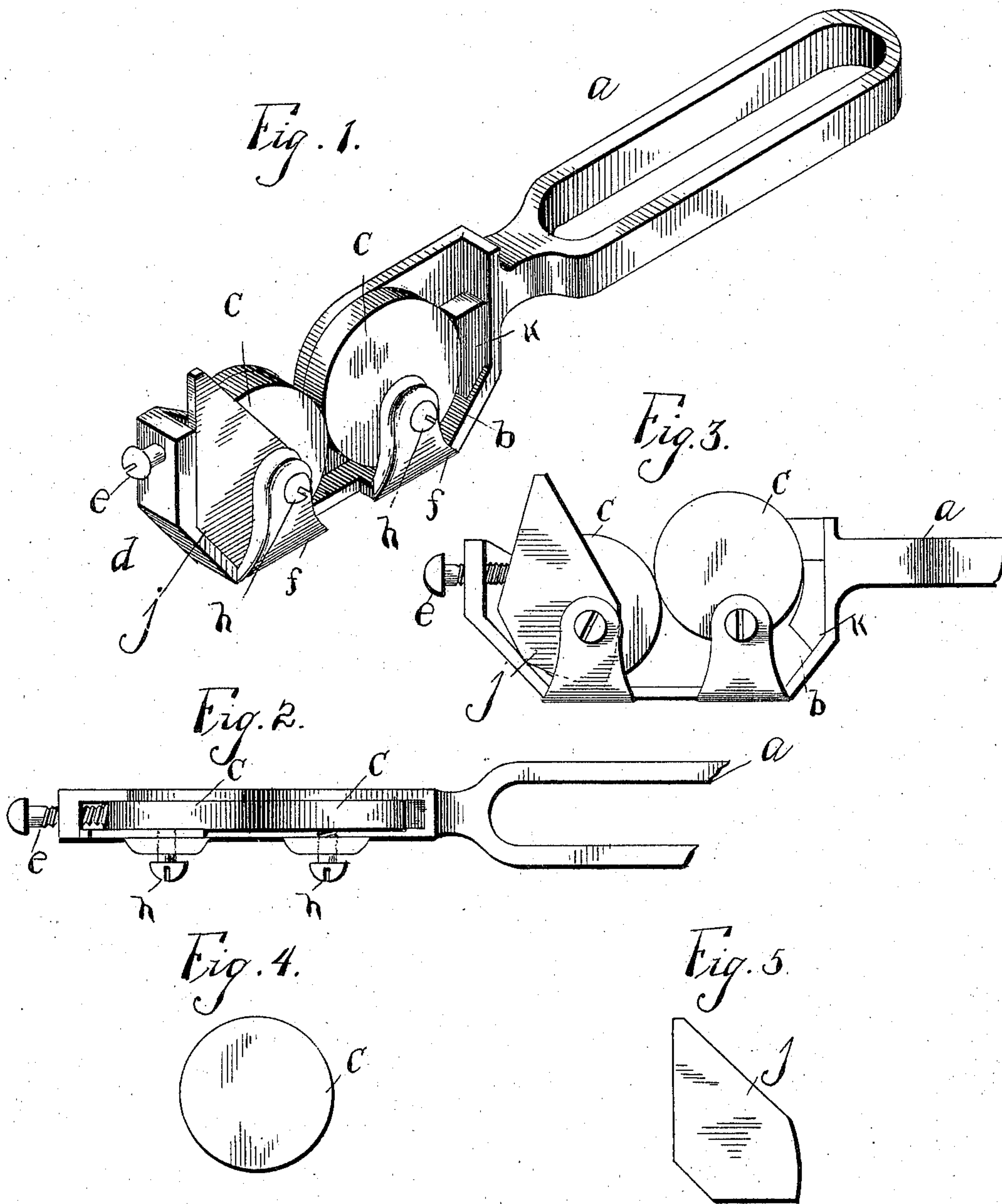


(No Model.)

G. T. HETZEL.
SHARPENING DEVICE.

No. 575,351.

Patented Jan. 19, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE T. HETZEL, OF ALLEGHENY, PENNSYLVANIA.

SHARPENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 575,351, dated January 19, 1897.

Application filed June 9, 1896. Serial No. 594,847. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. HETZEL, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain
5 new and useful Improvements in Sharpening Devices; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to
10 make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in knife and scissors sharpeners.

The object of the invention is to provide an improved device of the character described,
very simple in construction, effective in operation, and composed of a minimum number of
20 parts.

The invention consists in certain features of construction and in combinations and arrangements of parts, more fully described hereinafter and particularly pointed out in
25 the claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of the complete device. Fig. 2 is a top plan. Fig. 3 is a front elevation, one of the sharpening disks
30 being shown in a raised position. Fig. 4 is a side elevation of one of the sharpening-disks, and Fig. 5 is a similar view of the guide employed when scissors are to be sharpened.

Like letters of reference mark the same parts throughout the several views.

a indicates a handle having at its opposite end and formed integral therewith a cut-away portion *b*, forming a frame for the reception of the disks *c c*. This frame is provided at one of its ends with an upward extension *d*, provided with a screw-threaded opening and a set-screw *e* to enter the same, and is arranged above the common center so
40 as to bear down on the disks to hold them down.

f f are upwardly-extending arms or projections from the under side of the frame. These arms are provided near their upper edges with openings adapted to receive set-screws *h*. The disks *c* are preferably formed
50 solid and of hard-tempered steel, and are lo-

cated edge to edge and in line with each other within the frame. It should be noticed that the set-screws *h*, when inserted in the openings of the upwardly-extending arms, bear
55 against the face of the disks, and that by reason of the rear extension *d* and the set-screw *e* the several disks can be held downwardly, one closely against the other, or the distance between the same regulated by the
60 movement of said screw *e*. Said disks can be made of different thicknesses.

j indicates a suitable guide of any desirable shape to fit in between one of the upwardly-extending arms *f* and one of the disks,
65 the screw *h* bearing against this guide or plate and against one of the disks *c*, thereby holding both the guide and disk in position. This guide or plate *j* can be made of any desired shape and can be set in any desired position
70 so as to form the angle required to coincide with the sharp edge or blade of the shears resting against the guide while being passed back and forth over the outer periphery of said disk and at right angles thereto.
75

k is a block or wedge interposed between one of the disks and the end wall of the frame.

The edges of the disk serve as the sharpening medium for the knife-blades, and in operation such blades are passed between said
80 disks at a slight angle a sufficient number of times until the knife is properly sharpened. When the edges of the disk become worn, they can be taken out of the frame and the edges or the faces of disks can be ground, when
85 they will be found to be in practically the same condition as when they were originally placed within the said frame. This can be done any number of times, and by reason of the hard nature of the material composing the
90 disks they will last for an indefinite period.

It should be observed that should any portion of the edges of the disks become dull or worn the screws passing through the upwardly-extending arms in the frame and bearing
95 against said disks can be loosened and the disks slightly turned, thereby providing a new sharpening-surface. This can be repeated a large number of times, so that there would be but little necessity to grind the edges
100 of such disks.

The invention is very simple in construc-

tion and composed of but a few parts, and by reason of the peculiar arrangement of the several parts thereof I am enabled to produce a device for the purposes intended far more simple and possessing many advantages not contained in similar devices heretofore produced.

It is evident that various slight changes might be made in the forms, constructions, and arrangements of the parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the exact construction herein set forth, but consider myself entitled to all such changes as fall within the spirit and scope of my invention.

What I claim is—

1. A sharpening device consisting of the handle, a frame, said frame having a rear extension, and the upwardly-extending arms, the disks mounted within said frame, a guide secured between one of said disks and one of

the upwardly-extending arms and fastening means adapted to secure said guide and the disks in the desired position, as set forth.

2. A sharpening device consisting of a handle, a frame having the rear extension and the upwardly-extending arms on one side thereof, a series of disks mounted within said frame, a guide between one of said disks and upwardly-extending arms, fastening means securing said guide and disks in the desired position and a wedge located in one end of said frame to prevent lateral or rotary movement of the disks, for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE T. HETZEL.

Witnesses:

JOHN L. GULLETT,
WM. J. RUCH.