

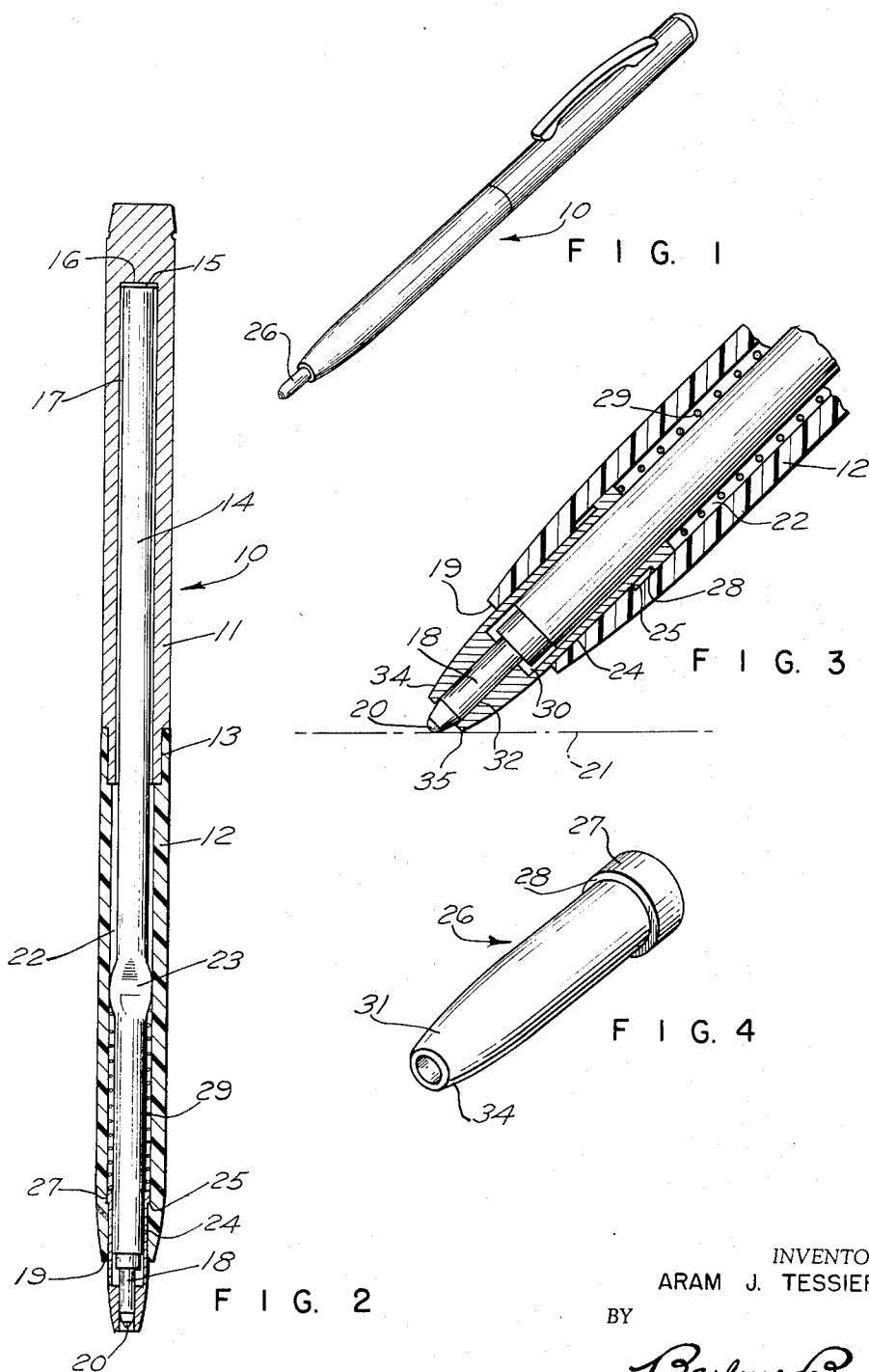
Sept. 7, 1965

A. J. TESSIER
WRITING INSTRUMENT

3,204,609

Filed March 29, 1963

2 Sheets-Sheet 1



INVENTOR
ARAM J. TESSIER
BY

Barlow & Barlow
ATTORNEYS

Sept. 7, 1965

A. J. TESSIER
WRITING INSTRUMENT

3,204,609

Filed March 29, 1963

2 Sheets-Sheet 2

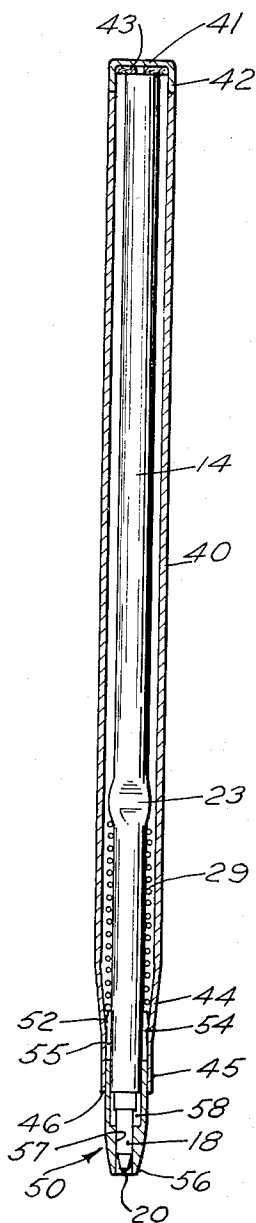


FIG. 5

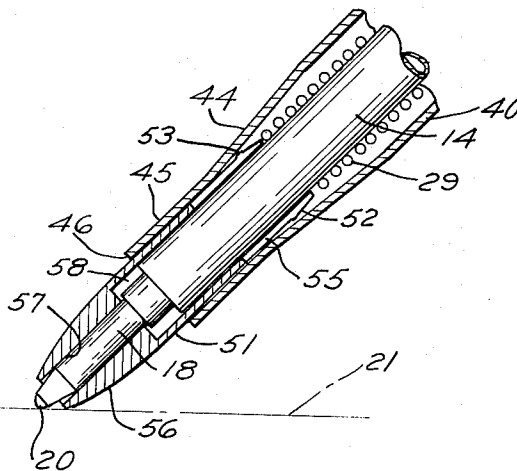


FIG. 6

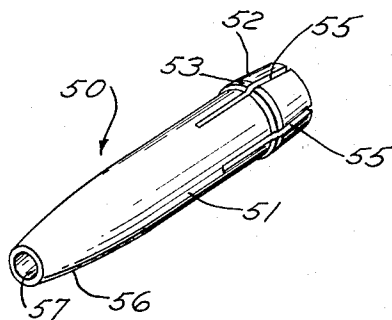


FIG. 7

INVENTOR
ARAM J. TESSIER
BY

Barlow & Barlow
ATTORNEYS

1

3,204,609

WRITING INSTRUMENT

Aram J. Tessier, Warwick, R.I., assignor to T & T Mfg. Co., a corporation of Rhode Island
Filed Mar. 29, 1963, Ser. No. 269,122
2 Claims. (Cl. 120-42.03)

This application is a continuation-in-part of my co-pending application Serial No. 217,472, filed August 16, 1962, and now abandoned.

This invention relates to a writing instrument and is shown herein as applied to a ballpoint pen, although it might be utilized for other type of writing instruments.

It is known that the ballpoint pen when exposed frequently will soil the clothing when put in the pocket, and it is desired to protect such a point from contact where it may leave an ink mark which is difficult to remove. In some cases the ballpoint is retracted into a case by some manual action.

One of the objects of this invention is to provide a guard which will embrace the pen point when not in use and protect the same from contact with some surface.

Another object of the invention is to provide a guard which will move into position immediately upon the pen being lifted from writing so that no manual action is necessary to cover the writing part of the instrument.

Another object of the invention is to provide a construction in which a spring of long and easy action may be provided so that very little pressure need be applied for moving the guard back so that the instrument may be used for writing.

