(12) UK Patent Application (19) GB (11) 2 313 878 (13) A

(43) Date of A Publication 10.12.1997

(21) Application No 9609236.6

(22) Date of Filing 02.05.1996

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(51) INT CL^6
B05C 17/01

(52) UK CL (Edition O)
F1R R15C

(56) Documents Cited
GB 1520762 A EP 0448375 A2 US 5192008 A
US 4572409 A

(58) Field of Search
UK CL (Edition O) F1R R15C
INT CL^6 B05C 17/01 , B65D 83/00
Online : WPI

(54) A paste dispensing gun

(57) A paste dispensing gun including a pushing rod (20) extending through a stock (13) into a barrel (10), a resilient clip member (50) fitted on the pushing rod between a rear wall (13) of the stock and a rear wall (11) of the barrel, a pushing board (30) and a pushing spring (40) fitted around the pushing rod between the clip member and the rear wall (13) the stock, and a trigger (60) pivotally connected with the stock under the pushing rod. After the barrel is filled with the paste and when the trigger is pulled, the pushing board is driven to push the pushing rod forward so as to squeeze the paste out of the barrel. The gripping force of the clip member does not prevent the pushing rod from being stably pushed forward. When the pushing rod is pushed to a fixed position, the clip member also serves to somewhat locate the pushing rod. If excessive pressure is created in the barrel, the clip allows the pushing rod to be retreated to buffer the backfeed pressure so as to prevent the paste from being over dispensed and wasted.

