No. 710,255. Patented Sept. 30, 1902.

R. Y. CORMACK.

PENCIL AND SHARPENER THEREFOR.

(Application filed Dec. 5, 1901.)

(No Model.)

Fig. 1.

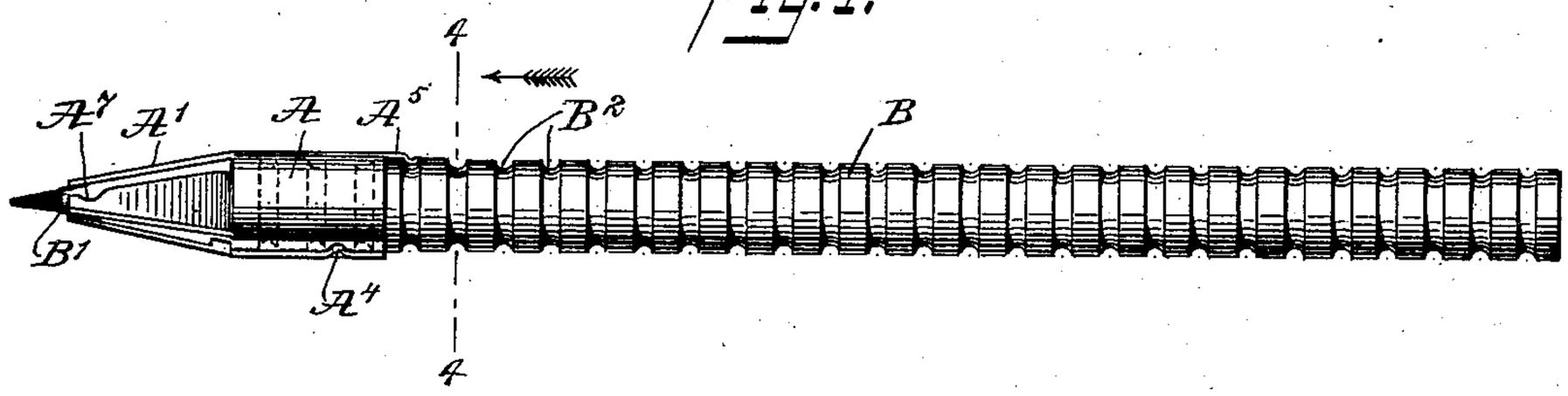


Fig. 2.

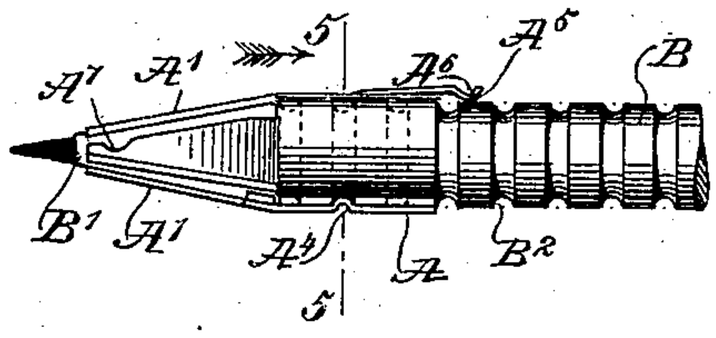


Fig. 3.

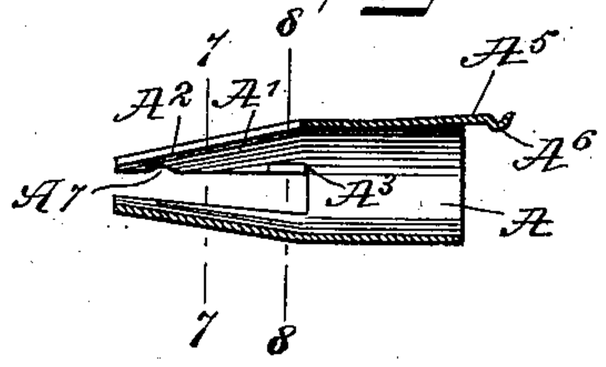


Fig. 4.

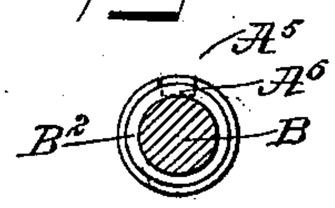


Fig. 5.

