

No. 640,590.

Patented Jan. 2, 1900.

J. RIGG & H. HART.  
POLISHING BOB.

(Application filed May 12, 1899.)

(No Model.)

Fig. 1.

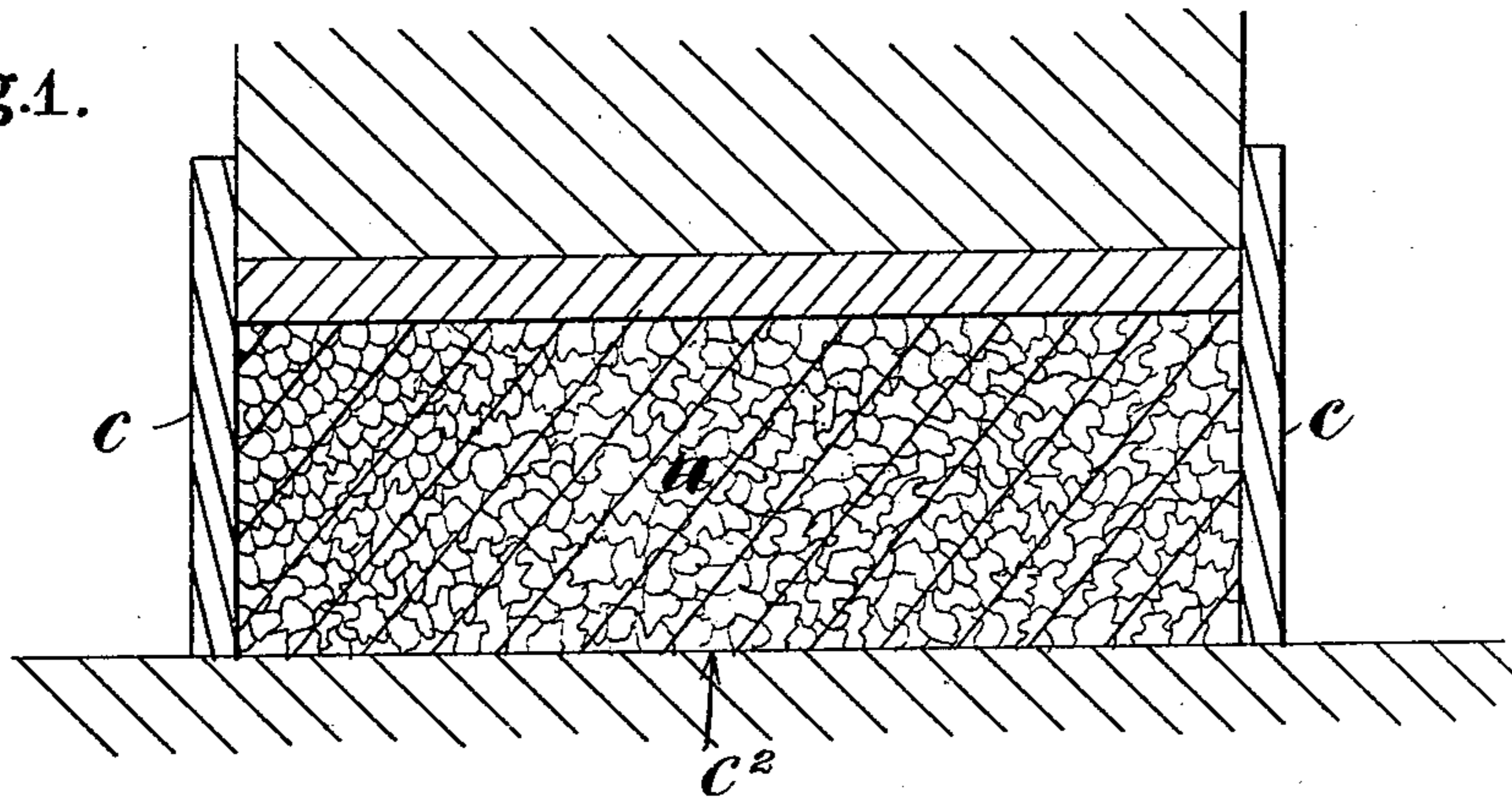


Fig. 2.