Another object of the invention is to provide for placing a cartridge into its casing through the forward or writing end of the instrument as distinct from the rear end thereof.

Another object of the invention is to make the guard removable for interchange of cartridges through the forward end of the instrument.

Another object of the invention is to provide a device which will be extremely simple and positive in its action and thus inexpensive to construct and assemble.

With these and other objects in view the invention consists of certain novel features of construction as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

FIG. 1 is a perspective view of the writing instrument with the writing portion in covered position;

FIG. 2 is a central sectional view through the writing instrument;

FIG. 3 is an enlarged section showing the guard retracted and the instrument in position for writing on its surface contacted;

FIG. 4 is a perspective view of the guard alone;

FIG. 5 is a sectional view similar to FIG. 1 but showing a modified construction;

FIG. 6 is a sectional view similar to FIG. 3 showing the writing end of this modified construction; and

FIG. 7 is a perspective view of a detachable sliding guard sleeve of the modified construction.

In proceeding with this invention, I have provided a casing in which the cartridge of the writing instrument is carried and is fixedly held so as to protrude beyond the casing, while at the end of the casing there is a sliding sleeve which will cover the writing end of the instrument or may be retracted so that the writing end of the instrument may be operable. This guard or sleeve is moved to guarding position by a spring causing it to be mechanical in this action, while it may be retracted simply by pressure on the surface which is to be written upon so that the guard will then be retracted and the writing

2

end of the instrument exposed for writing. This guard further is detachable at the writing end of the instrument so that a used cartridge may be removed and a fresh one inserted through the forward or writing end of the instrument.

With reference to the drawings, the casing designated 10 is in two parts 11 and 12 suitably held together in end to end relation by the reduction and frictional fitting of the end parts as at 13 so that the casing may be pulled apart axially overcoming the friction which holds these two parts together. A cartridge 14 is fixedly held in the part 11 and abuts a washer 15 at the inner end 16 of the bore 17 so as to provide for some breathing of the cartridge which may be had along the bore 17 and through the end of the cartridge. The writing portion 18 of the cartridge protrudes beyond the end 19 of the casing part 12 and is of a usual ballpoint construction which is frictionally held in the end of the tubular cartridge 14 with the ball 20 in the position for writing when contacted with the writing surface such as 21 (see FIG. 3). The casing part 12 has a bore 22 larger than the size of the cartridge and the cartridge is flattened as at 23 so as to frictionally engage the bore 22 and center the cartridge and also provide an abutment. This casing 12 is also reduced in its bore size at its point end 24 so as to provide a shoulder 25 spaced from its end 19.

A guard sleeve 26 (see FIG. 4) comprises a screw machine member of a size to slidably fit the bore 24 having enlarged end 27 of a size to slidably fit the bore 22, also providing a shoulder 28 which will engage the internal casing shoulder 25 and limit the outward movement of the guard 26. The guard 26, however when the shoulders 25 and 28 are in contact such as shown in FIG. 2 provides a length of guard which will completely embrace the writing portion 18 of the instrument and thus completely house it. This guard is moved to this housing position by a long helical spring 29 which engages the end of this guard and acts between it and the abutment formed by the flattened portion 23 of the cartridge, thus providing a long spring and thus an easy action which may be provided for retracting the guard so as to expose the writing point 18. This guard is provided with a bore 30 so to easily slide along the cartridge while it has a bearing in the reduced bore 24 of the casing which is of long extent and thus well supported so that it will have an easy sliding movement along these parts. At the reduced end 31 of this guard, however, there is a smaller bore 32 so as to have sliding bearing fit with the writing portion 18 along a substantial extent thereof.

The size of the end portion 34 of this guard is such that when the writing instrument is held in a normal position at an angle to the surface 21 upon which it is to mark, slight pressure will cause the edge 35 of this end 34 to be moved inwardly along the bearing 24 sufficiently so as to expose the ballpoint 20 of the writing instrument that it may contact with the surface 21 so as to write thereon. However, immediately after the instrument is lifted from the writing surface, pressure is released on the guard and the spring 29 will slide the guard into covering relation with the writing part 18 so as to prevent the same from inadvertent contact with a surface to mark thereon.

