

(No Model.)

W. I. & E. S. STIMPSON.
LOOM TEMPLE.

No. 553,216.

Patented Jan. 14, 1896.

Fig. 1.

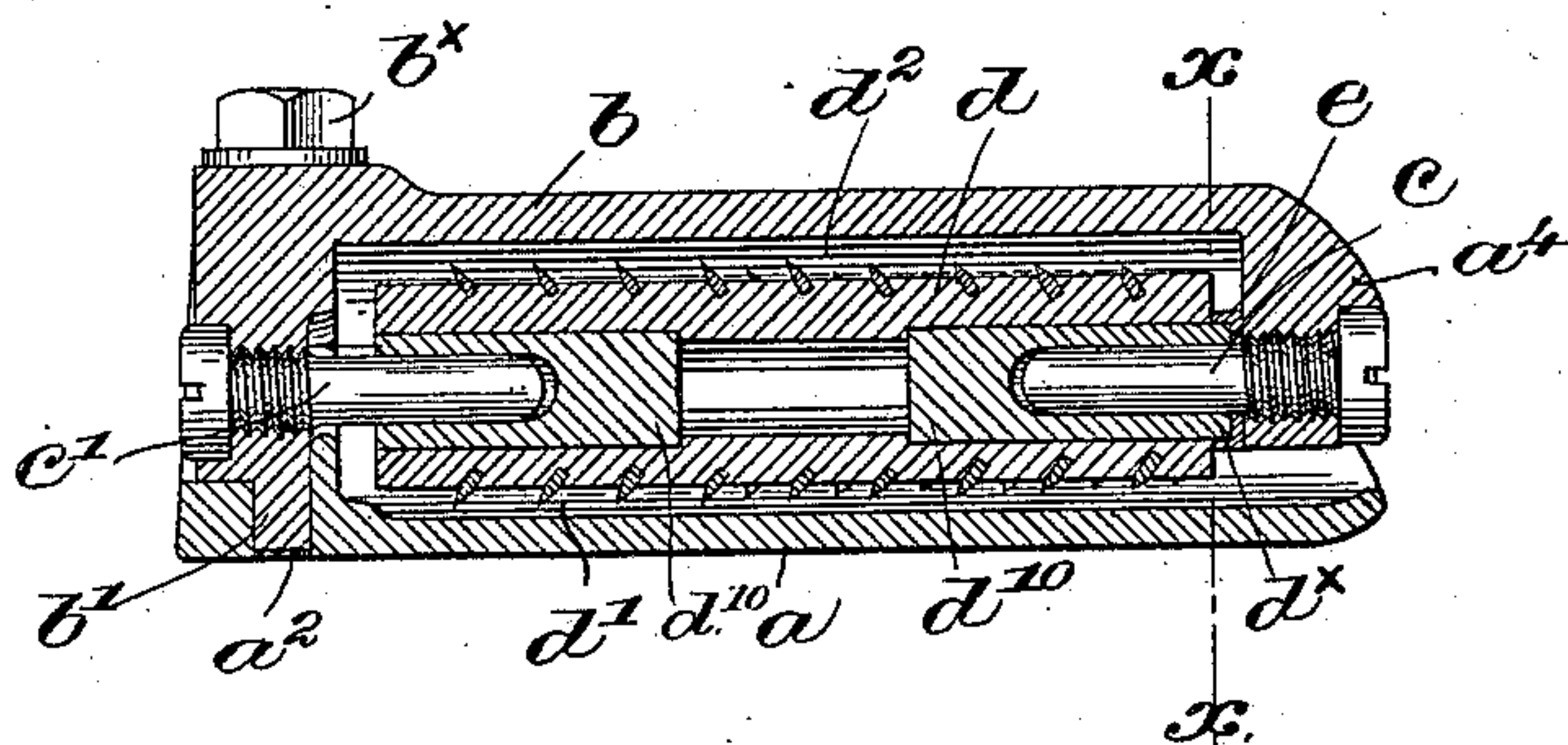


Fig. 2.

