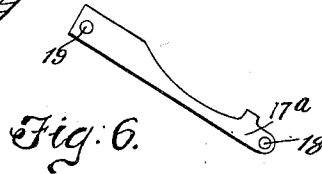
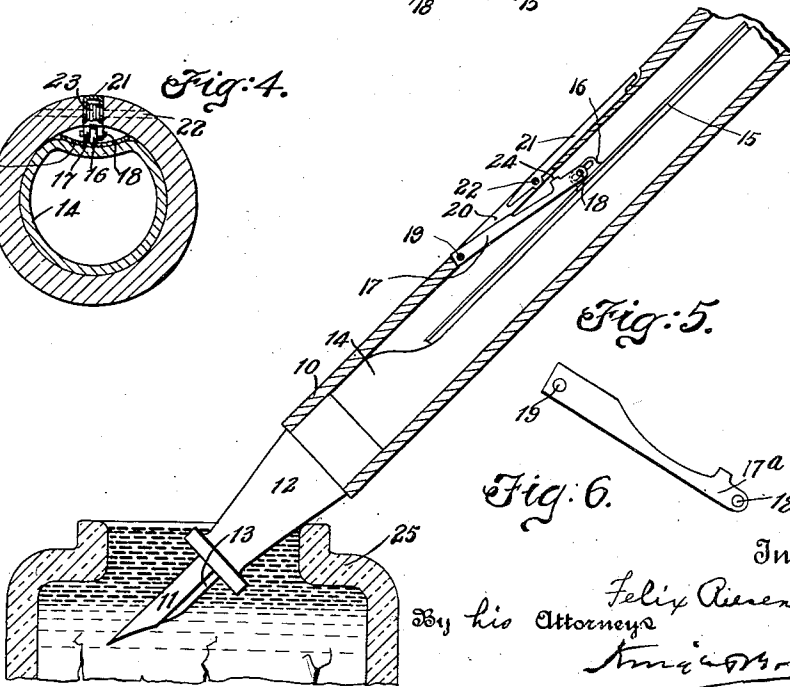
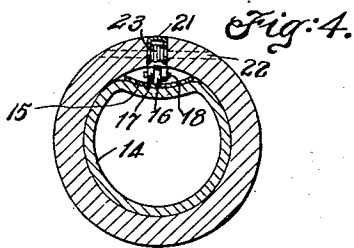
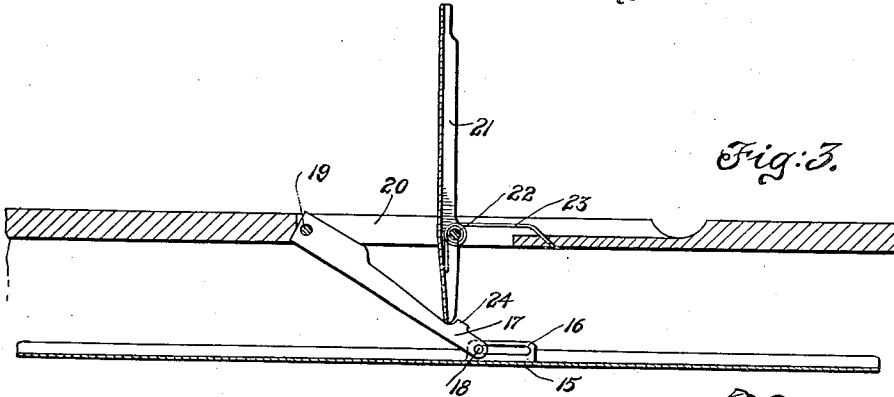
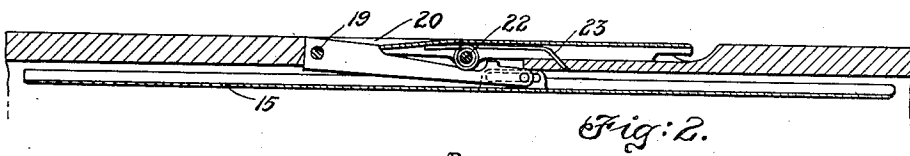
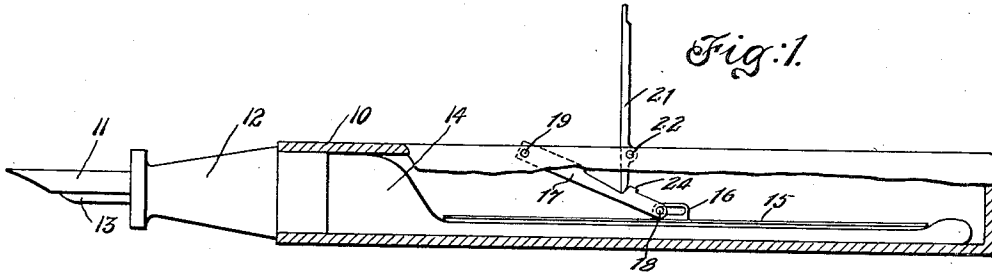


