

(No Model.)

J. J. GILLESPIE.
PENCIL.

No. 500,487.

Patented June 27, 1893.

Fig. 1

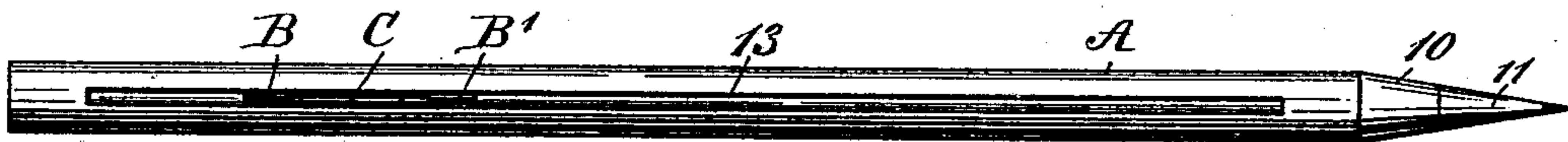


Fig. 2

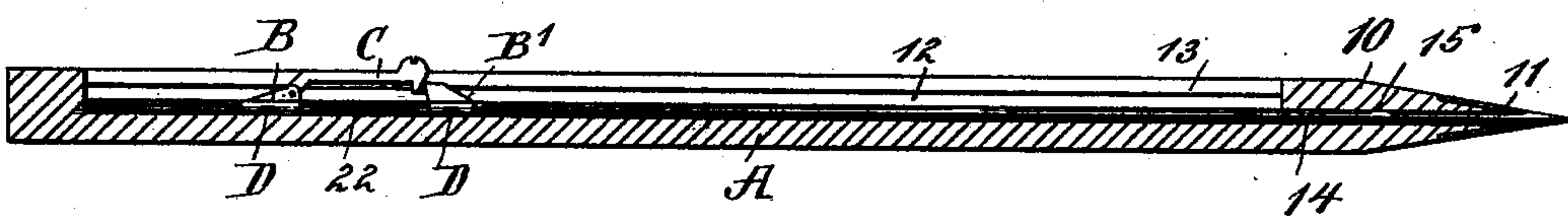


