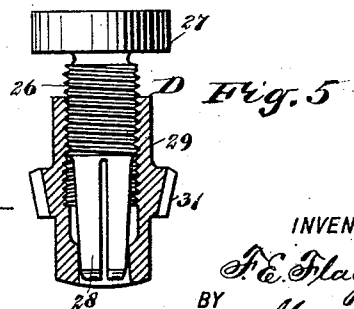
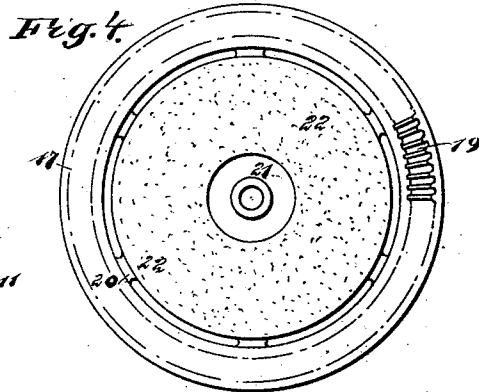
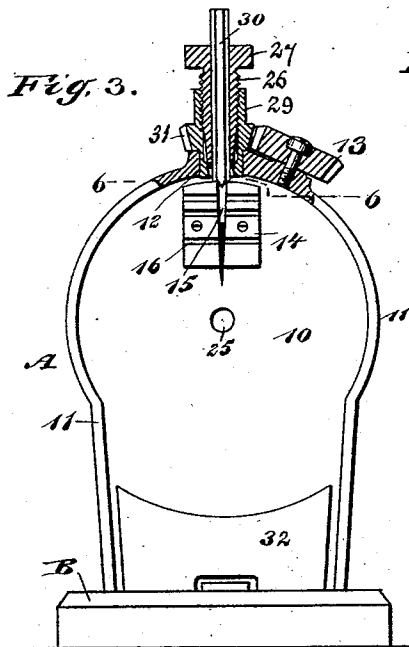
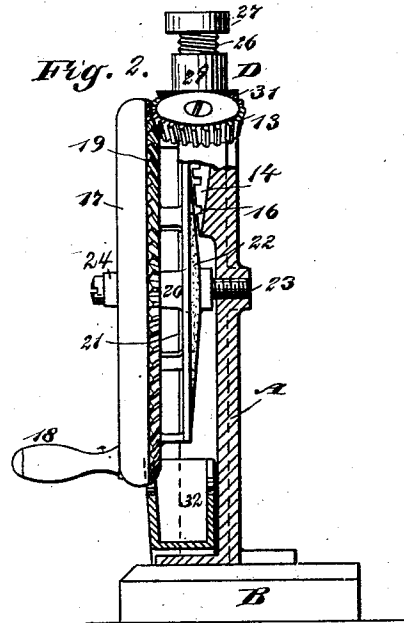
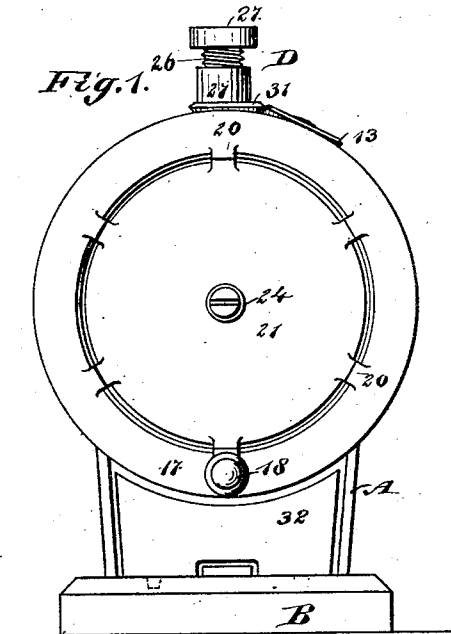


(No Model.)

F. E. FLAGG.
PENCIL POINTER.

No. 481,018.

Patented Aug. 16, 1892.



WITNESSES:
J. a. Burdett
C. Sedgewick

Fig. 6.

INVENTOR
F. E. Flagg
BY *Munn & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK E. FLAGG, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
ANDREW DOW, OF SAME PLACE.

