

D. M. SOMERS.  
Lead-Pencils.

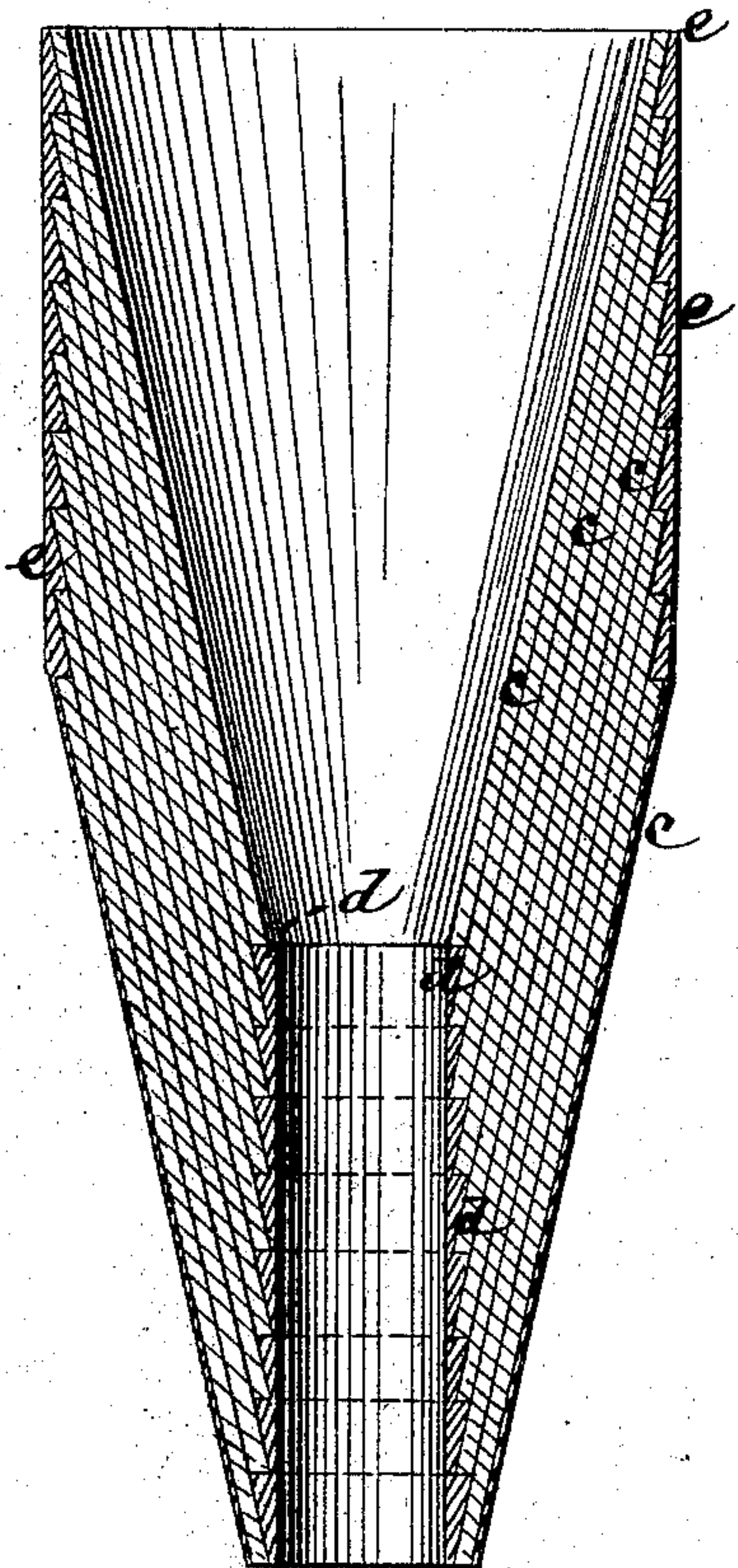
No. 157,881.

Patented Dec. 15, 1874.

