

No. 846,442.

PATENTED MAR. 12, 1907.

F. M. ASHLEY.  
PENCIL HOLDER.

APPLICATION FILED FEB. 7, 1905.

Fig. 1

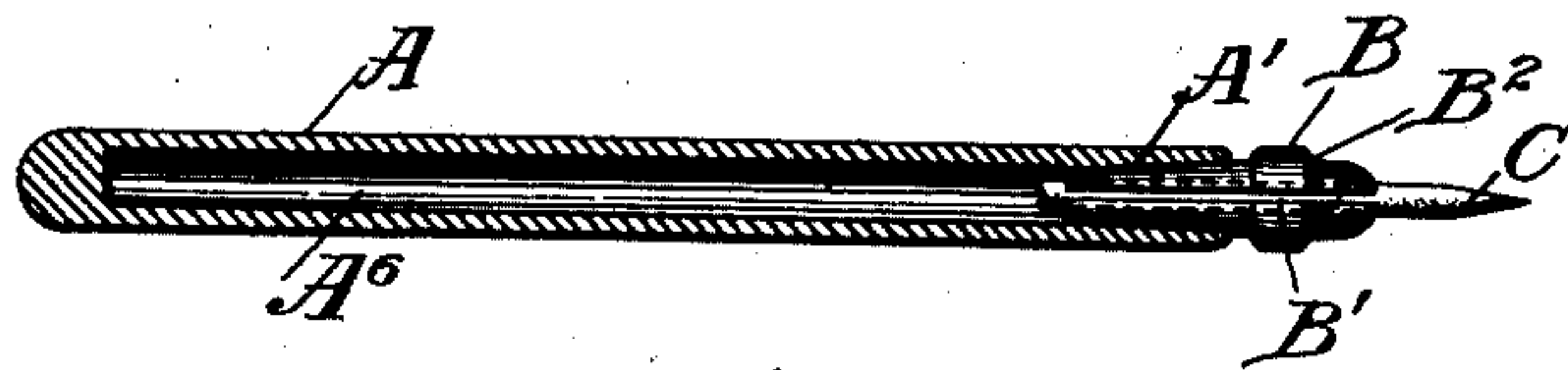


Fig. 2

