April 21, 1925. 1,534,629

H. ANSHEN

WRITING INSTRUMENT

Filed Jan. 19, 1923

Fig. 1.

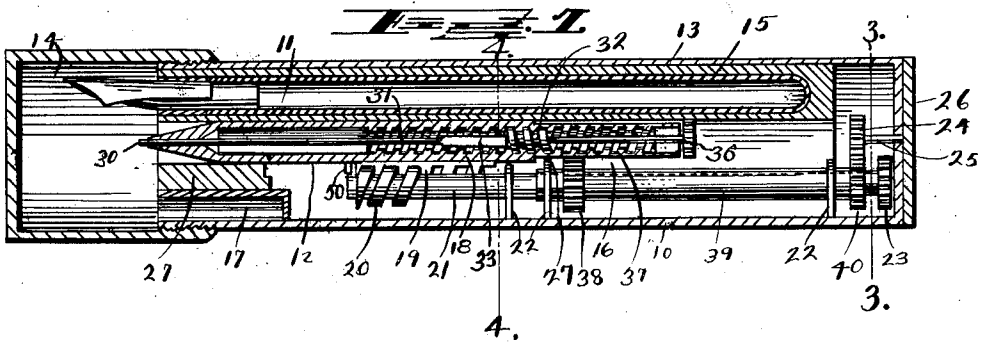


Fig. 2.

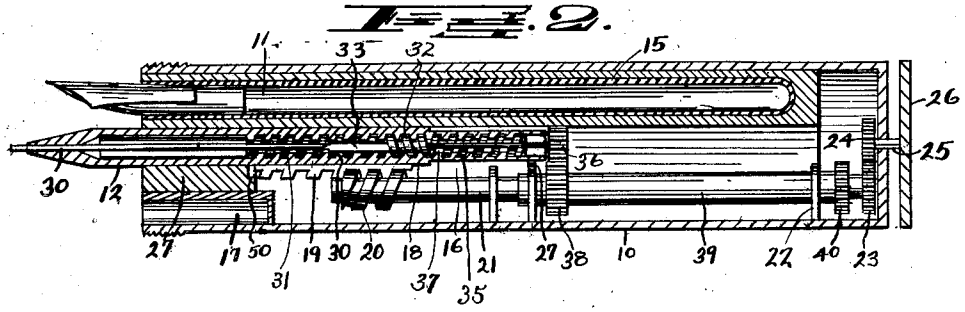


Fig. 3.

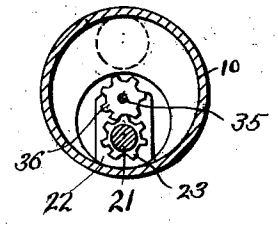


Fig. 4.

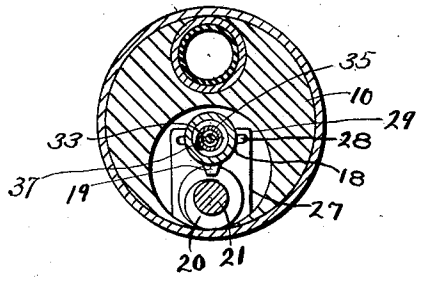
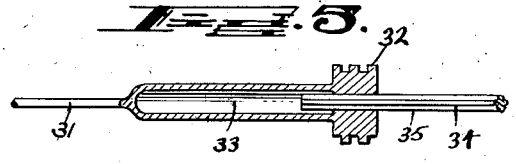


Fig. 5.



Harold Anshen,
INVENTOR.

BY Victor J. Evans,
ATTORNEY.

WITNESS: J. B. White

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UNITED STATES PATENT OFFICE.

HAROLD ANSHEN, OF TRENTON, NEW JERSEY, ASSIGNOR OF ONE-HALF TO CORILLA F. WILLIAMSON, OF TRENTON, NEW JERSEY.

WRITING INSTRUMENT.

Application filed January 19, 1923. Serial No. 613,703.

To all whom it may concern:

Be it known that I, HAROLD ANSHEN, a citizen of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented new and useful Improvements in Writing Instruments, of which the following is a specification.

This invention relates to writing instruments.

Some of the objects of the present invention are: to produce a single instrumentality of dual character in which a pen is combined with a pencil; to make use of a casing of a construction capable of retaining a fountain pen and a pencil of the lead extension type; to provide a writing instrument having a pencil of the lead extension type with means for moving the encased pencil to writing and non-writing positions and means for extending the lead of the pencil; to provide a manipulator exteriorly of the casing surrounding the pencil for moving the writing end of the pencil in and out of the casing and for extending the lead of the pencil; and with these and other objects in the view of the invention resides in the particular provision, relative disposition, and the functions of the parts hereinafter fully described and illustrated in the accompanying drawing, in which:

Figure 1 is a longitudinal sectional view through the instrument of the present invention.

Figure 2 is a view similar to the view shown in Figure 1 but showing a different relation of some of the parts and in which relation of the parts the lead of the pencil is ready to be extended; the pencil having been moved to a writing position.

