

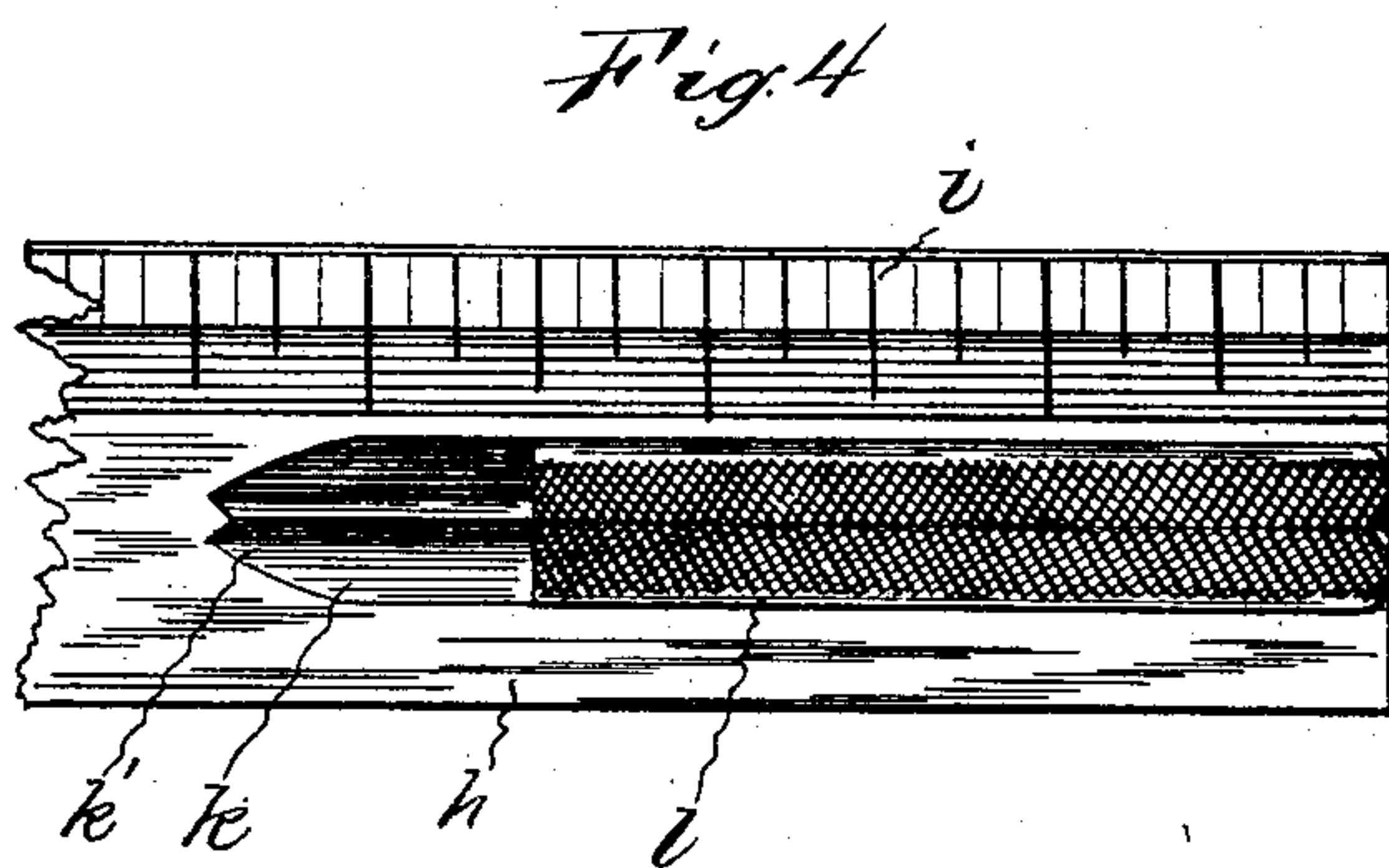