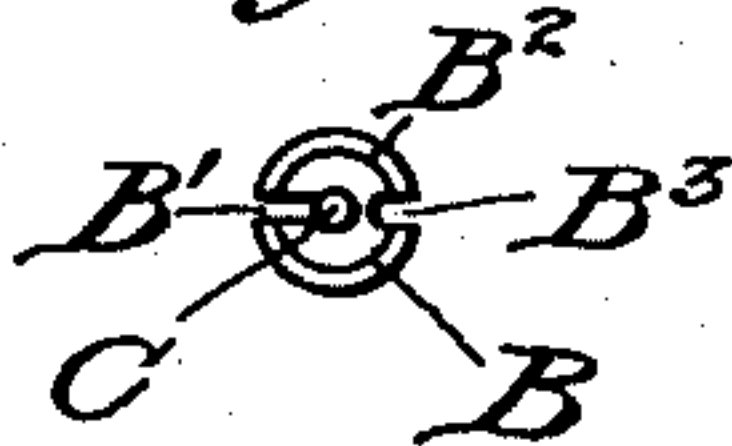


Fig. 3

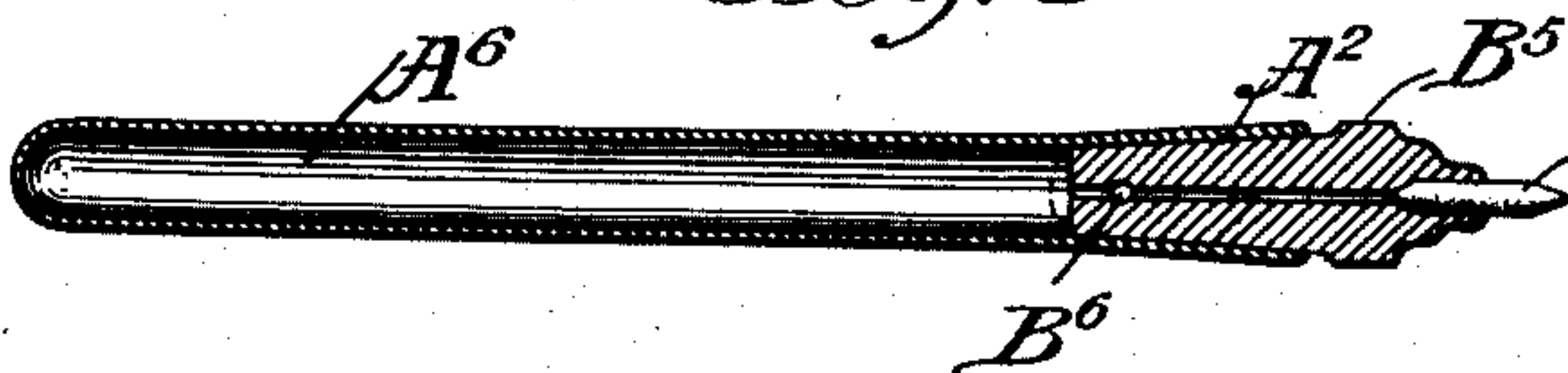


Fig. 4

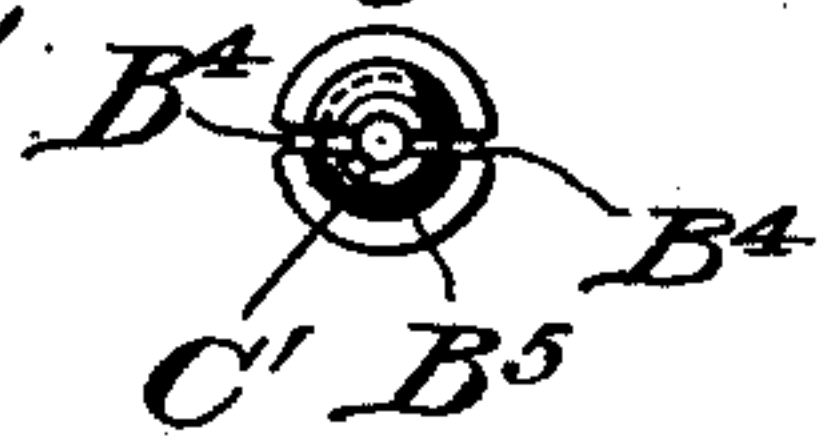


Fig. 5



Fig. 6