In some cases it may be desirable to place the cartridge into its shell from the forward or writing end of the instrument such as by removal of the sliding sleeve, in which case it is unnecessary to have the casing jointed intermediate its ends. In FIGS. 5-7 such a modified construction is illustrated. In these figures the casing is designated as 40 which is of a relatively thin metallic shell which is closed at its rear end by a cap 41 having side walls or flanges 42 of the size of the casing 40 and soldered in position to remain fixed. A washer 43 is located inside

3

this closure against which the cartridge 14 abuts so as to provide for some breathing of the cartridge as above pointed out.

The casing 40 is reduced in diameter at its forward or writing end along the taper 44 with an extending cylindrical portion 45 of substantial extent, terminating at its end as at 46. The cartridge 14 with its writing end 18 projects beyond this end portion 46 of the casing together with its ball point 20 as above pointed out.

The guard sleeve 50 (see FIG. 7) comprises a screw machine product having a cylindrical body portion 51 which will so fit the cylindrical portion 45 of the casing 40 so to slide axially therein and be guided thereby. The inner end of this member is provided with an enlarged portion 52 forming a shoulder 53 and is of a size to engage the small portion of the taper 44 of the casing as at 54 (FIG. 5) and be held against moving out of the casing. A spring 29 acts between the flattened enlargement 23 of cartridge 14 and the end of this member 50 so as to move the member outwardly until there is an engagement of this enlarged portion with the tapered part of the casing at 54. The length of the member 50 is sufficient so that when engagement occurs at 54, it will cover the ball point of the writing portion 18 which is fixed in the cartridge 14. However, this member 50 will slide inwardly when pressure is exerted upon it as when pressed against surface 21 as above pointed out and as shown in FIG. 6.

Member 50 at its inner end is slit or slotted as at 55 at a plurality of different points so as to permit this end of the member to collapse for withdrawing it from the casing 40 when it is desired to replace the cartridge 14 in the casing. This may be done by pulling upon the member 51 so that the taper 44 of the casing will wedge the inner end portions together sufficiently to collapse it enough so that it may be withdrawn along the inner surface of the cylindrical portion 45 of the casing. This frees the cartridge 14 and spring 29 to be withdrawn from the casing so that a new cartridge may be inserted. The spring 29 may be used with a fresh cartridge.

Member 50 is also reduced as at 56 at its forward end, and along this forward end there is a bore 57 which slid-

4

ably engages the writing portion 18 so as to slide therealong and also provide a good bearing for this writing portion of the cartridge. A bore 58 of a size larger than the bore 57 also gives good bearing to the forward end of the cartridge 14 during writing. During writing the guard sleeve 50 has a good bearing on the cylindrical portion 45 of the casing. The guard sleeve is thus also slidably guided both on its inner and outer surfaces as it is moved axially with reference to the casing.

I claim:

1. In a writing instrument, a tubular casing permanently closed at one end and open at the other end, a marking cartridge removably positioned through said open end and having a writing end projecting through and beyond said open end, and a sleeve embracing the writing end of said cartridge and axially slidable in said casing relative to said cartridge, said sleeve having an enlarged inner end portion, stop means comprising a reduced diameter portion carried by the casing outwardly of said inner end portion of said sleeve, said sleeve being axially slit from its inner end a part of its length for collapsing sufficiently to pass said reduced diameter portion and be removed from the open end of said casing for changing the cartridge in the casing.

2. In a writing instrument as in claim 1 wherein a spring engages said split end and acts against the cartridge to urge the sleeve to a position to cover the writing end of the cartridge.

References Cited by the Examiner

UNITED STATES PATENTS

2,261,314	11/41	Vogel	120—21
2,808,032	10/57	Ducharme	120—42.03
3,101,075	8/63	Johmann	120—42.03

FOREIGN PATENTS

1,150,257	8/57	France.
69,155	5/58	France.
810,719	3/59	Great Britain.

EUGENE R. CAPOZIO, *Primary Examiner.*

JEROME SCHNALL, *Examiner.*