(No Model.)

A. N. CLARK.

TOOL SHARPENER.

No. 606,000. Patented June 21, 1898.

Fig. 4.

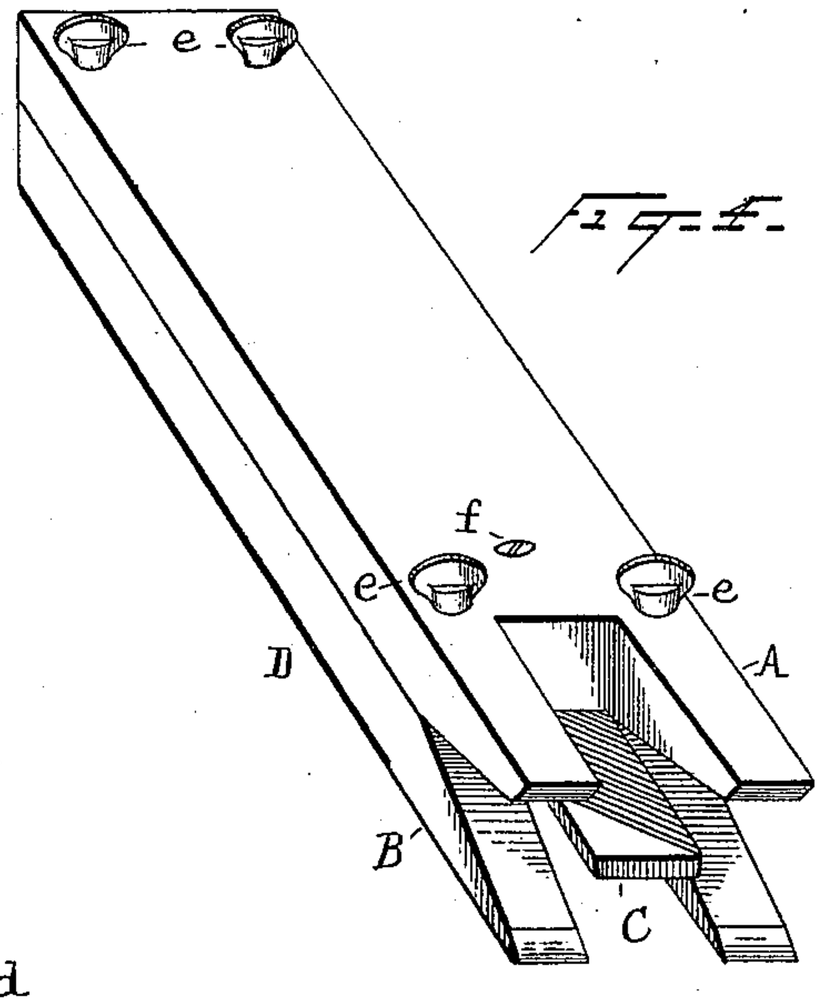


Fig. 3.

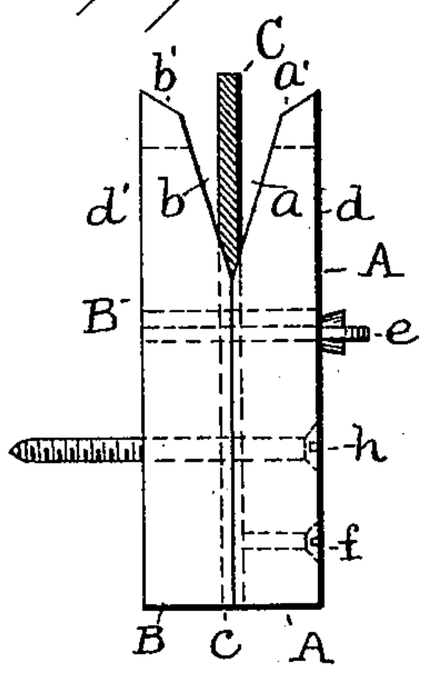
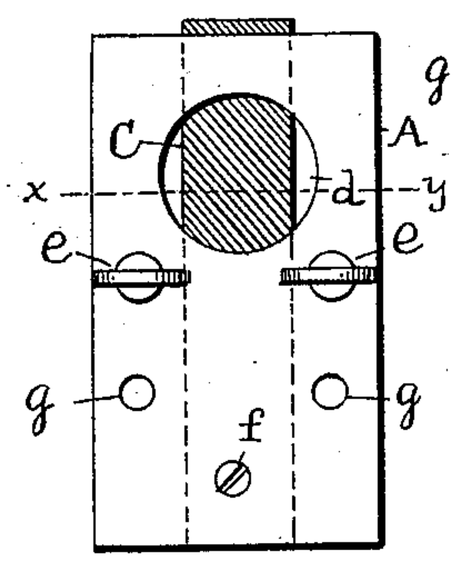


Fig. 7.