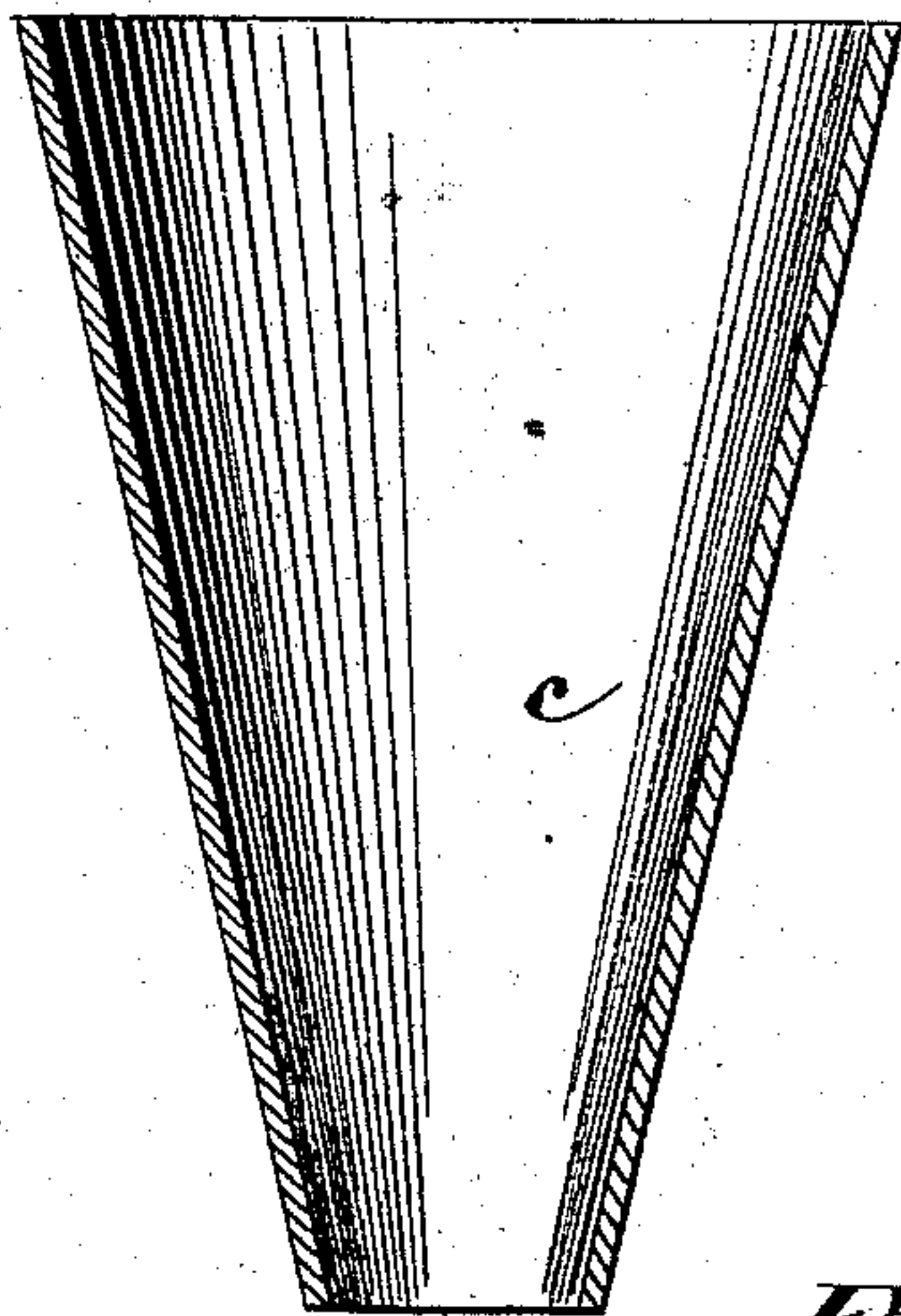
*Fig. 1.*



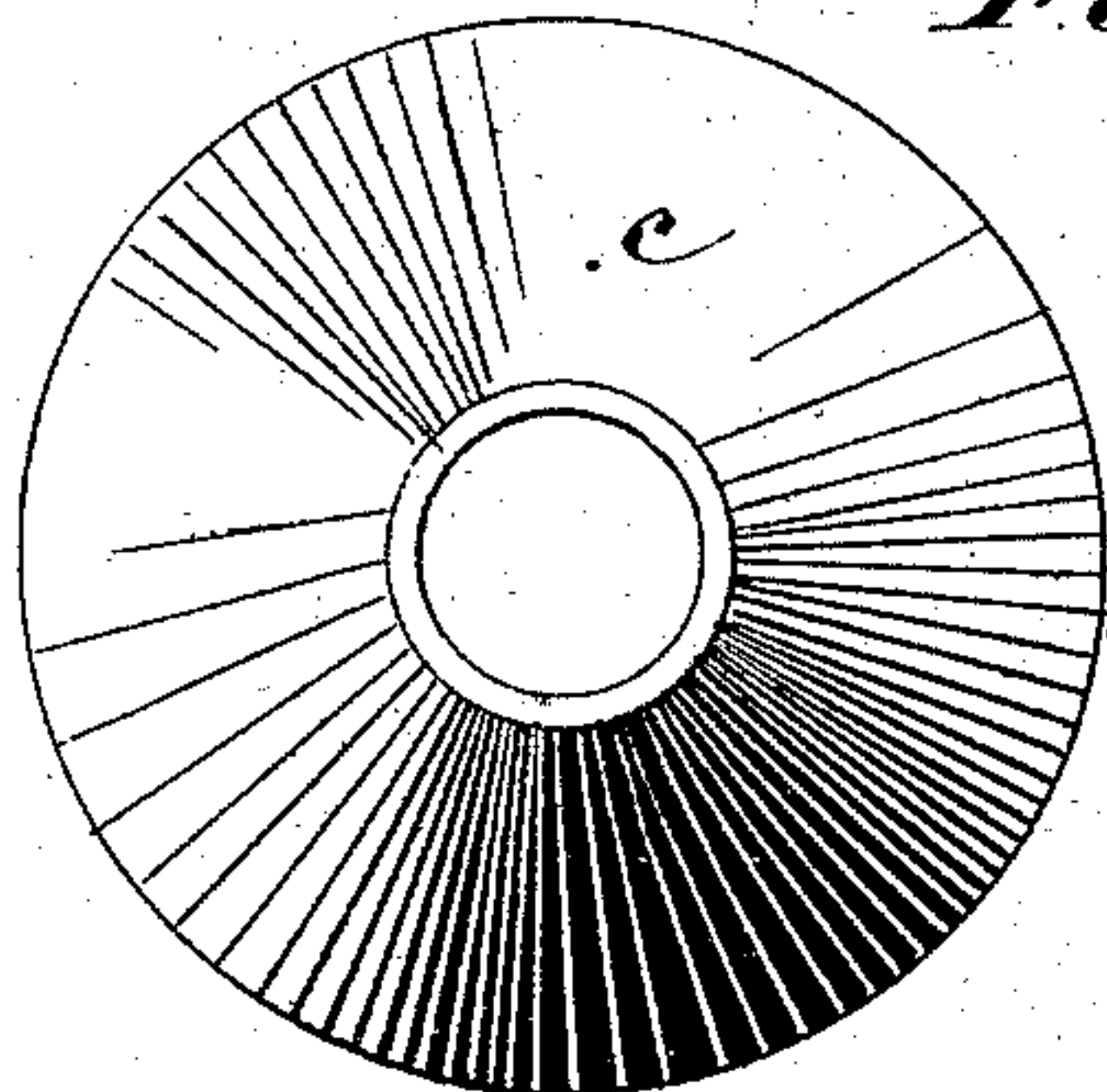
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses.