PENCIL-POINTER.

SPECIFICATION forming part of Letters Patent No. 481,018, dated August 16, 1892.

Application filed May 10, 1892. Serial No. 432,409. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. FLAGG, of New York city, in the county and State of New York, have invented a new and Improved Pencil-Pointer, of which the following is a full, clear, and exact description.

My invention relates to an improvement in pencil-pointers, and has for its object to provide a machine capable of rapidly and perfectly pointing a pencil of any description and of producing a point thereon as long as may be desired.

Another object of the invention is to construct a machine capable of pointing pencils expeditiously, and also capable of being conveniently manipulated.

A further object of the invention is to construct the machine in an exceedingly simple and economic manner.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the machine. Fig. 2 is a partial vertical section through the body of the machine, the grinding-disk and drive-wheel being in edge view. Fig. 3 is a vertical section through the pencil-clamp and a front elevation of the body of the machine, the driving-wheel and grinding-disk being removed. Fig. 4 is a side elevation of the grinding-disk. Fig. 5 is an enlarged vertical section through the pencil-holder, and Fig. 6 is a section taken practically on the line C C of Fig. 3.

The body or casing A of the machine is mounted upon a base B of any approved construction, and the body or casing consists of a face-plate 10, the upper portion of which is more or less cylindrical, the lower portion being somewhat tapering or wedge-shaped, and a marginal flange 11, extending around the top and side portions of the plate to an engagement with the base. In the upper central portion of the flange 11 of the body an

opening 12 is made, and adjacent to that opening upon the outer face of the flange a pinion 13 is pivoted. Upon the inner face of the plate 10 of the body, immediately below the opening 12 therein, a socket-plate 14 is located, being rigidly secured to the body, as is best shown in Fig. 3. This socket-plate provided with a conical vertical bore 15, extending from top to bottom, the bore being visible from the front of the socket-plate, as that portion of it is conically cut from top to bottom, as shown in Figs. 3 and 6. The taper of the bore 15 corresponds to the taper of a properly-sharpened pencil, and the outer face of the socket-plate is beveled from the top downward, the upper line being indicated at *a*, in Fig. 6, and the lower line at *a'*, and in the front or outer face of this socket-plate a series of transverse grooves or channels 16 is produced, adapted as conduits for the dust created by the sharpening of the pencil.

In addition to the casing a drive-wheel 17 is employed. This wheel is provided with an attached crank 18, whereby it is rotated. The inner face of the wheel is provided with teeth 19, beveled so as to mesh with the pinion 13, and the spokes 20 of the wheel are carried inward and are made integral with a disk 21, the inner face of which disk is beveled from its center in direction of its periphery, as shown in Fig. 2, and upon the beveled surface of the disk a correspondingly-shaped strip 22 of sandpaper, emery, or other material of an abrading character is adapted to be secured by glue, cement, or otherwise, the attachment between the grinding material and the disk being so made that one may be removed from the other when the grinding material has become damaged, so that other material may be substituted for that worn out. The bevel of the inner face of the disk 21 and the bevel of the outer face of the socket-plate 14 is the same, as is also shown in Fig. 2, as the surface of the disk carrying the grinding material is adapted to revolve essentially in contact with the beveled surface of the socket-plate; and to that end a screw 23 is passed through a suitable hub 24, formed at the center of the disk, and screwed into a suitable

opening 25, formed in the body A, the wheel or-disk being capable of turning upon the pin 23, as that portion of it passing through the hub 24 is not threaded.

5 The pencil is held by a clamp D. (Illustrated in detail in Fig. 5.) This clamp consists of a tube 26, having a threaded upper end and provided with a head 27, the lower end of the tube being made tapering or split, forming a chuck-section 28. The thread upon the tube 26 is exteriorly produced and is preferably a left-hand thread, as it is adapted to receive a socket 29, the upper portion of which socket is threaded to receive the thread upon the tube, while the lower portion of it is reduced in such manner that when the sleeve or socket is screwed upon the tube the jaws of the chuck-section of the tube are forced inward to clamp any article placed between them, the pencil 30 to be sharpened being passed down through the tube and out between the jaws at the lower end of the tube. The sleeve 29 of the clamp has a beveled pinion 31, produced upon its outer face, and this beveled pinion is adapted to mesh with the pinion 13 upon the body when the lower end of the sleeve has been entered into the opening 12 at the top of the body, as shown in Fig. 3.

