

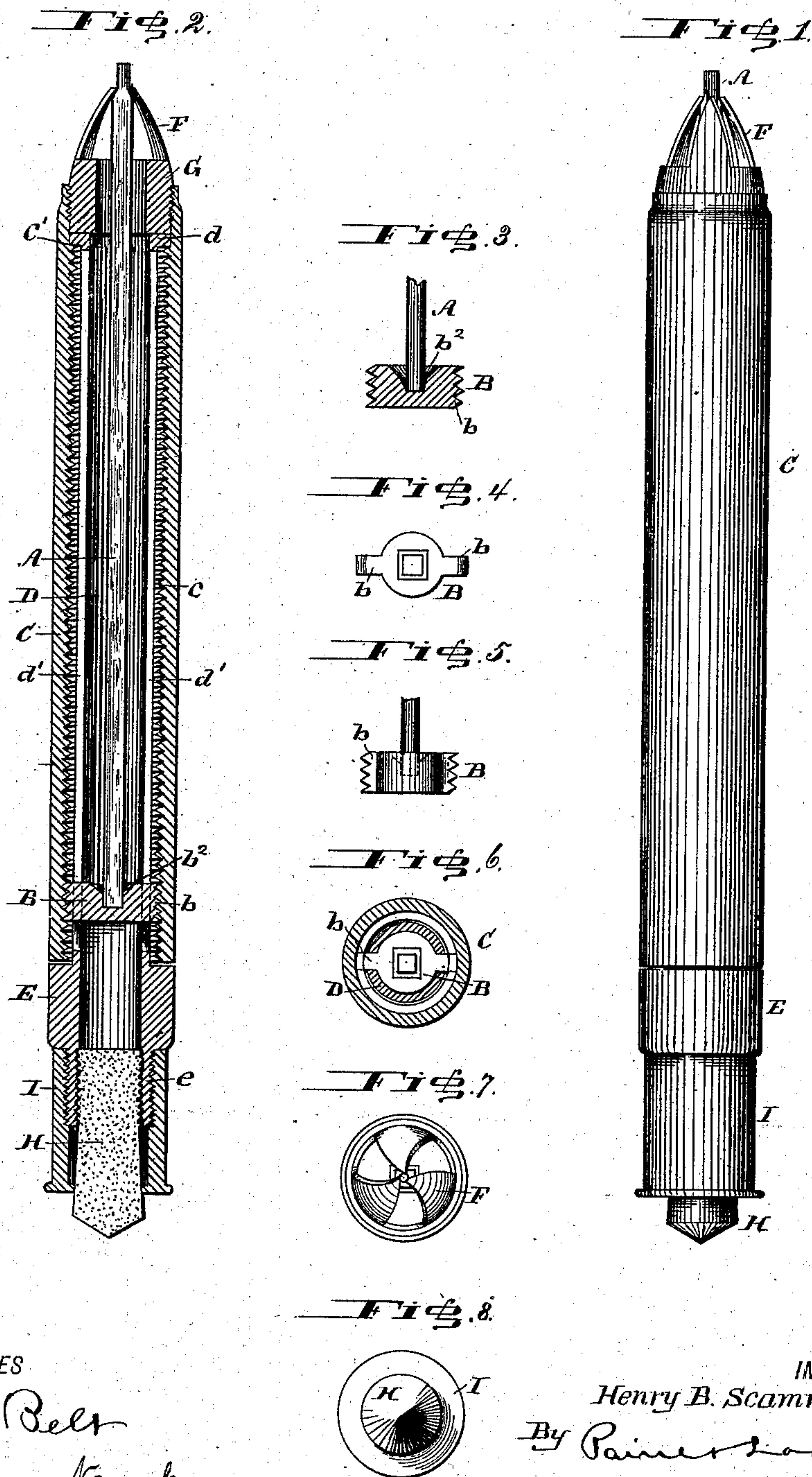
(No Model.)

H. B. SCAMMELL.

SELF SHARPENING PENCIL AND ERASER COMBINED.

No. 293,280.

Patented Feb. 12, 1884.



WITNESSES

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UNITED STATES PATENT OFFICE.

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SELF-SHARPENING PENCIL AND ERASER COMBINED.

SPECIFICATION forming part of Letters Patent No. 293,280, dated February 12, 1884.

Application filed January 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. SCAMMELL, a citizen of the United States, residing in the city of St. Louis, and State of Missouri, have invented a Self-Sharpening Lead-Pencil and Eraser Combined, of which the following is a specification.

