

No. 661,198.

Patented Nov. 6, 1900.

J. W. & H. A. THURSTON.

HAMMER FOR STRAIGHTENING SAW BLADES.

(Application filed Mar. 19, 1900.)

(No Model.)

Fig. 1.

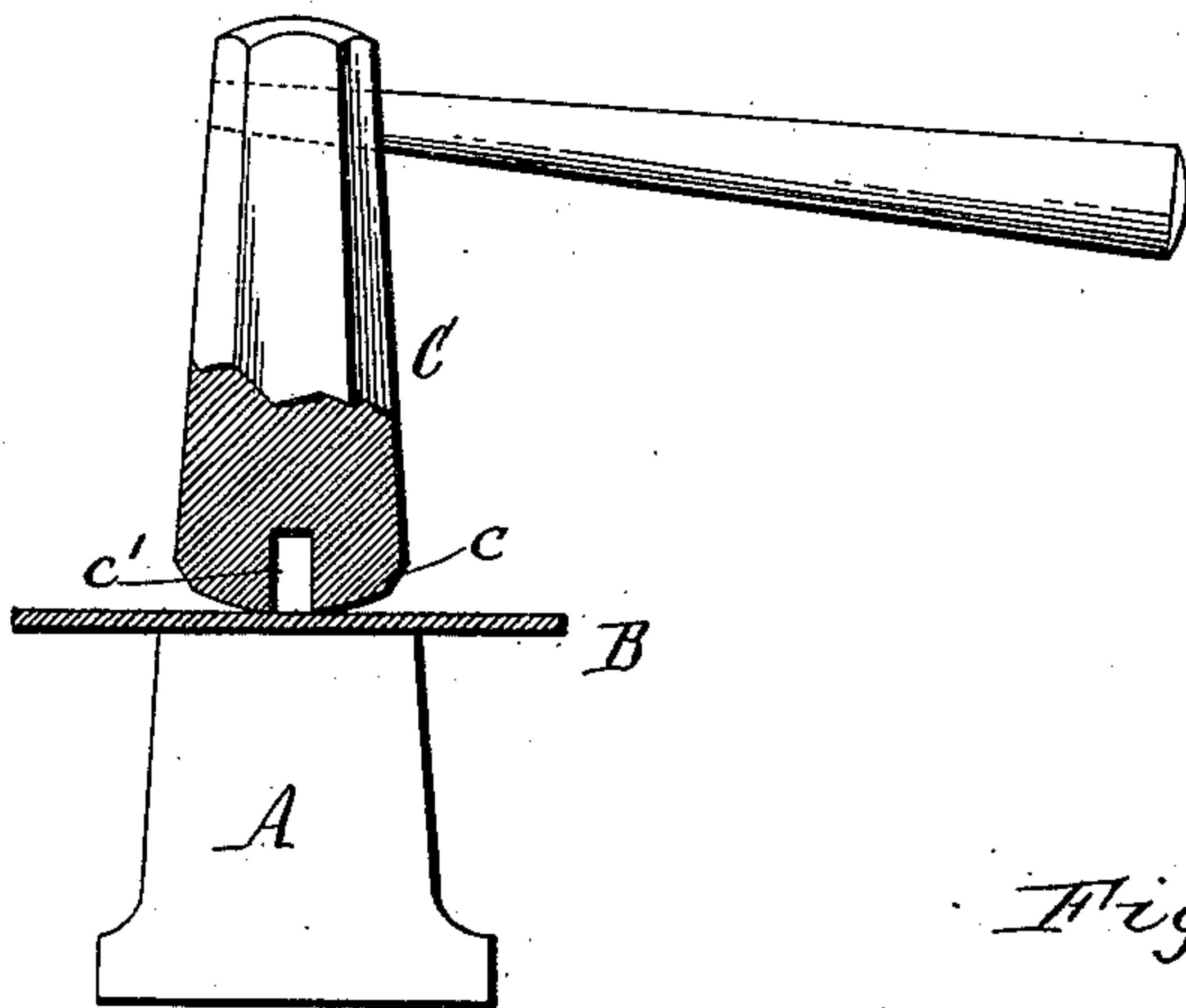


Fig. 2.

