



(22) Date de dépôt/Filing Date: 2004/03/18

(41) Mise à la disp. pub./Open to Public Insp.: 2004/09/21

(45) Date de délivrance/Issue Date: 2010/09/21

(30) Priorité/Priority: 2003/03/21 (DE103 12 761.5)

(51) Cl.Int./Int.Cl. *F41C 23/14* (2006.01),
F41A 9/65 (2006.01), *F41C 23/10* (2006.01)

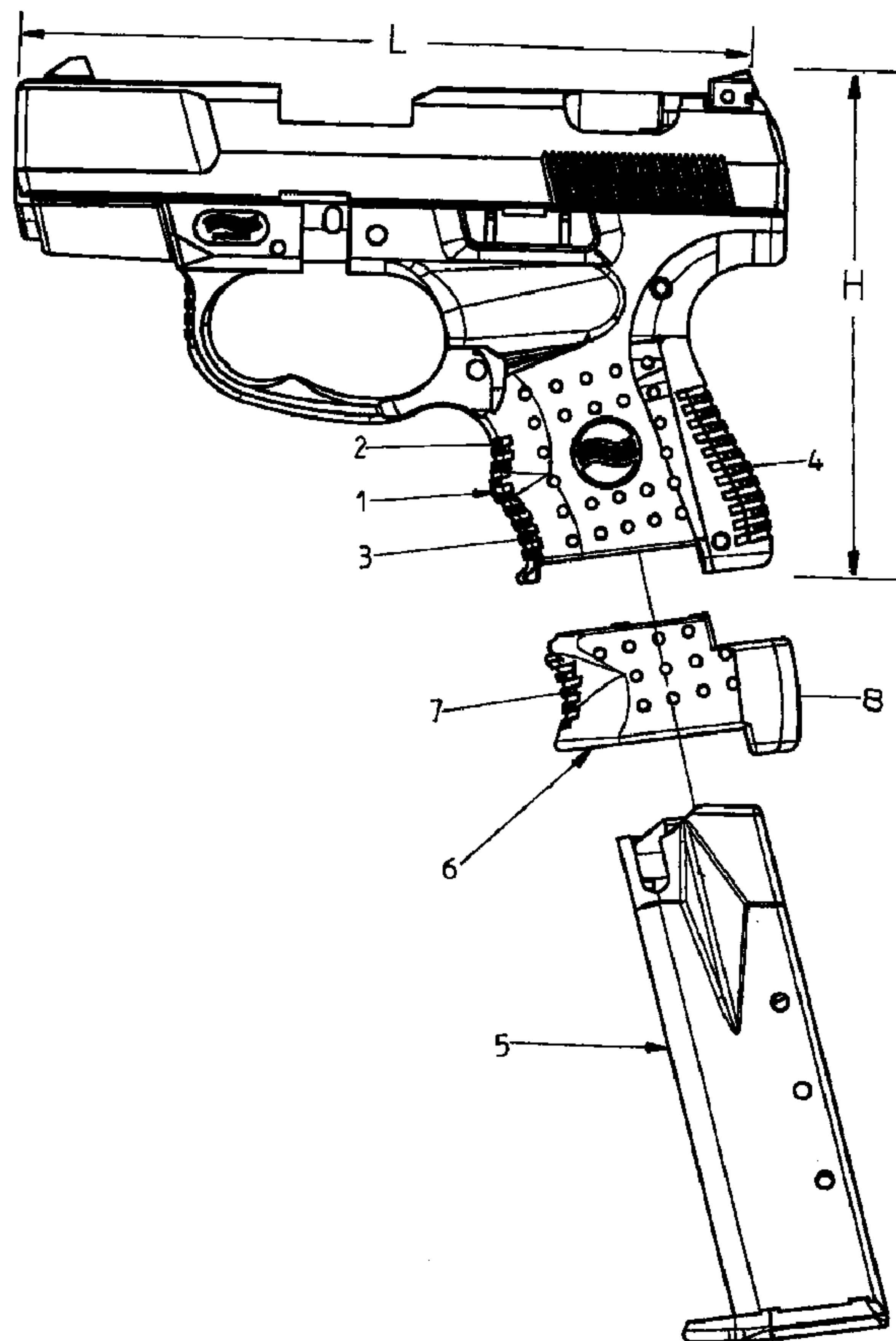
(72) Inventeurs/Inventors:
DALLHAMMER, PETER, DE;
EITH, STEFAN, DE;
KRIEGER, HUBERT, DE;
PAUSCH, HEINZ, DE;
WERNER, MARTIN, DE;
GARNEAU, GERALD, CA

(73) Propriétaire/Owner:
CARL WALTHER GMBH, DE

(74) Agent: OGILVY RENAULT LLP/S.E.N.C.R.L.,S.R.L.