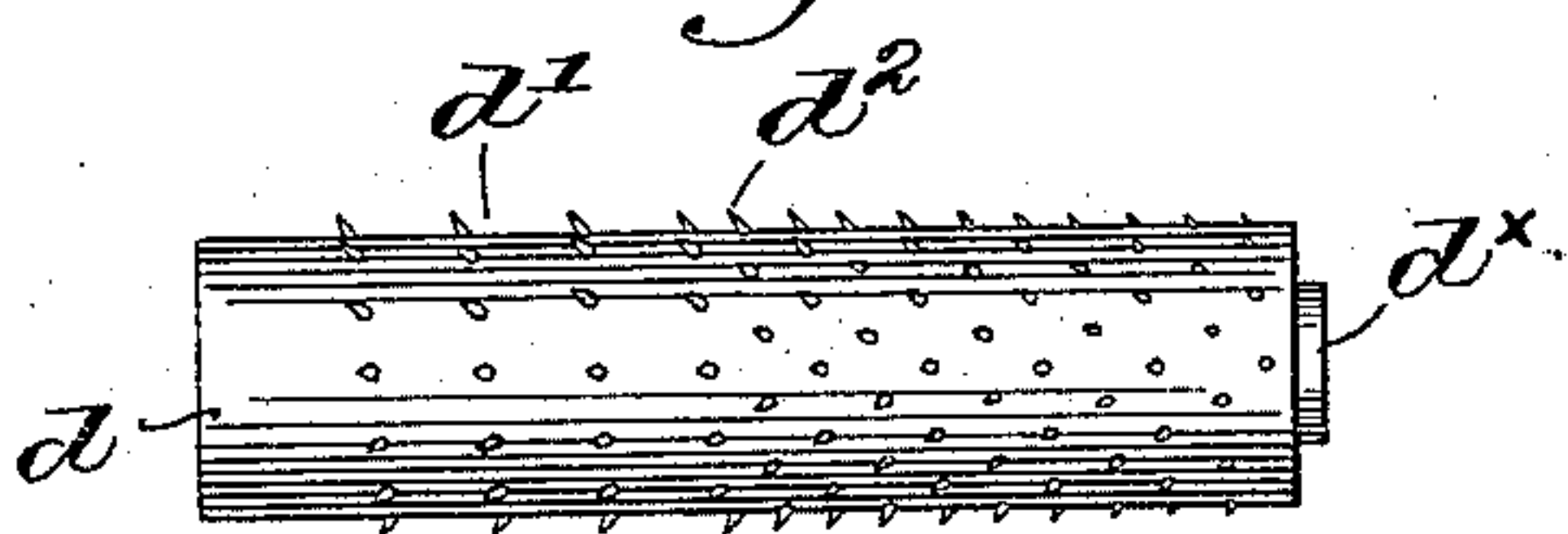


Fig. 3.