Fig. 3

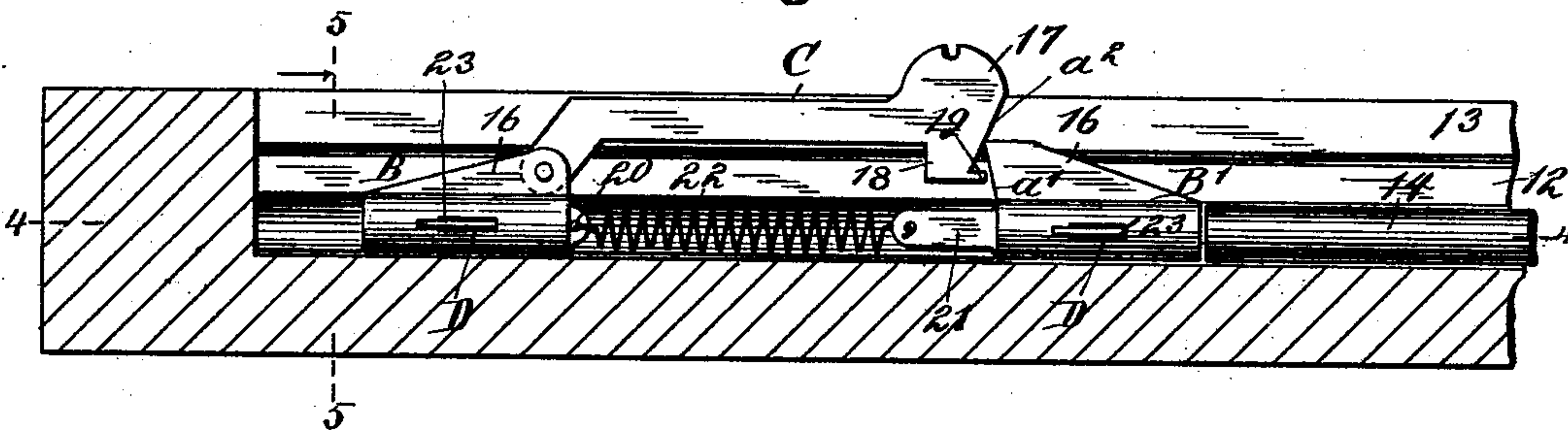


Fig. 4

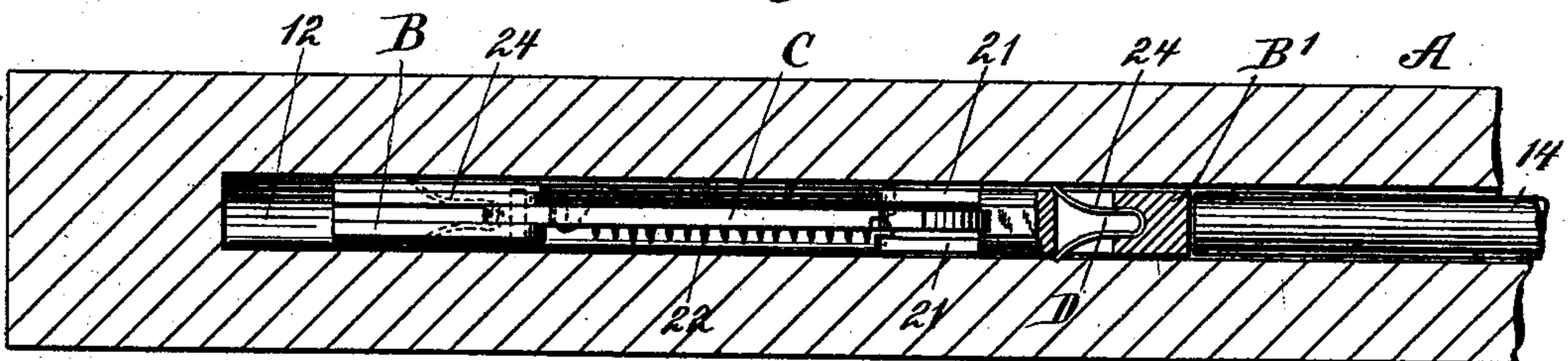
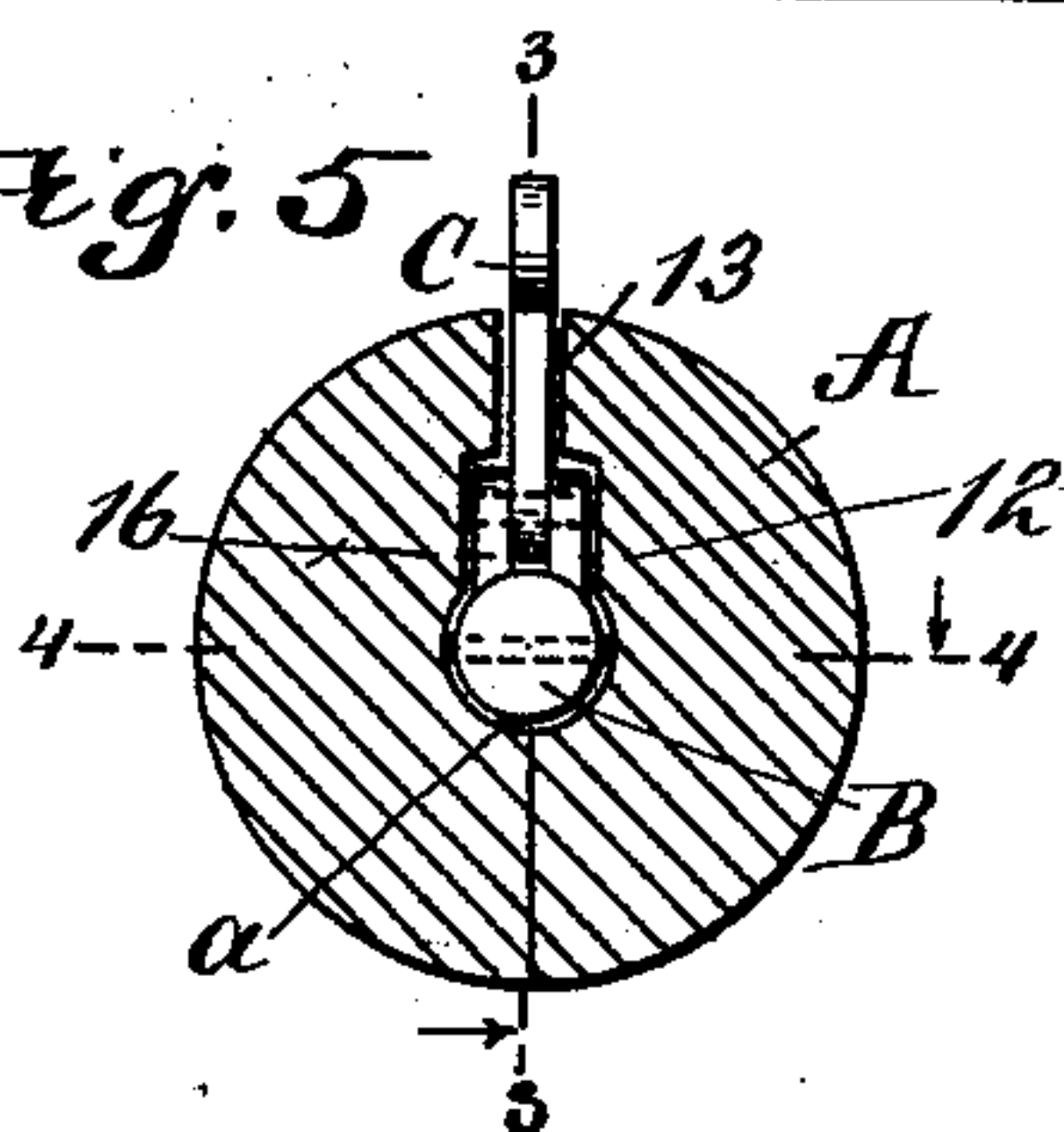


