No. 775,423. PATENTED NOV. 22, 1904.

A. P. JACOB.

LEAD PENCIL.

APPLICATION FILED JAN. 15, 1904.

NO MODEL.

Fig. 1.

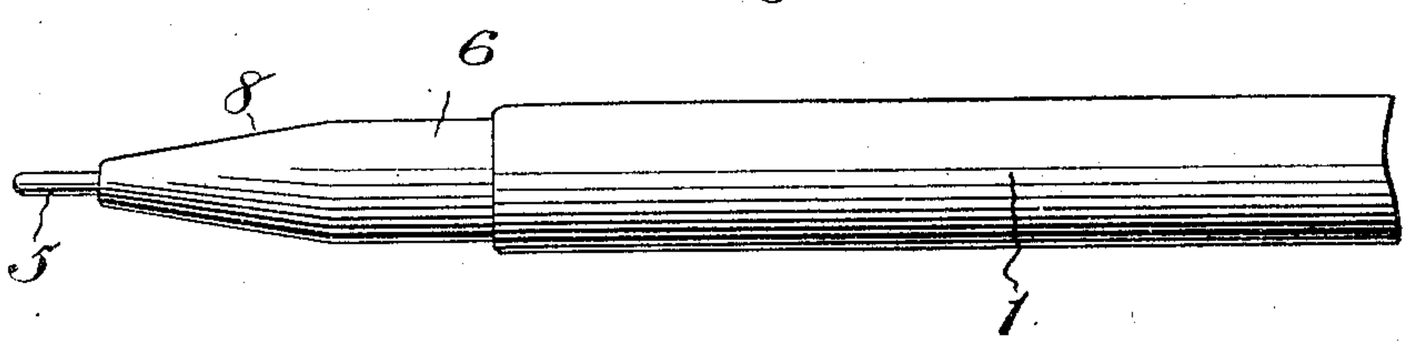


Fig. 2.

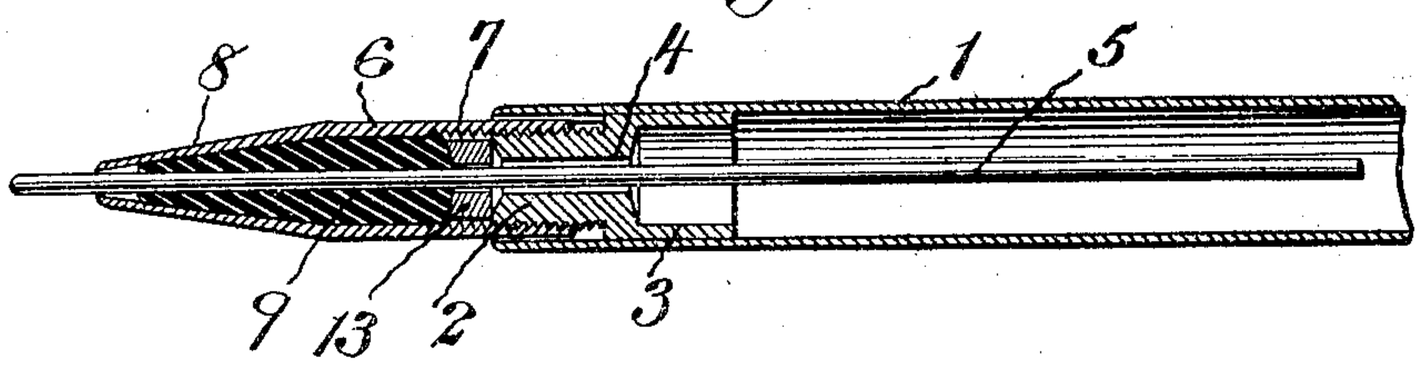


Fig. 3.