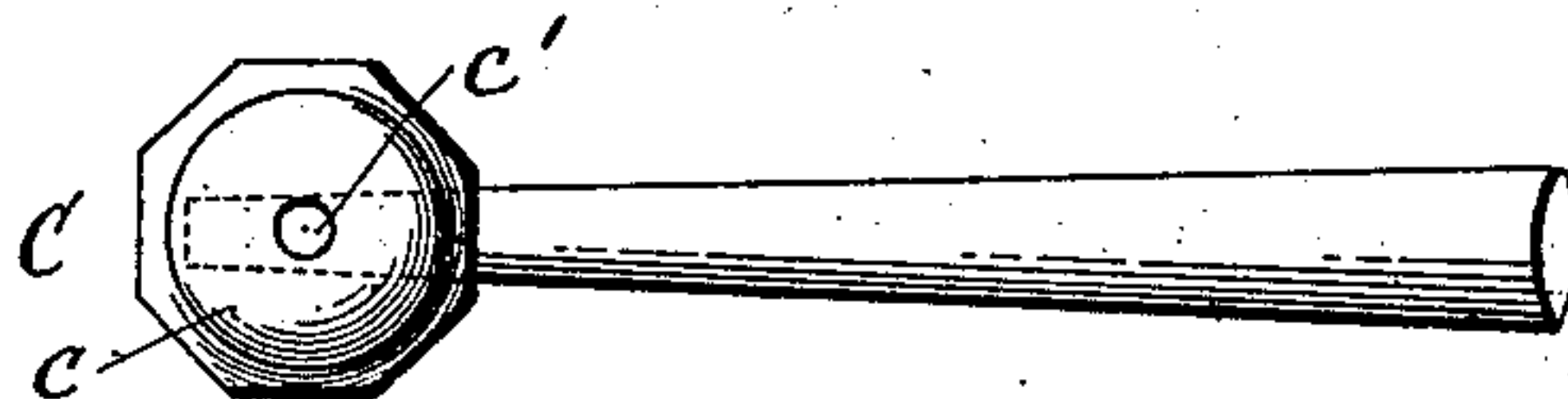


Fig. 3.