(54) Titre : ARME DE POING

(54) Title: HANDGUN



(57) Abrégé/Abstract:

A handgun comprising a grip on whose front face when the handgun is in the in-use position the fingers of the user can rest, in which the handgun has an extension piece which can lengthen the grip downwards when the handgun is in the in-use position.

Abstract

A handgun comprising a grip on whose front face when the handgun is in the in-use position the fingers of the user can rest, in which the handgun has an extension piece which can lengthen the grip downwards when the handgun is in the in-use position.

HANDGUN

The present invention relates to a handgun comprising a grip on whose front face when the handgun is in the in-use position the fingers of the user can rest.

A handgun of the type mentioned above is known from German Laid Open Specification DE 195 05 829 A1. The handgun described in the document has a grip which, on the front face, provides three grip depressions for the user's middle finger, ring finger and little finger to rest on. A rear part, which is used for the user's palm of the hand to rest on, is arranged on the rear face when the handgun is in the in-use position. This rear part can be replaced in the abovementioned prior art, such that the grip can be matched to different requirements or to different users.

So-called compact weapons have been offered and demanded on the market for some time now. Normally, compact weapons are physically small weapons. Compact weapons are frequently variants of full-size weapons. The user can therefore choose weapons of different sizes which belong to the same product range. Compact weapons are preferably carried concealed and are smaller in size than normal handguns, such as traditional military pistols. In particular, a compact weapon such as this has a shorter barrel, a shorter breach and a grip with a shorter height. The user can grip a shorter grip such as this with only two fingers rather than with three fingers. For this reason, compact weapons such as these cannot be held sufficiently well, so that the hit probability is adversely affected. Furthermore, in the case of known compact weapons, smaller magazines are used, which are specifically matched to the size of the grip and can accordingly hold fewer cartridges.

The problem on which the present invention is based is to provide a handgun of the type mentioned initially which a user can grip better.

5

According to the invention, this is achieved in that the handgun has an extension piece which can lengthen the grip downwards when the handgun is in the in-use position. Particularly in the case of the compact
10 weapons mentioned above, this may be regarded as a major advantage because this allows the comparatively short grip on compact weapons to be lengthened such that the user can grip the handgun more securely.

15 A handgun according to the invention can accordingly be designed as a compact weapon, and can have a height of less than 130 mm, in particular a height of about 110 mm, in the in-use position. This height of about 110 mm can be lengthened considerably by the extension
20 piece.

According to the invention, the handgun may have a magazine body which can be pushed into the grip from underneath when the handgun is in the in-use position.
25 The additional extension piece, which may be arranged on the lower face of the grip, makes it possible to use magazine bodies for a handgun according to the invention which are normally used only for normal pistols and which cannot be optimally used for the
30 compact weapons that are being marketed. For the user, it is obvious to use magazines from full-size weapons in the same product range. However, full-size magazines project beyond the short grip of the compact weapons and irritate the user. It appears as if the magazine
35 has not been inserted completely into the grip and is accidentally slipping. Furthermore, the magazine chute is not closed, so that there is a risk of dirt entering it. A handgun according to the invention thus makes it

-3-

possible to use commercially available magazines with a considerably larger number of cartridges despite being designed as a compact weapon.

- 5 As an alternative to the design of the handgun as a pistol, the handgun may also be a revolver or the like.

According to one preferred embodiment of the present invention, the extension piece can be connected to the
10 grip. The extension piece and the grip may be connected, for example, by being hooked in on one side, by being pinned in or being latched in on one face and being pinned in or latched in on the opposite face, or by being pushed onto a guide, or by adhesive bonding,
15 by a bayonet fitting or by latching. In particular, of the connection methods mentioned above, those which are detachable offer the capability to lengthen the grip by the extension piece when required and to remove the extension piece from the grip again, for example in
20 order to carry the compact weapon in a concealed manner.

According to one alternative embodiment of the present invention, the extension piece can be connected to the
25 magazine body such that the grip is extended by the extension piece by pushing the magazine body into the grip. For this purpose, the extension piece may, for example, be in the form of a sleeve and may be pushed onto the magazine body such that the extension piece
30 rests on the upper face of a magazine shoe which is fitted to the lower face of the magazine body. Connecting the extension piece to the grip by pushing the magazine body in offers the advantage that no additional process step is required to connect the grip
35 and the extension piece to one another.

