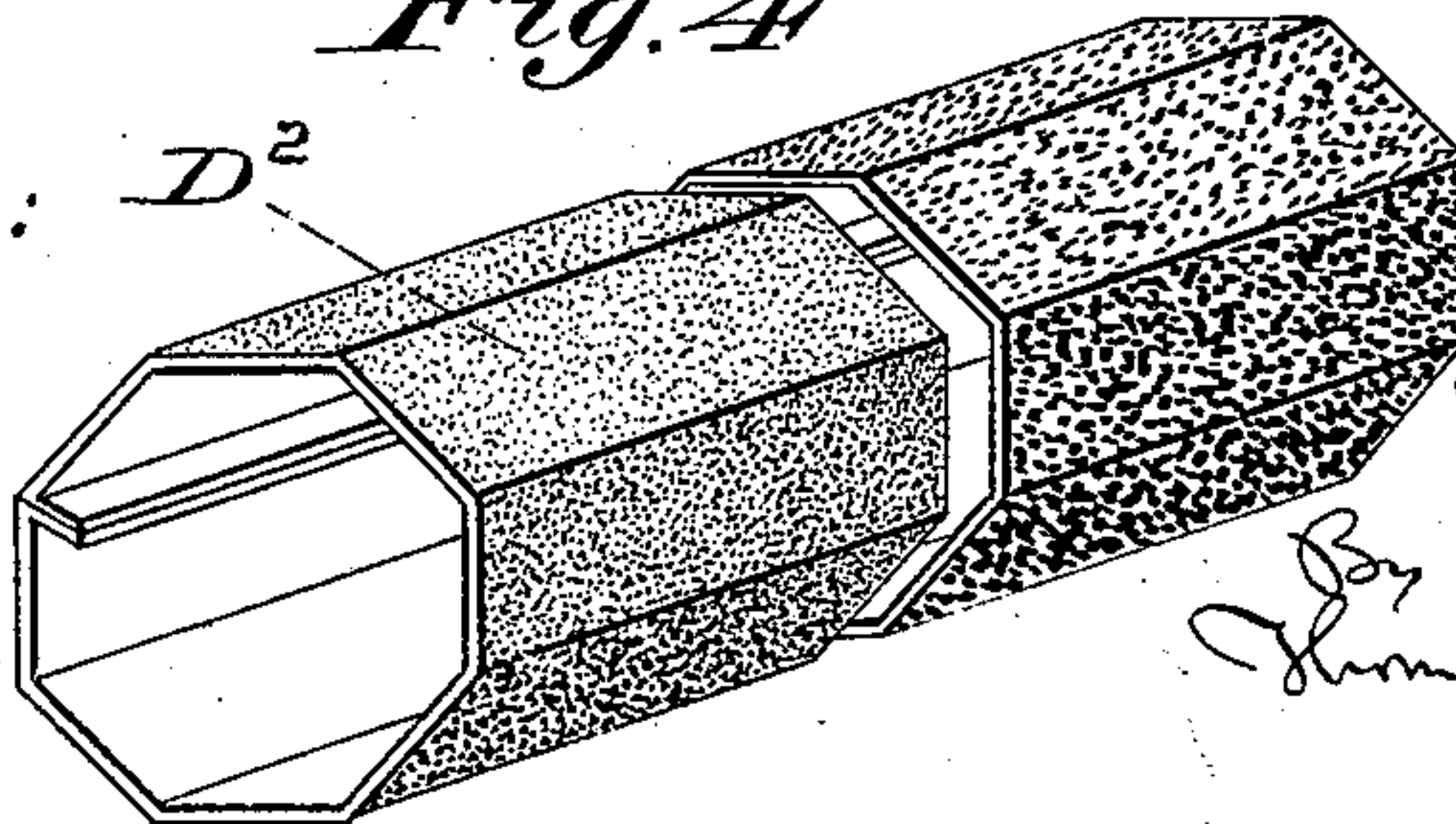


Fig. 4

Witnesses:

M. F. Boyle

Charles R. Seale



Inventor:

W. L. E. Keuffel

By Thomas D. Stetson
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM L. E. KEUFFEL, OF HOBOKEN, NEW JERSEY.

PENCIL SHARPENER AND POLISHER.

SPECIFICATION forming part of Letters Patent No. 547,925, dated October 15, 1895.

Application filed February 17, 1894. Serial No. 500,525. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. E. KEUFFEL, a citizen of the United States, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Pencil Sharpeners and Polishers, of which the following is a specification.

