Dec. 3, 1929. H. E. HAUGHT 1,738,367

COMBINATION PEN AND PENCIL

Filed Aug. 27, 1927 2 Sheets-Sheet 1

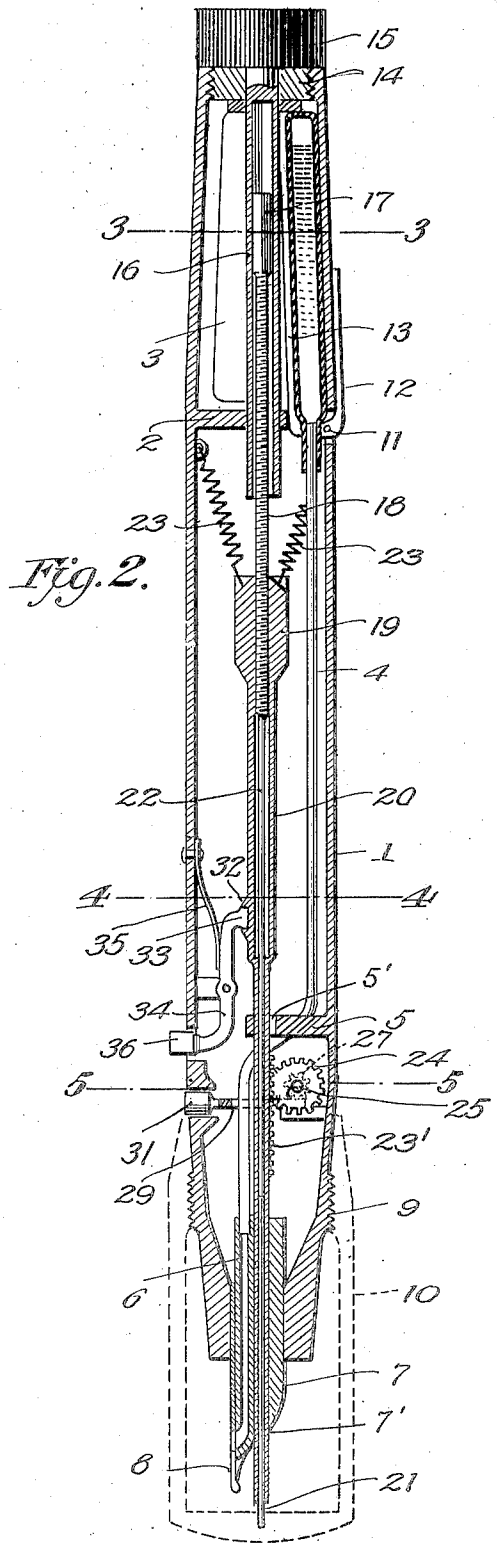


Fig. 2.

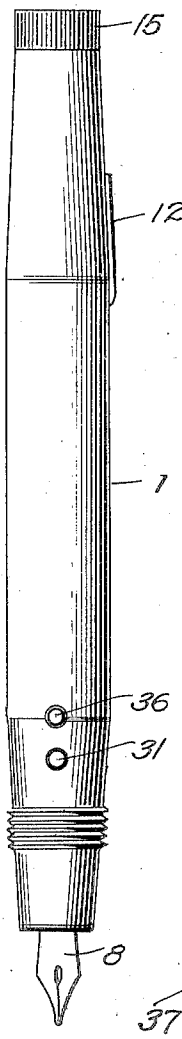
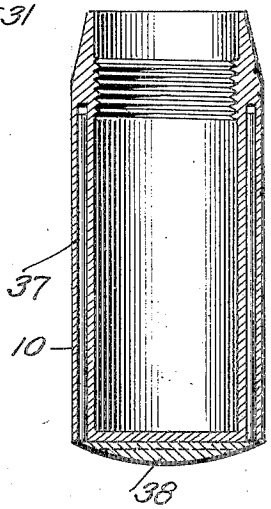


Fig. 1.

Fig. 7.



Harry E. Haught
INVENTOR
BY Victor J. Evans
ATTORNEY

Dec. 3, 1929. H. E. HAUGHT 1,738,367

COMBINATION PEN AND PENCIL

Filed Aug. 27, 1927 2 Sheets-Sheet 2

Fig. 3.

