(No Model.)

B. B. GOLDSMITH.

LEAD PENCIL.

No. 447,310. Patented Mar. 3, 1891.

Fig. 1.

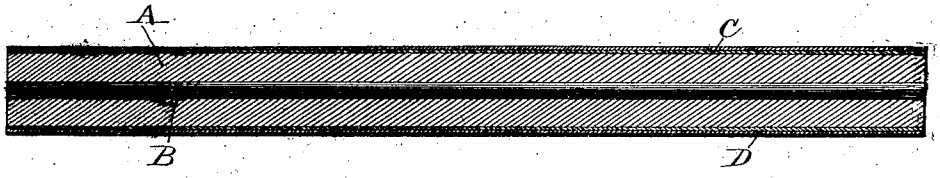
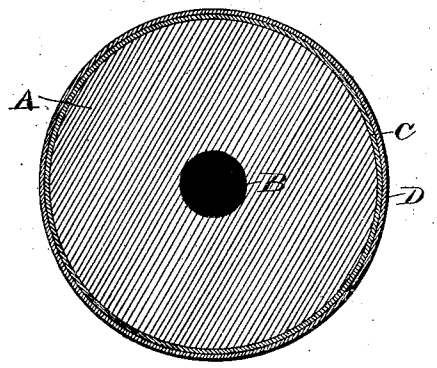


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

BYRON B. GOLDSMITH, OF NEW YORK, N. Y.

LEAD-PENCIL.

SPECIFICATION forming part of Letters Patent No. 447,310, dated March 3, 1891.

Application filed May 8, 1890. Serial No. 351,065. (No model.)

To all whom it may concern:

Be it known that I, BYRON B. GOLDSMITH, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Lead-Pencils, of which the following is a specification.

My invention has reference to improvements in pencils, pencil and pen holders, and other like articles, all of which are comprised in the generic term "pencil," and all of which I mean to include by the term "lead-pencils;" and it consists, broadly speaking, in a lead-pencil the wooden surface of which is provided with a coating of pyroxyline and in addition thereto with a superimposed coating of ordinary varnish.

I have found that pyroxyline in solution when applied as a varnish to wooden or other fibrous surfaces does not, like ordinary varnishes, raise the fiber of the wood, but keeps that surface as even and smooth as it was before the pyroxyline was applied. In consequence thereof a pyroxyline or celluloid varnish applied to wooden articles is capable of receiving an exceedingly high polish, for in the act of polishing no wood fibers are torn off from the surface to expose minute spots of the bare wood, as is the case with all other varnishes which raise the fiber of the wood, as is well known. Thus in coating the wood of a lead-pencil or pencil or pen-holder with celluloid varnish and then polishing the latter the surface thus treated receives an exceedingly high metallic luster. By preference I apply to the pyroxyline surface, whether polished or not, a protective coating of ordinary varnish, which, not being in contact with the wood proper, does not raise the fiber of the same, and permits the pencil being stamped, in gold or other letters, with the name of the maker or descriptive words or ornamental designs, in the same manner in which this is done with ordinary lead-pencils. Lead-pencils and other like articles thus prepared are smooth and pleasant to the touch and retain their high polish an indefinite time, and are in this respect more durable than pencils of ordinary manufacture.

To still further ornament and protect the surfaces of lead-pencils and other like articles the pyroxyline varnish is colored or tinted with a suitable pigment, and preferably with an aniline color, which rapidly diffuses in a celluloid varnish; or I may color the pencil after the pyroxyline has been applied by momentarily dipping it into an aniline dye. My improved lead-pencil therefore has upon the surface of the wood, first, an exceedingly thin coat of pyroxyline, either colorless or tinted, and, second, a thin coat of the ordinary varnish, it being understood that the coat of pyroxyline may be polished, and that the ordinary varnish after its application may also be polished.

In the accompanying drawings, which form a part of this specification, I have illustrated as far as practicable my improved article of manufacture.

Figure 1 represents a longitudinal section of a lead-pencil with my improvement applied thereto, but showing the coatings upon the wood of the lead-pencil greatly exaggerated; and Fig. 2 represents a cross-section of the improved lead-pencil upon a still larger scale, and the coatings of the wood also exaggerated.

A represents the wooden body of the lead-pencil with the graphite or graphite compound B in the center. The very thin coating of pyroxyline upon the surface of the wood is represented by appropriate shading and is marked by the reference-letter C. This coating, as has been stated above, is applied to the wood in a fluid state, either tinted or colorless; or it may be tinted after application by momentarily immersing the lead-pencil in a suitable bath; and D represents the coating of ordinary varnish applied upon the pyroxyline surface after the latter has been highly polished.

Having now described my invention, I claim and desire to secure by Letters Patent—

1. As an article of manufacture, a lead-pencil having a coat of pyroxyline upon its exposed surface and a coat of ordinary varnish upon the pyroxyline, substantially as described.

2. As an article of manufacture, a lead-pencil having a tinted coat of pyroxyline upon its exposed surface and a protective coating of ordinary varnish upon the pyroxyline, substantially as described.

3. As an article of manufacture, a lead-pen-

cil having a polished and tinted coat of pyroxyline upon its exposed surface and a protective coating of ordinary varnish upon the pyroxyline, substantially as described.

4. As an article of manufacture, a lead-pencil having a polished coat of pyroxyline upon its exposed surface and a polished coating of ordinary varnish upon the pyroxyline, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of the subscribing witnesses.

BYRON B. GOLDSMITH.

Witnesses:
SAMUEL J. RECKENDERFER,
MICHAEL J. CANNON.