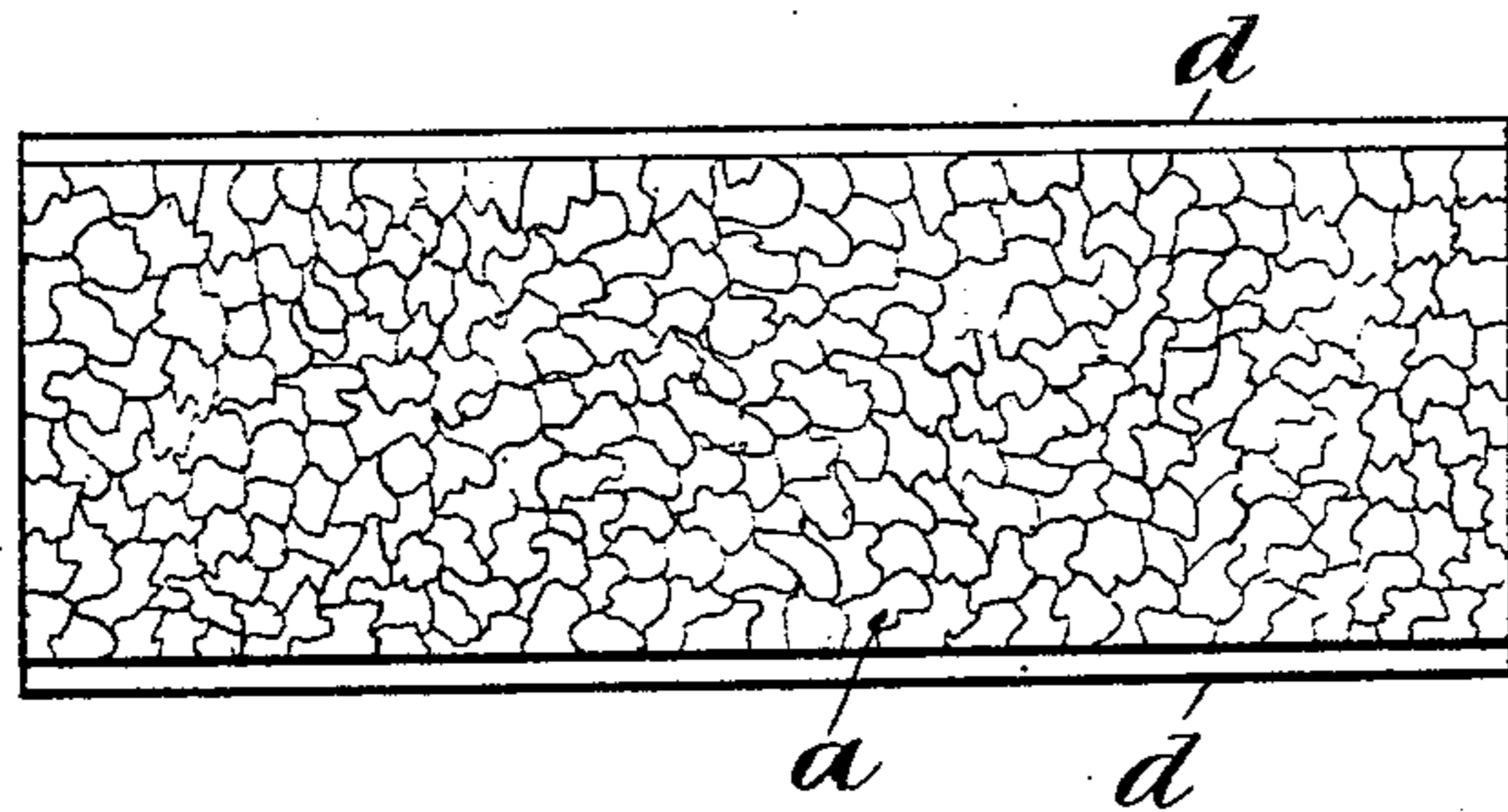
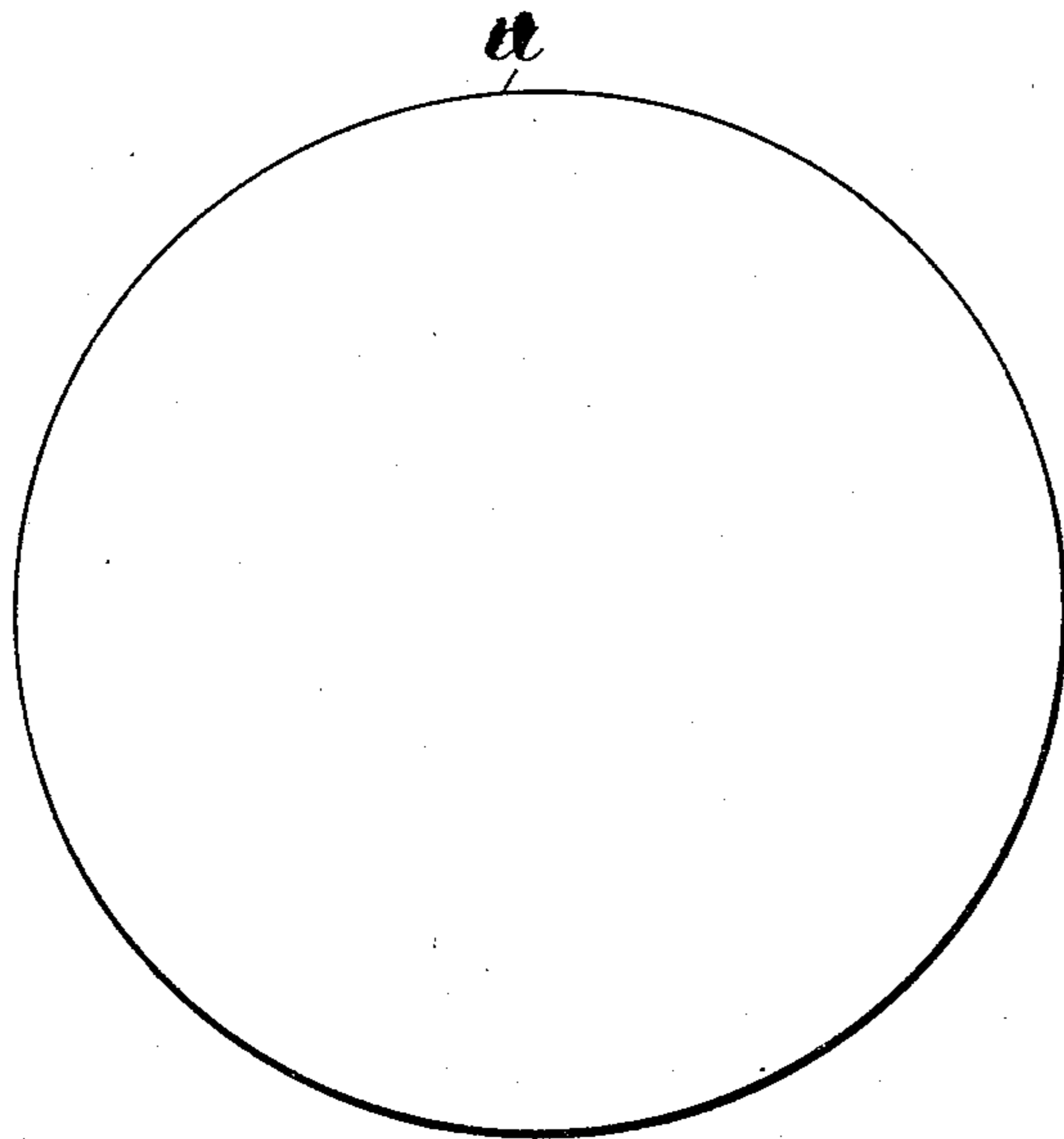


