A. W. GIFFORD.

PENCIL SHARPENER.

APPLICATION FILED MAY 14, 1909.

943,223.

Patented Dec. 14, 1909.

FIG. 1

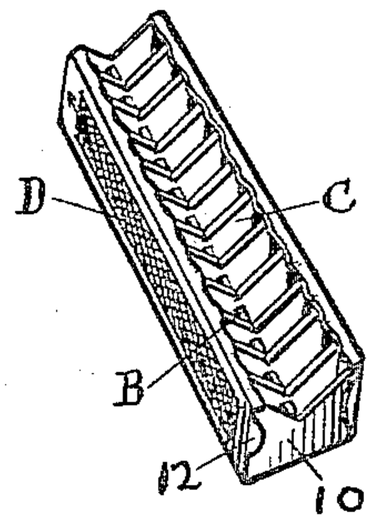
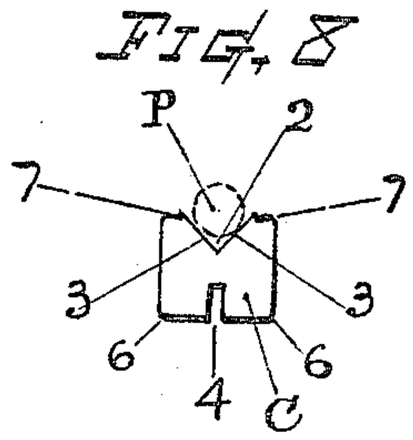