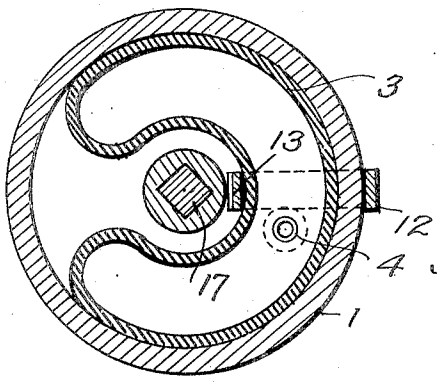


Fig. 4.

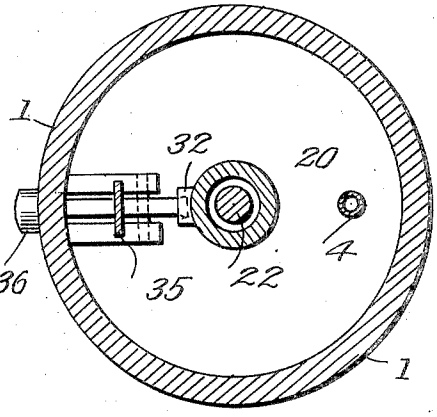


Fig. 5.

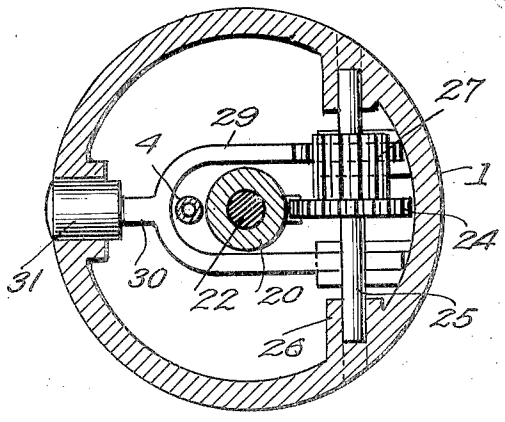
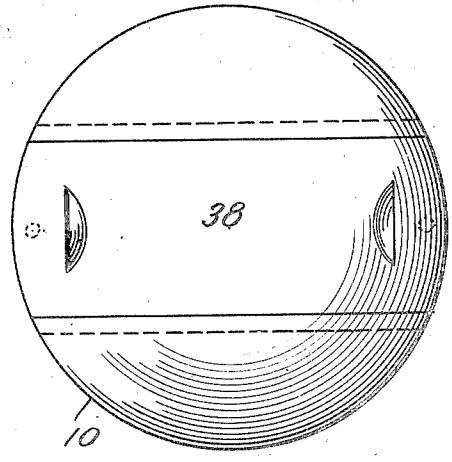


Fig. 6.



Harry E. Haught INVENTOR

BY Victor J. Evans

ATTORNEY

Patented Dec. 3, 1929 1,738,367

UNITED STATES PATENT OFFICE

HARRY E. HAUGHT, OF WILKINSBURG, PENNSYLVANIA

COMBINATION PEN AND PENCIL

Application filed August 27, 1927. Serial No. 215,894.

My present invention has reference to a writing instrument, my primary object being the provision of an instrument that combines a fountain pen and a pencil and which includes simple but extremely novel means for projecting a tubular container for the lead of the pencil beyond the pen point, when the pencil is desired for use, and likewise novel means for retracting the pencil when the pen is to be used.

The improvement also resides in other novel features of construction, combination and operative association of parts, one satisfactory embodiment of which is disclosed by the accompanying drawings.

In the drawings:

Figure 1 is a side elevation of my improvement.

Figure 2 is a central longitudinal sectional view therethrough on an enlarged scale.

Figure 3 is a transverse sectional view approximately on the line 3—3 of Figure 2, upon an enlarged scale.

Figure 4 is a similar sectional view approximately on the line 4—4 of Figure 2.

Figure 5 is a similar sectional view approximately on the line 5—5 of Figure 2.

Figure 6 is a bottom plan view of the cap.

Figure 7 is an approximately central longitudinal sectional view through the cap.