Fig. 6.

Fig. 1.



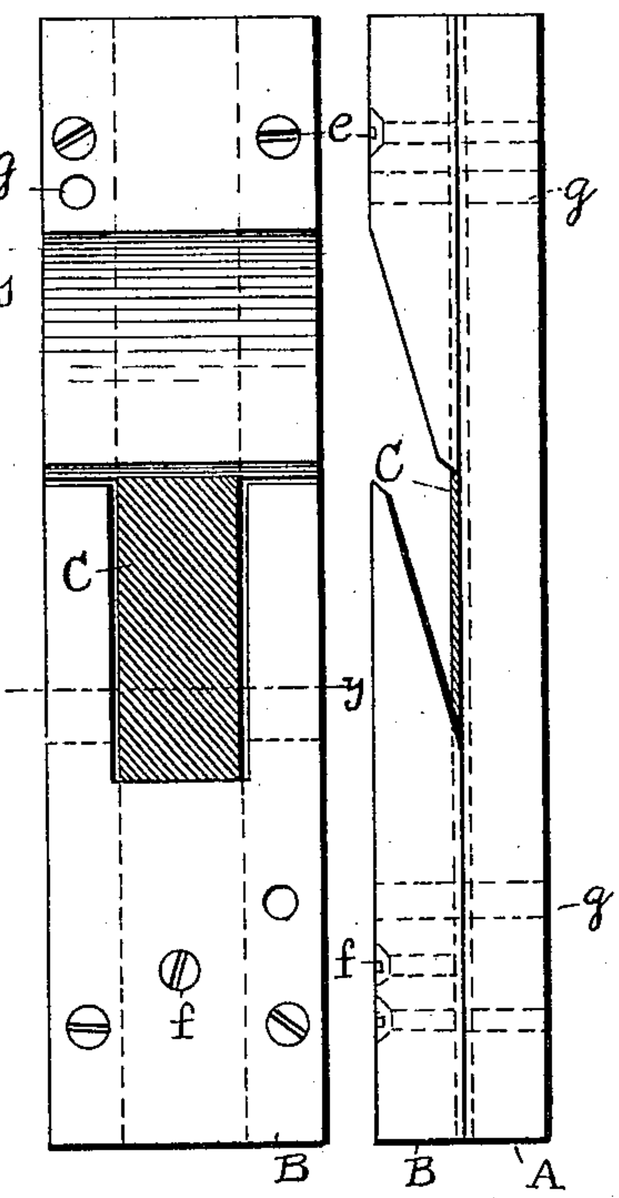


Fig. 5.

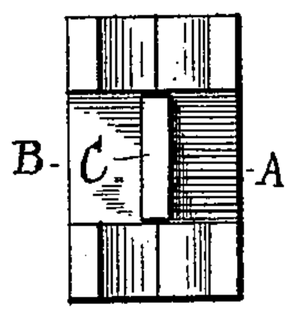
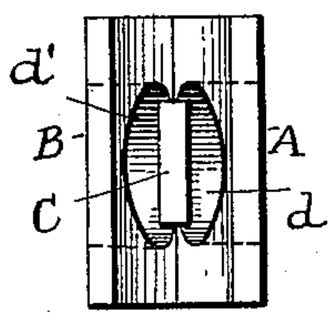


Fig. 2.



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UNITED STATES PATENT OFFICE.

ALFRED N. CLARK, OF ATHENS, MICHIGAN.

TOOL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 606,000, dated June 21, 1898.

Application filed September 18, 1897. Serial No. 652,100. (No model.)

To all whom it may concern:

Be it known that I, ALFRED N. CLARK, a citizen of the United States, residing at Athens, in the county of Calhoun and State of Michigan, have invented a certain new and useful Improvement in Tool-Sharpeners, of which the following is a specification.

My invention relates to an implement for sharpening tools, and is especially useful for sharpening the edges of knives, scissors, &c.

My device is handy in size and is cheap to manufacture. It is exceedingly simple, while being more efficient than the tool-sharpeners known to me for the reason that the blade is held against the sharpening-surface in such manner that particles ground from the edge thereof fall away and leave the edge and the sharpening-surface clear and clean instead of clogging up the point of contact between the blade and the sharpening-surface and thus interfering with the sharpening of the blade. Another advantage of my invention lies in the fact that the sharpening-surface can be very easily moved in reference to the guide, so as to present, when desired, a fresh surface to the edge of the blade.