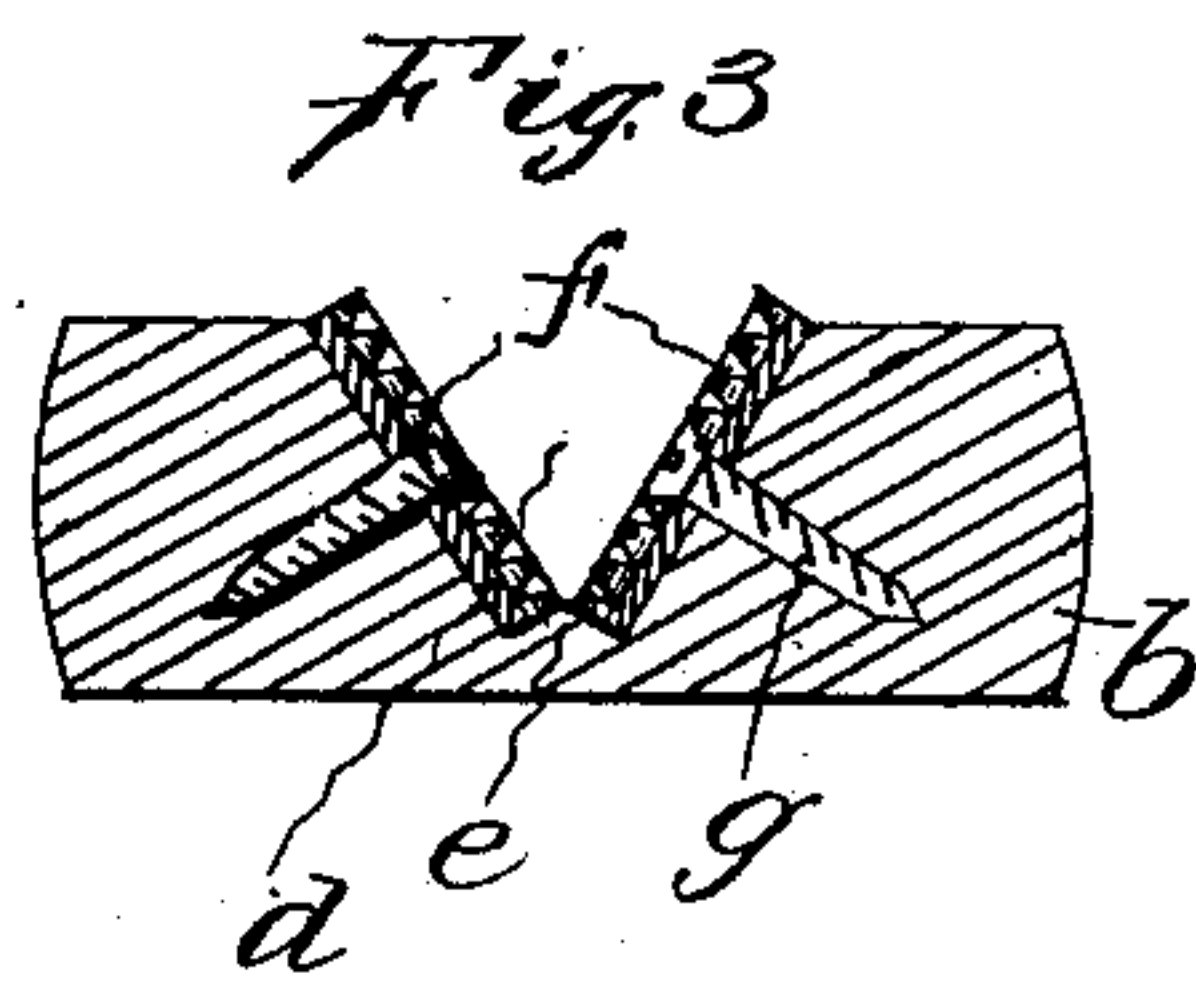
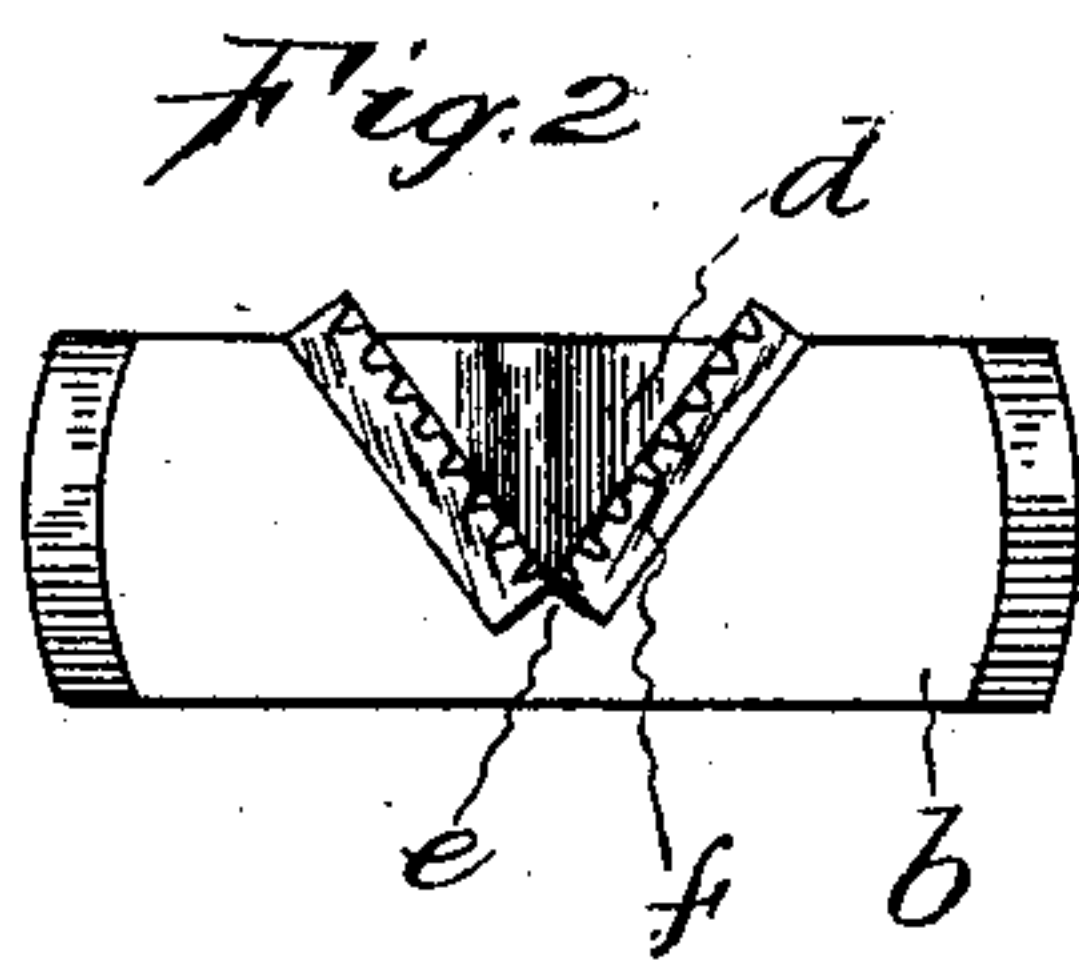