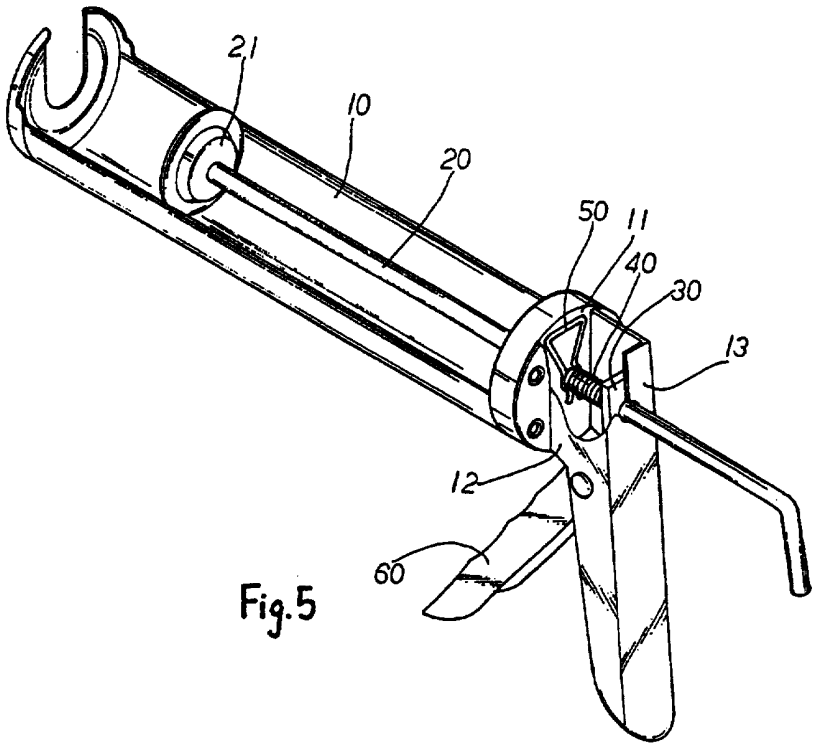

Fig.5

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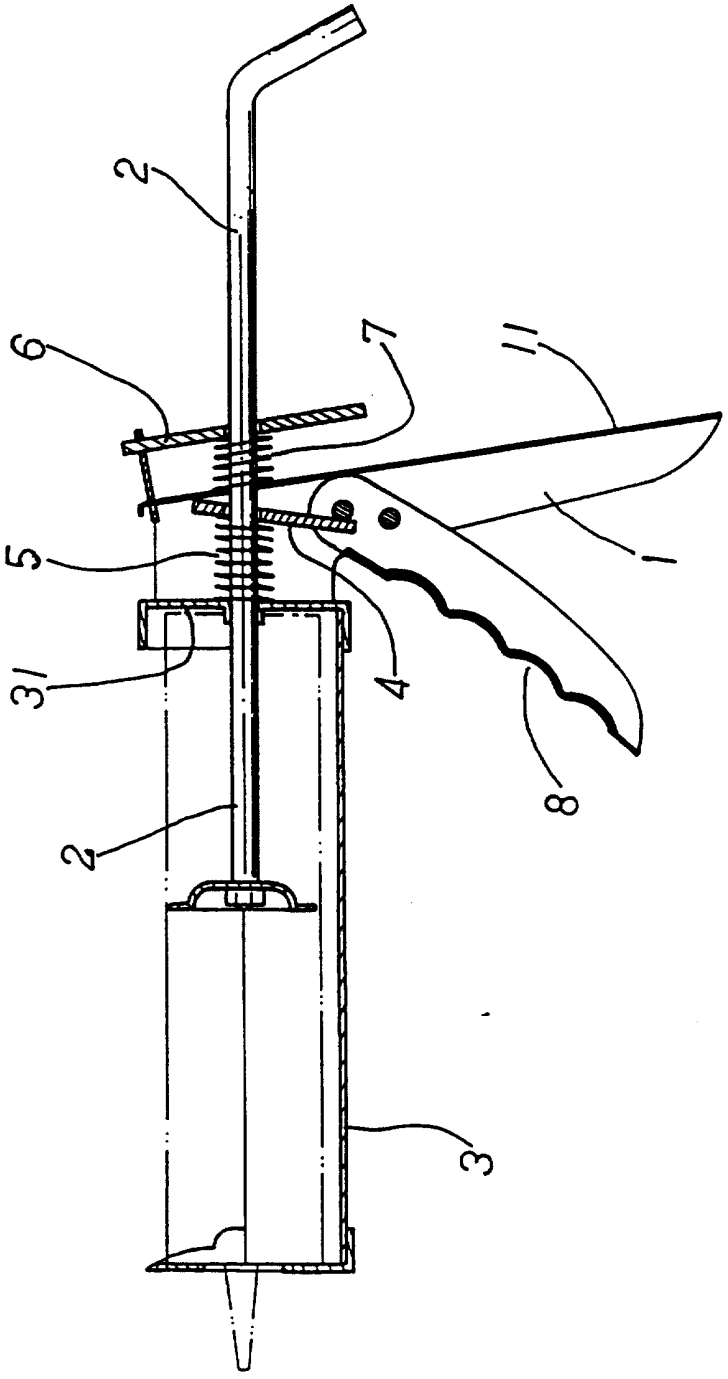