Fig. 5



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PENCIL.

SPECIFICATION forming part of Letters Patent No. 500,487, dated June 27, 1893.

Application filed November 10, 1892. Serial No. 451,485. (No model.)

To all whom it may concern:

Be it known that I, JOHN JULIAN GILLESPIE, of Colorado Springs, in the county of El Paso and State of Colorado, have invented a new and useful Improvement in Pencils, of which the following is a full, clear, and exact description.

My invention relates to an improvement in pencils and especially to an improvement in that class of pencils in which the lead is capable of being adjusted toward the point of the pencil as the lead is consumed, and it is the object of the invention to provide a pencil the body of which does not need to be sharpened, and to provide a simple device whereby the lead, crayon or slate core carried by the pencil may be expeditiously and conveniently fed outward as occasion may demand.

Another object of the invention is to provide a pencil the body of which may be constructed of wood and in practically the ordinary manner, and to fit such a body with a movable lead core, or a core of any description, which, by means of said mechanism, may be fed toward the point of the body in an expeditious and convenient manner and as required for use, the core while being fed forward or toward the point being also prevented from moving backward from said point.

The invention consists in the novel construction and combination of these several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improved pencil. Fig. 2 is a central longitudinal section through the pencil. Fig. 3 is a partial central longitudinal section through the pencil, said figure being drawn upon an enlarged scale and illustrating fully the construction of the feeding mechanism, the section being taken practically on the line 3—3 of Fig. 5. Fig. 4 is a horizontal section taken practically on the lines 4—4 of Figs. 3 and 5; and Fig. 5 is a transverse section taken essentially on the line 5—5 of Fig. 3.

