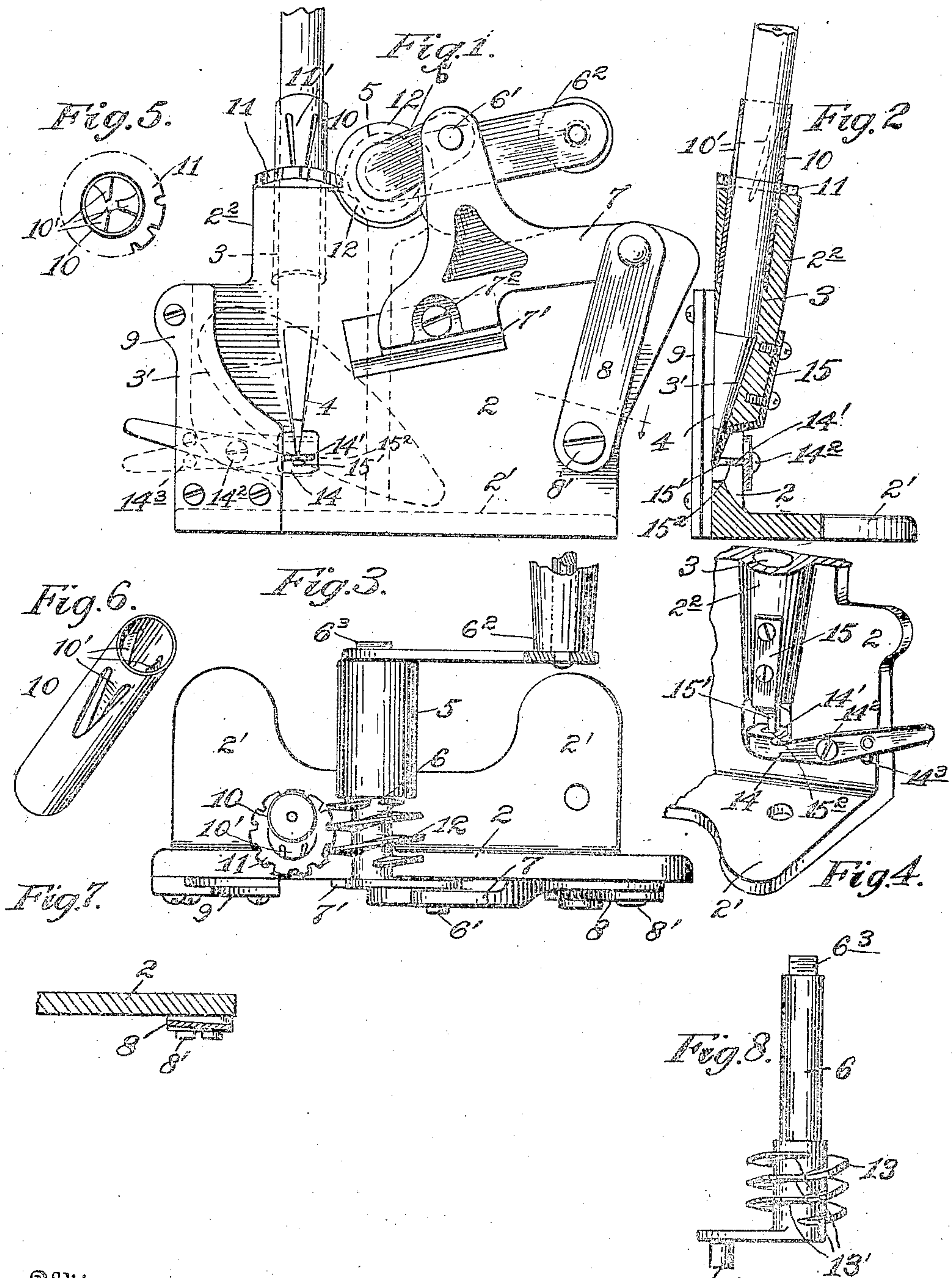


R. W. PITTMAN.
PENCIL SHARPENING DEVICE.
APPLICATION FILED NOV. 23, 1908.

940,613.

Patented Nov. 16, 1909.



Witnesses:
Fred Weber
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UNITED STATES PATENT OFFICE.

REINHART W. PITTMAN, OF NEW YORK, N. Y.

PENCIL-SHARPENING DEVICE.

940,613.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed November 23, 1908. Serial No. 464,072.

To all whom it may concern:

Be it known that I, REINHART W. PITTMAN, of the borough of Manhattan, city and State of New York, have invented a certain new and useful Improvement in Pencil-Sharpening Devices, of which the following is a specification.

The subject-matter of this invention pertains to a pencil sharpener simple in construction, cheap of manufacture, efficient in operation and in the use of which a large or small pencil may be given a desired sharpness or bluntness of point.