Fig. 1 PRIOR ART

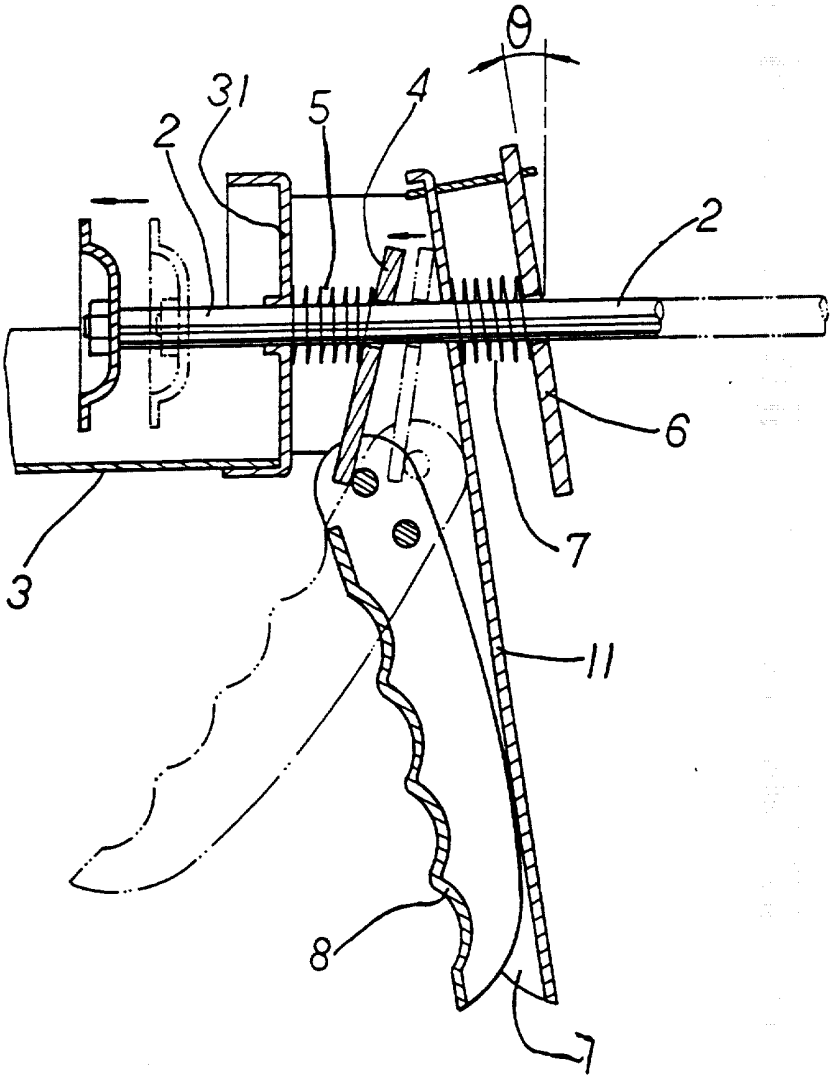

Fig.2 PRIOR ART

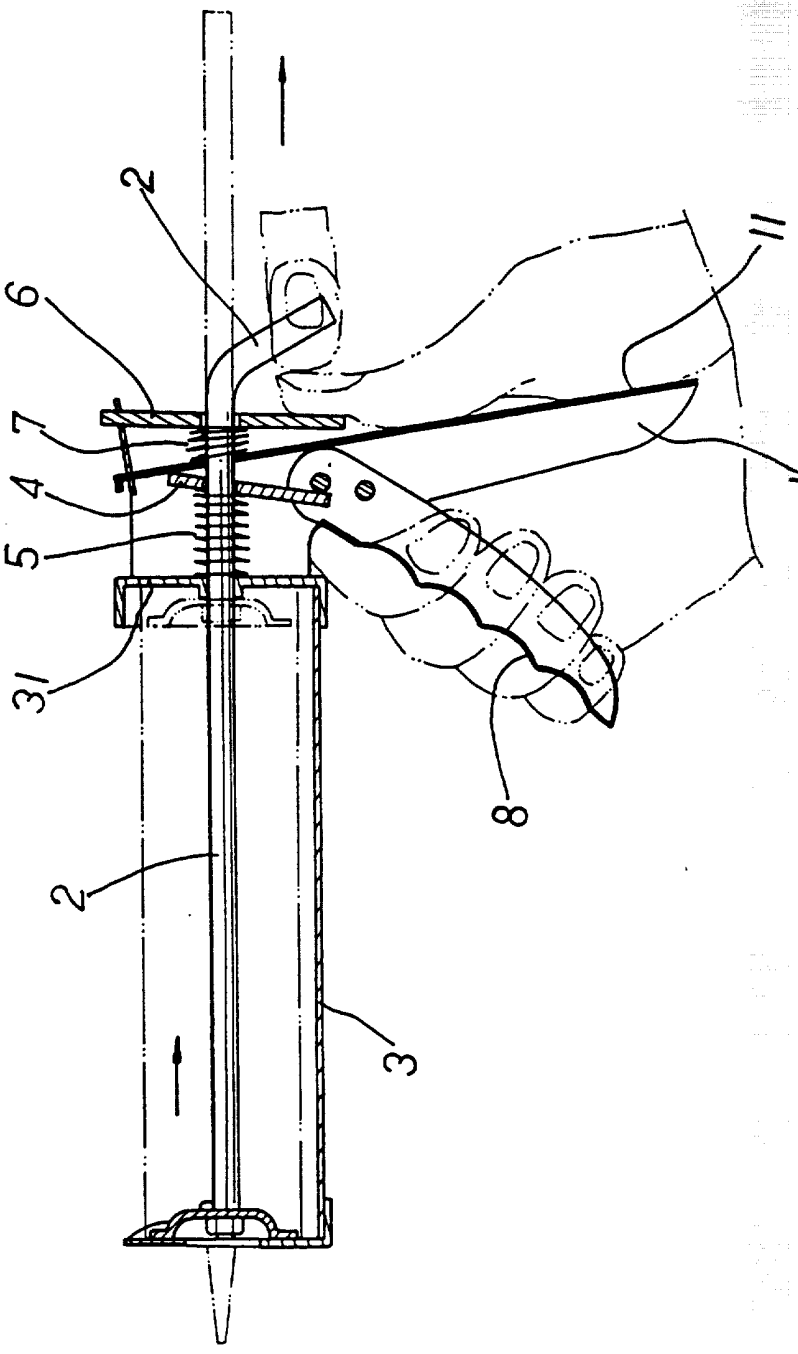

Fig.3 PRIOR ART

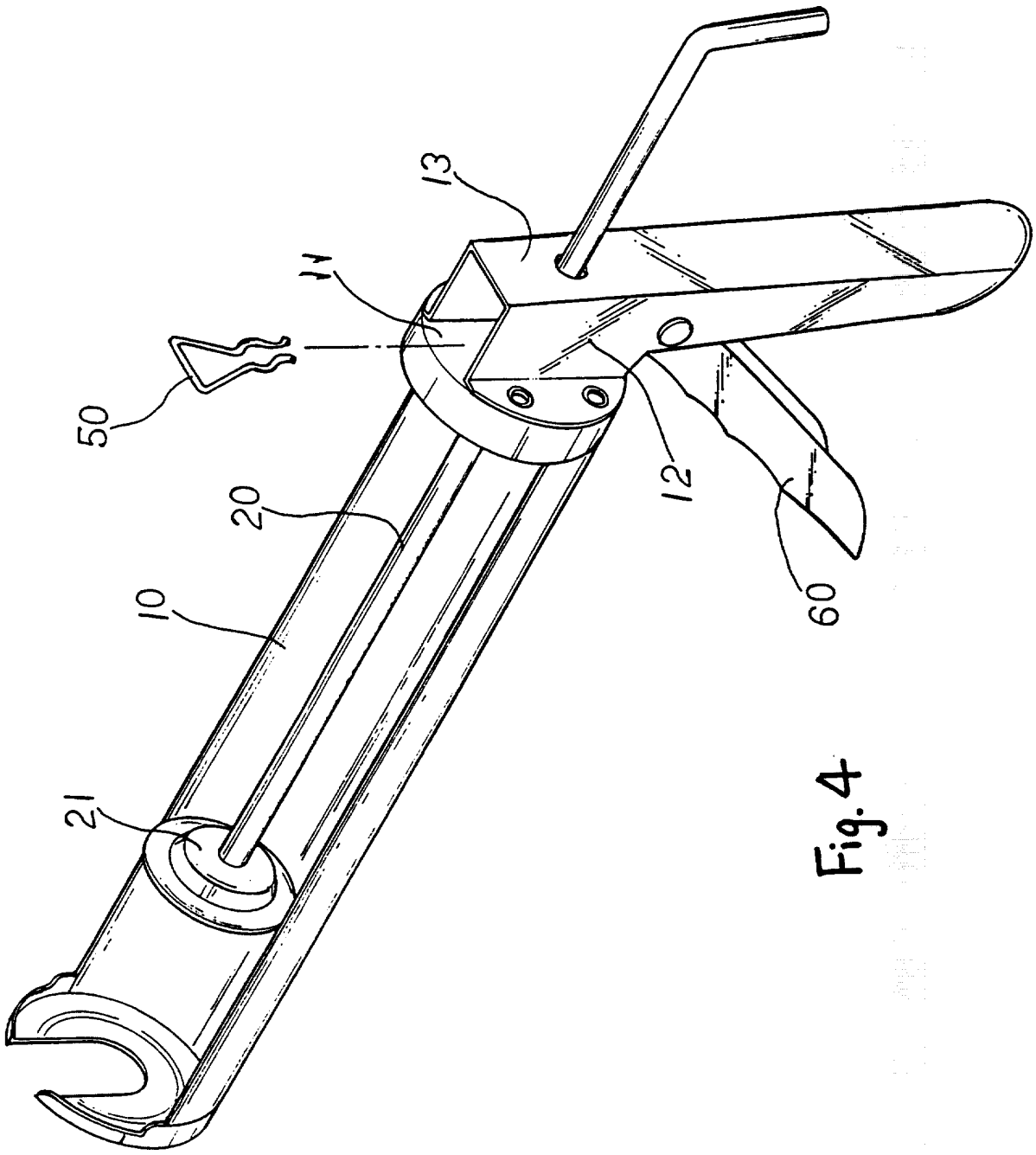

Fig. 4

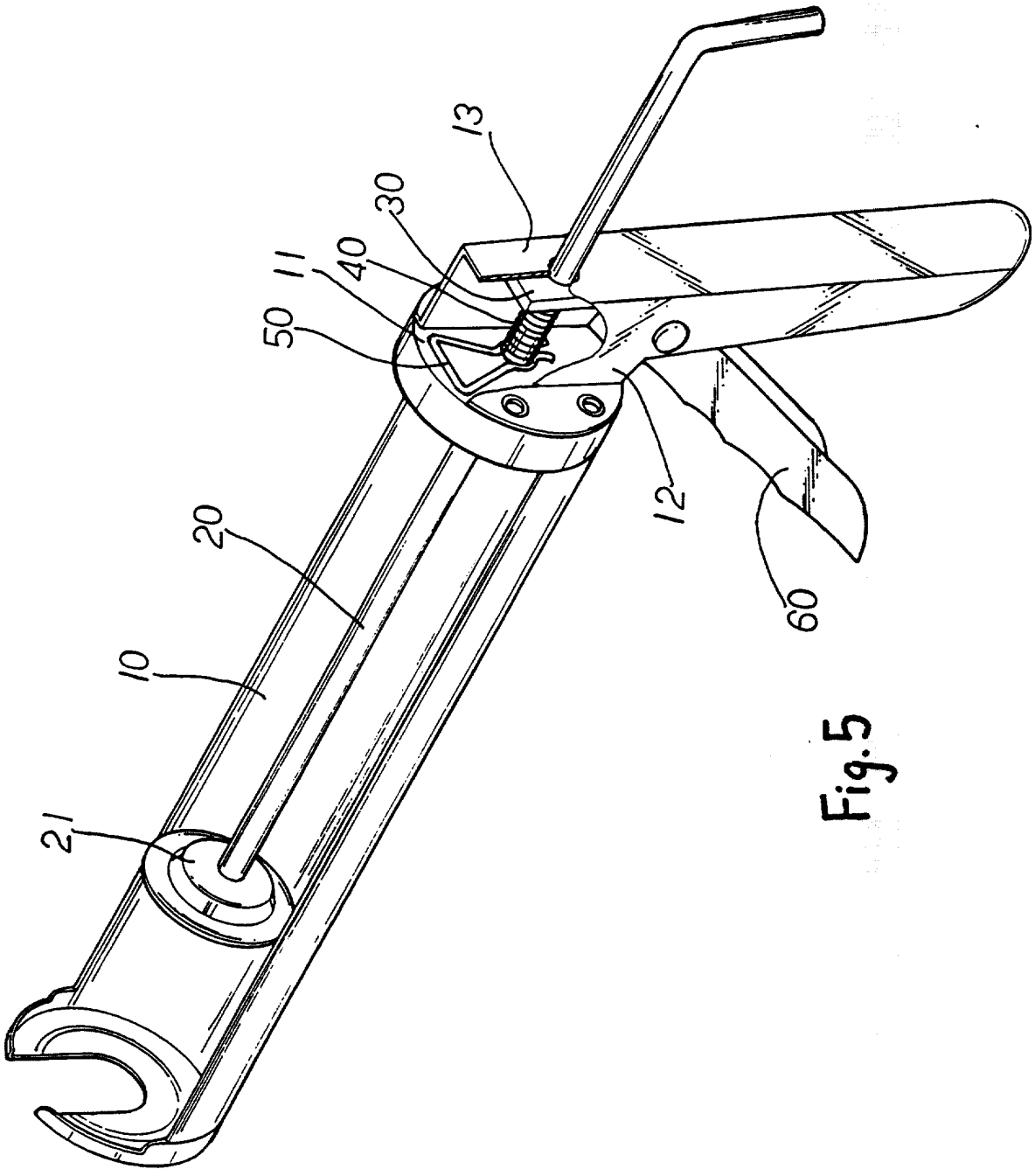

Fig.5

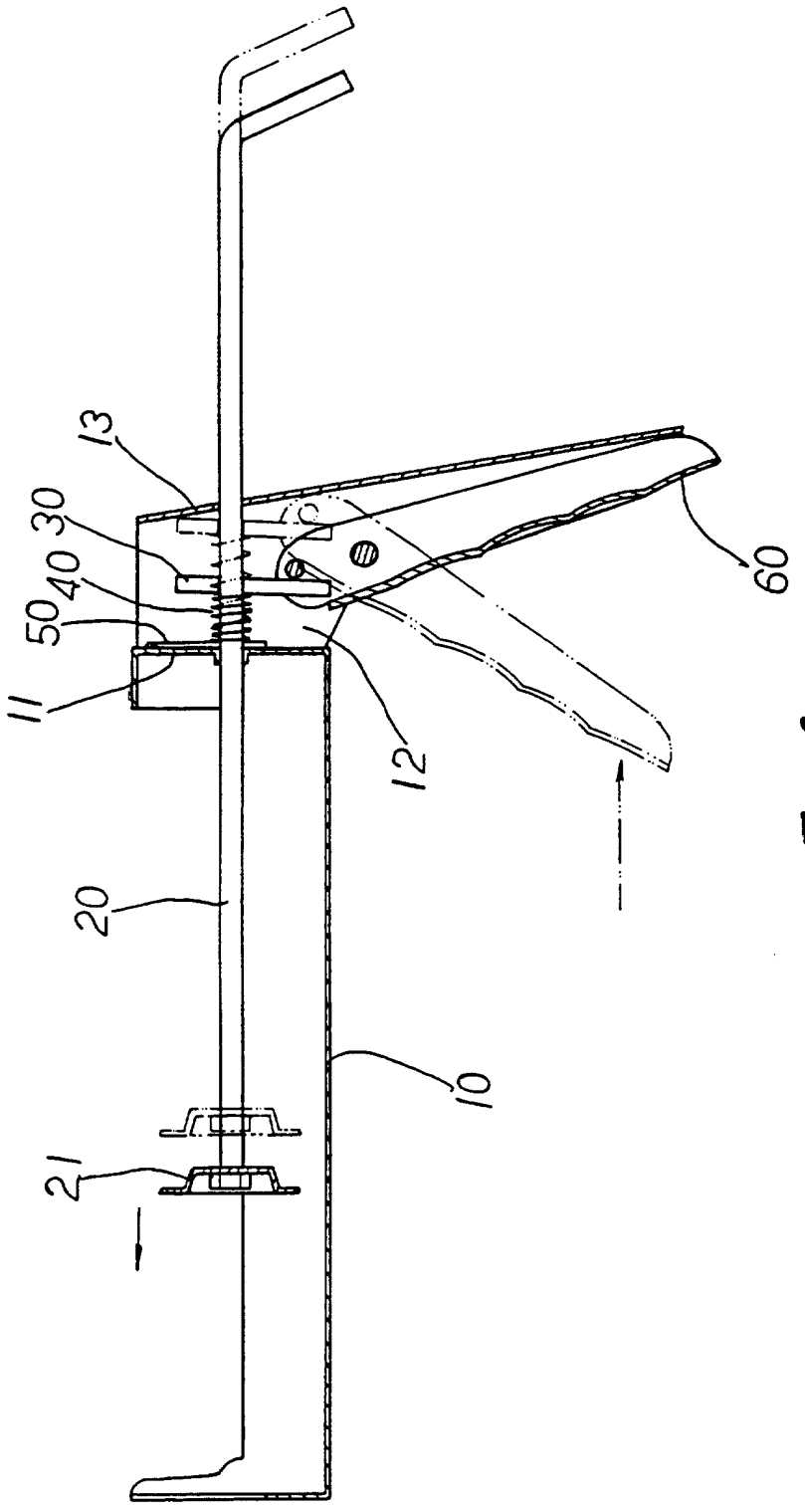

Fig. 6

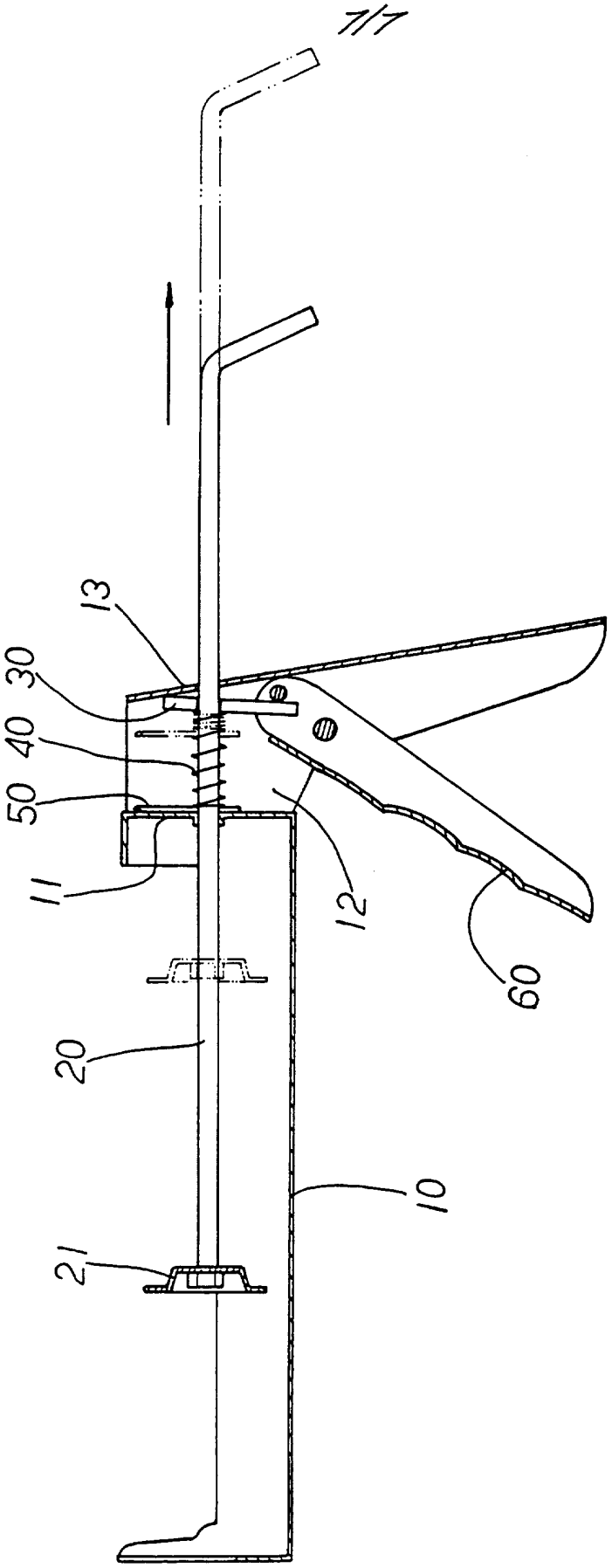

Fig. 7

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A PASTE DISPENSING GUN

BACKGROUND OF THE INVENTION

The present invention relates to a paste dispensing gun. By means of the clipping of a clip member, the pushing rod can be stably pushed forward and when the pushing rod is pushed to a fixed position, the clip member also serves to somewhat locate the pushing rod. In the case that an excessive pressure is created in the barrel. the pushing rod can be properly retreated to buffer the backfeed pressure so as to prevent the paste from being over-dispensed out and avoid waste of the paste.