Fig. 3



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# UNITED STATES PATENT OFFICE.

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## POLISHING-BOB.

SPECIFICATION forming part of Letters Patent No. 640,590, dated January 2, 1900.

Application filed May 12, 1899. Serial No. 716,600. (No model.)

*To all whom it may concern:*

Be it known that we, JOSEPH RIGG, residing at Church Place, Yardley, in the county of Worcester, and HENRY HART, residing at 5 32 Regents road, Harborne, in the county of Warwick, England, subjects of the Queen of Great Britain, have invented certain new and useful Improvements in Polishing-Bobs of Leather, of which the following is a specification.

10 This invention has reference to polishing-bobs of leather, such as are used for polishing metals, glass, and similar substances and are formed of thick hides, such as walrus-hide, buffalo-hide, and bull's neck.

15 The objects of the invention are, first, the production of a bob of greater breadth (practically unlimited) than hitherto; secondly, to utilize scrap or waste parts of hides in the formation of the bobs, as well as the best portions thereof, and, thirdly, to reduce their cost of production and increase their wear. Usually such bobs are formed from full-sized solid leather pieces cut from the best and most 20 suitable parts of hides, these pieces being turned circular in a machine. In this case there is considerable waste of material, especially having regard to hides, such as walrus, which have particular properties and thicknesses, which are rare, and which are not of equal thicknesses at all parts or flat enough or sufficiently within shape to form a true bob.