John Becker.  
Fred Haynes

D. M. Somers  
by his Attorneys  
Brown & Allen



# UNITED STATES PATENT OFFICE.

DANIEL M. SOMERS, OF GREEN POINT, BROOKLYN, NEW YORK.

## IMPROVEMENT IN LEAD-PENCILS.

Specification forming part of Letters Patent No. **157,881**, dated December 15, 1874; application filed June 13, 1874.

*To all whom it may concern:*

Be it known that I, DANIEL M. SOMERS, of Green Point, Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Lead-Pencils, of which the following is a specification:

This invention consists in a lead or other pencil the body or case of which containing the lead, slate, or other marking substance, is composed of a series of conical or tapering scales fitting one within the other, the whole constituting a laminated or foliated pencil, whereby, among other advantages, the pencil may be readily and uniformly sharpened, as required, by simply peeling off one or more scales at the point end of the pencil.

In the accompanying drawing, Figure 1 represents a longitudinal exterior and partly sectional view of a lead-pencil made in accordance with my invention; Fig. 2, a longitudinal section upon an enlarged scale of the point end of the pencil with the lead removed; Fig. 3, a longitudinal section upon a like enlarged scale of one of the conical scales detached; and Fig. 4, an end view of the same.

A is the body or case of the pencil, and *b* the lead therein. Said body may either be of round or polygonal shape on its exterior, and is composed of a series of hollow cones, the same constituting conical or tapering scales *c*, which are fitted or packed one within the other, so as to form a close tube, receiving the lead *b* within it, and which latter may be united with the case by pouring liquid glue into the longitudinal passage through the latter before introducing the lead therein, said glue, which is represented at *d* in Fig. 2, also serving to unite the scales *c* at their inner or smaller ends or edges with one another, while they are united at their larger or outer ends or edges, and a smooth finish given to the exterior preparatory to varnishing or japanning it, by a coat-

ing, *e*, of any gelatinous or other suitable glazing substance in solution. Such union of the scales, however, is only at their extremities, and the several scales *c* are virtually independent of one another, so that on longitudinally splitting them by penknife or otherwise at the point end of the pencil the same may be readily peeled off, one by one or successively, as required, whenever it is necessary to sharpen the pencil. This not only provides for an expeditious sharpening of the pencil, but insures uniformity of taper and smoothness to the point. The scales *c* may be of paper, wood, or any suitable material, but preferably of paper-pulp.

This mode of constructing the body A is totally different from and superior to winding paper in a continuous strip to the required thickness around a mandrel, inasmuch as such latter construction does not provide for a like expeditious and regular or uniform sharpening of the pencil; besides, the cones may be made of paper-pulp, which is cheaper than paper, making them, for instance, by feeding the pulp into conical dies fitted with conical punches, and afterward packing said cones or conical scales one within the other by any suitable means to form the case or tube. This tube is then passed through a bath of gelatinous or other glazing substance in solution to coat the exterior of it, and the lead forced into the tube or case after liquid glue has been introduced therein, as hereinbefore described.

I claim—

A lead or other pencil having its case or body composed of a series of conical or tapering scales, packed one within the other, substantially as specified.

D. M. SOMERS.

Witnesses:

HENRY T. BROWN,  
MICHAEL RYAN.