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CA 2303582 C 2005/06/07

(11)(21) 2 303 582

(12) BREVET CANADIEN
CANADIAN PATENT

(13) C

(22) Date de dépôt/Filing Date: 2000/03/30

(41) Mise à la disp. pub./Open to Public Insp.: 2001/09/30

(45) Date de délivrance/Issue Date: 2005/06/07

(51) Cl.Int.^{7}/Int.Cl.^{7} B26B 13/20, A01G 3/02, B25G 3/26

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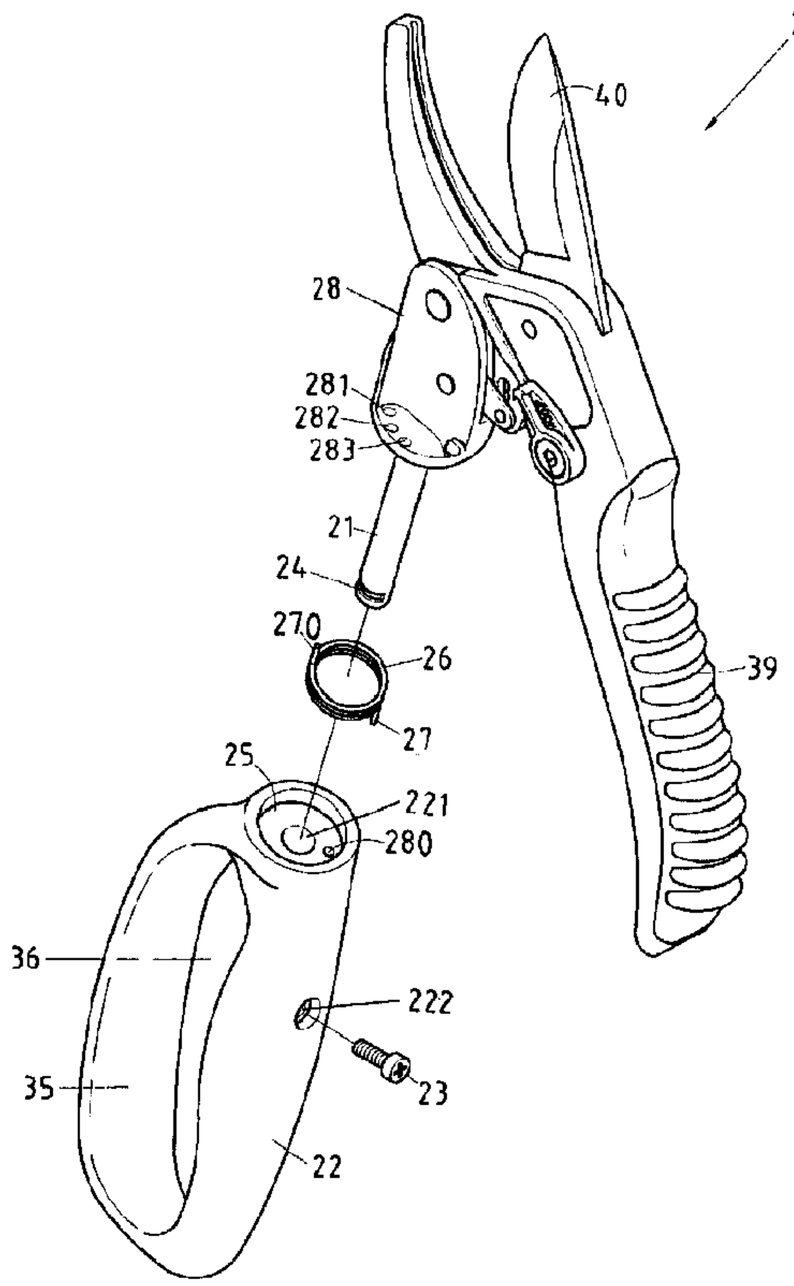
(54) Title: SHEARS



(57) Abrégé/Abstract:
A pair of shears 20 has a pair of blades 40, a main handle 22, an auxiliary handle 39, a lug 28, and a shaft 21. The lug 28 is connected to the auxiliary handle 39. The shaft 21 is disposed on a bottom of the lug 28. The shaft 21 has an insertion groove 24. The lug 28 has a circular aperture 33. The main handle 22 has a protection bow 35, a hollow interior 36, an upper recess 31 receiving a spring 32, a round hole 221 formed on an upper portion of the main handle 22 and receiving the shaft 21, and a circular hole 222 communicating with the round hole 221. A bolt 23 is inserted in the insertion groove 24 via the circular hole 222. A rod 34 has a lower end inserted in the upper recess 31 and an upper end inserted in the circular aperture 33.

TITLE:SHEARS

ABSTRACT OF THE DISCLOSURE

A pair of shears 20 has a pair of blades 40, a main handle 22, an auxiliary handle 39, a lug 28, and a shaft 21. The lug 28 is connected to the auxiliary handle 39. The shaft 21 is disposed on a bottom of the lug 28. The shaft 21 has an insertion groove 24. The lug 28 has a circular aperture 33. The main handle 22 has a protection bow 35, a hollow interior 36, an upper recess 31 receiving a spring 32, a round hole 221 formed on an upper portion of the main handle 22 and receiving the shaft 21, and a circular hole 222 communicating with the round hole 221. A bolt 23 is inserted in the insertion groove 24 via the circular hole 222. A rod 34 has a lower end inserted in the upper recess 31 and an upper end inserted in the circular aperture 33.

TITLE:SHEARS

The present invention relates to a pair of shears. More particularly, the present invention relates to a pair of shears which has a main handle to be rotated and returned to its original direction.

