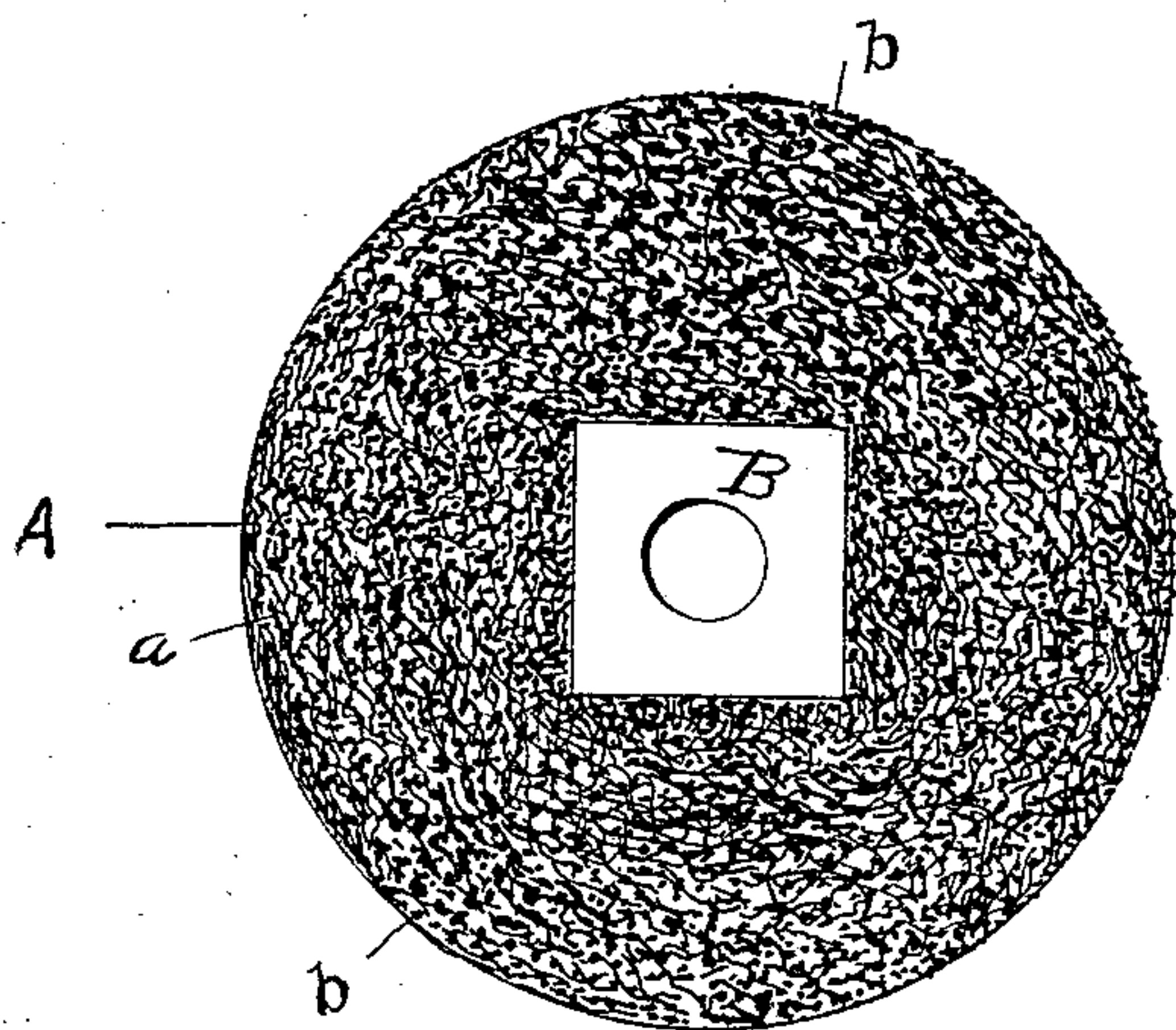


(No Model.)

J. CHASE.
BUFFING OR POLISHING WHEEL.

No. 507,214.

Patented Oct. 24, 1893.



Witnesses

Ed Withington Robinson
Elizabeth F. Knowles

Inventor

Jefferson Chase
By Elym C. Mill
Atty.

UNITED STATES PATENT OFFICE.

JEFFERSON CHASE, OF PORTLAND, MAINE.

BUFFING OR POLISHING WHEEL.

SPECIFICATION forming part of Letters Patent No. 507,214, dated October 24, 1893.

Application filed October 11, 1892. Serial No. 448,708. (No model.)

To all whom it may concern:

Be it known that I, JEFFERSON CHASE, of Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Buffing and Polishing Wheels; and I do hereby declare that the following is a full, clear, and exact description of the invention which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in buffing, polishing and grinding wheels. Its object is to produce artificial tools of the character described having a homogeneous composition extending from the circumference to the center or to a considerable distance inwardly from the circumference. To this end it consists in the fiber of disintegrated animal material, leather or raw hide, thoroughly mixed and combined with a suitable mineral substance reduced to a required degree of fineness, or in the fiber of disintegrated animal material and the fiber of disintegrated vegetable material as for example, wood fiber mixed together and combined as before with a suitable mineral substance, and in either case without the addition of glue or size.

The animal material or the animal and vegetable material is first disintegrated and reduced to a semi-plastic condition with water and while in this condition the mineral substance as emery, sand, &c., is thoroughly mixed therewith until the whole mass is homogeneous and from this mass the tools are molded into any desired form and size. The mineral substances become firmly embedded in the fibrous, semiplastic mass, the small particles sinking into and between the fibers and being firmly held thereby. In tools of this character as now constructed, the emery or sand is spread on the surface of a wheel and caused to adhere thereto by means of a cement or glue or a vegetable pulp and a mineral substance is mixed together and held together by mixing therewith a glue or cement. In the former case the polishing or grinding material soon wears away and the wheel has to be discarded or the surface restored. In the latter case the glue or size renders the wheel for the purposes for which it is designed unsuited because it causes the

surface to become clogged and to glaze over quickly, and when vegetable pulp and mineral is used without the glue or size the union of the vegetable and mineral will not be sufficiently strong to accomplish the desired results. With the animal fiber, however, a small quantity of vegetable fiber may be mixed but the animal fiber is an essential part of this invention. In neither case is it necessary that a glue, cement or size be added—in fact the addition of these substances would be a fatal objection.

The advantages of the present invention are that the tools are made homogeneous, that they wear evenly and do not clog with the fine dust from the material being operated on, nor become glazed with the glue or cement in the body of the tool as is the case in other homogeneous tools of this character.

In the drawing herewith accompanying and making a part of this application, the figure shows an elevation of my improved wheel.

In said drawing A represents the body of the wheel; B the bushing.

a represents the fibrous part of the wheel; b the mineral or cutting part.

Having thus described my invention and its use, I claim—

1. As a new article of manufacture, homogeneous tools of the character described composed of disintegrated animal and vegetable fibrous material and a suitable mineral substance reduced to any required degree of fineness and evenly mixed therewith and molded into any desired form and size, as and for the purposes set forth.

2. As a new article of manufacture, homogeneous tools of the character described, composed of disintegrated animal material and a suitable mineral substance thoroughly mixed together and molded into any desired form and size, as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JEFFERSON CHASE.

Witnesses:

ELGIN C. VERILL,
ARTHUR C. LIBBY.