(No Model.)

A. M. GRUBBS.

ADDITION PENCIL.

No. 508,417. Patented Nov. 14, 1893.

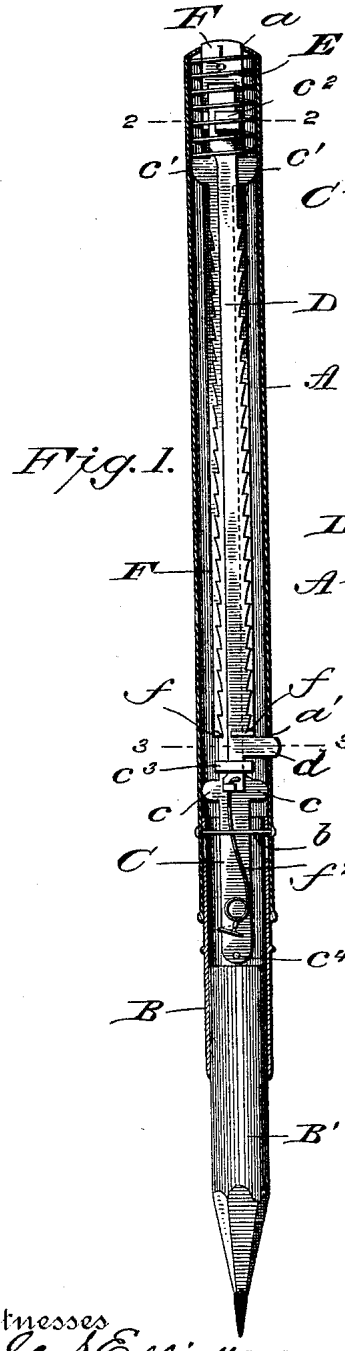

Fig. 1.

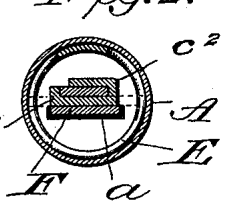

Fig. 2.

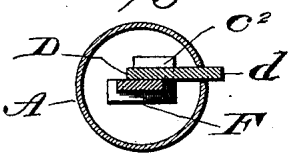

Fig. 3.

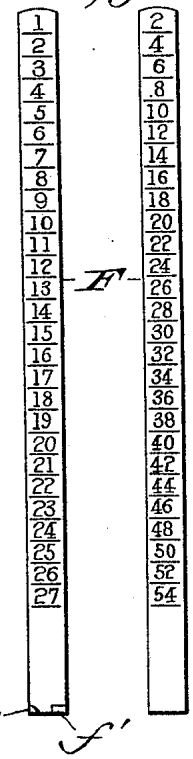

Fig. 5.

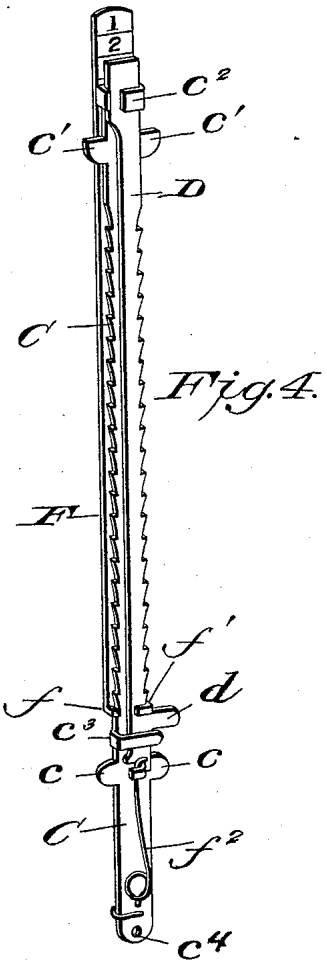

Fig. 4.

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ADDITION-PENCIL.

SPECIFICATION forming part of Letters Patent No. 508,417, dated November 14, 1893.

Application filed February 11, 1893. Serial No. 461,902. (No model.)

To all whom it may concern:

Be it known that I, ALBERT M. GRUBBS, a citizen of the United States of America, residing at Forest Grove, in the county of Washington and State of Oregon, have invented certain new and useful Improvements in Addition-Pencils; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a pencil-holder which consists of two parts connected to each other and provided with mechanism whereby when the point of the pencil is pushed upon, or the body of the handle depressed, and the part carrying the pencil held rigid, such movement will cause a register-bar to be projected a single step or space; said spaces being numbered so that counting can be done rapidly and accurately.

The invention is designed more especially as an improvement upon that class of addition pencils shown in the patent of C. R. Thompson, No. 356,561, dated January 25, 1887.

In the accompanying drawings, Figure 1 is a longitudinal sectional view. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a sectional view on the line 3—3. Fig. 4 is a perspective view of the counting mechanism detached. Fig. 5 shows side views of the register-bar.

A designates a tube or casing, which is provided at its upper end with a slot *a*, through which the register-bar passes, and with a side aperture *a'*, through which passes a lug *d* on the ratchet-bar D to hold said ratchet-bar against longitudinal movement in the casing.