In size and appearance my instrument resembles that of an ordinary fountain pen. The barrel of the pen is indicated by the numeral 1 and is, of course, hollow. The barrel, adjacent to one end thereof, has a transverse partition 2 therein, and this partition provides a compartment for the ink containing well for the pen. The well 3 is in the nature of a compressible sack and is substantially U-shaped in cross section. From the sack there leads a tube 4 directed through the barrel 1 and likewise through an opening in a partition 5 and into the feed channel or duct 6 in the feed block 7 for the pen 8. The feed block is, of course, let in the end of the barrel in the usual manner, and this end of the barrel is flared, and is threaded, as at 9, for engagement with the interior threads of a hollow cap member 10. There is pivoted, as at 11, in an opening in one side of the barrel 1, the connecting portion of the substantially U-shaped lever 12, the inner arm 13 of the said lever being of a greater length than that of the outer arm and being in contact with the ink sack and designed to compress the same when the outer arm of the lever is swung away from the barrel to create a suction for drawing ink through the duct or passage 6 and through the tube 4 into the sack for replenishing the supply of ink for the pen.

The end of the barrel provided with the compartment in which the ink sack is arranged is closed by a plug 14. Resting on this end and on the end of the barrel and on the plug there is the milled head 15 of a tubular member 16 that has the walls of its bore arranged right angularly with respect to each other for the reception of the squared head 17 of a threaded member in the nature of an elongated screw 18 which is guided through the member 16. The screw 18 passes through the threaded bore in the head portion 19 of a tubular member 20, the said tube being guided through an opening 5′, the partition 5 and through an opening 7′ arranged longitudinally through the feed block 7 for the pen point 8 at one side of the duct or passage 6 thereof. The outer and reduced portion of the tube 20 is designed to receive therein a stick of lead 21 and this lead has its inner end contacted by a rod extension 22 on the screw 18.

The head 19 of the tubular member 20 has connected thereto coil springs 23 which are likewise connected to suitable ears in the barrel 1. These springs normally influence the tube into the barrel so that the reduced end of the tube will be arranged inwardly with respect to the point of the pen 8, and consequently the instrument may be usually employed as a fountain pen.

As far as the description has progressed it will be noted that by turning the milled head 15 of the element 16 the screw 18 will be likewise turned and moved through the threaded bore of the head 19 of the tubular member 20 so that its rod 22 will contact with the lead stick to project the same through the end of the tube to writing position and by this sim-

ple means the lead may be properly fed through the tube.

The tube 20 carries a rack 23'. This rack is engaged by a toothed wheel 24 fixed on a shaft 25 which is journaled in suitable bearing lugs 26 in the barrel 1. On one side of the toothed wheel 24 there is fixed a pinion 27. This pinion has its teeth engaged by a rack on one of the arms of the U-shaped member or yoke 29, the said arms of the yoke being suitably guided in the barrel 1. The yoke has its connected portion formed with an extension 30, the said extension in turn is formed with a head 31 that is received through a guide or bearing opening in one side of the barrel 1.

By pressing on the head 31 and imparting a longitudinal movement to the toothed yoke 29 a rotary motion will be imparted to the toothed wheel 24, and as the same engages the rack surface 23 on the tube 20, the said tube will be moved longitudinally and outwardly through the feed block 7 to arrange the lead in writing position.

Obviously the lead stick and tube must be sustained in an outward position when projected through the barrel in a manner as previously described. To accomplish this the tube 20, on one side thereof, is thickened or formed with a lug 32, which is centrally notched and in this notch there is designed to be received the offset end 33 of a pivotally supported lever 34. A spring 35 contacts with the lever to force the end thereof into the notched block 32. The second end of the lever is disposed at an angle which is directly opposite from the end 33 and on this end there is fixed a head or button 36 that passes through a suitable opening in one side of the barrel 1. The lug 32 is beveled in opposite directions from the central notched portion of the lug, so that when the head or button 31 is actuated to impart a longitudinal movement to the toothed or rack carrying yoke 29 the end 33 of the lever 34 will ride over one of the inclined surfaces and be projected into the notch in the lug 32 by the spring 35, thus holding the tube 20 projected and the lead stick in writing position. An inward pressure upon the head or button 31 will bring the active or dog end 33 of the lever 34 out of the notch in the lug 32, permitting the springs 23 to return the tube and the lead therein to inward and initial position.

The cap 10 has its sides, from its outer end, provided with spaced openings that afford pockets for lead sticks 37 for replenishing the lead supply to the tube 20. The pockets are normally closed by a cover plate 38 which has beveled or wedge grooves in the side walls of a central notch or opening in the outer end of the cap 10, as best disclosed by Figure 6 of the drawings.