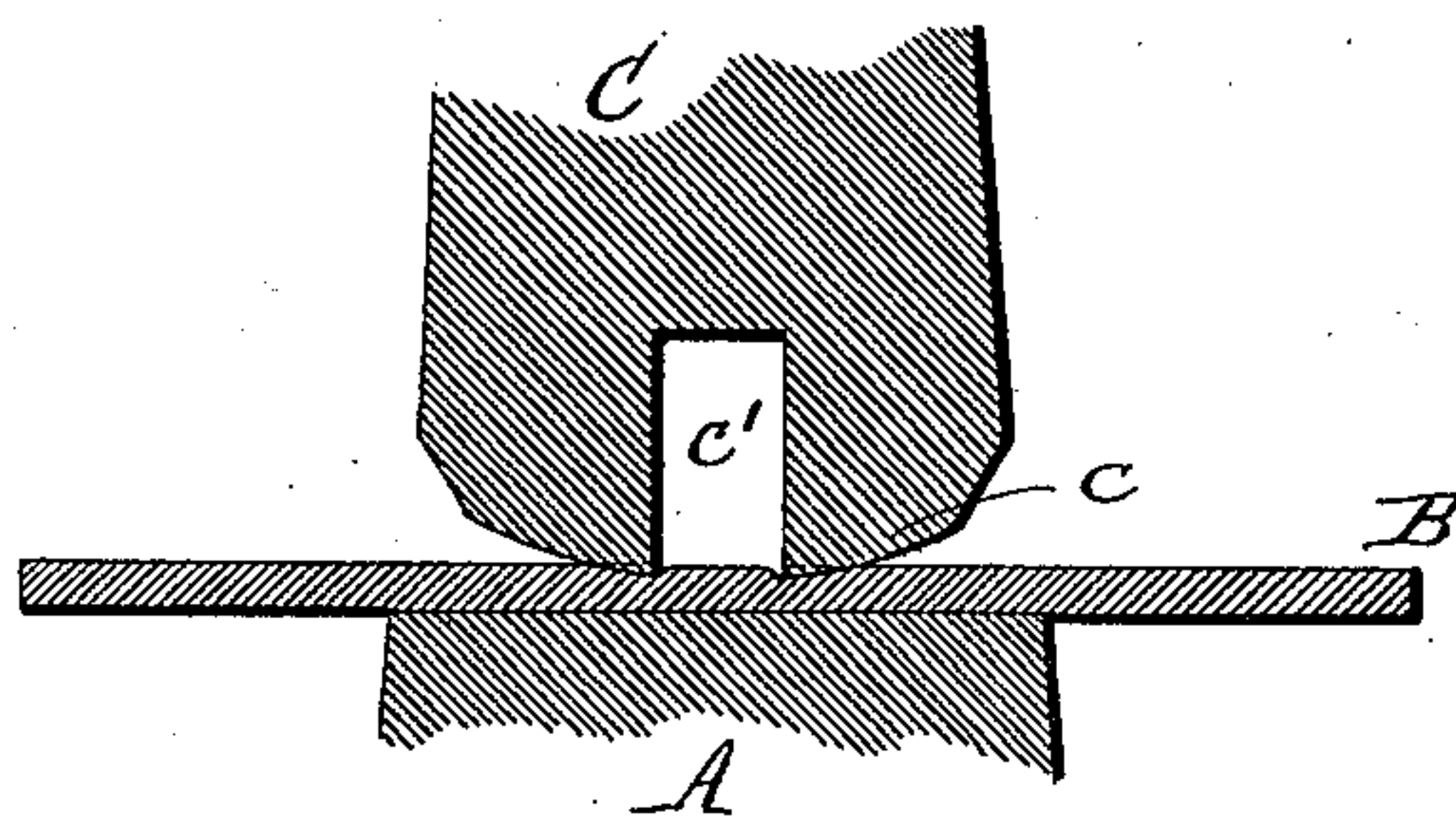


Fig. 4.

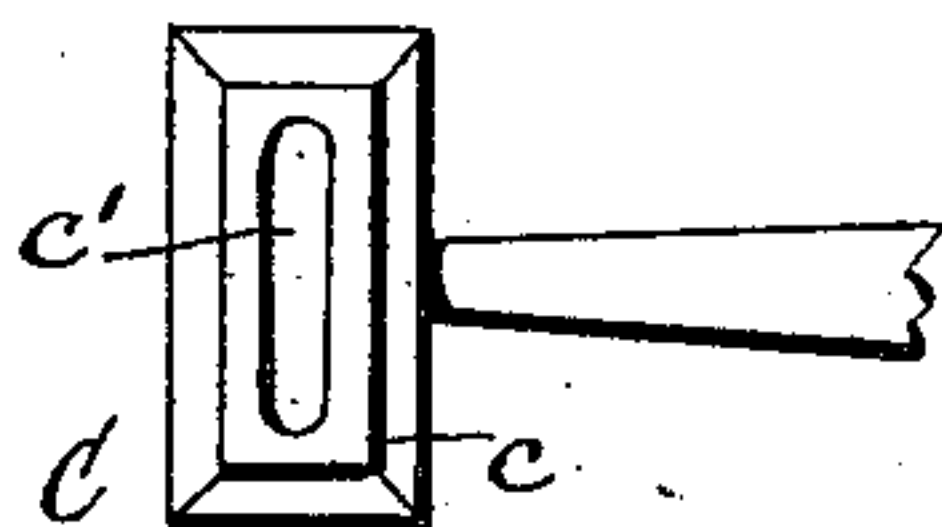


Fig. 5.