The present invention has for its object to provide a pencil-holder which possesses means for sharpening the lead as the same is worn off by use.

To this end the invention consists in the combination of an outer shell or tube having lead-sharpening wings or blades at one of its ends with an inner revolving tube containing a sliding carrier or block for the pencil-lead. This carrier has screw-threaded wings, which project through slots in the inner revolving tube, and engage with a screw-thread cut in the outer shell or tube. The pencil-lead is seated in the carrier in such a way that it cannot turn therein, and hence it follows that the rotation of the inner tube by means of an external finger-piece will move the carrier forward and cause the rotation of the pencil-lead between the points or cutting-edges of the sharpening device. The external finger-piece or collar of the rotating tube has a screw-threaded neck, which receives an india-rubber eraser, and a shell or short tube for partly inclosing the latter.

In the drawings, Figure 1 is an elevation of a pencil embodying my improvements. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detail sectional view of the lead-carrier and the square-ended lead seated therein. Figs. 4 and 5 are plan and side views of said lead-carrier. Fig. 6 is a transverse section taken through the outer shell, inner slot-tube, and lead-carrier having a square seat or socket. Fig. 7 is an end view of the sharpening blades or wings. Fig. 8 is an end view of the rubber eraser.

The letter C designates an outer shell or tube, which may be made of metal, hard india-rubber, or other suitable material. This shell has a cylindrical bore, in which is cut a screw-thread, *c*, extending from the bottom of said shell to a shoulder or ledge, *c'*, near the top thereof. The portion of the shell beyond this shoulder is also screw-threaded, and receives an externally-screw-threaded ring, G,

which has converging cutting wings or blades F. A tube, D, fitted inside the shell C, has a flange, *d*, at its upper end, which rests on the ledge or shoulder *c'* of the outer shell, being held in place by the screw-threaded ring G, as is clearly shown in Fig. 1. The portion of the tube D extending beyond the lower end of the shell C forms a collar or enlargement, E, which is flush with the exterior surface of the shell C, and serves as a finger-piece for rotating said tube. A hollow screw-threaded neck, *e*, projecting from the collar or enlargement E, receives an india-rubber eraser, H, in its interior thread, and an apertured cap or short shell, I, is applied to its outer thread, as is shown in Fig. 1. The india-rubber eraser projects sufficiently far through the end of said cap I, and is protected thereby. The tube D contains a traveler-block or lead-carrier, B, which is provided with vertical wings or ribs *b*, that project through vertical slots *d'*, made in the tube D. These wings or ribs are screw-threaded, as is clearly shown in Figs. 1, 3, and 4, and engage with the interior screw-thread, *e*, of the outer shell or case, C. The carrier or traveler B has a sloping square seat or socket, *b²*, which receives a square-ended pencil-lead, A, or a lead made square or angular throughout its entire length. The object of this formation is to prevent the lead from rotating independently of the carrier or traveler B.

The operation of a pencil constructed according to my invention is as follows, viz: A pencil-lead having been properly seated in the traveler B, and the parts being in the position shown in Fig. 2, the exterior case is grasped in one hand and the interior tube rotated through the medium of the exterior collar or finger-piece. This will cause the screw-threaded lead carrier or traveler to turn in the screw-thread of the exterior case and slide forward or upward within the interior tube, the slots in the latter permitting this movement to take place. The pencil-lead carried by the traveler is in this manner gradually fed forward and rotated between the points of the sharpening wings or blades. The portion of the lead projected beyond said blades is sharpened, and forms a point for writing. As the point wears off the lead is fed forward in the manner above indicated; and thus I pro-

duce a self-sharpening pencil, which is simple in construction and can be easily operated. It should be stated that the screw-thread in the outer shell for receiving the ring of the sharpening-blades runs in a reverse direction from the thread that feeds the carrier forward, and thus I guard against the unscrewing of the ring and sharpener blades by the rotation of the pencil-lead between the latter.

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

1. A self-sharpening pencil, consisting of an outer shell having an internal screw-thread
15 and converging blades or sharpener-wings at

one of its ends, an interior rotating tube having vertical slots, and a lead carrier or traveler having threaded wings projecting through said slots and engaging with the threads of the outer shell, substantially as herein set forth. 20

2. The combination of the rotating tube D, having collar or enlargement E, screw-threaded neck e, shell or cap I, and india-rubber eraser H, with the outer shell, C, and lead supporting and feeding devices, substantially as
25 herein set forth.

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