FIG. 8



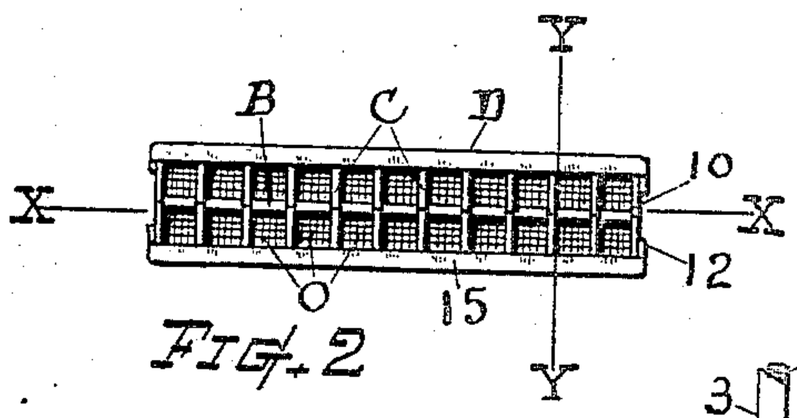


FIG. 2

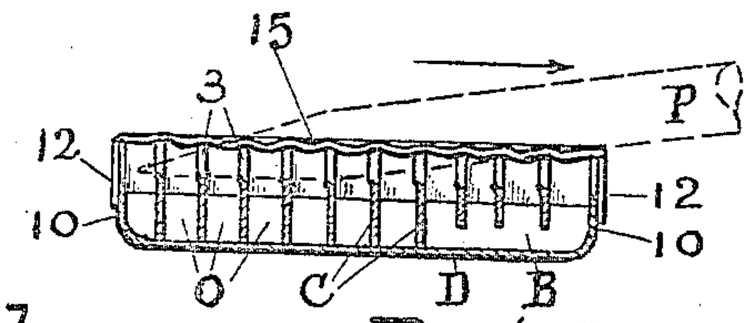


FIG. 3

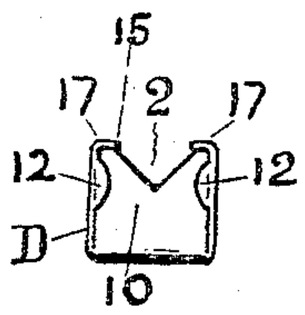


FIG. 4

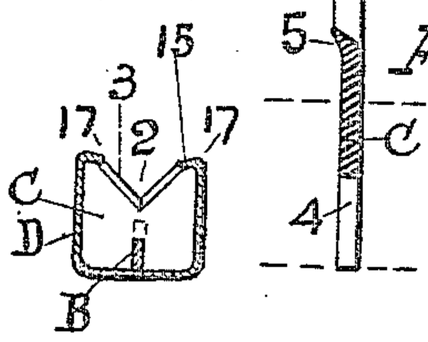


FIG. 5

FIG. 6

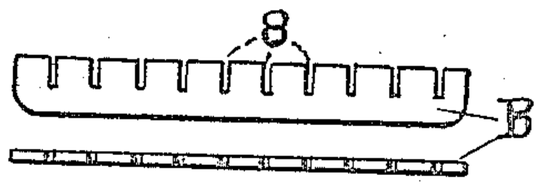


FIG. 7

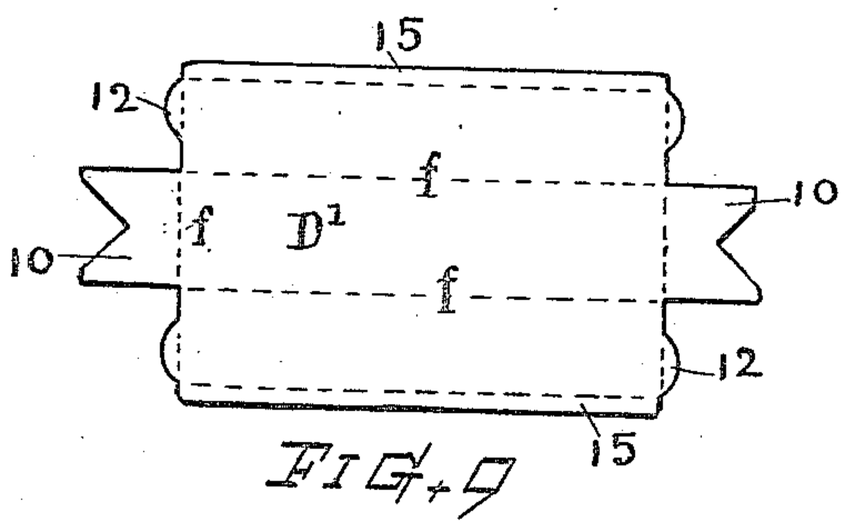


FIG. 9

Witnesses—

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UNITED STATES PATENT OFFICE.

ALBERT W. GIFFORD, OF WORCESTER, MASSACHUSETTS.

PENCIL-SHARPENER.

943,223. Specification of Letters Patent. Patented Dec. 14, 1909.

Application filed May 14, 1909. Serial No. 496,042.

To all whom it may concern:

Be it known that I, ALBERT W. GIFFORD, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Pencil-Sharpener, of which the following is a specification, reference being made therein to the accompanying drawings.

The object of my present invention is to provide an efficient and simple pencil sharpener that can be readily and successfully used by any one; also that will avoid scattering the dust and chips, and that can be conveniently carried in the pocket.

To this end my invention consists in a pencil sharpener embodying the novel construction herein described and illustrated in the accompanying drawings, wherein—

Figure 1 represents a perspective view of my improved pencil-sharpener. Fig. 2 is a top plan view; Fig. 3 a longitudinal section at line X X; Fig. 4 an end view; Fig. 5 a transverse section at line Y Y; Fig. 6 a central vertical section of one of the blades, drawn to an enlarged scale. Fig. 7 shows the detail, side and top views of the back-bar separate from the other parts. Fig. 8 is a front view of one of the blade-plates, and Fig. 9 is a diagram showing the form of the blank from which the casing or box is produced.

In the construction of this improved pencil-sharpener there is employed a series of blade-plates C, a bar B for supporting said blade-plates in series, with intervening spaces O between the respective blades; and a sheet metal inclosing case D that embraces the bottom and sides of the series of blades, forming an open topped box within which the blades or cutters are rigidly sustained.