My sharpener may also be provided with a hone, if it is desired to get a very fine edge.

In the accompanying drawings, where like letters of reference indicate similar parts, Figure 1 shows an elevation of the preferred form of my sharpener. Fig. 2 shows a plan view of the top of this sharpener. Fig. 3 shows a side elevation. Fig. 4 shows another form of sharpener embodying my invention. Fig. 5 is a plan view of the top of the sharpener shown in Fig. 4, and Figs. 6 and 7 show elevation and plan views of a further modification of my invention.

Referring to the drawings, A and B are counterparts, preferably of hard wood, which hold the file C between them and which are formed so as to act as guides to hold the edges of tools in proper position against the file. To do this, they are cut away to form the faces *a*, *b*, *a'*, and *b'*, which when the counterparts are fitted upon the file are situated at the proper angle with the face of the file at which the tools should be presented thereto. For instance, I design faces *a b* to be at the proper angle for holding a knife-edge to the file and *a' b'* at the proper angle for presenting the blades of scissors. It is understood, however, that the faces *a* and *b* or the faces *a'* and *b'* may not be at similar angles to the face of the file, but may be made at different angles suitable for sharpening different kinds of tools. If desired, they may also have an emery or other hard coating to help sharpen and smooth the knife-edge and protect the guides from wear. It should be noted that none of the figures show a sharpener where the guides are opposite to the sharpening edge; but in every case the guides are outside of the file, so that the edge of the knife or other tool is free and clear as it passes across the face of the file. This renders impossible any clogging of filings or particles taken from the edge of the tool at the point where the tool meets the sharpening-file and prevents the dulling of the tool by this means. The reason why other tool-sharpeners having guides fail to put a sharp edge on tools is thus done away with.

Grooves *c* are cut in the counterpart blocks A and B, so that they may fit snugly about the file. As shown in Figs. 1, 2, and 3, one end of each of these counterparts is cut away to form the guide-faces *a*, *b*, *a'*, and *b'* and has the hole *d d'* cut therethrough, slightly larger in diameter than the width of the file. This frees that part of the edge of the tool which passes across the face of the file on the line *x y*, Fig. 1, while the blade as a whole is kept in the proper position by the guides. Thumb-screws *e e* serve to hold the blocks A and B together. The position of the file is fixed by means of set-screw *f*. This set-screw may be omitted if A and B are fitted to the file so tightly as to render a set-screw unnecessary. Screws *e e* may be ordinary screws, but I prefer thumb-screws, as it makes it easier to loosen the file and to slightly change its position when it becomes worn at the points where the tools are drawn across it. By looking at Fig. 1 it may be seen that besides being able to sharpen on both faces of the file it is possible to shift the file slightly and even turn it end to end, so as to use all the available sharpening-surface.

It may be desirable to make holes *g g* through A and B, through which one or more

long screws *h* may be passed, and thus render the sharpener capable of being screwed to a bench, table, window-sill, &c.

Figs. 4, 5, 6, and 7 show modifications of my invention. Fig. 4 shows the blocks A and B to be of sufficient length to make a tool which may be held in the hand and which will hold a longer file. In this modification one of the outer faces of the blocks may be provided with a hone D, of emery or similar substance, for giving a finer edge to the blade than is capable of being obtained by the file. Figs. 6 and 7 show a form of sharpener suitable to be fastened flat upon a bench or table. Though this form employs but one face of the file, the file may be used up by turning it over and shifting it, as in the other forms. Instead of the file C there may be substituted as a sharpening-surface any material, such as emery or whetstone, which is suitable for the purpose, the size and shape of the other parts being modified accordingly.

What I claim is—

1. In a tool-sharpener, the combination with a flat sharpening-surface, and a guide on each side of said sharpening-surface for holding the tool at the proper angle against said surface, whereby the blade of the tool is free and clear of the guides as it passes across said sharpening-surface, substantially as set forth.

2. In a tool-sharpener, the combination with a flat sharpening-surface, a guide on each side of said sharpening-surface for holding the tool at the proper angle against said surface whereby the blade of the tool is free and clear of the guides as it passes across said sharpening-surface, and means permitting the adjustment of the sharpener with respect to said guides, substantially as set forth.

3. A tool-sharpener having in combination a sharpener with two or more flat sharpening-faces, blocks rigidly fitting upon said sharpener having guides formed therein for holding the edge of the tool in proper position against the sharpener and free and clear as it passes across the face of the said sharpener, and means permitting the adjustment of the sharpener between the blocks, substantially as set forth.

This specification signed and witnessed this 15th day of September, 1897.

ALFRED N. CLARK.

Witnesses:

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