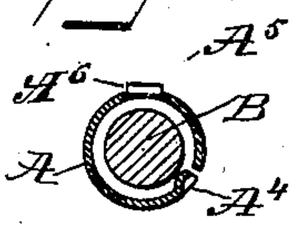


Fig. 7.

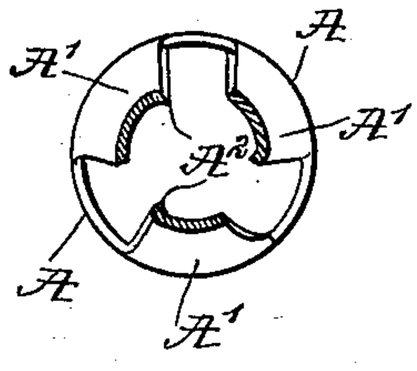


Fig. 6.

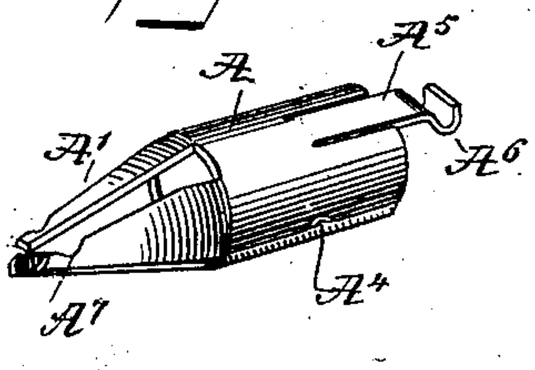
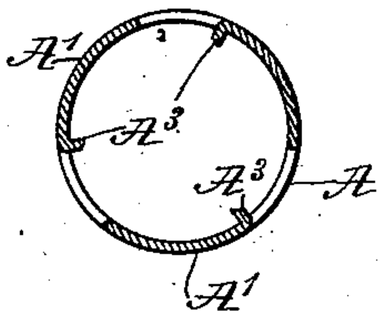


Fig. 8.



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UNITED STATES PATENT OFFICE.

ROBERT Y. CORMACK, OF JAMAICA, NEW YORK.

PENCIL AND SHARPENER THEREFOR.

SPECIFICATION forming part of Letters Patent No. 710,255, dated September 30, 1902.

Application filed December 5, 1901. Serial No. 84,719. (No model.)

To all whom it may concern:

Be it known that I, ROBERT Y. CORMACK, a citizen of the United States, and a resident of the city of New York, (Jamaica, borough of Queens,) in the county of Queens and State of New York, have invented a new and Improved Pencil and Sharpener Therefor, of which the following is a full, clear, and exact description.

The object of the invention is to provide certain new and useful improvements in pencils and sharpeners therefor, whereby the sharpener forms a fixture of the pencil to permit the user to quickly and conveniently sharpen the pencil and to allow convenient adjustment of the sharpener on the pencil as the latter wears away.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is a like view of the same with the sharpener in a different position. Fig. 3 is a longitudinal sectional elevation of the sharpener. Fig. 4 is a transverse section of the improvement on the line 4 4 of Fig. 1. Fig. 5 is a similar view of the same on the line 5 5 of Fig. 2. Fig. 6 is a perspective view of the sharpener. Fig. 7 is an enlarged cross-section of the same on the line 7 7 of Fig. 3, and Fig. 8 is a like view of the same on the line 8 8 of Fig. 3.

The sharpener is made of a conical piece of metal and is formed with a split cylindrical portion A, slidably fitted on the pencil B, and from the outer end of said cylindrical portion extends a conical cutter formed of a spiral of knife-blades A′, preferably three in number and each having one edge turned inward to form a cutting edge A^2 for cutting the material of the pencil B at the conical end B′ thereof. The other edge of each knife-blade A′ has an inner or base portion turned inward to form a roughening-knife A^3 (see Fig. 8) to give a preliminary cut to the material of the pencil B near the base of the conical end B′ to insure ready and uniform cutting of the knife-edges A^2 without undue strain on said edges.