The improvement is of a comparatively simple nature and provides an instrument that will obviate the necessity of a clerk or other person employing two separate instruments for pencil writing and for ink writing. The construction as herein set forth is only one of a number of satisfactory embodiments of my improvement and obviously I do not wish to be restricted to the details thereof. Therefore, it is to be understood that I hold myself entitled to make such changes therefrom as fairly fall within the scope of what I claim.

Having described the invention, I claim:

1. In a writing instrument, the combination of a fountain pen having a feed block, a pen point and said feed block having a longitudinal opening therethrough for the pen point, of a lead carrying tube movable through said opening and into the barrel of the pen, spring means normally holding the tube in the barrel, means operable from the exterior of the barrel for projecting the tube therethrough, and means also operable from the exterior of the barrel for locking the tube when so projected.

2. In a writing instrument, the combination of a fountain pen having a feed block for a pen, said block having a longitudinal opening therethrough, of a lead carrying tube movable through said opening and into the barrel of the pen, spring means normally holding the tube in the barrel, means operable from the exterior of the barrel for projecting the tube therethrough, means also operable from the exterior of the barrel for locking the tube when so projected and means operable from one end of the pen for adjusting the lead stick in the tube.

3. A writing instrument including a barrel having a compartment for a compressible ink sack, a feed block extending through one end of the barrel, a pen point therein, said feed block having a longitudinal opening therethrough, a tube connecting the ink sack and the ink duct in the feed block, lever operated means for compressing the ink sack, a lead stick carrying tube having one end guided through the opening in the feed block, a rack on the tube, a toothed wheel engaging the rack, means operable from the exterior of the barrel for revolving the toothed wheel to impart a longitudinal movement to the tube to project the same through the feed block beyond the pen point, means also operable from the exterior of the barrel for locking the tube when so projected and spring means for drawing the tube into the barrel when the locking means is released.

4. A writing instrument including a barrel having a compartment for a compressible ink sack, a feed block extending through one end of the barrel, a pen point therein, said feed block having a longitudinal opening therethrough, a tube between the ink sack and the ink duct in the feed, lever operated means for

compressing the ink sack, a lead stick carrying tube guided through the opening in feed block, a rack on said tube, a toothed wheel engaging the rack, longitudinally movable means operable from the exterior of the valve for revolving the toothed wheel to impart a longitudinal movement to the tube to project the same through the feed block beyond the pen point, means also operable from the exterior of the barrel for locking the tube when so projected, and spring means for drawing the tube into the barrel when the locking means is released, a revoluble element on one end of the barrel, having a tubular portion extending into the barrel, and the bore of the said tubular portion being square, a screw having a squared head received in said bore and threadedly engaging the inner and closed end of the tube, and a rod extension on said screw contacting with the lead stick in the tube.

5. A combination fountain pen and lead pencil, including a barrel having a feed block in one end thereof in which the pen point is arranged, said feed block having a longitudinal opening therethrough, a partition in the barrel dividing the same into an upper compartment, a compressible ink sack in the compartment, a tube leading from the ink sack to the feed duct in the feed block, lever operated means for compressing the ink sack, a lead stick carrying tube in the barrel and having one end guided through the opening in the feed block, and said tube having an inner closed end, a rack on the tube, a toothed wheel meshing with the rack, a pinion on the wheel, a yoke having a headed end guided in the barrel and whose head is projected through one side of the barrel and having one arm toothed to engage with the pinion, a lug having oppositely beveled faces on the tube and having a central notch therein, a pivotally supported angle lever having a headed end extending through the barrel and its opposite end signed to be received in the notch of the lug when the tube is moved to bring said notch opposite said end, spring means influencing the lever, springs connecting the closed end of the sleeve with the barrel for drawing the sleeve into the barrel, a tubular member having a squared socket guided through the outer end of the barrel and having a milled head, a screw having a squared head received in said socket and threadedly engaging the closed end of the tube, said screw having a rod extension for contacting with the lead stick in the tube, in combination with a cap for the barrel having openings therein providing lead stick compartments and a slidable closure for closing said compartments.

In testimony whereof I affix my signature.

HARRY E. HAUGHT.