According to the invention, it is possible to provide for the grip to have two grip depressions for the

-4-

user's middle finger and ring finger on its front face when the handgun is in the in-use position. According to the invention, it is also possible to provide for the extension piece to have a grip depression, which
5 can be used in particular for the user's little finger to rest on, on its front face when the handgun is in the in-use position. In this way, the connection of the grip and extension piece provides the user with a number of grip depressions corresponding to
10 commercially available large handguns, so that the handgun can be gripped securely by the person firing it.

It is also possible to provide for the grip and the
15 extension piece to have rear parts on their rear face when the handgun is in the in-use position. The connection of the grip to the extension piece thus also lengthens the rear part of the grip so as to provide an adequately large contact area for the palm of the hand.

20 The extension piece advantageously lengthens the height of the grip of the handgun which can be used by the user by about $1/4$ to $1/2$ of the height of the grip, in particular by about $1/3$ of the height of the grip.
25 Lengthening it by about $1/3$ of the height of the grip thus turns a grip for a compact weapon into a grip of a normal handgun which can be gripped by the user without any problems.

30 Further features and advantages of the present invention will become clear from the following description of preferred exemplary embodiments and with reference to the attached figures, in which:

35 Figure 1 shows a schematic exploded view of a first embodiment of a handgun according to the invention;

-5-

Figure 2 shows a schematic side view of the handgun as shown in Figure 1, with an extension piece fitted and magazine body that has not been pushed in;

5

Figure 3 shows a schematic side view of a further embodiment of a gun according to the invention with a magazine body which has not been pushed in; and

10

Figure 4 shows a side view of the gun as shown in Figure 3 with the magazine body pushed in.

A handgun according to the invention, as is shown in Figure 1 to Figure 4, has a grip 1 which is arranged behind a trigger (not shown) in the firing direction. On its front face in the in-use position, the grip 1 has two grip depressions 2, 3 for a user's middle finger and ring finger. On its rear part when the handgun is in the in-use position, the grip 1 also has a rear part 4 for the palm of the user's hand to rest on.

The handgun which is shown in Figure 1 to Figure 4 is, in particular, in the form of a so-called compact weapon, which has smaller dimensions than normal handguns, such as traditional military pistols. For example, a compact weapon such as this may have a length L (see Figure 1) of less than 180 mm, in particular a length L of about 169 mm. Furthermore, a compact weapon such as this may have a height H (in this context, see Figure 1) of less than 130 mm, in particular of about 110 mm. Alternatively, however, a handgun according to the invention may also be a larger handgun.

The embodiment of a handgun according to the invention as shown in Figures 1 to 4 is in the form of a pistol,

-6-

in particular a self-defense pistol with a magazine body 5, which can be pushed into a corresponding recess in the grip 1. Alternatively, a handgun according to the invention may also be in the form of a revolver or the like.

The embodiment of a handgun according to the invention as shown in Figure 1 and Figure 2 also has an extension piece 6, which can be fitted to the lower face of the grip 1. When an extension piece 6 (in this context, see Figure 2) is fitted to the lower face of the grip, the grip 1 is considerably longer than when no extension piece is fitted, for example being lengthened by about 1/5 to 1/3 of its length. Particularly on its front face when the handgun is in the in-use position, the extension piece 6 has a grip depression 7, and has a rear part 8 on its rear face when the handgun is in the in-use position. In the state when the extension piece 6 is connected to the grip 1, the grip depression 7 may be used for the user's little finger to rest on, so that the user can grip the handgun according to the invention considerably more securely. Furthermore, the contact surface for the palm of the hand is considerably enlarged by the additional rear part 8 (in this context, see Figure 2). The rear part 8 may also be shaped such that the rear part 4 is at the same time a component of the extension piece 6.

The extension piece 6 may be connected to the grip 1 in various ways. For example, it is possible for the extension piece 6 to be attached with the aid of bayonet fitting, or to be hooked-in, latched-in or pinned on one face, for example the front face, and to be latched to the other face, for example the rear face, or to be attached by means of a pin. Furthermore, it is also possible for the extension piece 6 to be pushed onto an appropriate guide on the grip 1, for example onto a dovetail guide or similar guide. In this

-7-

case, in particular, it is possible for the extension piece 6 to be fixed in its final position on the grip 1 by latching. It is also possible for the extension piece 6 to be adhesively bonded to the grip 1. In addition, it is possible to provide a latching connection between the extension piece 6 and the grip 1.