25 According to this invention, a bob of leather is made of any size and thickness from a congregation of small lumps, pieces, or cuttings or from granulated powder of the hide preferred by thoroughly mixing the said cuttings, lumps, or powder with a liquid or partly-liquid cement, working the same until it becomes 30 a saturated adhesive mass of the proper pitch of dryness, and then submitting it in quantities to pressure in a mold of the size and shape of the bob required, which presses the whole of the cuttings together, so as to form when dry a hard consolidated inseparable mass having the desired qualities of a polishing-bob. During the application of the pressure as aforesaid the superfluous cement is squeezed out of the mass under treatment, so that when 35 finished the bob is fairly dry.

An important feature of this invention is the composition of the cement used, as, while

it must be effective in the consolidation of the cuttings in the mass, it must not allow of the said molded mass drying harsh.

55 In producing polishing-bobs according to this invention leather or hide—such, for example, as walrus, buffalo, or bull's neck—is selected (preferably scrap-pieces, for the sake of lessening the cost of production) and is 60 cut up into small pieces or lumps of small size or is ground to a coarse powder or granulated and is placed in quantities required in water, so as to become soaked or saturated, the said lumps or pieces swelling slightly and 65 becoming soft thereby. After a time the mass is taken from the water and thoroughly mixed with a liquid cement composed of water, glue, resin, gum-dragon, vinegar, and gutta-percha dissolved in carbon bisulphid, which finds its 70 way into the pores of the leather lumps until they become thoroughly saturated with it, the said mixing being continued until such time as the mass has been worked to the proper consistency and pitch of dryness. Portions 75 of the mass are now taken and submitted to pressure in molds of the exact size (or approximately so) and shape of the bobs to be produced, the whole of the leather pieces or lumps being pressed and bound together 80 and amalgamated through the said pressure and cement, so as to form hard set consolidated inseparable masses having the desired qualities and the exterior shape of polishing-bobs.

85 A mold wherein the mass is pressed together is shown in Figure 1 of the accompanying drawings, a bob *a*, constructed according to this invention, being shown in position within the said mold. This mold is 90 simply a metal ring *c*, resting upon a suitable base *c*<sup>2</sup>, and its inner walls and also the face of the base are suitably greased before the mass is placed therein and thereon, so that the bob can be knocked out fairly easy. In 95 this sheet of drawings a finished bob is also shown in edge view in Fig. 2 and in side view in Fig. 3, it having upon its sides in these figures thin leather disks *d*, which are cemented thereon subsequent to the bob being 100 molded.

The cement used in the amalgamation has by experiment been found to be particularly effective when the materials forming it have

the following proportions: water, one pint;  
glue, two ounces; resin, one-half ounce; gum-  
dragon, one ounce; vinegar, one-fourth pint,  
and one and one-half ounces of gutta-percha,  
5 (this last named and the resin being dissolved  
by the carbon sulfid,) and in this cement the  
vinegar is a very important substance, as it  
keeps the leather from drying harsh in the  
consolidation.

10 The bobs after they leave the molds require  
to be further dried, and this may be done by  
a very slow heat in an oven of some kind or  
by being left to stand a considerable time.

In the drawings the bob *a* is solid—that is  
15 to say, it is formed entirely of amalgamated  
leather pieces; but it is obvious that it may  
be molded around a wooden core or on a  
mounting, especially in bobs of large diame-  
ter. It will at once be seen that by this in-  
20 vention there is practically no limit as to the  
thickness of a bob, as would be in the case of  
a hide such as walrus, and this is of great im-  
portance to the metal trades; further, that by  
constructing bobs according to this invention

the frequent dressing necessary in leather- 25  
covered wooden bobs of ordinary construction  
is obviated.

The lumps, pieces, or cuttings from which  
the bobs according to this invention are  
formed need not be of any particular shape 30  
or size, so long as they are small—say about  
half an inch—as in their congregation and  
consolidation they are forced together irregu-  
lar or without any arrangement.

Having now described our invention, what 35  
we claim, and desire to secure by Letters Pat-  
ent, is—

As a new article of manufacture, a polish-  
ing-bob consisting of leather cuttings or gran-  
ulations amalgamated with water, glue, resin, 40  
gum-dragon, vinegar, gutta-percha and car-  
bon bisulfid, substantially as described.

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Witnesses:

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