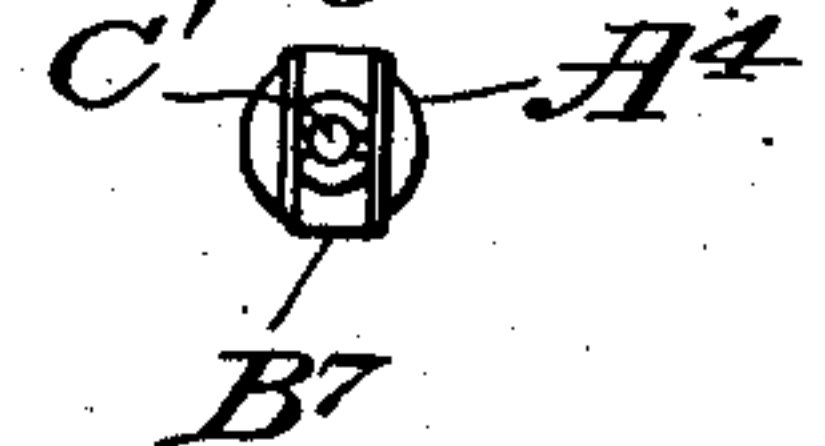


Fig. 7

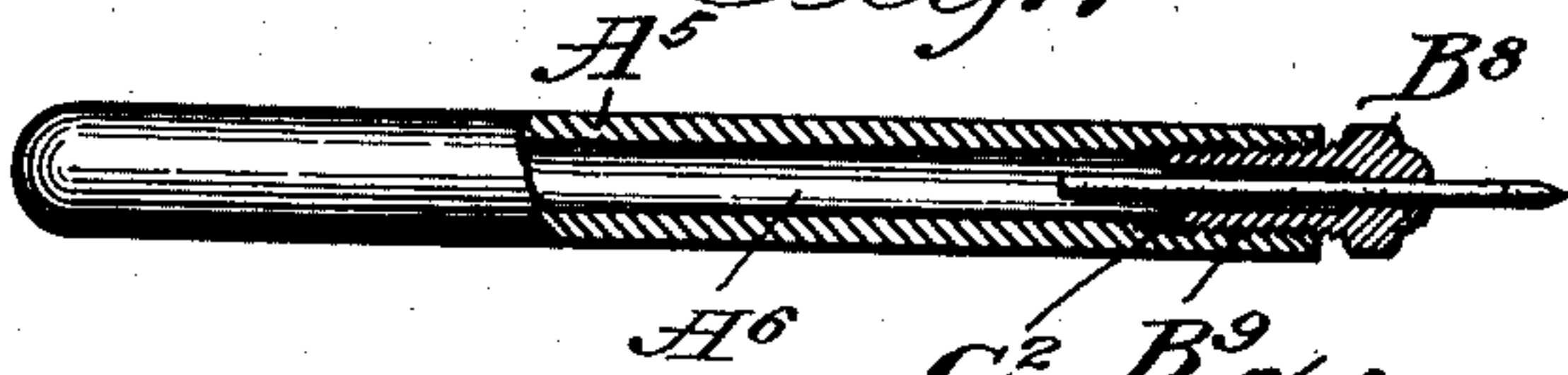


Fig. 8

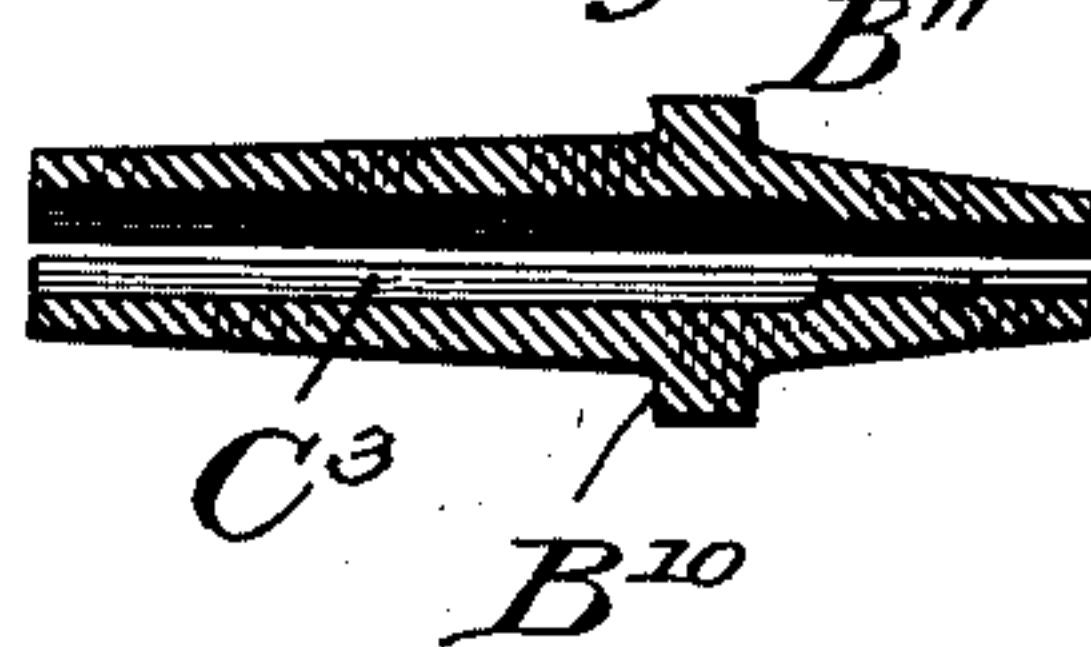
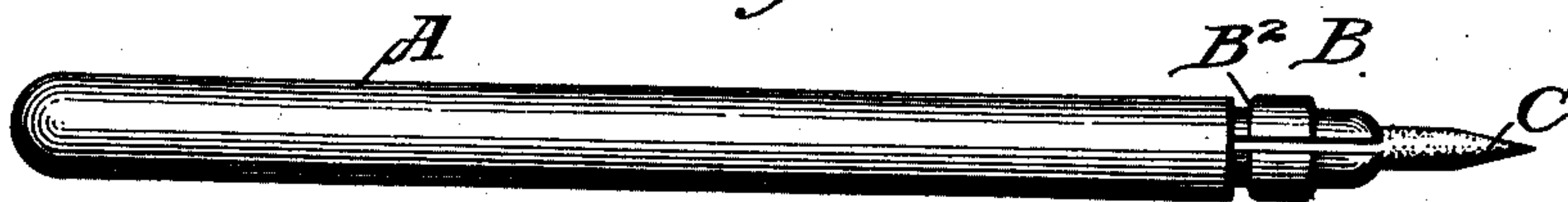