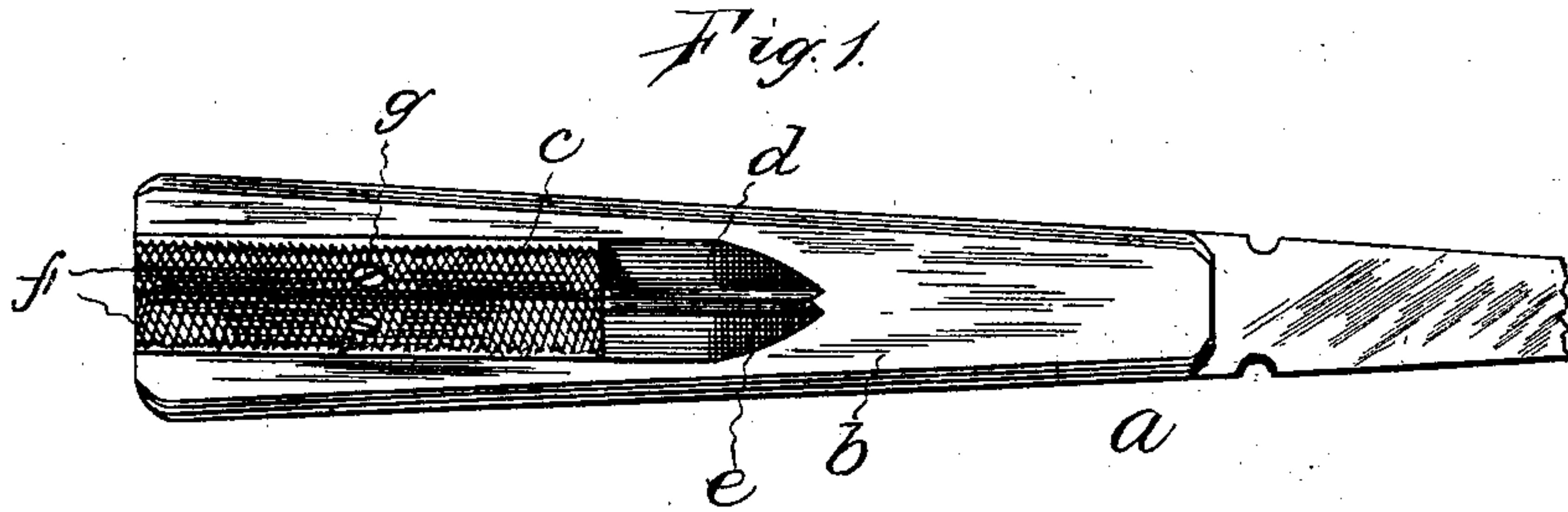
No. 705,322.