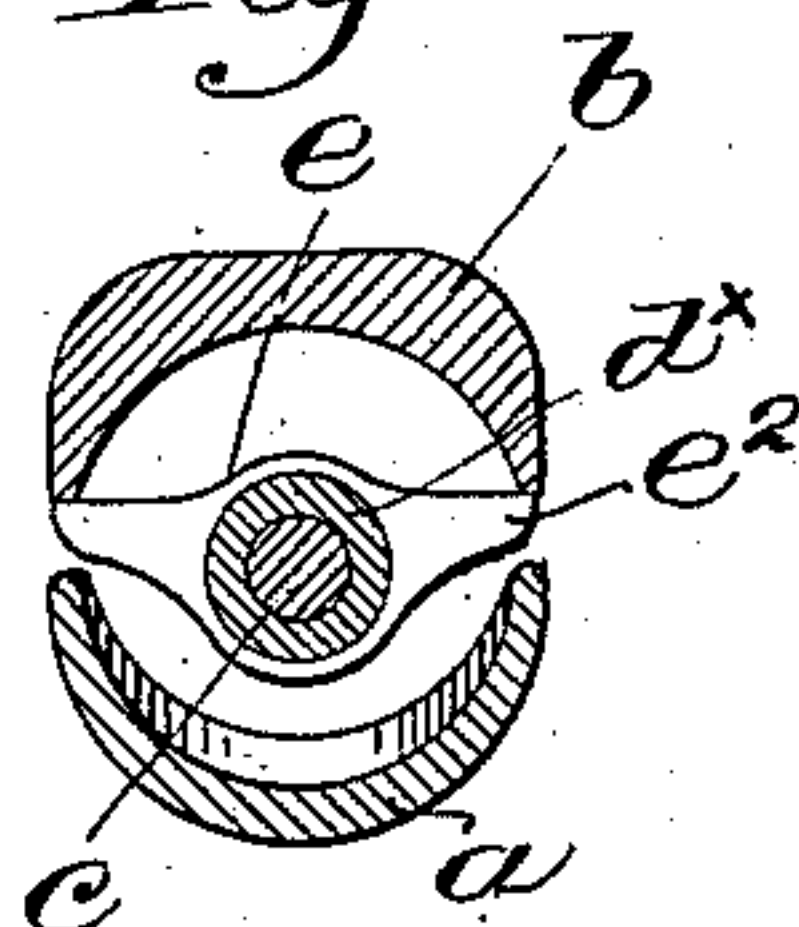


Fig. 4.

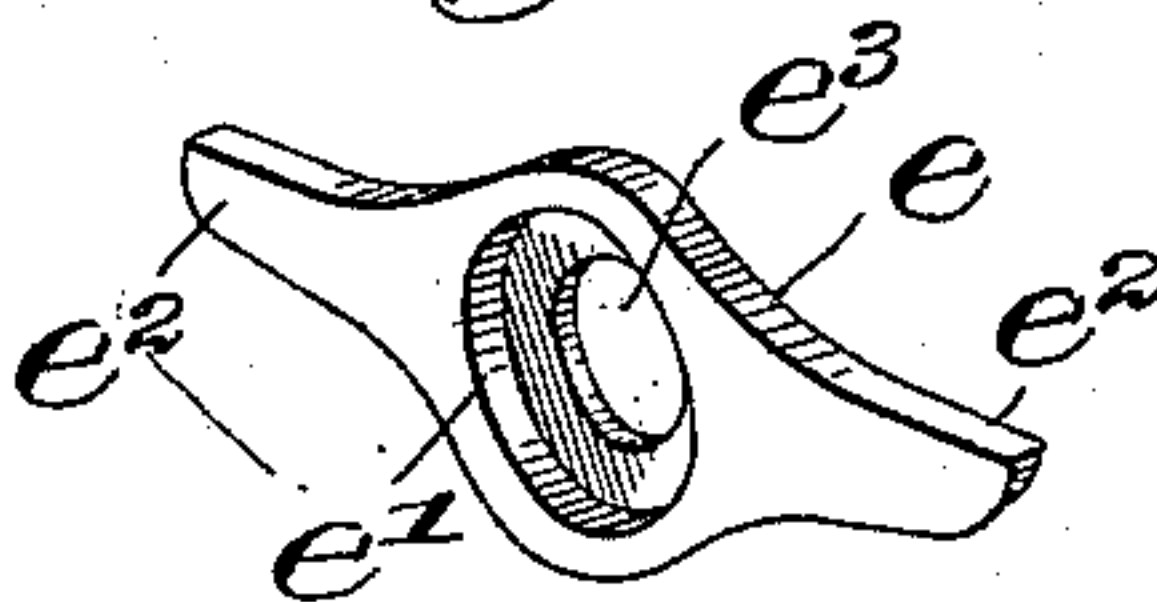
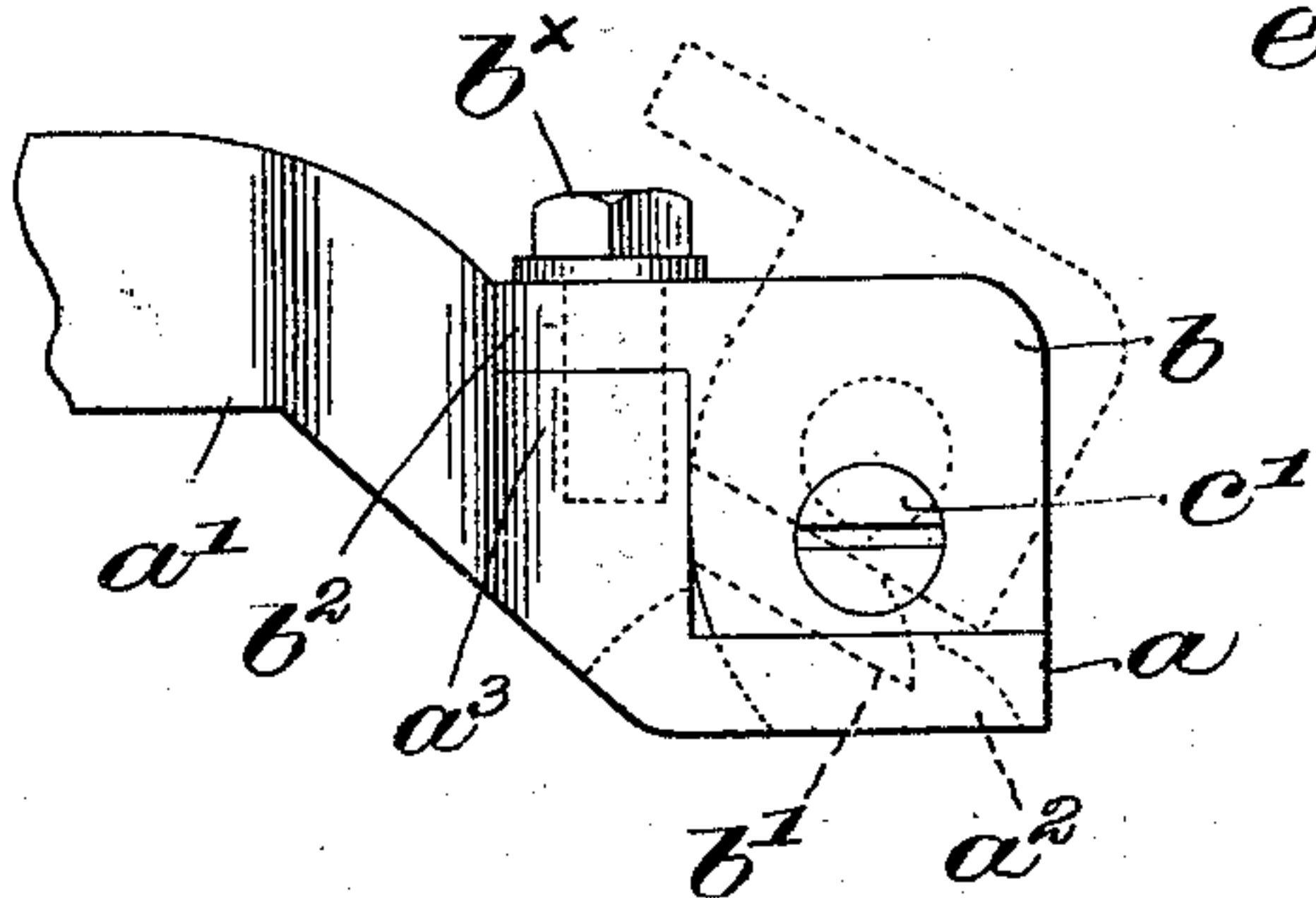