The body A of the pencil may be given any cross sectional shape desirable, and may be

made of any suitable or approved material. In the interest of economy of manufacture, however, the body of the pencil is preferably made of wood. One end of the pencil body is pointed, as shown at 10 in the drawings, and this point permanently remains, it being protected by means of a ferrule 11, of metal or other hard material, in order that when the lead, or other core adapted to be carried by the body is to be sharpened, or is broken, the point will not be in the slightest degree damaged.

The body of the pencil is provided with a central longitudinal bore 12, extending from a point near the head and through the point of the body. The bore 12 is intersected by a slot 13, produced also longitudinally in the body, the slot being made in one side thereof. The slot extends from a point near the head and terminates before reaching the point of the body, as shown in both Figs. 1 and 2. The slot is preferably made rectangular in cross section, while the bore 12 between the termination of the slot 13 and the point of the body is round or given a shape corresponding to the cross sectional shape of the lead, slate, or other core 14 to be carried by the body, as shown at 15 in Fig. 2, but the cross section of the bore 12, where it connects with the slot 13, is made considerably larger than at the point of the body. The shape of this portion of the bore is best shown in Fig. 5, in which it will be observed that the bore is of greater width in one direction than in the other, the greatest depth of the bore being parallel with the side walls of the slot 13, and what may be termed the upper side surfaces of the bore are straight, while the lower side portions and the bottom portion thereof are cylindrical, as shown at a in Fig. 5. The core 14, fits quite snugly in the lower or reduced portion of the bore 12, and in the lower portion of the wider section thereof; but the core is capable of being moved longitudinally in the bore when proper tension is exerted upon one end of it.

The adjusting mechanism, or the mechanism employed for moving the core in the body of the pencil, is best shown in Figs. 3, 4 and 5, and it comprises virtually two sleeves B and B', which face one another, a lever C, and grippers D, carried by the sleeves. Each sleeve is adapted to travel in the larger por-

tion of the bore 12, and each sleeve is preferably provided with a flange 16, formed upon one side thereof, and these flanges ordinarily extend, especially the flange of the sleeve B', upward into the slot 13 a predetermined distance. The sleeve B, is located nearest the head of the body, and in the inner end of this flange one end of the lever C, is fulcrumed, the lever C being adapted to move freely diametrically of the body in the slot 13 and likewise in the bore 12. The free end of the lever is ordinarily provided with a head 17, extending above the outer surface of the body, and beneath the head a lip 18, is formed upon the lever, the said lip being preferably provided at its lower end with an extension or tongue 19, facing the point of the body; and the flange of the sleeve B', at its outer end, or that end facing the head of the lever C, is beveled downward from the top, as shown at a' in Fig. 3, whereby the top of the flange overhangs the bottom portion to a slight extent, and the face of the head of the lever above the tongue 19, is inclined in a direction opposite to that of the flange of the sleeve B', as shown at a^2 in said Fig. 3. Thus by pressing downward the head of the lever, the sleeve B' is forced in direction of the point of the body, while when the lever is in its upper position the tongue 19, by engaging with the overhanging portion of the flange of the said sleeve B', will prevent the head of the lever from becoming disengaged from the flange. The inner end of the outer sleeve B has a stud 20 formed upon it, and the outer end of the sleeve B', is provided with two ears 21, one emanating from each side, a space intervening said ears; and a spring 22, is connected with the ears 21 and with the stud 20, thus connecting the two sleeves and holding them a predetermined distance apart, while the ears 21 admit of the head of the lever C, being carried down between them into the bore 12.