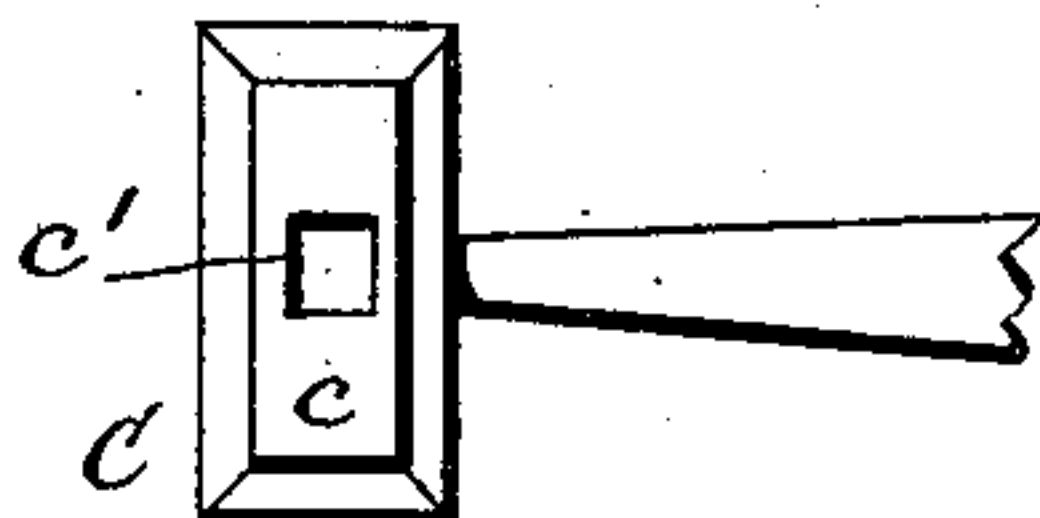
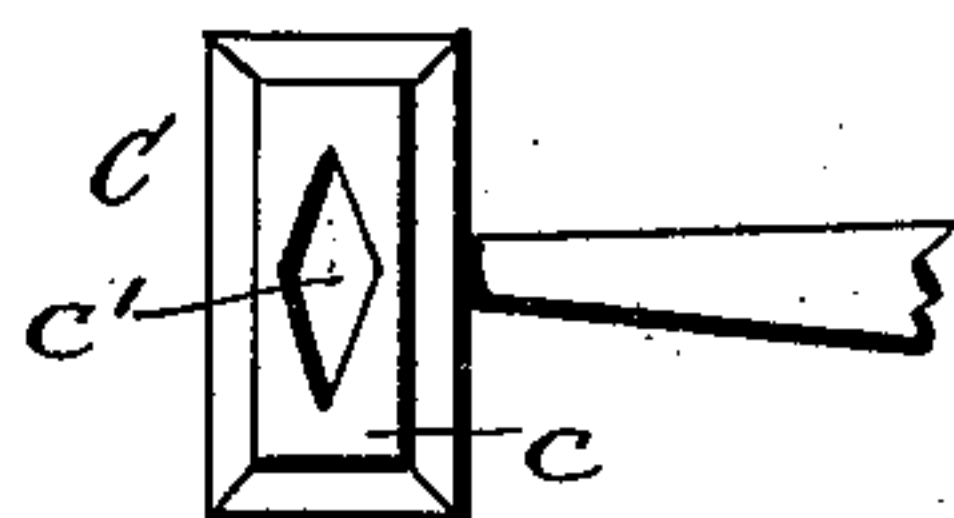


Fig. 6.



Witnesses:

F. J. Schuyler
C. A. Volk.

James W. Thurston
Herbert A. Thurston Inventors.
By Wilhelm D. Bonner
Attorneys.

UNITED STATES PATENT OFFICE

JAMES W. THURSTON AND HERBERT A. THURSTON, OF INDIANAPOLIS,
INDIANA.

HAMMER FOR STRAIGHTENING SAW-BLADES.

SPECIFICATION forming part of Letters Patent No. 661,198, dated November 6, 1900.

Application filed March 19, 1900. Serial No. 9,307. (No model.)