Referring to FIG. 1, a pair of conventional shears 10 comprises a pair of blades 18, a main handle 12, an auxiliary handle 17, a lug 15, and a shaft 11. The lug 15 is connected to the auxiliary handle 17. The lug 15 has a blocking flange 151. The pair of blades 18 are disposed on the lug 15 and the auxiliary handle 17. The shaft 11 is disposed on a bottom of the lug 15. The shaft 11 has an annular groove 14. The main handle 12 has a protuded block 16, a round hole 121 receiving the shaft 11, and a circular hole 122 communicating with the round hole 121. A bolt 13 is inserted in the annular groove 14 via the circular hole 122. The protuded block 16 engages with the blocking flange 151. After the main handle 12 is rotated, the main handle 12 cannot return to its original direction.

An object of the present invention is to provide a pair of shears which has a main handle to be rotated and returned to its original direction.

Another object of the present invention is to provide a pair of shears which has a main handle having a protection bow to protect fingers of a user.

In one aspect, the present invention provides a pair of shears comprising a pair of blades, a main handle, an auxiliary handle, a lug, and a shaft, the lug connected to the auxiliary handle, the pair of blades attached to the lug and the auxiliary handle such that one blade is attached to the lug and the other of the pair of blades is attached to the auxiliary handle, and the shaft attached on a bottom of the lug, characterized in that:

the shaft has an insertion groove,

the lug has at least one circular aperture,

the main handle has a protection bow, a hollow interior, an upper recess receiving a spring, a round hole formed on an upper portion of the main handle for receiving the shaft, and a circular hole communicating with the round hole, and

a bolt is inserted in the insertion groove via the circular hole,

wherein

said main handle is rotatable about a longitudinal axis of said shaft,

said spring acts as a detent means for keeping said handle in one position such that when said main handle is rotated, said spring is compressed,

a rotational arc of said handle is dependent upon said insertion groove and bolt such that when said main handle is rotated, said bolt travels along said insertion groove.

FIG. 1 is a perspective exploded view of a pair of conventional shears of the prior art;

FIG. 2 is a perspective exploded view of a pair of shears of a first preferred embodiment in accordance with the present invention;

FIG. 3 is a first sectional view of a main handle of a first preferred embodiment in accordance with the present invention;

FIG. 4 is a first sectional view of a main handle of a first preferred embodiment after the main handle is rotated;

FIG. 5 is a second sectional view of a main handle of a first preferred embodiment in accordance with the present invention;

FIG. 6 is a second sectional view of a main handle of a first preferred embodiment after the main handle is rotated;

FIG. 7 is a perspective exploded view of a pair of shears of a second preferred embodiment in accordance with the present invention;

FIG. 8 is a sectional view of a main handle of a second preferred embodiment in accordance with the present invention;

FIG. 9 is a sectional view of a main handle of a second preferred embodiment after the main handle is

rotated;

FIG. 10 is a perspective assembly view of a pair of shears of a second preferred embodiment in accordance with the present invention;

FIG. 11 is another sectional view of a main handle of a second preferred embodiment after the main handle is rotated;

FIG. 12 is a schematic view illustrating an application of a pair of shears of a second preferred embodiment in accordance with the present invention;

FIG. 13 is a schematic view illustrating an operacation of a pair of shears of a second preferred embodiment in accordance with the present invention; and

FIG. 14 is a perspective exploded view of a pair of shears of a third preferred embodiment in accordance with the present invention.

Referring to FIGS. 2 to 6, a first pair of shears 20 comprises a pair of blades 40, a main handle 22, an auxiliary handle 39, a lug 28, and a shaft 21. The lug 28 is connected to the auxiliary handle 39. The pair of blades 40 are disposed on the lug 28 and the auxiliary handle 39. The shaft 21 is disposed on a bottom of the lug 28.

The shaft 21 has an insertion groove 24. The lug 28 has a first circular aperture 281, a second circular

aperture 282, and a third circular aperture 283.

The main handle 22 has a protection bow 35, a hollow interior 36, an upper recess 25 receiving a spring 26, a round aperture 280 communicating with the upper recess 25, a round hole 221 communicating with the upper recess 25 and receiving the shaft 21, and a circular hole 222 communicating with the round hole 221.

The spring 26 has a first end 27 inserted in the round aperture 280 and a second end 270 inserted in one of the first circular aperture 281, the second circular aperture 282, and the third circular aperture 283.

A bolt 23 is inserted in the insertion groove 24 via the circular hole 222.

Referring to FIGS. 7 to 13, a second pair of shears 20 comprises a pair of blades 40, a main handle 22, an auxiliary handle 39, a lug 28, and a shaft 21. The lug 28 is connected to the auxiliary handle 39. The pair of blades 40 are disposed on the lug 28 and the auxiliary handle 39. The shaft 21 is disposed on a bottom of the lug 28.

The shaft 21 has an insertion groove 24. The lug 28 has a circular aperture 33.

The main handle 22 has a protection bow 35, a hollow interior 36, an upper recess 31 receiving a spring 32, a round hole 221 formed on an upper portion of the

main handle 22 and receiving the shaft 21, and a circular hole 222 communicating with the round hole 221.

A bolt 23 is inserted in the insertion groove 24 via the circular hole 222.

A rod 34 has a lower end inserted in the upper recess 31 and an upper end inserted in the circular aperture 33.

Referring to FIG. 14, the main handle 22 further has two protruded posts 37. The protection bow 35 has two end grooves 38 receiving the protruded posts 37.

WHAT IS CLAIMED IS:

1. A pair of shears comprising a pair of blades, a main handle, an auxiliary handle, a lug, and a shaft, the lug connected to the auxiliary handle, the pair of blades attached to the lug and the auxiliary handle such that one blade is attached to the lug and the other of the pair of blades is attached to the auxiliary handle, and the shaft attached on a bottom of the lug, characterized in that:

the shaft is an insertion groove,

the lug has at least one circular aperture,

the main handle has a protection bow, a hollow interior, an upper recess receiving a spring, a round hole formed on an upper portion o the main handle for receiving the shaft, and a circular hole communicating with the round hole, and

a bolt is inserted in the insertion groove via the circular hole,

wherein

said main handle is rotatable about a longitudinal axis of said shaft,

said spring acts as a detent means for keeping said handle in one position such that when said main handle is rotated, said spring is compressed,

a rotational arc of said handle is dependent upon said insertion groove and bolt such that when said main handle is rotated, said bolt travels along said insertion groove.