Each sleeve is provided in opposite sides with longitudinal slots or openings 23, and within each sleeve a clamp 24, is located, the clamps being of essentially V or U-shape and of spring metal; and the members of the clamps extend outward through the slots in the sleeves, forming barbs which are constantly in engagement with the side walls of the bore 12. These barbs effectually prevent the sleeves from being carried rearward or in direction of the head of the body, while they do not in the least interfere with the movement of the sleeves in an opposite direction, that is, in direction of the point of the body, as at that time the members of the clamps will close into the sleeves and permit the latter to slide freely, while when the sleeves are forced in direction of the head, the members or barbs of the clamps are expanded and enter the slots of the bore. The core 14, whether of lead, slate, or other material, is adapted to engage at its inner end with the outer end of the sleeve B'. Thus in operation, when it is

desired to carry the core outward beyond the point of the body, the head of the lever C, is pressed downward within the body, and its beveled face a' , by engagement with the overhand of the flange on the inner face of the sleeve B', will force that sleeve in direction of the point, exerting tension upon the spring 22 and the sleeve B', and the sleeve B' will be held in its new position by its barbs engaging with the walls of the bore 12. The spring 22, when the lever is released, will force the head of the lever upward, and will draw the sleeve B in direction of the sleeve B', a distance corresponding to the distance the latter sleeve was moved. It will be observed that as the sleeve B' is forced in direction of the point of the body, the lead or other core will be carried in the same direction; and it is obvious that by repeatedly pressing inward the lever C, as great a length of core as may be desired will be forced out through the opening in the body at its point. It is also evident that the ferrule 11 at the point will prevent the point of the body becoming damaged in the event the outer end of the core should be pointed or sharpened. It is also obvious that a wooden body may be employed, and that the entire feeding or adjusting apparatus is so simple as to add so slightly to the cost of the construction of the pencil as to carry it in price but little beyond that of the ordinary slate or lead pencil.

Among the advantages that may be mentioned, is the fact that the body of the pencil requires no sharpening, thus avoiding soiling the hands and also saving time and annoyance; the device, that is, the feeding mechanism, may be applied to any form or style of pencil and may be of any approved material, as may likewise be the core, and the body of the pencil is always of the same length.

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

1. A pencil comprising the tubular or bored body having a longitudinal slot and a slide or sleeve within the bore provided within the body with a laterally projecting clamp to engage the interior of the body and prevent retraction and means extending through the slot for moving the slide or sleeve toward the point of the pencil, substantially as set forth.

2. The combination with the tubular longitudinally slotted body, of a slide within the body provided with rearwardly and laterally projecting spring arms yielding when the slide is moved outwardly and engaging the interior of the body and preventing rearward movement of the slide, substantially as set forth.

3. In a pencil of the character described, the combination, with a body provided with a bore extending through one end, that end being pointed, and a lead held to slide in the bore of the body, of a feeding device, the same consisting of a sleeve located within the bore of the body, a spring clamp carried by the

sleeve, and engaging the interior thereof to prevent retraction of the sleeve and a lever separate and independent of said sleeve and movably located in the body of the pencil and adapted for engagement with the said sleeve, as and for the purpose set forth.

4. In a pencil, the combination, with a body, pointed at one end and provided with a central bore extending through the pointed end, the bore being adapted to receive a lead, crayon, or its equivalent, of two sleeves held to slide in the bore of the body, the sleeves being spring-connected, spring clamps carried by the sleeve and normally engaging with the sides of the bore, and a lever fulcrumed upon one of the sleeves, the opposite sleeve being provided with an extension adapted for engagement with the head of the lever, as and for the purpose set forth.

5. In a pencil, the combination, with the body thereof having a point at one end and

provided with a bore extending through the major portion of the body and through the pointed end, a slot connecting with the bore a portion of the length of the latter, and a lead loosely mounted in the bore, of a feed mechanism, the same consisting of two opposing sleeves mounted to slide in the bore of the body, the inner sleeve being adapted for engagement with the lead, and provided with a flange projecting from one of its sides, a spring connecting the two sleeves, clamping devices carried by the sleeves, and a lever pivotally connected with one of the sleeves, which lever is provided at its free end with a head engaging with the flange of the lower sleeve, as and for the purpose specified.

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Witnesses:

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