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

WALLACE I. STIMPSON AND EDWARD S. STIMPSON, OF HOPEDALE, MASSACHUSETTS, ASSIGNORS TO THE DUTCHER TEMPLE COMPANY, OF SAME PLACE.

LOOM-TEMPLE.

SPECIFICATION forming part of Letters Patent No. 553,216, dated January 14, 1896.

Application filed August 19, 1895. Serial No. 559,739. (No model.)

To all whom it may concern:

Be it known that we, WALLACE I. STIMPSON and EDWARD S. STIMPSON, of Hopedale, in the county of Worcester and Commonwealth of Massachusetts, have invented an Improvement in Loom-Temples, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In the use of temple-rolls with different kinds of cloth much difficulty has been experienced in the marks which are left by the teeth of the rolls on thin fine goods, and with heavy closely-woven cloth the rolls fail to take proper hold, particularly at the selvages, which latter curl up, and cloth with straight selvages cannot be made.

This invention has for its object the production of a temple-roll which will overcome the before-named objections, the wear on the journals of the temple-roll being also decreased by our invention.

Figure 1 is a vertical longitudinal sectional view of a temple-roll embodying our invention, the pod and cap being shown in section. Fig. 2 is a side elevation of the temple-roll to more clearly show the arrangement of the teeth. Fig. 3 is a transverse section taken on the line $x x$, Fig. 1, looking to the right. Fig. 4 is an enlarged inner side perspective view of the dust-protector for the roll-journal, and Fig. 5 is a rear-end elevation of the pod and cap with a portion of the supporting-shank.