The cylindrical portion A of the sharpener is formed with a lug or projection A^4, extending inward to engage the pencil between adjacent grooves of a series of annular grooves B^2, formed transversely in the peripheral face of the pencil B, as is plainly illustrated in the drawings, said lug A^4 holding the pencil-sharpener against turning movement on the pencil B during the time the pencil-sharpener is at rest on the pencil. The cylindrical portion A is provided on its inner end with an integral arm A^5, having an inwardly-extending lug or bent portion A^6, adapted to engage one of the grooves B^2 to hold the sharpener in place against longitudinal movement on the pencil when not in use—that is, when the projection A^4 stands on the peripheral face of the pencil B between two grooves B^2, as indicated in Fig. 1. Now it will be seen that when the operator turns the cylindrical portion A and pushes the sharpener inward along the pencil then the knife-edges A^2 and A^3 cut the material of the pencil at the conical end B′ thereof, so that the pencil is readily sharpened. The conical end B′ is cut by the knife-edges A^2 and A^3 until the bend A^6 engages the next adjacent groove B^2, and the projection A^4 stands on the ridge adjacent to the groove it normally occupies. Thus the sharpener A is held in an inactive position on the end of the pencil B by the arm A^5 and the lug A^4 to allow convenient use of the pencil for its legitimate purposes without interference by the parts. The prongs are cut out, as at A^7, on the non-cutting side near the outer ends of the prongs to render the points of the prongs more flexible to allow easy passage of the lead when moving the sharpener along the lead of the pencil.

It will be readily seen that by having the pencil provided with the grooves the sharpener has to remove considerably less wood than when used on an ordinary pencil.

When the pencil is not in use, the sharpener can be readily moved down to cause the prongs to protect the lead point from being broken.

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

1. A pencil and sharpener therefor, comprising a pencil having a series of independent annular grooves on its periphery, and a pencil-sharpener having a cylindrical portion slidably fitting said pencil, a projection on the cylindrical portion for engaging the pencil, and a conical cutter extending integrally from the outer end of the cylindrical portion and consisting of a plurality of knives, as set forth.

2. A pencil and sharpener therefor, comprising a pencil having spaced and independent annular grooves on its periphery, and a pencil-sharpener having a cylindrical portion slidably fitting said pencil, a projection on the cylindrical portion for engaging the pencil, and a conical cutter extending integrally from the outer end of the cylindrical portion, said conical cutter being formed of a plurality of spaced knife-blades, each blade having one edge turned inward to form a cutting edge, and the other edge of the blade having a portion bent inward to form a roughening edge, as set forth.

3. A pencil and a sharpener therefor, comprising a pencil having peripheral grooves, and a pencil-sharpener having a cylindrical portion slidably fitting said pencil, a projection on the cylindrical portion for engaging the pencil, a conical cutter extending integrally from the outer end of the cylindrical portion and consisting of a plurality of knives, and a manually-controlled spring-arm extending integrally from the inner edge of the cylindrical portion, said arm having a bend engaging one of the grooves in the pencil, as set forth.

4. A pencil and a sharpener therefor, comprising a pencil having peripheral grooves, and a pencil-sharpener having a cylindrical portion slidably fitting said pencil, a projection on the cylindrical portion for engaging the pencil, a conical cutter extending integrally from the outer end of the cylindrical portion and consisting of a plurality of knives, and a manually-controlled spring-arm extending integrally from the inner edge of the cylindrical portion, said arm having a bend engaging one of the grooves in the pencil, said bend and the projection being so arranged that when one engages a groove, the other extends on the peripheral face of the pencil between adjacent grooves, as set forth.

5. A pencil and sharpener therefor, comprising a pencil having peripheral grooves, and a pencil-sharpener having a cylindrical portion slidably fitting said pencil, a projection on the cylindrical portion for engaging the pencil, and a conical cutter extending integrally from the outer end of the cylindrical portion and consisting of a plurality of knives, each cutter having near its outer end a cut-out portion to render the point of the cutter flexible, as set forth.

6. A pencil and a sharpener therefor, comprising a pencil having a series of independent annular grooves on its periphery, and a pencil-sharpener consisting of a cylindrical portion and a conical cutter projecting from one end thereof the said cylindrical portion slidably mounted on the pencil and provided with means for preventing it from turning and sliding on the pencil, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT Y. CORMACK.

Witnesses:
THEO. G. HOSTER,
EVERARD B. MARSHALL.