The improvement relates to that class of devices in which the pencil is treated by moving it upon a grinding-surface, which is held stationary during the treatment, and in which there are provisions for changing the grinding-surface, so that after a portion has become foul with the lead it may be moved out of the way and a new clean surface presented. I have devised important improvements. I provide two rollers or blocks of polygonal form, which may be turned step by step to present the several faces in succession, and provide corresponding polygonal shells of sandpaper or analogous material adapted to be slid on and off such blocks when the latter are lifted out of the supporting-frame, which is a box closed at the bottom. I employ two such blocks set side by side a convenient distance apart in a single box, and provide each end of each block with a pin of small diameter, which pins are received in vertical slots in the ends of the box. I provide friction washers or collars in the form of thin spider-frames at each end, which induce friction enough to hold each block reliably for use, but allow them to be partially rotated by a sufficient force, as also to be lifted out and returned, when required.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a vertical section in the plane of the axis of one of the blocks. Fig. 2 is a vertical section in a plane at right angles thereto. One of the blocks and the friction-spring therefor is shown in elevation. Fig. 3 is a plan view of the whole. Fig. 4 shows in perspective the two shells, which are matched on one of the blocks.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is a box of cast-iron or other material

japanned, painted, or otherwise, and *a* are vertical slots therein open at the top.

B B are polygonal or rounded blocks of hard wood provided each with a metal pin *B'*, which may be ordinary "screw-nails" set in the center at each end adapted to match in the slots *a*. The blocks B are shorter than the interior of the box, the space at each end being occupied by a spider-frame C of thin elastic metal, which when all is in place for use exerts a sufficient pressure to hold the blocks B with gentle firmness in any position in which they may be set.

D' D² D³ D⁴ are covering-shells of thin material shaped to correspond to the polygonal blocks and adapted to be slipped over the ends, so as to be applied and removed at will. Each is of a length about half that of a block. The outer surfaces of the whole of these shells are of different materials.

D' is paper coated with coarse sand or emery. D² is finer material of the same character. D³ is a brushing-surface made of cut pile fabric, and D⁴ is chamois-leather. The several shells may be conveniently made from flat sheets of the proper material bent around, with their ends scarfed and joined with shellac. The entire shells may be slightly stiffened with a thin solution of shellac or other adhesives, if desired.

In the use of the device the pencil-point is held obliquely and rubbed forward and backward or in any direction and properly turned on the several surfaces in succession, ending with the chamois. When the several surfaces become foul by accumulating dust from the pencil, the blocks with their shells are partially rotated to present fresh surfaces. At long intervals each block is lifted out of its place in the box and the two shells removed and new ones applied, and the blocks thus newly coated are returned to place. The dust abraded by the coarser surfaces collects in the bottom of the box and may be emptied at such period. The box with its rollers is sufficiently heavy to serve efficiently as a paper-weight.

A' is a bottom facing, of felt, soft cloth, or analogous material, underlying the base, so as to not injure the desk, drawing-table, &c., on which the box is set.

The edges of the covering-shells D' D², &c.,

have a considerable breadth turned inward and cemented together and stiffened with shellac or the like, and the blocks B are each formed with a corresponding longitudinal groove *b*, adapted to receive and hold such inturned edges or internal ridges, which serve additional to the angular shape of the parts in holding the shells firmly in place, each on its respective block while in use, but without preventing its being slid off endwise when the block is lifted out and it is desired to exchange the shells for cleanliness or for any other reason.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. Instead of cast-iron for the box A, it may be glass or various other materials. I prefer iron for economy and strength, as also for weight. Instead of japanning the surface, it may be painted, metal-plated, or otherwise decorated. The blocks may be of cylindrical instead of polygonal form, and may be rotated to any desired small increment to present fresh surfaces. Other materials than those named may be used in place of the chamois-leather and instead of the several qualities of abrading and brushing and wiping surfaces. The

edges of the shells may be joined by other material than shellac. The spider-frame C may be smaller, so that when the blocks are taken out of the box A the shells may be drawn off and on without detaching either spider. Parts may be used without the whole. I can dispense with one of the blocks.

I claim as my invention—

A box A of iron or analogous heavy material adapted to serve as a paper weight, having slots *a* in the ends adapted to receive the bearings of a roller, and a bottom A' of felt or analogous material, in combination with a removable block B having trunnions B' engaged in such slots, the elastic spiders C exerting frictional pressure against the ends of such block and the removable covering having an internal ridge engaged in the said groove, all arranged for joint operation substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

WILLIAM L. E. KEUFFEL.

Witnesses:

H. REICHE,
EDWARD WIEMER.