Fig. 1 shows a conventional paste dispensing gun in which a pushing rod 2 extends through a stock 1 into the barrel 3. A pushing board 4 is fitted on the pushing rod 2 between a rear wall 11 of the stock 1 and a rear wall 31 of the barrel 3. A spring 5 is fitted around the pushing rod between the pushing board 4 and the rear wall 31 of the barrel 3. A pivotable stopper board 6 is disposed behind the rear wall 11 of the stock 1 and another spring 7 is disposed between the stopper board 6 and the rear wall 12 of the stock 11. A trigger 8 is pivotally connected with the stock 1 under the pushing rod 2.

Referring to Fig. 2. by means of pulling the trigger 8, the pushing board 4 is driven to push the pushing rod 2 forward. At this time, the stopper board 6 is pushed by the spring 7 to together with the pushing rod 6 contain an angle θ for stopping and preventing the pushing rod 2 from retreating, so that the trigger can be further pulled to keep the pushing rod 2 moving forward. referring to Fig. 3. when the pushing rod 2 is pushed to the end of the barrel. a user needs to depress the stopper board 6 with his/her thumb to eliminate the angle θ and the stopping force so as to pull back the pushing rod 2.

According to the above arrangement, the stopper board 6 serves to make the pushing rod 2 only pushed forward by the pushing board 4 without retreating. This is able to dispense the paste out of the barrel. However, there is no buffering space between the pushing rod and the barrel and a feedback pressure is often created inside the barrel under compression due to the physical property of the