To all whom it may concern:

Be it known that we, JAMES W. THURSTON and HERBERT A. THURSTON, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Hammers for Straightening Saw-Blades, of which the following is a specification.

This invention relates to the hammers which are employed in the manufacture of saws for straightening and planishing saw-blades preparatory to grinding their surfaces.

In the ordinary method of straightening saw-blades the same are hammered upon an anvil by a hammer having a solid or unbroken striking-face, such hammering being done either by hand or by a power-hammer—for instance, a trip-hammer. Such a plain-faced hammer produces comparatively deep indentations in the metal and sometimes even cuts or fractures the surface portions of the saw-blades, thus requiring considerable grinding of the surfaces of the blades to finish or smooth the same.

Our invention has for its object to provide an efficient hammer of this kind which, while producing the desired result, makes comparatively shallow indentations and avoids all liability of cutting or fracturing the metal, thereby permitting the use of thinner saw-blades and economizing in stock and also saving time and labor by requiring less grinding of the blades.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of a hammer embodying our invention, showing the same in connection with an anvil and a fragment of a saw-blade. Fig. 2 is a plan view of the striking-face of said hammer. Fig. 3 is a fragmentary vertical section of the hammer-head, on an enlarged scale, showing in an exaggerated manner the effect of a blow of the hammer upon the saw-blade. Figs. 4, 5, and 6 are plan views of the striking-face of the hammer, showing different forms of the recess in the same.

Like letters of reference refer to like parts in the several figures.

A is an anvil such as is ordinarily used in straightening or planishing saw-blades, and B is a saw-blade resting thereon.

C is the head of our improved hammer or tool. The striking-face *c* of the hammer is slightly convex or of such form as to recede in all directions from its central portion.

c' is a recess or depression formed in the central portion of the striking-face and extending a suitable distance into the head. This recess is closed on all sides by the adjacent portion of the striking-face, which latter recedes in all directions from the edge of the recess, so that this edge forms the most salient or highest portion of the striking-face.

In the use of the ordinary solid or unprocessed hammers heretofore employed the central or salient portion of the striking-face displaces the metal of the saw-blade forwardly, as well as in other directions, and is liable to penetrate or indent the blade to such an extent as to cut or fracture the surface portion thereof. By providing the striking-face of the hammer with the recess *c'* that portion of the face corresponding to the most salient portion of the ordinary solid hammer-head is cut away and only the salient metal forming the edge of the recess strikes the saw-blade and indents the same. Owing to this construction, the penetrating capacity of the hammer is reduced without impairing its efficiency. When the hammer strikes the saw-blade, that portion of the blade directly opposite the recess of the hammer-head is not spread or displaced, as is the case with the use of the ordinary solid hammer, but remains in place, as indicated in an exaggerated degree in Fig. 3.

By the use of this hammer saw-blades are straightened or planished with fewer blows than with the solid hammer-head and therefore in less time, and the indentations produced by the hammer are materially shallower than those made by the ordinary hammer, thus requiring less grinding of the straightened saw-blade to finish the same and permitting the use of thinner blades without danger of cutting or fracturing the same. An important saving is thus effected both in material and in the time and labor involved in grinding down the uneven surface of the saw produced by hammering it.

The form of the recess in the hammer-head is immaterial. It is preferably circu-

lar, as shown in Figs. 1 and 2; but it may, for instance, be oblong, square, or diamond-shaped, as shown in Figs. 4, 5, and 6.

We claim as our invention—

- 5 1. A hammer or tool for straightening or planishing saw-blades, provided in its striking-face with a recess or depression which is closed on all sides, and having the striking-face formed to recede in all directions from
10 the edge of said recess, substantially as set forth.

2. A hammer or tool for straightening or

planishing saw-blades, provided with a convex striking-face having a central recess or depression which is closed on all sides, substantially as set forth. 15

Witness our hands this 10th day of March, 1900.

JAMES W. THURSTON.
HERBERT A. THURSTON.

Witnesses:

JOHN Phipps,
TAYLOR E. GRONINGER.