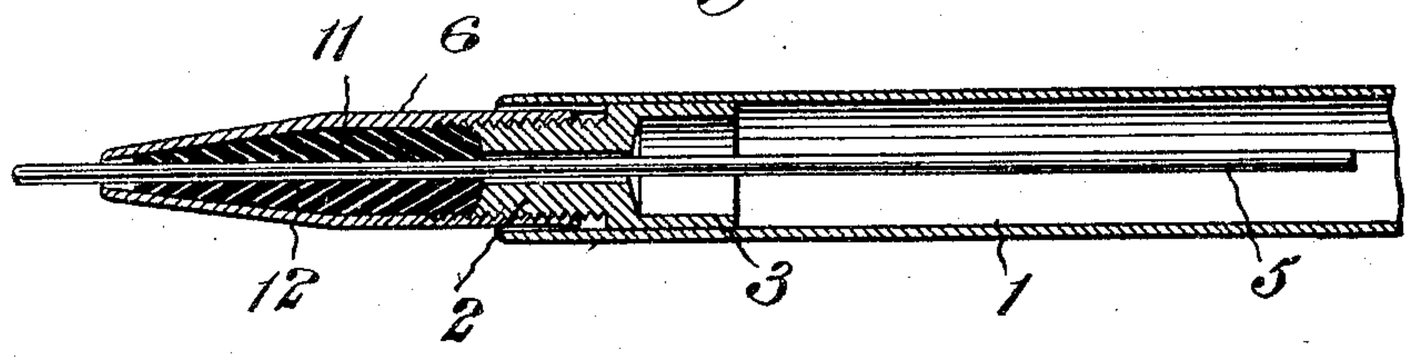


Fig. 4.

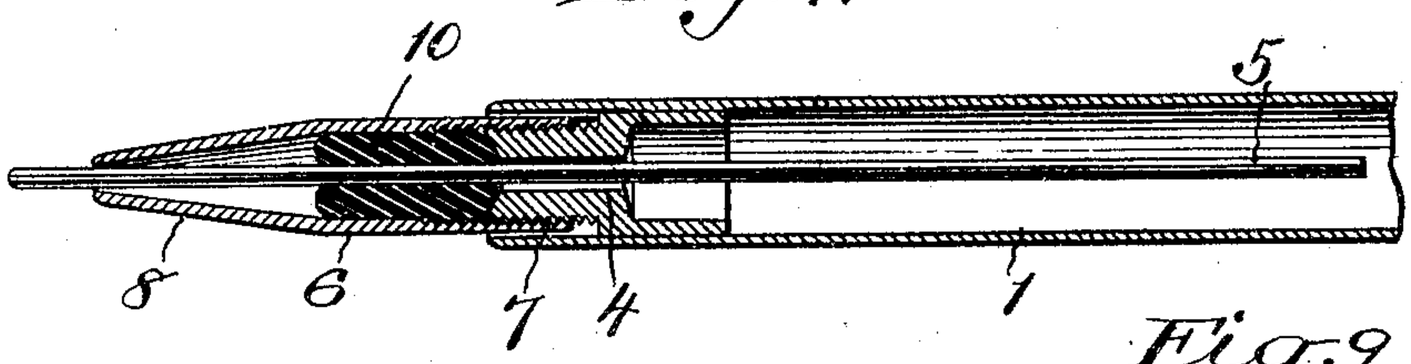


Fig. 9.

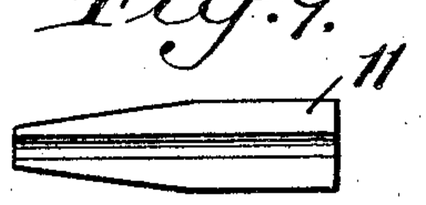


Fig. 5.

Fig. 8.

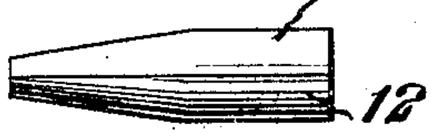


Fig. 6

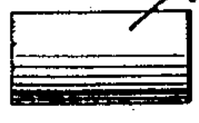
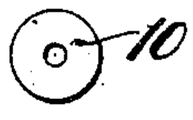


Fig. 7.



Witnesses:-
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Alfred P. Jacob
By Brown & Seward
His Attorneys

No. 775,423. Patented November 22, 1904.

UNITED STATES PATENT OFFICE.

ALFRED P. JACOB, OF NEW YORK, N. Y.

LEAD-PENCIL.

SPECIFICATION forming part of Letters Patent No. 775,423, dated November 22, 1904.

Application filed January 15, 1904. Serial No. 189,152. (No model.)

To all whom it may concern:

Be it known that I, ALFRED P. JACOB, a citizen of the United States, and a resident of the borough of Manhattan, in the city and State of New York, have invented a new and useful Lead-Pencil, of which the following is a specification.

My invention relates to a lead-pencil, and more particularly to that type of pencil in which the lead or core which is to make the mark is in the form of a rod which may be slipped from time to time from within the holder to form a projecting point to come in contact with the surface on which the mark is to be made.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is an enlarged view in side elevation, showing that portion of the pencil which embodies my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a similar section with the washer omitted and the body of compressible material in sections. Fig. 4 is a similar section showing a modified form of compressible gripping-piece. Fig. 5 is a view in detail in side elevation of one form of compressible gripping-piece. Fig. 6 is a view of another form of compressible gripping-piece. Fig. 7 is an end view of the same. Fig. 8 shows in side elevation a sectional gripping-piece, and Fig. 9 shows the two sections of a sectional gripping-piece separated.