2. A pair of shears as claimed in claim 1, wherein a rod has a lower end inserted in the upper recess and an upper end inserted in the circular aperture, said rod acting to compress said spring when said main handle is rotated.

3. A pair of shears according to claim 1 wherein said spring is a coil spring with one end inserted in one of said at least one circular aperture and another end inserted in a round aperture in said upper recess.

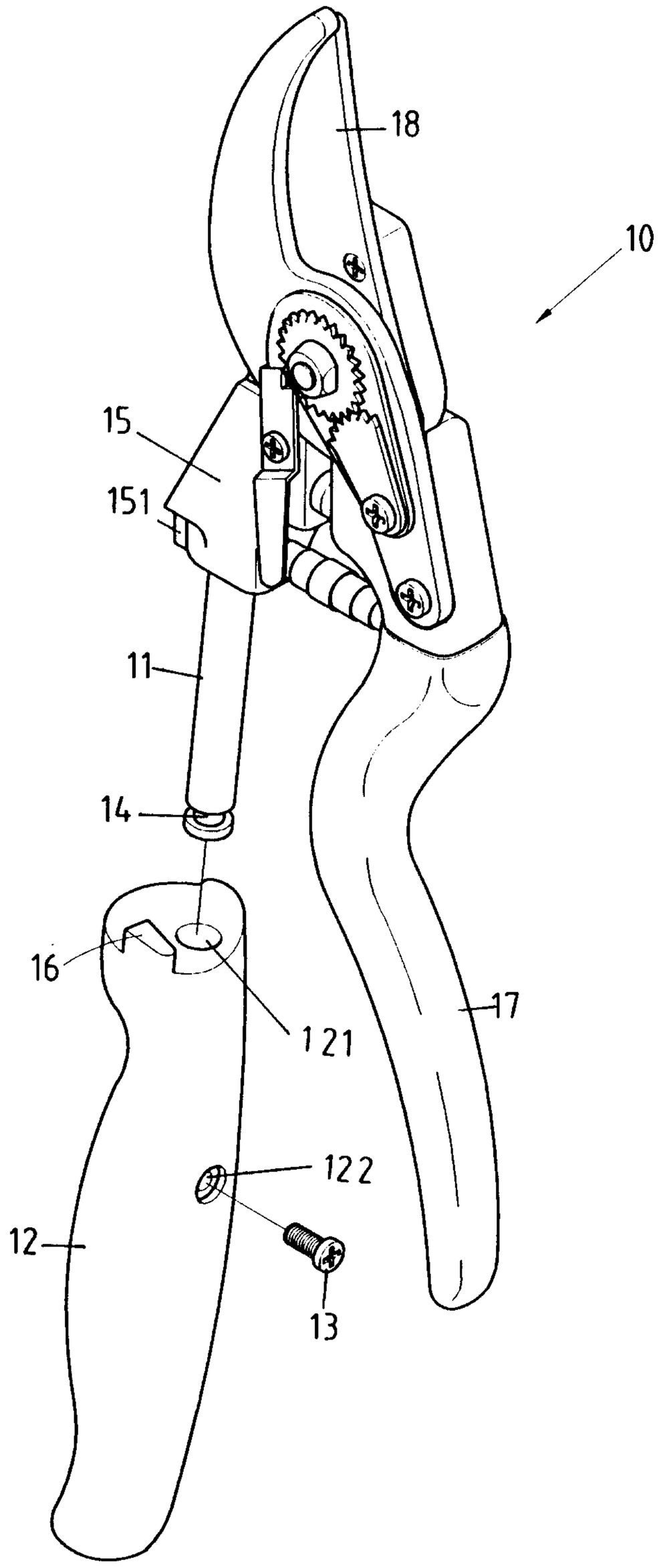


FIG.1
PRIOR ART

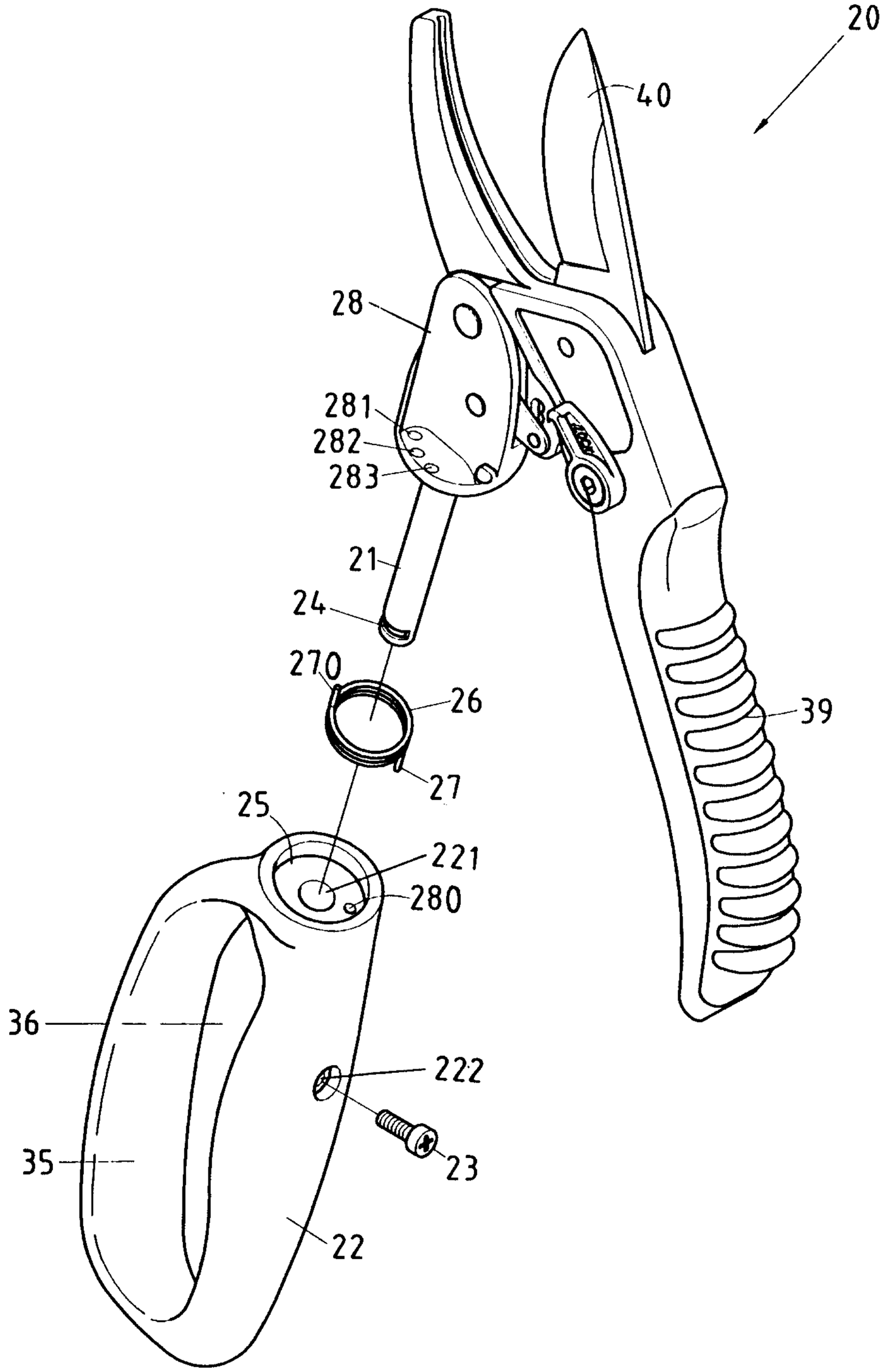


FIG.2

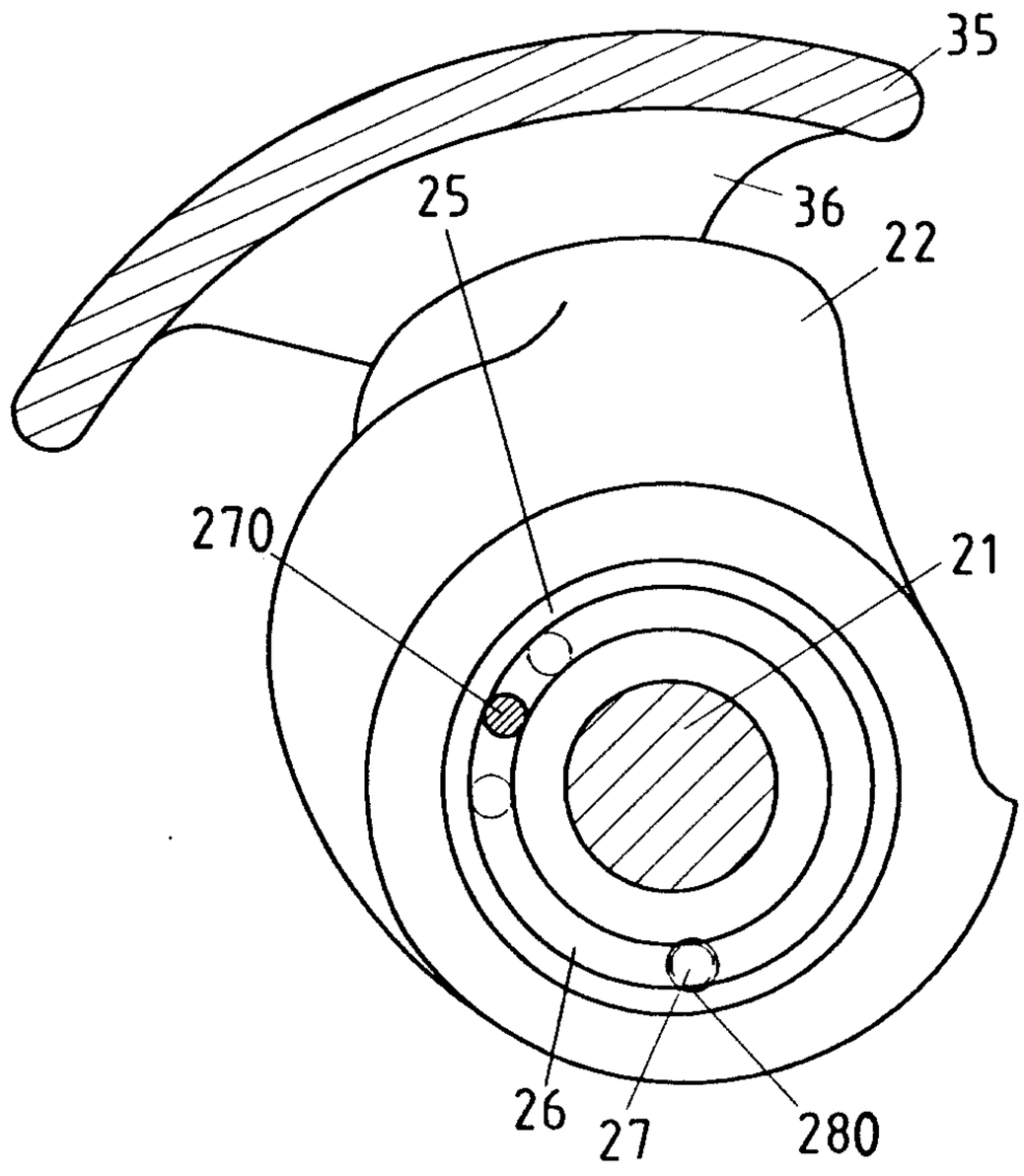


FIG.3