The lower part of the front face of the extension piece 6 when the handgun is in the in-use position may be shaped such that, when the magazine body 5 is inserted, it merges into the front part of a magazine shoe 9 which is fitted to the lower face of the magazine body 5 (in this context, see Figure 4).

In the embodiment of a handgun according to the invention illustrated in Figure 3 and Figure 4, the extension piece 6 cannot be connected directly to the grip 1, but can be fitted to the magazine body 5. For this purpose, the extension piece 6 is, for example, in the form of a sleeve which can be pushed from above (see Figure 3) onto the magazine body 5 and, in its final position, rests on the upper face of the magazine shoe 9. Insertion of the magazine body 5 into the grip 1 provides the user with a grip extended according to the invention in the final position, as shown in Figure 4, that is to say when the magazine body 5 is in the completely inserted position.

A handgun according to the invention and in the form of a compact weapon offers the advantage that the extension piece 6 allows magazines and magazine bodies 5 which are designed for considerably larger weapons than commercially available compact weapons to be used with a compact weapon such as this.

CLAIMS:

1. A handgun comprising a grip having a front face on which, when the handgun is in an in-use position, the fingers of the user can rest, wherein the handgun has
5 an extension piece connectable to the grip that lengthens the grip downwards when the handgun is in the in-use position.
2. The handgun as claimed in claim 1, wherein the handgun is a compact weapon.
- 10 3. The handgun as claimed in claim 2, wherein the handgun has a height (H) of between 110 mm and less than 130 mm, when in the in-use position.
4. The handgun as claimed in any one of claims 1 to 3, wherein the handgun has a magazine body which can be
15 inserted into the grip from underneath when the handgun is in the in-use position.
5. The handgun as claimed in any one of claims 1-4, wherein the extension piece can be connected to the grip by a connector selected from the group consisting
20 of: a hook on a side thereof; a pin; a latch; a guide; an adhesive; and a bayonet fitting.

- 9 -

6. The handgun as claimed in claim 4, wherein the extension piece can be connected to the magazine body wherein the grip is extended by the extension piece by pushing the magazine body into the grip.

5 7. The handgun as claimed in claim 6, wherein the extension piece is in the form of a sleeve and can be pushed onto the magazine body wherein the extension piece engages the magazine body by at least one of:
resting on the upper face of a magazine shoe which is
10 fitted to the lower face of the magazine body; latching in the magazine body; and latching in the magazine shoe.

8. The handgun as claimed in one of claims 1 to 7, wherein, on its front face when the handgun is in the
15 in-use position, the grip has two grip depressions for a user's middle finger and ring finger.

9. The handgun as claimed in one of claims 1 to 8, wherein, on its front face when the handgun is in the in-use position, the extension piece has a grip
20 depression which can be used in particular for the user's little finger to rest on.

10. The handgun as claimed in one of claims 1 to 9, wherein the grip and the extension piece have rear

- 10 -

parts on their rear face when the handgun is in the in-use position.

11. The handgun as claimed in one of claims 1 to 10, wherein the extension piece lengthens the height of the grip of the handgun which can be used by the user by about 1/4 to 1/2 of the height of the grip, by about 1/3 of the height of the grip.

12. A handgun comprising a compact weapon with a grip with a front face on which the fingers of the user can rest when the handgun is in an in-use position, wherein the handgun has an extension piece that lengthens the grip downwards when the handgun is in the in-use position, wherein the handgun has a height (H) of between 110 mm and less than 130 mm, when in the in-use position.

13. The handgun as claimed in claim 12, wherein the handgun has a magazine body which can be inserted into the grip from underneath when the handgun is in the in-use position.

14. The handgun as claimed in one of claims 12 to 13, wherein the extension piece can be connected to the grip.

- 11 -

15. The handgun as claimed in any one of claims 12 to 14, wherein the extension piece can be connected to the grip by a connector selected from the group consisting of: a hook on a side thereof; a pin; a latch; a guide;
5 an adhesive; and a bayonet fitting.

16. The handgun as claimed in claim 13, wherein the extension piece can be connected to the magazine body wherein such that the grip is extended by the extension piece by pushing the magazine body into the grip.

10 17. The handgun as claimed in claim 16, wherein the extension piece is in the form of a sleeve and can be pushed onto the magazine body wherein the extension piece engages the magazine body by at least one of:
resting on the upper face of a magazine shoe which is
15 fitted to the lower face of the magazine body; latching in the magazine body; and latching in the magazine shoe.

18. The handgun as claimed in any one of claims 12 to 17, wherein, on its front face when the handgun is in
20 the in-use position, the grip has two grip depressions for a user's middle finger and ring finger.