Fig. 9



Fig. 10



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# UNITED STATES PATENT OFFICE.

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## PENCIL-HOLDER.

No. 846,442.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed February 7, 1905. Serial No. 244,582.

*To all whom it may concern:*

Be it known that I, FRANK M. ASHLEY, a citizen of the United States, and residing at 59 West One Hundred and Fifth street, New York city, New York, have invented certain new and useful Improvements in Pencil-Holders, of which the following is a specification.

This invention relates to lead-pencils, and particularly to that type wherein a chuck is employed for clamping a removable lead, and a compartment in the body of the pencil provides for carrying a supply of such leads.

A prominent object of the invention is the production of a pencil of the character described which will be exceedingly simple and cheap in construction, capable of high efficiency, and in which the chuck may be quickly inserted in position to insure the retention of both the same and the lead with a high degree of positiveness, and which chuck may with equal facility be removed, carrying with it said lead. The chuck is so conditioned that the lead will be gripped both at the extremity of the chuck and for a considerable distance to the rear of said extremity, thereby obviating tendency of breakage of the lead due to lateral play of the same adjacent to its point and insuring somewhat-extended gripping-surfaces, so that the slipping of the lead in the chuck will be prevented.

A further object of the invention is to make the mutually-engaging portions of both the pencil-bodies, or, as they may be termed, the "holders," and the chucks, the latter with different capacities, all of the same size, whereby the chucks can be interchangeably used with the bodies, so that the leads may extend entirely through the chucking portion of the pencil when a long lead is used or short double-pointed leads can be employed; but in all cases when the chuck is removed from the holder the lead is removed with it.

There are other important features connected with the invention, which, besides those referred to, are already set forth in the subsequent detailed description and illustrated in the accompanying drawing, in which latter—

Figure 1 indicates a pencil the body of which is shown in central longitudinal sec-

tion, and the chuck and lead are shown by exterior views. Fig. 2 is an end view of Fig. 1. Fig. 3 is a central sectional view of a modification of the pencil and chuck, the latter being shown as holding a short lead pointed at each end and the body indicated as being made of metal. Fig. 4 is an end view of Fig. 3 as it would appear if Fig. 3 were not in section. Fig. 5 is a view, partly in section, which shows a modification of the form of the chuck. Fig. 6 is an end view of the same. Fig. 7 is a view, partly in section, which illustrates a modification wherein the chuck is screwed in the body of the pencil instead of being held therein by friction. Fig. 8 is an enlarged sectional view of a modification of the form of the chuck. Fig. 9 is an end view of the same. Fig. 10 is an enlarged exterior view of the pencil illustrated in Fig. 1.

In the drawings, A indicates the body of the pencil, B the chuck, and C the lead-pencil. The body A may be made of wood, which may be neatly enameled in various colors or may be made of enameled tin or other metal or hard rubber.