Referring to Figs. 1 and 5, the inner end of the pod a , forming a part of the shank a' , is transversely slotted at a^2 to receive a locking-ear b' formed on the cap b , the latter in this instance supporting the temple-roll. A lug b^2 on the cap (see Fig. 5) rests on the enlarged end a^3 of the shank when the cap is in operative position, a bolt b^x passing through the lug and into a threaded hole in the end a^3 retaining the cap rigidly in place. The inner end of the cap is downturned at a^4 , and threaded to receive and support one of the pivots or stud-bearings c of the temple-roll d , a similar pivot or bearing c' being held in the outer end of the cap, as clearly shown in Fig. 1.

We have herein shown the temple-roll as provided with bushings d^{10} , axially bored at the ends to receive and freely turn upon the smooth inner ends of the stud-bearings $c c'$, the end of one bushing projecting beyond the end of the roll, as at d^x .

It is found in practice that lint, dust, &c., are apt to collect about the inner end bearing of the usual temple-roll, and we have obviated this by extending the bushing, as at d^x , and inserting it loosely in the counterbore e' of a protector e . (Shown separately in Fig. 4.) This protector is preferably made of brass or other suitable metal, with laterally-extended wings e^2 , which enter between the edges of the cap and pod, holding it in place, the bearing or pivot c passing through a hole e^3 in the protector, the latter also taking up the end-thrust of the temple-roll when in use. By this means the necessary longitudinal play of the roll is permitted while effectually protecting the bearing from the entrance of lint or dirt.

In weaving heavy closely-woven cloth it is found that if the teeth of the roll are reduced in number at the outer end of the roll, as at d' , Fig. 2, they take a much better hold of the cloth along the selvage, and slack selvages can then be held properly, thus preventing the curling up of the selvage.

With the usual temple-roll, having the teeth disposed equally from end to end, the teeth cannot properly enter and take hold of slack selvages, and cloth with straight selvages cannot be woven. We also prefer to make the teeth at the outer or selvage end of the roll of uniform height, the teeth gradually decreasing in height from about the point d^2 , Figs. 1 and 2, to the inner end of the roll. This prevents the teeth at the inner end of the roll from taking the greatest hold of the cloth and marking it, for the gradually-decreasing height of the teeth toward the inner end of the roll causes them to take a gradually-diminishing hold on the cloth inward from the selvage.

When weaving thin fine goods, the arrangement of the teeth as to number is reversed—that is to say, the teeth are set closer together at the selvage end, so that a greater number engage the cloth at any one time, and being set closer together they cannot enter so deeply

into the material, thus avoiding marking. Furthermore, the close setting of the teeth enables them to let go of the fabric more easily as the cloth is moved along.

5 The arrangement of the teeth as to height is, however, the same as heretofore, the teeth decreasing in height from the vicinity of the middle of the roll to the inner end, as described. This "tapering" of the teeth, as it
10 may be termed, decreases the pressure of the cloth on the inner end of the roll and so decreases the wear on the bearing.

We claim—

1. A temple roll provided for a portion of
15 its length with teeth of equal height from the surface of the roll, the teeth gradually decreasing in height therefrom toward the end of the roll, substantially as described.

2. A temple roll provided for a portion of
20 its length with teeth of equal height from the surface of the roll, the teeth gradually decreasing in height therefrom toward the end of the roll, the number of teeth being increased toward one end of the roll, substan-
25 tially as described.

3. A temple roll having an increased number of teeth toward one of its ends and decreasing in height from the surface of the roll toward such end, the remaining teeth being
30 of equal height, substantially as described.

4. In a loom temple, the pod and cap, journals for the roll, a temple roll having a bush-

ing bored to receive the bearings and projecting beyond one end of the roll, and a protector counterbored to receive the projecting
35 end of the bushing, substantially as described.

5. In a loom temple, the cap provided with bearings, a temple roll having a bushing to be entered by said bearings and projecting
40 beyond the inner end of the roll, and a protector interposed between the inner end of the roll and the cap and inclosing the projecting portion of the bushing, substantially as described.

6. In a loom temple, the cap, a temple roll
45 rotatably supported therein, a bushing in the roll projecting beyond its inner end, and a counterbored plate to receive the projecting bushing and take up the end thrust thereof and to protect the bearing, substantially as
50 described.

7. A temple roll provided with teeth gradually decreasing in height from the surface of the roll toward one of its ends, substantially as described.
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In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

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EDWARD S. STIMPSON.

Witnesses:

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