19. The handgun as claimed in any one of claims 12 to 18, wherein, on its front face when the handgun is in

- 12 -

the in-use position, the extension piece has a grip depression which can be used in particular for the user's little finger to rest on.

20. The handgun as claimed in one of claims 12 to 19,
5 wherein the grip and the extension piece have rear parts on their rear face when the handgun is in the in-use position.

21. The handgun as claimed in one of claims 12 to 20,
wherein the extension piece lengthens the height of the
10 grip of the handgun which can be used by the user by about 1/4 to 1/2 of the height of the grip, in particular by about 1/3 of the height of the grip.

22. A handgun comprising a grip with a front face on which the fingers of the user can rest when the handgun
15 is in an in-use position, wherein the handgun has an extension piece that lengthens the grip downwards when the handgun is in the in-use position,

wherein, the grip has two grip depressions on its front face for a user's middle finger and ring finger,
20 when the handgun is in the in-use position, and

wherein, the extension piece has a grip depression which can be used for the user's little finger to rest on, on its front face when the handgun is in the in-use position.

- 13 -

23. The handgun as claimed in claim 22, wherein the handgun is a compact weapon.

24. The handgun as claimed in claim 23, wherein the handgun has a height (H) of between 110 mm and less
5 than 130 mm, when in the in-use position.

25. The handgun as claimed in any one of claims 22 to 24, wherein the handgun has a magazine body which can be inserted into the grip from underneath when the handgun is in the in-use position.

10 26. The handgun as claimed in one of claims 22 to 25, wherein the extension piece can be connected to the grip.

27. The handgun as claimed in any one of claims 22 to 26, wherein the extension piece can be connected to the
15 grip by a connector selected from the group consisting of: a hook on a side thereof; a pin; a latch; a guide; an adhesive; and a bayonet fitting.

28. The handgun as claimed in claim 25, wherein the extension piece can be connected to the magazine body
20 wherein the grip is extended by the extension piece by pushing the magazine body into the grip.