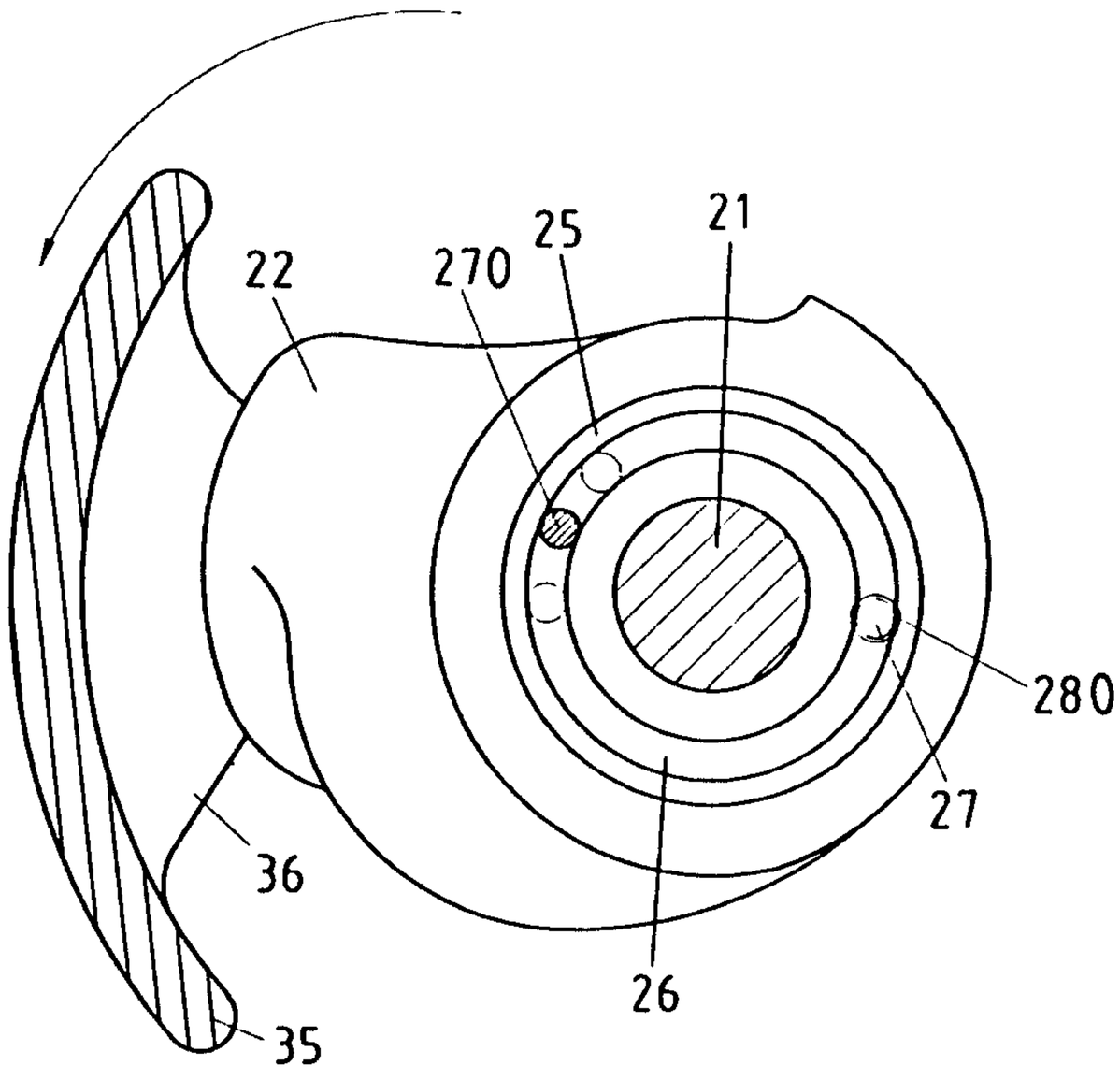


FIG.4

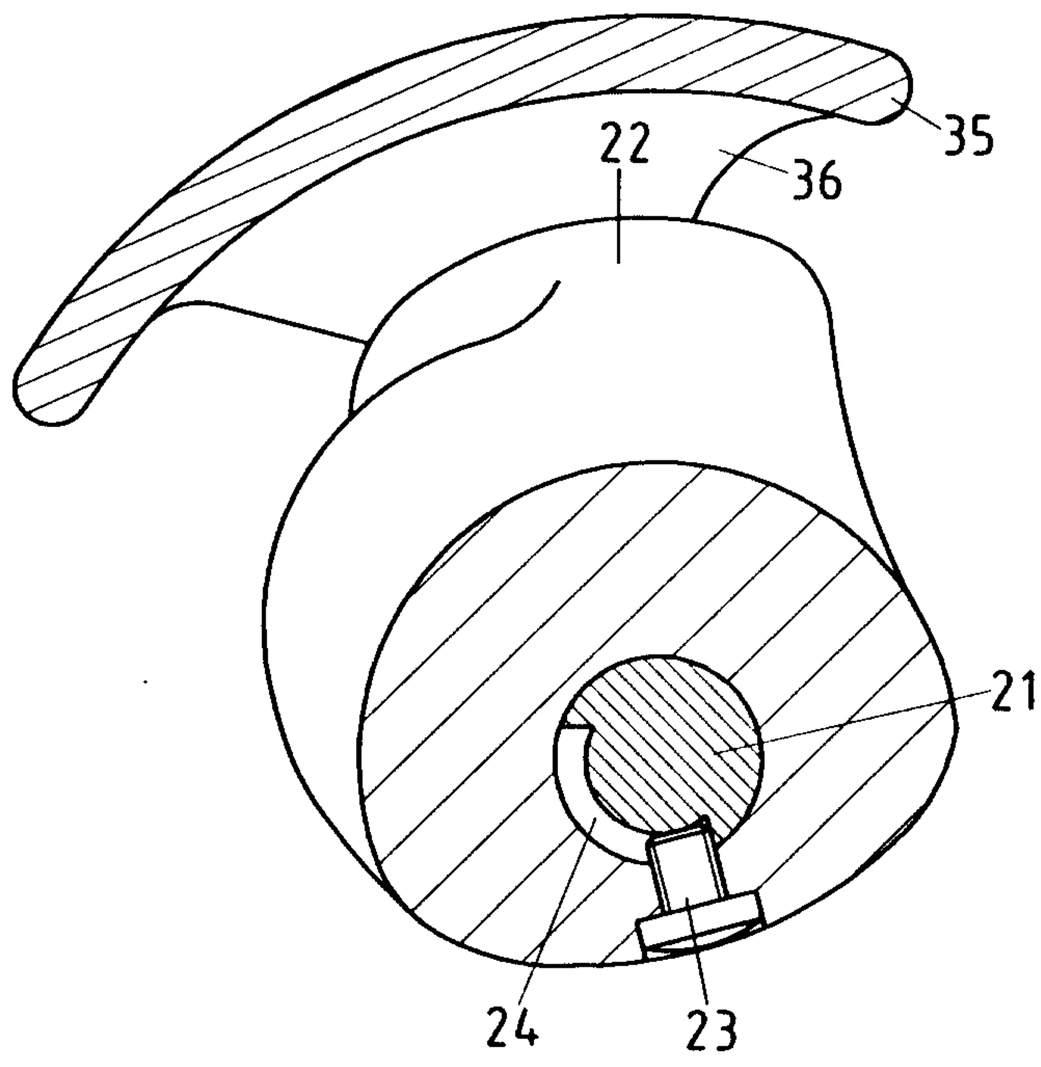


FIG.5

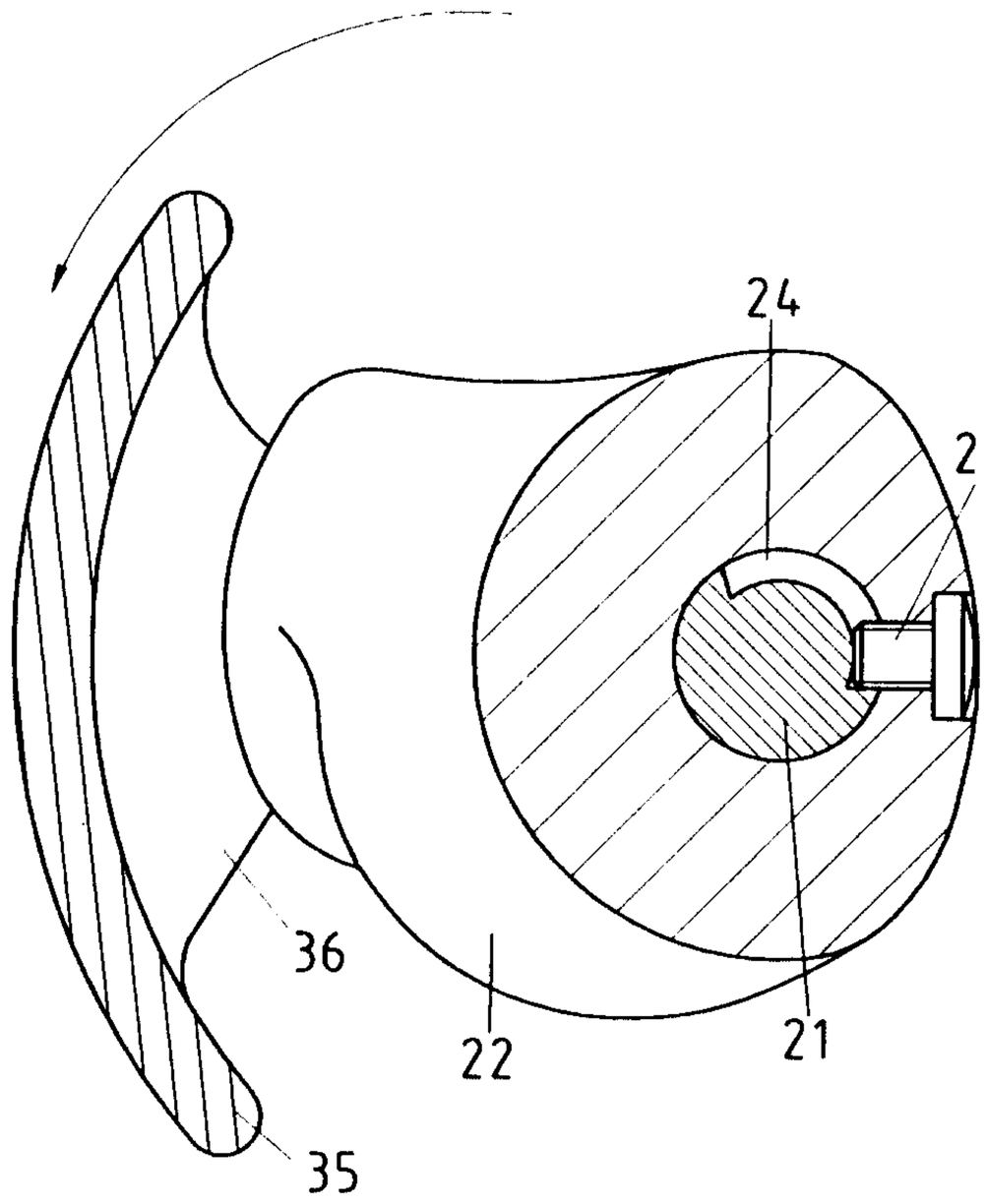


FIG.6