The blade-plates C are preferably made of thin flat steel, approximately rectangular in form, with a recess or V-shaped space 2 at their upper side and having sharp or cutting edges 3 formed on the two opposite edges of the angle or V-shaped recess. The blade-plates each have a narrow slot or incision 4 in the lower edge; their corners 6 are slightly rounded and the top corners, adjacent to the cutting portions, are formed with an inward incline 7, as best indicated on Fig. 8. The blades C are arranged transversely in serial alinement and supported as a rigid gang by the longitudinal back-bar B, which is provided along its upper edge with slots or incisions 8, disposed at short intervals of about three sixteenths of an inch, more or less, apart, and which intermatch with the slots 4 in the blades. The cutting edges 3 at the two sides of the recess are best formed with a slightly offset lip, as at 5, (see Fig. 6) and with the beveled face 9 wholly upon one side of the blade-plate. The blades are disposed with the bevel on their cutting edges 3 all trending in the same general direction, while the series of blades all stand in uniform order of alinement with each other.

The assembled series of blades and back-bar are inclosed at the bottom, sides and ends by the sheet-metal casing D, the top above the cutting edges being open, and the whole forming a trough or channel of cutting elements that present two distinct walls of cutting edges, narrowing toward the bottom of the channel or V-shaped space. The side surfaces of the casing are best check-stamped or roughened to facilitate the hold of the fingers thereon. The casing is best formed of a blank D^1 of thin sheet-metal cut to the shape shown in Fig. 9, and folded where indicated by dotted lines *f* on said Fig. 9, so as to embrace the bottom and side edges of the blades; the ends 10 being bent upward and confined by offset clips 12 that lock onto the end portions, as shown. The longitudinal edges 15 of the casing are bent inward and clenched down upon the inwardly inclined top corners 7 of the blade-plates, as indicated at 17; the inwardly clenched edge being corrugatedly depressed between the respective blade-plates, as best shown in Fig. 3, thereby retaining their top corners firmly in position in their relative serial arrangement.

In the operation, the end of the pencil is laid obliquely into the trough of blades, as indicated by dotted lines P in Fig. 3, and is then drawn, in the direction indicated by the arrow, across the V-shaped cutting edges which shave off the substance of the pencil at the two sides in contact therewith; the operator turning or rotating the pencil as the work proceeds. The chips and dust cut from the pencil fall into the spaces O between the cutters, and can be emptied out of the case at a convenient time and place.

I claim—

1. A pencil-sharpener composed of a series or gang of flat blades, having V-shaped recesses with oppositely inclined cutting edges at their upper side, said blades arranged at

intervals in transverse order, and a sheet metal inclosing case formed of a single piece folded and fitting against the bottom and side edges of said blades, and that is open at its top above the cutting edges.

2. A pencil-sharpener blade formed of thin flat metal, having an internal angular recess at one side thereof, with a sharp or cutting edge along the opposite sides of the recess; said cutting edges beveled upon the side of the plate, and the cutting edge turned over in a slightly outstanding lip at the side opposite the bevel.

3. In a pencil-sharpener of the character described, the blade-plates having V-shaped cutting edges, and rounded corners with inwardly inclined edge portions at the ends of said cutting edges; in combination with means for sustaining said blades in separated relation, and the sheet metal casing having inwardly bent edges that lock or clench onto said inwardly inclined top points of the blade-plates.

4. In an instrument of the class described, the combination, of a longitudinal back-bar having a series of vertical slots in its upper edge, a series of blade-plates slotted at their lower edges, interlockingly engaging with said slotted back-bar, each blade having an approximately V-shaped recess with cutting edges at the opposite sides of said recess; and a sheet metal casing embracing the bottom and sides of the assembled back-bar and blade-plates, and having its edges clenched over the corners of said blade-plates adjacent to the V-shaped openings.

5. In an instrument of the character described, the combination, with a gang of thin flat metal blade-plates having V-shaped cutting portions, said blade-plates disposed in uniform alinement at short intervals apart, and a notched back-bar supporting said blade-plates in series; of the casing-box formed from a single blank of sheet metal and comprising the bottom portion, the upstanding sides and end sections, the latter confined by inwardly-bent clips formed on the side sections; the side sections embracing the ends of the blade-plates, and having their longitudinal edges clenched over the inwardly inclined top corners of the same, and corrugatedly depressed between the respective blade-plates, substantially as set forth.

Witness my hand this 13th day of May, 1909.

ALBERT W. GIFFORD.

Witnesses:
CHAS. H. BURLEIGH,
A. G. DAVIS.