Figure 3 is a cross section on the line 3—3, Figure 1.

Figure 4 is a cross section on the line 4—4, Figure 1.

Figure 5 is a detail of the lead push-rod.

Referring now more particularly to the several views of the drawing, it will be apparent that, the instrument of the present invention, generally, comprises a casing 10, a pen 11 preferably of the fountain type, and a pencil 12 preferably of the lead extension type.

The casing 10 is of two parts, a part 13 and a part 14 in the nature of a cap capable of being screwed on and off the part 13 by virtue of screw threads. The casing has a chamber 15 for the pen 11, and a chamber 16 for the pencil 12 and a pencil lead magazine 17. The part 14 has openings in the end wall thereof through which the writing ends respectively of the pen and pencil protrude. The writing end of the pencil is shiftable inasmuch as the pencil is movable bodily so that the instrument may be used conveniently. The pen is held against moving out of the casing by a portion of the part 14 which engages a portion of the pen.

The pencil 12 as stated is of the lead extension type and is capable of being moved bodily to a writing and a non-writing position. Means presently described is employed for effecting the bodily movement of the pencil. The barrel 18 of the pencil has spaced portions 19 arranged between beads which will be presently described. A worm 20 coacts with the portions 19. The worm 20 is on the end of a shaft 21 mounted for rotation in suitable bearings 22. The opposite end of the shaft 21 to end of the shaft having the worm 20 has a pinion 23 thereon which meshes with a small gear 24 on an arbor 25 having a knurled head or manipulator 26. The arbor 25 fits snugly in extended portions of the end wall of the casing and is therefore capable of being moved back and forth and yet be temporarily held in one position or another for a reason to appear. It will now be manifest that when the gear 24 is in mesh with the pinion 23, by operating the manipulator 26 the shaft 21 will be rotated and as a consequence the worm 20 in its coaction with the portions 19 will cause the pencil to move in one direction or another according as the shaft is rotated. The barrel 18 is mounted in bearings 27 and is held against turning by a bead 28 which extends in diametrically opposite longitudinally arranged grooves 29 in the bearings 27 as shown in Figure 4. A pin 50 limits the movement of the pencil by engaging a recess formed in the bearing 27 as shown.

As stated the pencil 12 is of the lead extension type and in order to effect the extension of the lead 30 thereof there is provided means presently described. The lead 30 moves through a bore in the writing end of the pencil and is frictionally retained in place against falling out. A push-rod 31 is carried by a nut 32 by virtue of a tubular member 33. The nut 32 has a central bore therein with grooves in the wall thereof

which grooves accommodate the splines 34 on a part 35 which extends in the bore in the nut. The free end of the part 35 has a pinion 36. The barrel 18 has screw threads 37 with which the screws threads of the nut 32 coact. It will now be manifest that the turning of the part 35 will cause the turning of the nut 32 and the nut may be advanced to cause the push-rod 31 to push the lead 30 for the extension of the latter. In order to effect the turning of the part 35 a pinion 38 is employed at the end of a hollow shaft 39 which surrounds the shaft 21 and a pinion 40 at the other end of the shaft 39; the pinion 38 meshes with the pinion 36 and the pinion 40 and gear 24 are put in mesh by pushing in on the manipulator 26. It follows that by turning the manipulator 26 and by virtue of the gear 24, pinion 40, shaft 39, pinion 38, and pinion 36 the part 35 will turn.

What is claimed is:

1. A writing instrument of the character described comprising a casing having a closed end and housing, a fountain pen, a bearing disposed in one end of said casing and provided with a recess having diametrically opposite longitudinally disposed grooves formed in its side walls, a pencil slidably mounted for longitudinal movement within the recess, beads formed on said pencil and being arranged in said grooves, aligned bearing brackets extending inwardly from the walls of the casing, a shaft mounted for rotation in the bearing brackets, a gear keyed to one extremity of the shaft and arranged adjacent to the opposite end of said casing, a manipulator having means movable through the closed end of the casing, a gear secured to said means for meshing with the gear of the shaft, and means formed on the inner end of the shaft for moving the pencil through the medium of the manipulator.

2. A writing instrument of the character described comprising a casing having a closed end and housing a fountain pen, a bearing disposed in one end of said casing and provided with a recess having diametrically opposite longitudinally disposed grooves formed in its side walls, a pencil slidably mounted for longitudinal movement within the recess, beads formed on said pencil and being arranged in said grooves, aligned bearing brackets extending inwardly from the walls of the casing, a shaft mounted for rotation in the bearing brackets, a gear keyed to one extremity of the shaft and arranged adjacent to the opposite end of said casing, a manipulator having means movable through the closed end of the casing, a gear secured to said means for meshing with the gear of the shaft, means formed on the inner end of the shaft for moving the pencil through the medium of the manipulator and means associated with said shaft and operated by said manipulator for movement of the lead within the pencil.

In testimony whereof I hereby affix my signature.

HAROLD ANSHEN.