30 In order that the dust from the pencil as it is being sharpened may be prevented from dropping upon the support a cup 32 is located within the lower portion of the body A, being attached in any suitable manner either to the base or to the body. The upper face of this cup is made somewhat concaved, in order that it may fit snugly in the body and yet admit of the revolution of the drive-wheel 17.

40 In the operation of the pencil pointer or sharpener the pencil is placed in the clamp D, being passed downward through the tube-section 26 of the clamp, and the end to be sharpened is made to extend a predetermined distance beyond the chuck end of the tube, as shown in Fig. 3. Before this is done the sleeve 29 is partially unscrewed from the tube-section of the clamp, so as to admit of the jaws of the latter being opened; but after the pencil has been placed in position the sleeve is screwed upward upon the tube-section, closing the jaws of the chuck portion of the tube around the pencil. The lower end of the sleeve of the clamp is now passed into the opening 12 at the top of the casing, and the gear 31 upon the sleeve will engage with the bevel-gear 13 of the body, and by exerting downward pressure upon the head 27 of the clamp and turning the handle 18, attached to the drive-wheel 17, the latter will revolve the clamp through the medium of the pinion 13, and will also turn the disk carrying the abrading material, and this material, being brought in constant engagement while revolving with that portion of the wood and lead of the pencil exposed through the

vertical cut in the socket-plate, will sharpen the pencil, give it the proper shape, and taper the wood above the point, and this is especially so as the pencil while being subjected to the action of the abrading material is also revolved.

This device is simple, durable, and economic, and is capable of being operated successfully by any person. As the material is rubbed from the pencil during the process of sharpening, it passes off through the channels 16 in the socket-plate and drops downward into the cup 32.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a pencil-pointer, the combination, with a casing provided with a socket-plate having a conical bore to receive a pencil, which bore extends through one face of the plate, that face being beveled, of a disk having a beveled inner face and provided with an attached abrading material, the beveled abrading-face of the disk being held to revolve in close proximity to the beveled face of the socket-plate, a clamp adapted to hold a pencil and loosely mounted in the casing above the socket-plate, and a driving mechanism connected with the disk and with the clamp, whereby both are revolved in unison, as and for the purpose specified.

2. In a pencil-pointer, the combination, with a casing provided with an opening in its top, a socket-plate attached to the casing below the opening and having a beveled outer face, and a central vertical tapering opening extending through its beveled face, of a drive-wheel journaled in the casing, a disk connected with the drive-wheel and having a beveled inner face, the beveled surface of the disk being provided with an abrading material and the beveled face of the disk practically engaging with the beveled surface of the socket-plate, a clamp capable of holding a pencil and loosely fitted in the casing, and a driving connection, substantially as shown and described, between the drive-wheel and the clamp, whereby the latter is revolved, as and for the purpose set forth.

3. In a pencil-pointer, the combination, with a casing provided with an opening in its upper end, a pinion adjacent to the opening, and a socket-plate attached within the casing beneath its upper opening, the forward face of the socket-plate being beveled and provided with a vertical tapering bore extending through the beveled surface, and clearance-channels leading from the bore, of a drive-wheel held to revolve in the casing, a disk connected with the drive-wheel, the inner face of which is beveled and provided with an abrading material, the said inner face of the disk revolving in close proximity to the beveled surface of the socket-plate, a clamp comprising a tubular section, provided with a head at its upper end and provided with

jaws at its lower end and a thread between
the jaws and the head, a sleeve screwed upon
the tube-section and capable of closing the
jaws of the latter and provided with an ex-
terior gear, the lower end of the sleeve being
5 adapted to enter the upper opening in the
casing and its gear to mesh with the pinion

of the casing, and a driving connection be-
tween the drive-wheel and pinion, as and for
the purpose specified.

FRANK E. FLAGG.

Witnesses:

J. FRED. ACKER,
C. SEDGWICK.