The holder of the pencil is preferably made in the form of a hollow tube, and for purposes of making the pencil light I prefer to use aluminium.

The holder is denoted by 1. It has fixed therein an exterior screw-threaded stem 2, the screw-threaded portion of the stem being spaced from the inner wall of the holder 1, and the said stem is conveniently held within the piece by a hollow head 3, the exterior face of which has a close frictional contact with the interior of the holder 1. The screw-threaded neck 2 is provided with a central perforation 4 for the free passage therethrough of the rod 5 of marking material.

A tubular piece 6 has at its end toward the holder an interior screw-thread 7, constructed to engage with the exterior screw-thread on the neck 2, and at its opposite end is tapered, as shown at 8, to bring its surrounding wall at the point into proximity to the rod of marking material 5.

Within the tubular piece 6 there is located a gripping-piece 9 of compressible material, preferably elastic material—such, for example, as rubber or cork—through the center of which the rod of marking material 5 may freely slide when the gripping-piece is not under compression. This gripping material 9 may be made in the form shown in Fig. 2, with a tapered portion conforming to the tapered portion 8 of its tubular casing, or it may be made in cylindrical form, as shown at 10, Fig. 4, and in detail in Figs. 6 and 7. It may also be made either in one piece, as indicated in Fig. 2 and in detail in Fig. 5, or it may be made sectional, as shown in Figs. 3, 8, and 9, where the sections are shown as half-sections and denoted by 11 and 12. In my preferred form I introduce a cap-piece or washer 13 between the end of the threaded stem 2 and the end of the gripping-piece 9, the said washer being provided with a central opening for the free passage therethrough of the rod of marking material 5, or this washer may be omitted, as shown in Figs. 3 and 4, and the end of the threaded stem 2 may be permitted to press directly against the end of the gripping material. The washer 13 when used is made sufficiently small to travel freely within the tubular casing 6.

In operation when the rod of marking material has been adjusted to project the desired distance out from the point of the casing 6 the holder 1 may be turned with the fingers while the part 6 is held stationary, thereby forcing the washer or the end of the threaded stem 2 into contact with the end of the compressible gripping-piece, and by compressing the said piece endwise the latter will exert a gripping pressure upon the marking-rod 5 upon all sides thereof and throughout the entire extent of the gripping-piece, holding it firmly in its position while in use. Whenever it is desired to shift the rod of marking material inwardly or outwardly, all that is re-

quired is to relieve the pressure of the neck 2 against the washer or end of compressible material, and after the core or rod 5 has been adjusted it may be tightly gripped in its adjusted position by simply turning the holder and again forcing the gripping-piece into frictional contact with the rod.

This structure has the advantage of gripping the rod of marking material with a soft grip throughout a considerable extent of its length and substantially with equal pressure throughout its entire circumference, effectually preventing any slipping of the rod while using the pencil in a vertical position, as is often required by the draftsman and engineer, and at the same time it provides for a slight yielding of the rod laterally when the pencil is used in an oblique position and is pressed hard upon the surface which is receiving the marks, the perforation 4 through the neck 2 being made, as shown, materially larger than the rod of marking material to permit such laterally-yielding movement of the rod. This is effective in preventing the breaking of the rod of marking material, particularly so where the compressible or elastic material is extended down the tapered portion of the end casing into close proximity to the point where the rod leaves the casing.

What I claim is—

1. A pencil comprising a tubular holder, a piece fixed within the holder and provided with a screw-threaded neck, a tubular piece having a screw-threaded engagement with the said screw-threaded neck, a rod of marking material extending through the said tubular piece and screw-threaded neck, and a body of compressible material located within the tubular piece and surrounding the rod of marking material throughout an extended portion thereof in proximity to the said screw-threaded neck and under the control of said neck and tubular piece to be compressed and released.

2. A pencil comprising a tubular holder, a piece with a screw-threaded neck fixed in the holder, a tubular piece having a screw-threaded engagement with the said neck, a rod of marking material extending through the tubular piece and neck and a body of compressible material surrounding the said rod within the tubular piece and throughout an extended portion thereof, the opening through the screw-threaded neck through which the rod passes being materially larger than the rod, whereby the rod is permitted a limited lateral movement within the holder under pressure on the projecting point of the rod.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 14th day of January, 1904.

ALFRED P. JACOB.

Witnesses:
FREDK. K. HAYNES,
HENRY THIEME.