In the drawing accompanying the present specification, Figure 1 is an elevation of a pencil sharpener embodying my present improvements. Fig. 2 is a cross section on the plane of the line representing the axis of the pencil socket. Fig. 3 is a plan view of Fig. 1. Fig. 4 is a detail view looking at the side of the device opposite to that represented in Fig. 1. Fig. 5 is a plan of the notched wheel or annulus and encircled sleeve, the inwardly extending spring fingers on which serve to rotate the pencil during the cutting operation but leaving it free to slide axially. Fig. 6 is a perspective view of such sleeve. Fig. 7 is a cross section illustrating in an exaggerated way a modified construction for holding the cutting blade or knife to its cut. Fig. 8 illustrates a worm for rotating the pencil in such a manner that the rotation of the pencil is suspended during the cutting operation.

Similar characters of reference designate corresponding parts in all figures.

A suitable base piece supports the various operative parts of the device, this piece here consisting of an upright portion 2 and a laterally extending foot portion 2'. A pencil socket is formed in a boss 2² of the upright 2, this socket having an upper cylindrical part 3 and a lower conical part 3'. The axis of the pencil socket is disposed at such an angle to the outer face of upright 2 that the lower part of the inserted pencil to be sharpened will protrude somewhat through an opening 4 therein and beyond the outer plane of such upright. Mounted in a bearing 5 transverse to said plane of the upright is a shaft 6 carrying at the end indicated an arm 6^a provided with a crank pin 6' and at the opposite end a crank handle 6² which may be engaged with the threaded end 6³ of the shaft, as shown. Hung from crank pin 6' is a carrier 7 provided with a cutting

blade 7', here shown as removably secured to the carrier by a screw 7². The carrier movement is preferably so controlled that the cutting blade thereon is given a sweeping movement across opening 4 at an angle to the cutting edge. This may be done as in Fig. 1 by a swinging link 8 pivoted at one end to the carrier and at the other end to a pin 8' on upright 2. The cutting blade may be held to its cut by an out-board gib 9 secured to upright 2 or preferably by twisting link 8 as in Fig. 7 to give thereto sufficient resiliency for the purpose.

Rotatably mounted in the pencil socket is a sleeve 10, of sufficient diameter to receive the largest pencil to be sharpened by the device. An inserted pencil is compelled to rotate with the sleeve by means of inwardly extending spring fingers 10' although the pencil is free to slide lengthwise under the drag of the cutting blade.

Secured to the sleeve as by soldering or a forced fit is a notched wheel 11 which engages with the thread of a worm 12 on shaft 6 which latter therefore during its rotation slowly turns the pencil in the socket. Preferably notched wheel 11 and its engaging worm are so related that the downwardly acting force component of the rotating worm thread tends to hold the sleeve in place. If the thread of the worm has a uniform twist, see Fig. 3, the turning of the pencil is uniform and continuous during the rotation of shaft 6; if, however, the worm thread comprises portions normal to the shaft axis, see parts 13' of worm 13, Fig. 8, the worm may be so related to the other features of the device that the rotation of the pencil is suspended during the actual cutting operation. As the pointed end of the pencil is gradually sharpened by the removal of chips, the pencil descends until the "lead" comes to rest upon a suitable stop when the pencil ceases to descend and the operation of sharpening is suspended although the knife continues to sweep across opening 4.

One of the features of the invention consists of an adjustable stop whereby the descent of the pencil may be arrested when the extreme point thereof has reached a predetermined point above the intersection of the axis of the pencil with the plane of the face of upright 2 whereby the "lead" of the pencil may be sharpened to the desired degree of fineness. The stop is here constituted by the laterally bent end 14' of a lever 14

pivoted by pin 14² to upright 2 and retained in any desired one of a number of positions by the resilience of the lever which enables it to be sprung into and out of any one of a number of recesses 14³. A rear bearing 15 for the pencil point is secured to the outside of the pencil socket in such a position that its free end 15' supports the pencil tip against the side thrust of the cut, this free end passing through an opening 15² in stop 14'.

Having described my invention, I claim:—

1. In a pencil sharpening device, the combination of a base piece provided with a pencil socket, a cutting blade, a cutting blade carrier, an operating crank shaft provided with a crank pin from which said carrier is hung, a swinging link pivoted at one end to the base piece and at the opposite end to the carrier, said link being resilient and twisted for the purpose of holding the blade to its cut during the cutting operation and means for rotating a pencil in said socket.

2. In a pencil sharpening device, the combination of a base piece provided with a pencil socket, a cutting blade, a cutting blade carrier, an operating crank shaft provided with a crank pin from which said carrier is hung, a swinging link pivoted at one end to the base piece and at the opposite end to the carrier said link being resilient and twisted for the purpose of holding the blade to its cut during the cutting operation, a sleeve rotatable in said socket and provided with inwardly projecting spring fingers for engaging a pencil, a worm and worm wheel for rotating the sleeve, and an adjustable stop for limiting the descent of the pencil in the pencil socket.

In witness whereof I have signed this specification in the presence of two subscribing witnesses.

REINHART W. PITTMAN.

Witnesses:

P. L. WELLS,
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