Patented July 22, 1902.

F. A. CORTIS.  
PENCIL SHARPENER.

(Application filed Dec. 15, 1900.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

FRANK A. CORTIS, OF MERIDEN, CONNECTICUT.

## PENCIL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 705,322, dated July 22, 1902.

Application filed December 15, 1900. Serial No. 40,009. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK A. CORTIS, a citizen of the United States, and a resident of Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Pencil-Sharpeners, of which the following is a specification.

My invention relates to an improvement in pencil-sharpeners, which consists of two metal plates having file-surfaces and being located in a groove or socket in the surface or handle of a desk implement.

The objects of my invention are, first, to provide a handy means for speedily sharpening a lead-pencil; second, to provide a means for admitting the sharpener to a location in the handle or surface of a desk implement; third, to do away to a great extent with the usual accumulation of litter that accompanies the operation of sharpening a pencil in the old method; fourth, to provide a receptacle for the small amount of litter that is made by the improved sharpener in its operation. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view showing the sharpener located in the handle of a desk implement. Fig. 2 is a view in end elevation of the handle of the implement. Fig. 3 is a view in cross-section through the handle and sharpener on plane passing through the fastening means shown in Fig. 1 and looking toward the left. Fig. 4 is a plan view of the end of a portion of a desk-ruler embodying my invention.

In the accompanying drawings the letter *a* denotes a letter-opener or paper-cutter, having a handle portion *b*, in which the sharpener *c* is located in one form of embodiment of my invention.

In the handle of the implement a recess *d* is formed with walls which slope or flare outward from the bottom, in which a ridge *e* is located. The recess is of the shape of a *V* in cross-section, open at the top of the implement and closed at the inner end where the surface of the recess merges into the upper surface of the holder or handle. The ridge *e* forms

on both sides of the recess a shoulder against which the lower edge of a plate *f* lodges, and thus serves to locate the lower edges of the two plates which are secured to opposite sides of the recess in proper relative position, as well as aiding in the firm attachment of the plates in position.

Each plate *f* is of metal, preferably iron or steel, with a file-surface the teeth of which preferably all range forward, so as to carry the filings and dust toward the inner end of the recess. The plates are less in length than the recess, so that a place is left at the inner end for the accumulation of dust, and particularly of wood and lead formed by the sharpening of the pencil. A screw *g* or like fastening means extending through each plate into the walls of the recess and the substance of the article holds the plate securely in place.

The desk implement to which this sharpener is applied may be of any desired material, as wood, ivory, or metal, and the plates being all made of the same size and interchangeable can be readily renewed when worn out.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination in a desk implement provided with a recess of *V* shape having a ridge along the bottom portion, removable plates with file-surfaces located opposite to each other on the walls of the recess, all substantially as described.

2. In combination in a desk implement provided with a recess of *V* shape having a ridge along the bottom portion, removable plates with file-surfaces located opposite to each other on the walls of the recess and less in length than the recess, all substantially as described.

3. In a desk implement provided with a recess of *V* shape which has means at the bottom thereof for the support of plates, plates with file-surfaces located opposite to each other on the walls of the recess and supported at the bottom thereof.

FRANK A. CORTIS.

Witnesses:

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