paste. In the case that the pressure is not relieved by any buffering space, some additional paste will be further squeezed out to relieve the pressure. This leads to waste of the paste.

SUMMARY OF THE INVENTION

It is therefore a primary object of the present invention to provide a paste dispensing gun which operates without dripping paste. The invention provides a paste dispensing gun comprising a pushing rod extending through a stock into a barrel, a friction member being fitted on the pushing rod between a rear wall of the stock and a rear wall of the barrel, a pushing board and then a pushing spring being fitted around the pushing rod between the friction member and the rear wall of the stock, whereby after the barrel is filled with paste the pushing board is driven to push the pushing rod forward so a to squeeze the paste out of the barrel.

The paste dispensing gun may include a pushing rod extending through a stock into a barrel, a resilient clip member fitted on the pushing rod between a rear wall of the stock and a rear wall of the barrel, a pushing board and a pushing spring fitted around the pushing rod between the clip member and the rear wall of the stock, and a trigger pivotally connected with the stock under the pushing rod. By means of the clipping of the clip member, the pushing rod can be stably pushed forward. When the pushing rod is pushed to a fixed position, the clip member also serves to somewhat locate the pushing rod. In the case that an excessive pressure is created in the barrel, the pushing rod can be properly retreated to buffer the backfeed pressure so as to prevent the paste from being over-dispensed out and avoid waste of the

paste.