In Fig. 1 I have illustrated the body as being made from wood or hard rubber and in Fig. 3 as being made from drawn metal. The body is provided at the chuck end with a taper portion A', into which the shank end of the chuck B fits and is secured to the body A by friction. In Fig. 1 the chuck is provided with a central cylindrical opening throughout its entire length, into which the lead C fits in sliding relation. One side of the chuck is provided with a longitudinal slot B', which extends throughout its entire length from its exterior surface to the opening in which the lead fits, and when the chuck containing the lead is forced into the taper portion A' of the body the chuck, due to its elasticity, binds the lead, and thereby holds both chuck and the lead firmly in the body A. The chuck B is provided with an enlarged diameter B<sup>2</sup>, which serves as an abutment for the fingers to use in removing the chuck B from the body A of the pencil. On the opposite side of the chuck B from the slot B' is a slot B<sup>3</sup>, which extends parallel to the circular opening in which the lead fits and serves to allow of the chuck being easily compressed on the lead C when inserted in



the tapered portion A' of the body. Where the chuck is made very small in diameter and of soft wood, the slot B<sup>3</sup> may be dispensed with; but where the chucks are made of fairly large diameter the slot B<sup>3</sup> is essential to its successful operation.

Referring to Fig. 3, the lead C' is made short, and the opposite ends are both pointed, and in this case the lead is made of larger diameter than the opening which extends throughout the length of the chuck; but the opening serves the purpose of allowing a pin to be inserted from the opposite end of the chuck to that in which the lead C' is held, whereby in case of the breaking of the lead C' in such a manner as to leave a portion of the lead within the jaws of the chuck the said broken part may be forced from the chuck by a pin being inserted behind it, either through the slot B<sup>4</sup> or the circular conduit which extends from the end of the lead C to the opposite end of the chuck. In Fig. 3 the slot B<sup>4</sup> is made on both sides of the chuck opposite to each other, and when made in this way one of the slots B<sup>4</sup> does not extend the entire length of the chuck B<sup>5</sup>, but extends back to about the point represented by a circle B<sup>6</sup>, and when made this way the spring of the chuck will be equal on both sides of the same and will firmly hold the lead C' when inserted in position in the taper portion A<sup>2</sup>.

Referring to Fig. 5, it will be noticed that the taper portion A<sup>3</sup> is decreased in diameter at A<sup>4</sup>, and beginning at this point the chuck B<sup>7</sup> is made with two flat sides parallel with each other, as shown in Fig. 6. In other respects the chuck B<sup>7</sup> is made in a similar manner to that just described with reference to Fig. 3.

In Fig. 7 the chuck B<sup>8</sup> is provided with a tapered shank which is provided with a thread B<sup>9</sup>, which engages with a similar thread in the body of the holder A<sup>5</sup>. The chuck B<sup>8</sup> is compressed and holds the lead when the same is screwed as far into the holder A<sup>5</sup> as it will go, which will be clear to any one skilled in the art to which this invention pertains. In some cases the leads used in these pencils are not found to be of equal diameters, and when the chucks are made of any considerable length the friction between a long lead and the opening into which it fits in the chuck is such that there is sometimes a difficulty in removing the lead through the chuck. I have overcome this difficulty to a considerable extent by enlarging the diameter of the opening in the shank end of the chuck, as illustrated at C<sup>2</sup> in Fig. 7 and C<sup>3</sup> in Fig. 8, in which last-named figure the chuck is shown considerably enlarged.

In Fig. 8 I also illustrate an abutment B<sup>10</sup>, being cut away on each side of the main body of the chuck B<sup>11</sup>, as illustrated in Fig. 9. This form allows the chuck to be more easily

held and affords a firmer grip to the fingers when the chuck is held by excessive friction in the taper portion of the holder-body.