B designates a short tube which carries the pencil B', and this tube is movable within the tube A, which movement is limited by the pin *b* which is fixed in the tube A and passes through slots in the tube B. To this pencil-tube B is pivoted at c^4 a ratchet-bar C, which extends to near the upper end of the tube A, and this ratchet-bar C is provided above the pencil-tube B, and on each side, with outwardly projecting lugs *c*, which bear against the tube A, and, with the lugs *c'* near the upper end of said ratchet-bar, act to keep the ratchet-bar in the center of the tube. The upper end of this ratchet-bar is provided with projecting members c^2, which are bent to form a guide for the upper end of a ratchet-bar D. Near the lower end of the ratchet-bar C is formed a guide, c^3, for the lower end of the ratchet-bar D. One side of each ratchet-bar is formed with a plain edge while the other edge is provided with ratchet-teeth, as shown.

E designates a spring which bears against the upper end of the tube or casing A and against the lugs *c'* formed on the ratchet-bar C, so as to operate said ratchet-bar in the direction to thrust out the pencil-carrying tube B, as shown in Fig. 1.

By the construction hereinbefore described it will be noted that I provide two ratchet-bars, one of which D, is permitted to have a slight lateral movement but is held against longitudinal movement in the casing by the lug *d* while the other C moves or slides over the same; thus every time the pencil is depressed, or the pencil-tube forced into the casing, the ratchet-bar C which is attached to said pencil-tube will be moved upward a distance slightly greater than the length of, one of the ratchet teeth, and after this movement has been made and pressure upon the pencil released the spring E will cause the ratchet-bar C and pencil-tube to resume their normal positions, the movement of the bar C carrying with it the register-bar hereinafter described.

F designates the register-bar, which is spaced and numbered to correspond with the number of teeth on the ratchet-bars, and this register-bar passes through the upper end of the casing A, and at its lower end is provided with projections *f* and *f'*, which engage the teeth of the ratchet-bars. On one side of the register-bar the spaces may be numbered 1, 2, 3, &c., to be used in counting one at a time while on the other side they may be numbered 2, 4, 6, &c., for counting two at a time, as shown in Fig. 5.

In operation, when it is desired to count it is only necessary to bear upon the point of the pencil and then release the pressure, when the register-bar will be projected one step or tooth beyond the casing A by means of the

ratchet-bar C engaging the lug *f*, and will be retained in this position by the projection *f'* engaging the teeth of the ratchet bar D; the ratchet-bar being moved to one side when the projection *f'* rides on the teeth and said teeth caused to engage the projection by means of a flat spring f^2 which is attached to the ratchet-bar C and bears against the lower end of the ratchet-bar D. It will be seen that when it is desired to return the register-bar within the casing it is only necessary to press upon the lug *d* on the bar D which will move the teeth of said bar out of engagement with the projection *f'* of the register-bar, and the straight edge of the bar D will be moved against the projection *f* of the register-bar to throw the same out of engagement with the teeth of the bar C; thus permitting said register-bar to slide down, as the straight edge of each ratchet-bar will then be on a line with the outer ends of the teeth of the adjacent ratchet-bar and will prevent the lugs *f* and *f'* engaging said teeth.

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

1. In an addition or counting pencil, the combination, of a tube or casing inclosing two ratchet-bars one of which has a limited longitudinal movement within the casing while the other is held against such movement by a lug which is attached to the lower portion of one of the ratchet-bars and projects through an aperture in said casing, and a register-bar having projections which are engaged by the teeth of the ratchet bars, substantially as shown, and for the purpose set forth.

2. In an addition or counting pencil, the combination, of a tube or casing inclosing two ratchet-bars one of which has a longitudinal movement within the casing while the other is held against such movement by a lug which is attached to the lower portion of one of the ratchet-bars and projects through an aperture in said casing, a register-bar having projections which are engaged by the teeth of the ratchet-bars, the casing being provided with a slot through which said register bar passes, and a spring bearing against the longitudinally movable ratchet-bar to force the same to the limit of its movement in one direction, substantially as shown, and for the purpose set forth.

3. In an addition or counting pencil, the combination, of a casing, a movable pencil-tube, a spring depressed ratchet-bar carried by the pencil-tube, a ratchet-bar D provided with a lug *d* which projects through an aperture in the casing to prevent longitudinal movement of said ratchet-bar D, and a register bar adapted to engage with the teeth of the ratchet-bars, substantially as shown, and for the purpose set forth.

4. In combination with a casing A and tube B movably connected to each other, a ratchet-bar C secured to the tube B to move therewith, a register-bar which is engaged by the teeth of the ratchet-bar C and engages with the teeth of a ratchet-bar D held within the casing against longitudinal movement, and a spring E which acts upon the ratchet-bar C to restore it to its normal position, substantially as shown, and for the purpose set forth.

5. In combination with a casing A and tube B sliding therein, a ratchet-bar C located within the casing A and attached to the tube B so as to move therewith, a spring for throwing the ratchet bar C in one direction, a ratchet-bar D located within the casing and held against longitudinal movement by a lug *d* which projects through an aperture in the casing A, together with a register-bar which projects through an aperture in the casing and is provided with lugs which are engaged by the ratchet-bars, and a spring for throwing the ratchet-bar D in engagement with the register-bar, substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT M. GRUBBS.

Witnesses:
A. E. WILSON,
C. L. LARGE.