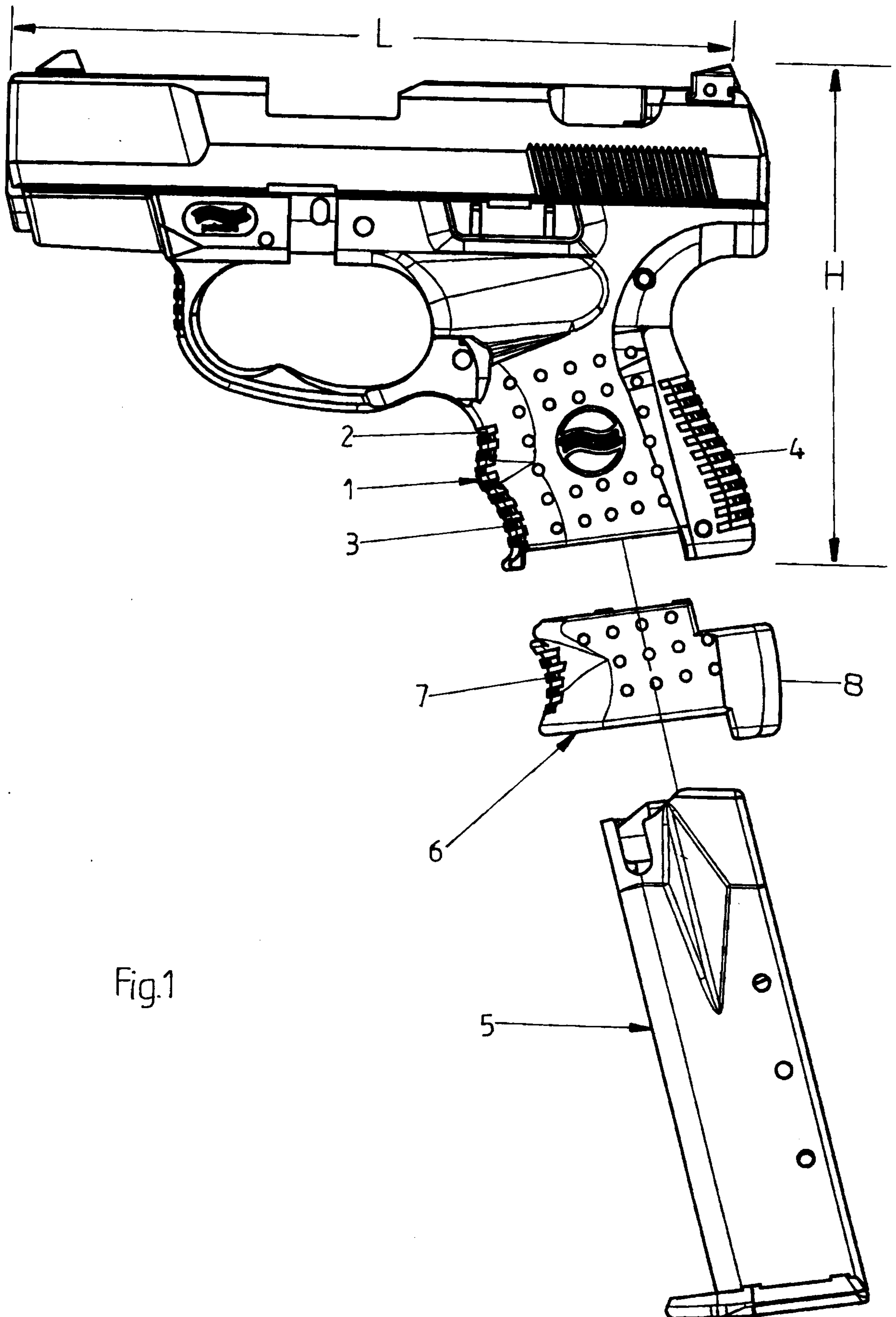
- 14 -

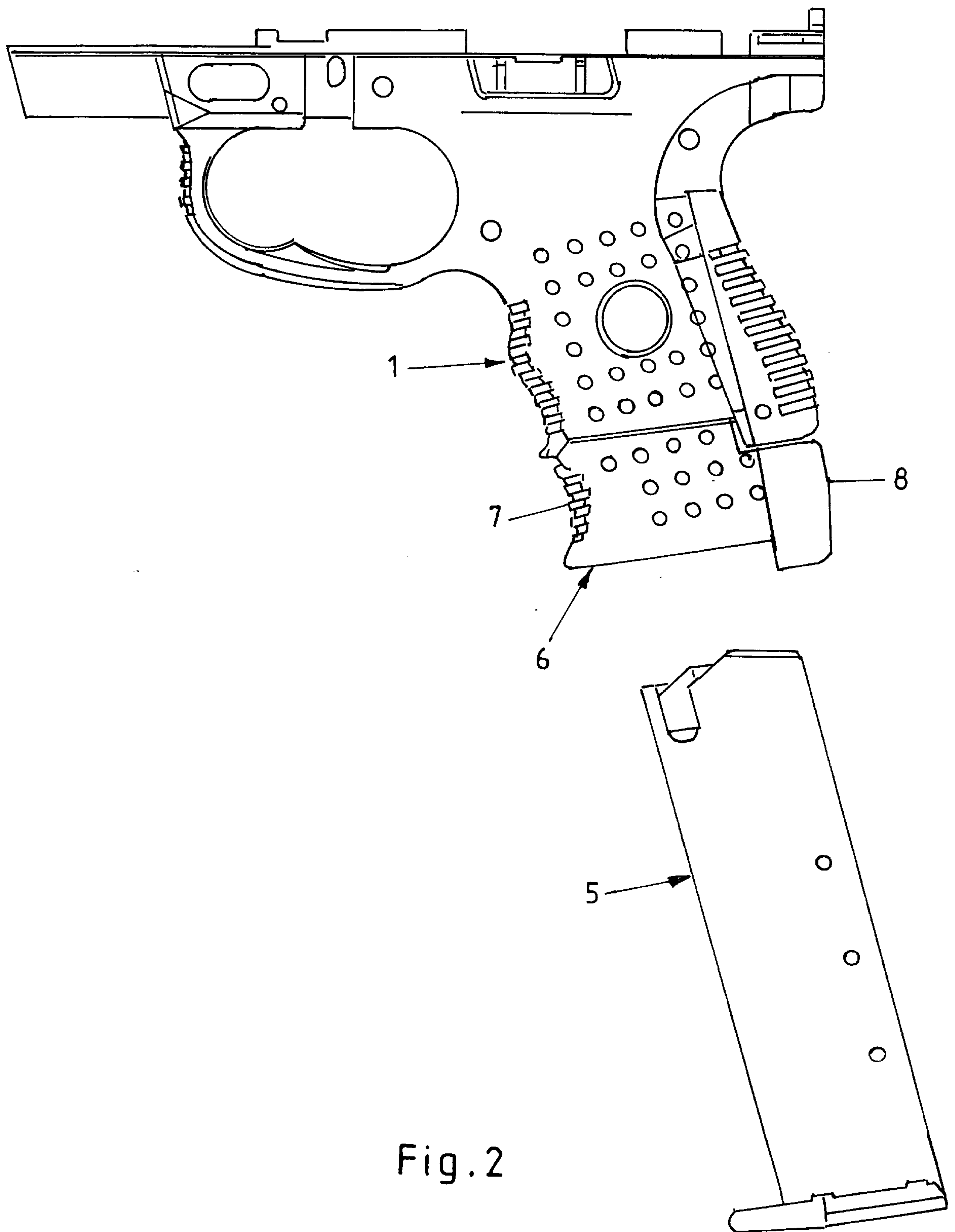
29. The handgun as claimed in claim 28, wherein the extension piece is in the form of a sleeve and can be pushed onto the magazine body wherein the extension piece engages the magazine body by at least one of:

5 resting on the upper face of a magazine shoe which is fitted to the lower face of the magazine body; latching in the magazine body; and latching in the magazine shoe.

30. The handgun as claimed in one of claims 22 to 29,
10 wherein the grip and the extension piece have rear parts on their rear face when the handgun is in the in-use position.

31. The handgun as claimed in one of claims 22 to 30, wherein the extension piece lengthens the height of the
15 grip of the handgun which can be used by the user by about 1/4 to 1/2 of the height of the grip, by about 1/3 of the height of the grip.





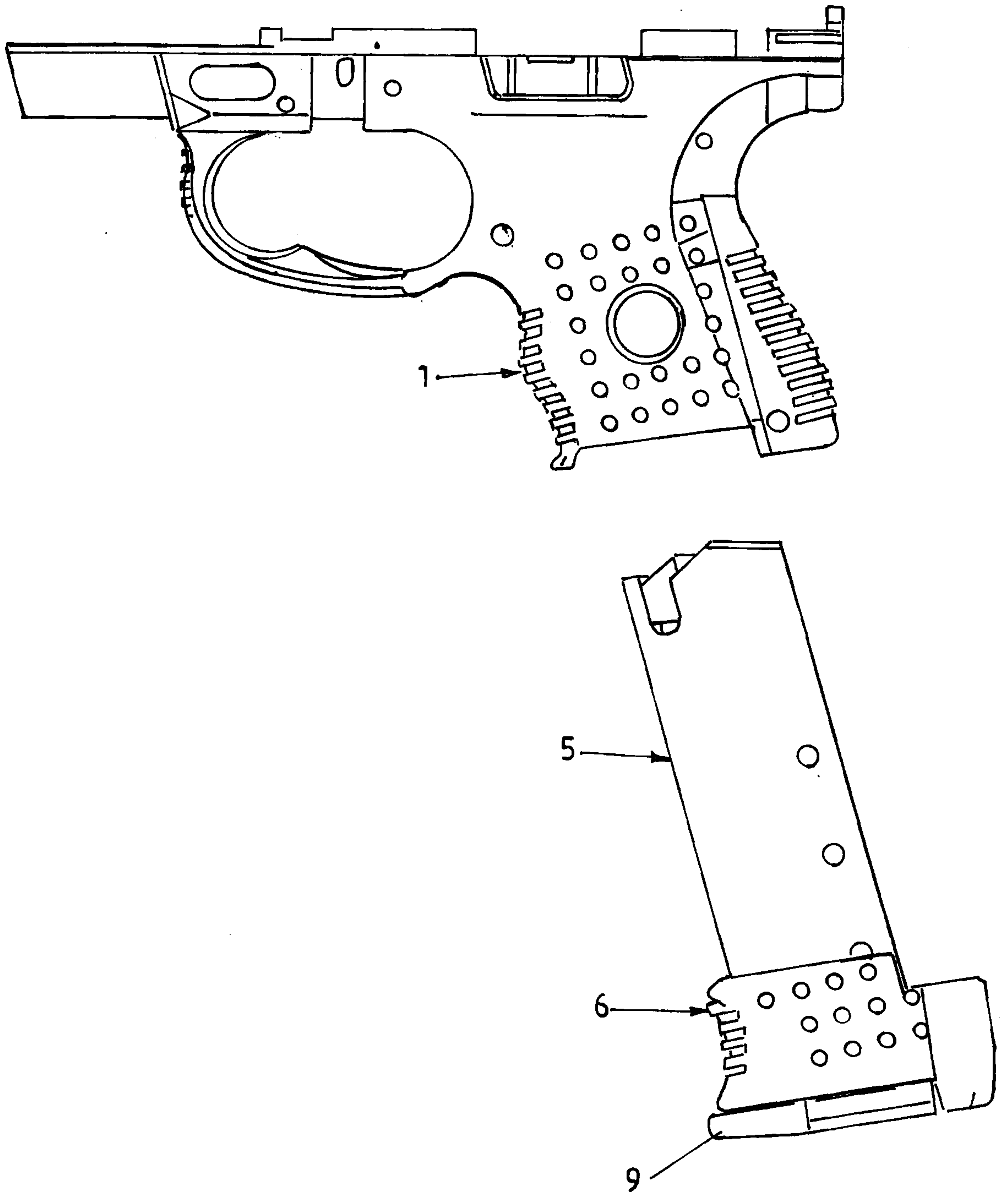


Fig. 3

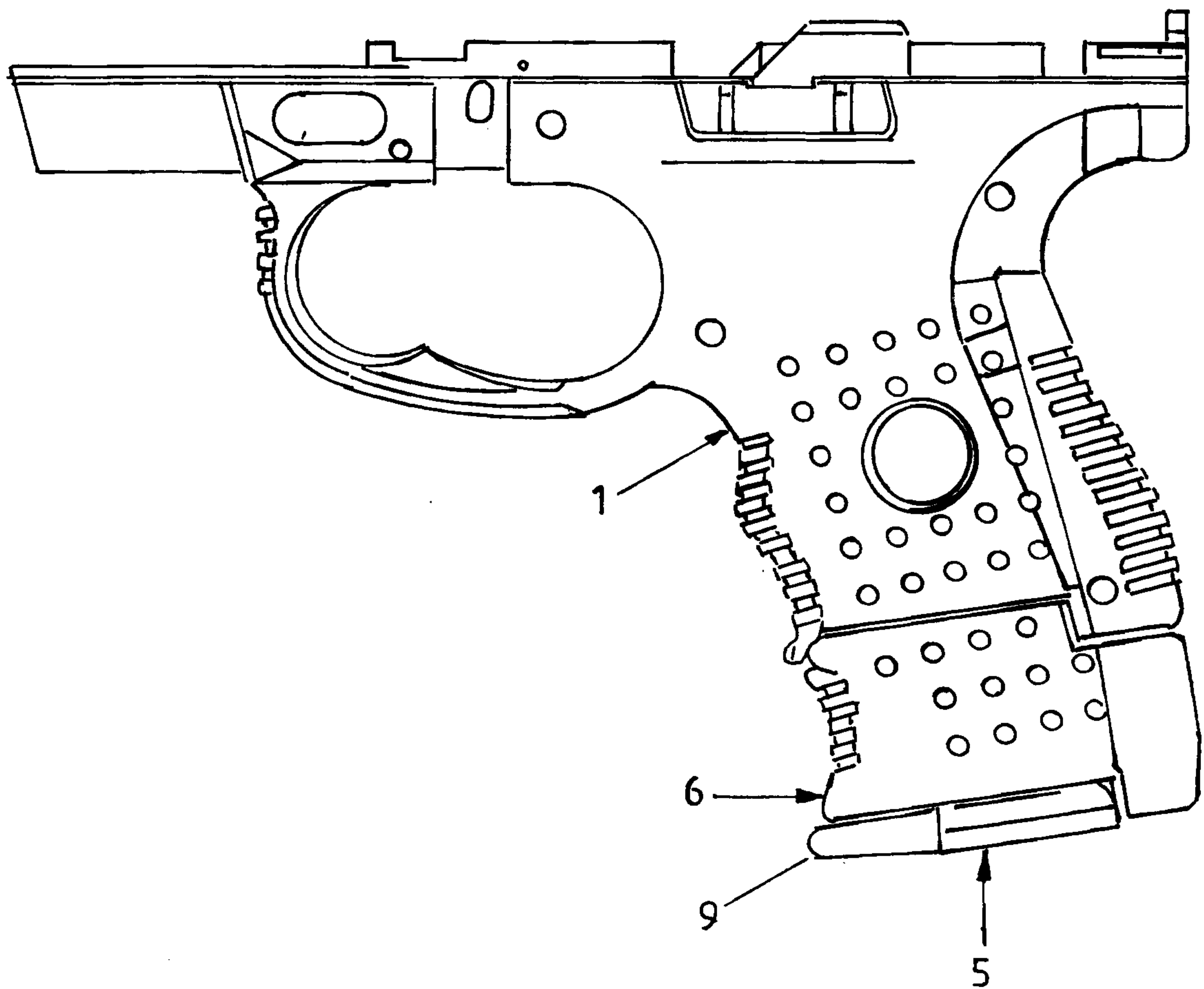


Fig. 4