The present invention can be best understood through the following description and accompanying drawings, wherein:

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a sectional assembled view of a convention paste dispensing gun:

Fig. 2 is a view according to Fig. 1, showing that the pushing rod is pushed forward to dispense the past out of the barrel;

Fig 3 is a view according to Fig.1, showing that the pushing rod is pulled back;

Fig 4 is a perspective exploded view of the present invention;

Fig 5 is a perspective assembled view of the present invention:

Fig. 6 is a side sectional view showing that the pushing rod is pushed forward to dispense the paste out of the barrel; and

Fig. 7 is a view according to Fig. 6, showing that the pushing rod is pulled back to its home position.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Please refer to Fig. 4. According to the present invention, a pushing rod 2 extends through a stock 12 into the barrel 10. A friction member in the form of a resilient clip member 50 is fitted on the pushing rod 20 between a rear wall 13 of the stock 12 and a rear wall 11 of the barrel 10. A pushing board 30 and then a pushing spring 5 are fitted around the pushing rod 20 between the clip member 50 and the rear wall 13 of the stock 12. A trigger 60 is pivotally connected with the stock 12 under the pushing rod 20 to form a structure as shown in Fig. 5.

Referring to Fig. 6. after the barrel 10 is filled with the paste and when the trigger 60 is pulled, the pushing board 30 is driven to push the pushing rod 20 forward. At this time, a pushing disk 21 at the front end of the Pushing rod 20 serves to squeeze the paste out of the barrel. When the Pushing rod 20 reaches the end of the barrel, the user only needs to pull the end of the pushing rod 20 with a pulling force greater than the clipping force of the clip member 50 so as to easily pull the pushing rod 20 back to its home position as shown in Fig. 7.

By means of the clipping of the clip member, the pushing rod can be stably pushed forward. When the pushing rod is pushed to a fixed position, the clip member also serves to somewhat locate the pushing rod. In addition, in the case that an excessive pressure is created in the barrel, the pushing rod can be properly retreated to buffer the backfeed pressure so as to prevent the paste from being over-dispensed out and avoid waste of the paste.

The above embodiment is only an example of the present invention and the scope of the present invention should not be limited to the example. Any modification or variation derived from the example should fall within the scope of the present invention.

CLAIMS:

1. A paste dispensing gun comprising a pushing rod extending through a stock into a barrel, a friction member being fitted on the pushing rod between a rear wall of the stock and a rear wall of the barrel, a pushing board and then a pushing spring being fitted around the pushing rod between the friction member and the rear wall of the stock, whereby after the barrel is filled with paste the pushing board is driven to push the pushing rod forward so as to squeeze the paste out of the barrel.

2. A paste dispensing gun comprising a pushing rod extending through a stock into a barrel, a resilient clip member being fitted on the pushing rod between a rear wall of the stock and a rear wall of the barrel, a pushing board and then pushing spring being fitted around the pushing rod between the clip member and the rear wall of the stock, a trigger being pivotally connected with the stock under the pushing rod, whereby after the barrel is filled with the paste and when the trigger is pulled, the pushing board is driven the push the pushing rod forward so as to squeeze the paste out of the barrel, said paste dispensing gun being characterized in that by means of the clipping of the clip member, the pushing rod can be stably pushed forward and when the pushing rod is pushed to a fixed position, the clip member also serves to somewhat locate the pushing rod and in the case that an excessive pressure is created in the barrel, the pushing rod can be properly retreated to buffer the backfeed pressure so as to prevent the paste from being over-dispensed out and avoid waste of the paste.

The Patent Office

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Application No: GB 9609236.6
Claims searched: 1 and 2

Examiner: Brian Denton
Date of search: 19 June 1996

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): F1R

Int Cl (Ed.6): B65D 83/00 ; B05C 17/01

Other: Online : WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
A	GB 1520762	(LOCTITE CORP) see lines 25-65, page 3	1
X	EP 0448375 A2	(BBA GROUP PLC) see lines28-37, column 4 and 23-26, column 5	1
X	US 5192008	(HWAN) see lines 38, column 2 to line 7, column 3	1
X	US 4572409	(FINNEGAN) whole document	1

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.