It is obvious that when carried in the pocket the chuck may be released from its friction in the tapered portion of the holder-body, and the pencil-point may be forced backward in the chuck and the chuck itself again quickly held in said tapered portion, whereby when carried in the pocket the point of the pencil will be protected from breaking. In the case of the short leads shown in Figs. 3 and 5 this advantage is not sought, for the reason that when leads of this form are used they are so short and easy to handle that it would involve but a moment to remove the same from the chuck and drop them within the body of the pencil, which constitutes a receptacle A<sup>6</sup> for carrying a supply of the leads to be used.

The extreme cheapness at which these pencils may be made, the firmness with which the leads are held in the pencil when in use, due to the extreme bearing-surface upon the leads afforded by the construction of the chuck, and the neatness and general utility of the design is such as to make this form of pencil particularly suitable for use in public schools and offices.

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

1. A two-part pencil embodying a holder and a chuck, the former integrally closed at its butt and containing a lead-compartment merging in an extended inwardly-tapering bearing at the holder front, and the chuck having a lead-gripping portion at its forward extremity and provided with an extended tapering shank adapted to be engaged within the tapering bearing of the holder continuously throughout the length of said bearing.

2. A two-part pencil embodying a holder and a chuck, the former integrally closed at its butt and containing a lead-compartment merging in an extended inwardly-tapering bearing at the holder front, and the chuck containing an extended longitudinal lead-passage contracted at the forward extremity of the chuck to contribute in forming a gripping portion thereat, the rear major part of the passage being of larger diameter than the passage at the said gripping portion, said chuck being also provided with an extended rear shank adapted to be engaged within the tapering bearing of the holder continuously throughout the length of said bearing.

3. A two-part pencil embodying a holder and a chuck, the former integrally closed at its butt-end and containing a lead-compartment merging in an extended inwardly-tapering bearing at the holder front, and the chuck having an extended rearwardly-tapering shank adapted to conform within said bearing, said chuck containing a central lon-



5 longitudinal lead-passage, an extended radial slot opening through the chuck side and intersecting said passage, and an external groove diametrically located with respect to said slot, the chuck having a gripping portion at its front extremity from which latter the passage and slot rearwardly extend.

10 4. A two-part pencil embodying a holder and a chuck, the former containing at its front end, an extended inwardly-tapering bearing, and the chuck having an intermediately-located external enlargement, and an extended rearwardly-tapering shank, the latter adapted for engagement within the holder-bearing continuously throughout the length of the latter, and the enlargement being removed at opposite sides to render said enlargement convenient for the engagement of the fingers in the removal of the chuck, 15 said chuck containing a central longitudinal lead-passage, and an extended radial slot opening through the chuck side and intersecting said passage, the chuck having a gripping portion at its front extremity from which latter the passage and the slot rearwardly extend. 20 25

5 30 5. A two-part pencil embodying a holder and a chuck, the former integrally closed at its butt-end and containing a lead-compartment merging in an extended inwardly-tapering bearing at the holder front, and the chuck having an intermediately-located external enlargement, and an extended rearwardly-tapering shank, the latter adapted for frictionally conforming within said bearing 35

throughout its entire length, and the enlargement being removed at opposite sides to render said enlargement convenient for the engagement for the fingers in the removal of the chuck, said chuck containing a central longitudinal lead-passage and an extended radial slot opening through the chuck side and intersecting said passage, the chuck having a gripping portion at its front extremity from which latter the passage and the slot rearwardly extend. 40 45

6. A two-part pencil embodying a holder and a chuck, the former containing a lead-compartment merging in an extended inwardly-tapering bearing at the holder front, said chuck having an extended rearwardly-tapering shank adapted to conform within said bearing, and provided with a central longitudinal lead-passage and an extended radial slot opening through the chuck side and intersecting said passage, and provided with an enlarged portion to serve as a gripping-surface, the rear part of the pencil-passage being of larger bore than the front part so that the pencil will be held exclusively by the front end of the chuck. 50 55 60

In testimony whereof I, FRANK M. ASHLEY, have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of February, 1905.

FRANK M. ASHLEY.

Witnesses:

A. T. SCHARPS,  
WM. PAXTOR.