F. RIESENBERG.
FOUNTAIN PEN FILLER.
APPLICATION FILED NOV. 29, 1915.

1,251,421.

Patented Dec. 25, 1917.



Inventor

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By his Attorneys
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FOUNTAIN-PEN FILLER.

1,251,421.

Specification of Letters Patent.

Patented Dec. 25, 1917.

Application filed November 29, 1915. Serial No. 64,055.

To all whom it may concern:

Be it known that I, FELIX RIESENBERG, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Fountain-Pen Fillers, of which the following is a full and clear specification.

My invention relates in general to fountain pen fillers of that class in which the operating means is exposed in the side wall of the pen, and the compression of the sack by which the air is expelled preparatory to taking in a new supply of ink is accomplished by suitable connections from these operating means to a presser bar which lies alongside the sack. The sack is made of rubber or other elastic material and upon the release of the operating means the elasticity of the sack operates to draw in a fresh supply of ink.

In the case of levers projecting through the pen walls for the operation of the filler, it has been considered desirable to have the lever return automatically to normal position within the thickness of the pen wall and also to cause the lever to remain firmly secured in either the normal position or in the upright position. At the completion of the expulsion of air from the sack it has been proposed to relieve the elasticity of the sack of the burden of restoring the lever to normal position and of maintaining it in fixed upright or normal position, but constructions heretofore employed for the attainment of that purpose have been subject to the disadvantage that, being independent of the refilling of the sack, they lead to the withdrawal of the pen from the source of ink before the sack is completely filled, the object of my invention is to provide for a positive stop and firm securing of the lever in the upright or sack emptying position and to provide at the same time for the automatic return of the lever to normal position, and to accomplish this return to normal position independently of the sack, while providing means for observing the progress of the filling operation, whereby the premature withdrawal of the pen from the ink is prevented. An embodiment of the invention is illustrated in the accompanying drawing, in which—

Figure 1 is a side elevation of a fountain

pen provided with my invention, parts being in section;

Fig. 2 is an enlarged detail view showing the normal position of the parts in the fountain pen wall;

Fig. 3 is a similarly enlarged view of the same parts in sack emptying position;

Fig. 4 is a transverse sectional view of the pen provided with my invention, the parts being in normal position;

Fig. 5 is a vertical section of an ink container into which a fountain pen containing my improvement has been introduced, the parts being shown at an intermediate stage of the sack filling position.

Fig. 6 is a side view of the preferred form of transmission lever.

Referring to said drawings, 10 indicates a pen barrel and 11 a nib, the nib being secured in the neck portion 12, and associated with a feed bar 13, through which ink is introduced and discharged. A rubber or other suitable sack 14 is secured to the neck portion 12 of the pen and serves as a reservoir for a charge of ink.

The filling device comprises a presser bar commensurate in length with its function of expelling the air from sack 14 and provided with a slotted lug 16, in which a transmission lever 17 has a sliding connection by means of its pin 18. Transmission lever 17 is preferably rigid and is fulcrumed preferably as at 19 in the slotted portion 20 of the fountain pen barrel 10. Lever 17 is actuated by the operating lever 21, which is fulcrumed at 22 in the slotted portion 20 of the pen barrel, and is preferably returned to normal position automatically by means of the spring 23, or its equivalent. Operating lever 21 actuates the transmission lever 17 by a sliding engagement therewith until the vertical position of lever 21 is obtained, where it is arrested by coming into contact with a stop shoulder 24. The portion of the transmission lever with which the end of lever 21 engages may be disposed angularly as shown in Fig. 3, but is preferably curved as in lever 17^a shown in Fig. 6 to afford a curved path for the end of the operating lever, this form being most conducive to easy operation. The elasticity of the sack applied against the under face of presser plate 15, causes the transmission lever 17 to firmly, but yieldingly, hold op-

erating lever 21 in this vertical position, while the pen is being inserted into the ink supply, as indicated at 25 in Fig. 5. After the pen point has been submerged in the ink, the lever 21 is pushed into normal position until its angle of engagement with transmission lever 17 permits its spring 23 to snap it into normal position, flush with the fountain pen wall 10. The presser plate 15, however, and its transmission lever 17, are independent of spring 23, and return slowly to normal position, the top of lever 17 being, if desired, suitably provided with an indicating signal or other sign, to be clearly visible upon the completion of the sack filling operation. The slotted lug 16 provides for the straight up and down movement of plate 15, regardless of the fact that the end of lever 17 swings on an arc. In this way longitudinal distortion of the rubber sack is minimized.

It should be understood that the expression "normal position" as applied to the operating lever and transmission lever 17 is used to designate the position of these members as shown in Fig. 2.

I claim:

1. A fountain pen filler comprising a barrel, a compressible ink sack within the barrel, a presser plate, an operating member adjacent to the ink sack and a member pivoted to the barrel and to the plate for transmitting motion of said operating member to said presser plate, and having a bearing face with which the operating member has a wiping thrust connection, but from which said operating member is separable in the direction of its return movement.

2. A fountain pen having a barrel with an opening in the wall thereof, a compressible ink sack in said barrel, a presser plate for said sack, a lever adjacent to the opening and having one end pivoted to the barrel and the other end connected to the plate, and an operating lever pivoted intermediate its end to the barrel at a point between the ends of the first mentioned lever.

3. A fountain pen having a barrel, a compressible ink sack housed within said barrel, a presser plate for said sack, an operating lever, a transmitting lever fulcrumed at one end to the pen barrel and pivoted at its other end to the presser plate, said transmitting lever having a cam face, and said operating lever having a wiping contact with said cam face, but separable therefrom in the direction of its return.

4. A fountain pen having a barrel, a compressible ink sack housed within said barrel, a presser plate for said sack, an operating

lever, a transmitting lever fulcrumed at one end to the pen barrel and pivoted at its other end to the presser plate, said transmitting lever having a cam face, and said operating lever having a wiping contact with said cam face, but separable therefrom in the direction of its return, and having a spring for so separating and returning it.

5. A fountain pen having a barrel with an opening in the wall thereof, a compressible ink sack in said barrel, a presser plate for said sack, a lever adjacent to the opening and connected at one end to the barrel and at its other end to the plate and a lever actuating means carried by the barrel, and mounted independently of said lever.

6. A fountain pen having a barrel, a compressible ink sack housed within said barrel, a presser plate for said sack, an operating lever, a transmitting lever fulcrumed at one end to the pen barrel and pivoted at its other end to the presser plate, said transmitting lever having a cam face, and said operating lever having a wiping contact with said cam face, but separable therefrom in the direction of its return, and an abutment on said transmitting lever limiting the movement of said operating lever on said cam face, said operating lever being yieldingly held in sack-compressing position by the expanding tendency of the sack.

7. A fountain pen having a barrel, a compressible ink sack housed within said barrel, a presser plate for said sack, an operating lever, a transmitting lever fulcrumed at one end to the pen barrel and pivoted at its other end to the presser plate, said transmitting lever having a cam face, and said operating lever having a wiping contact with said cam face, but separable therefrom in the direction of its return, and an abutment on said transmitting lever limiting the movement of said operating lever on said cam face, said operating lever being yieldingly held in sack-compressing position by the expanding tendency of the sack, and having means for returning it to normal position.

8. A fountain pen having a barrel with an opening in the wall thereof, a compressible ink sack in said barrel, a presser plate for said sack, a lever adjacent to the opening and having one end pivoted to the barrel and the other end engaging the presser plate, and an operating lever pivoted intermediate its ends to the barrel at a point between the ends of the first mentioned lever.

FELIX RIESENBERG.

Witnesses:

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