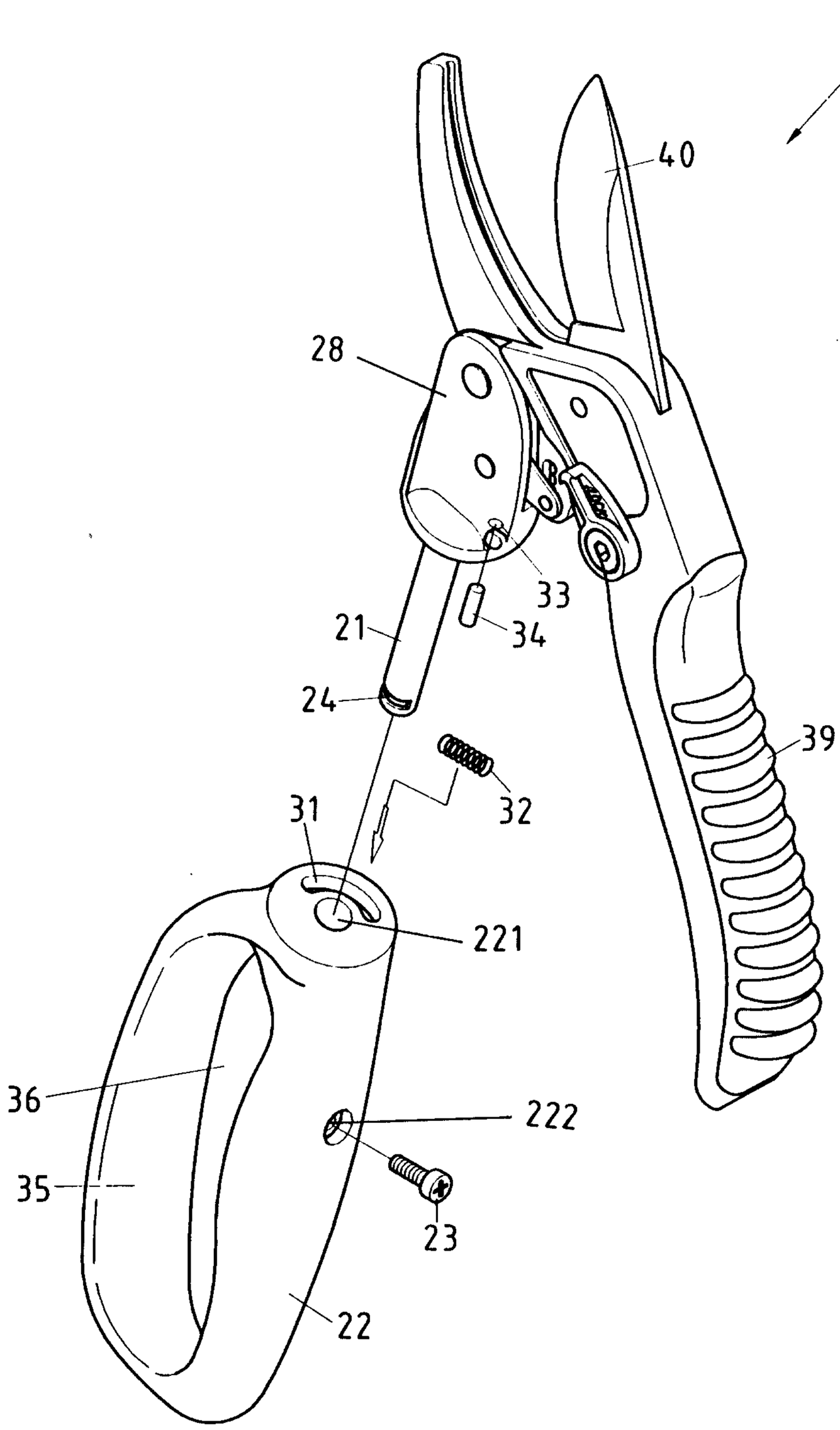


FIG.7

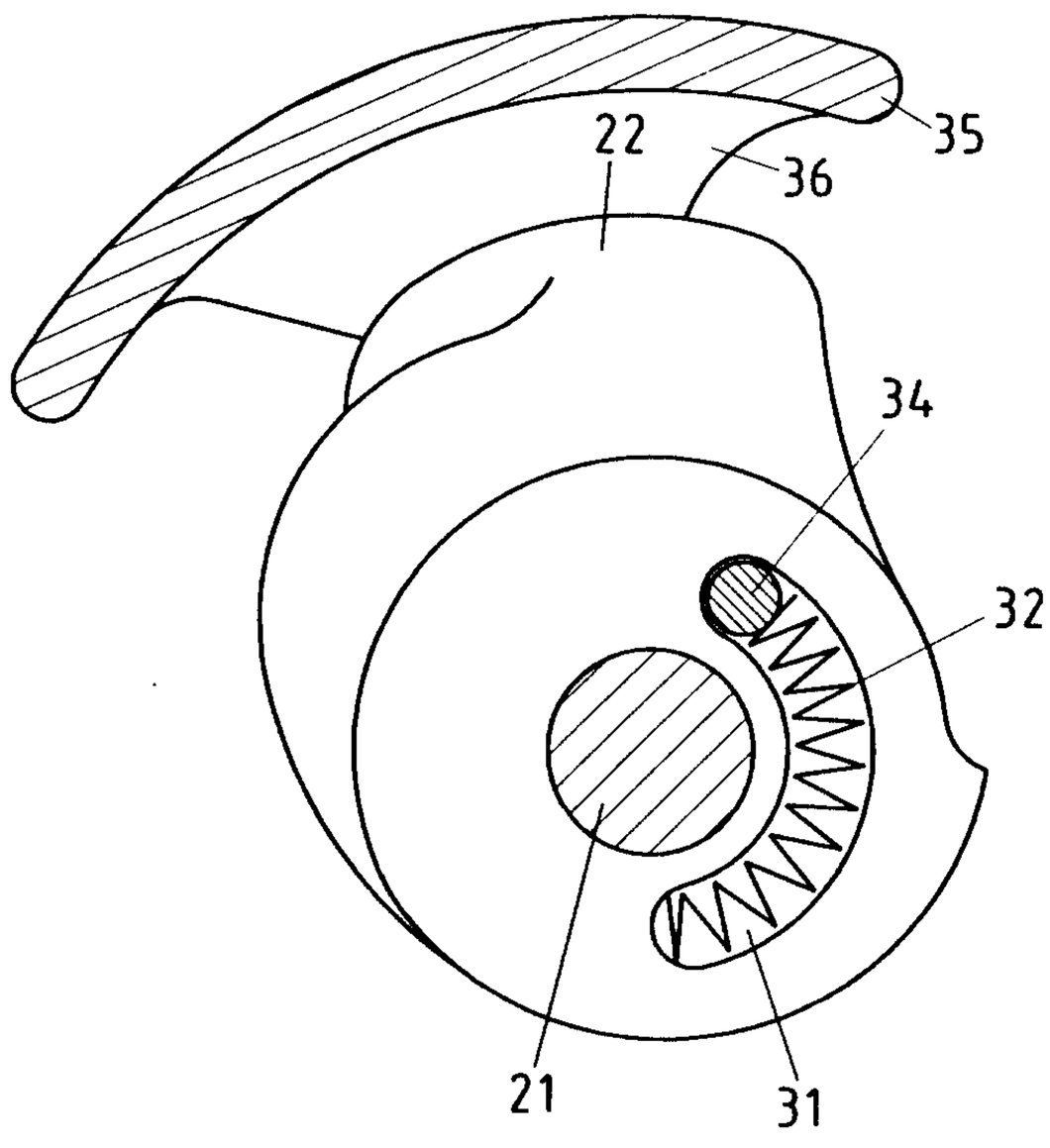


FIG.8

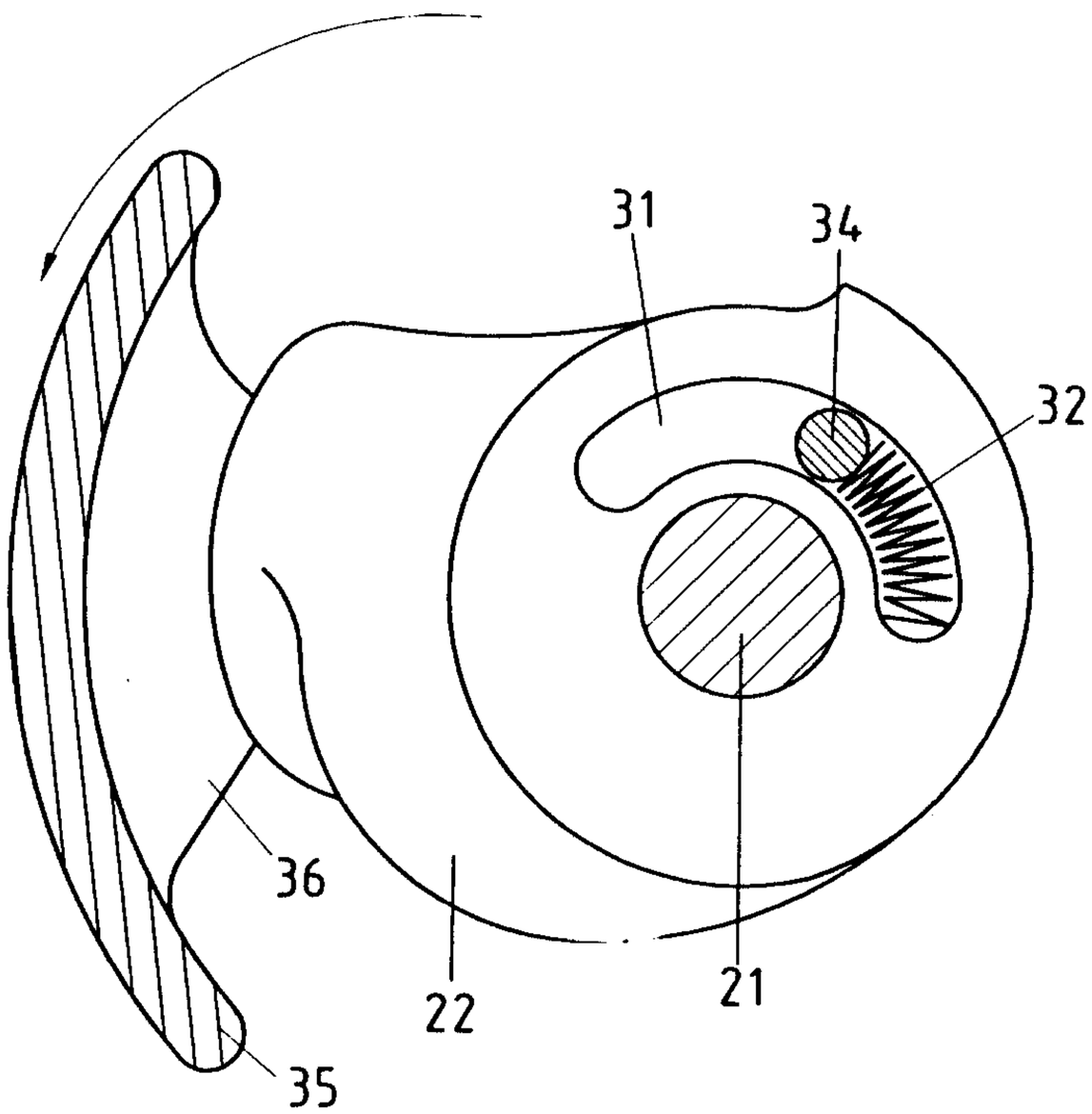


FIG.9

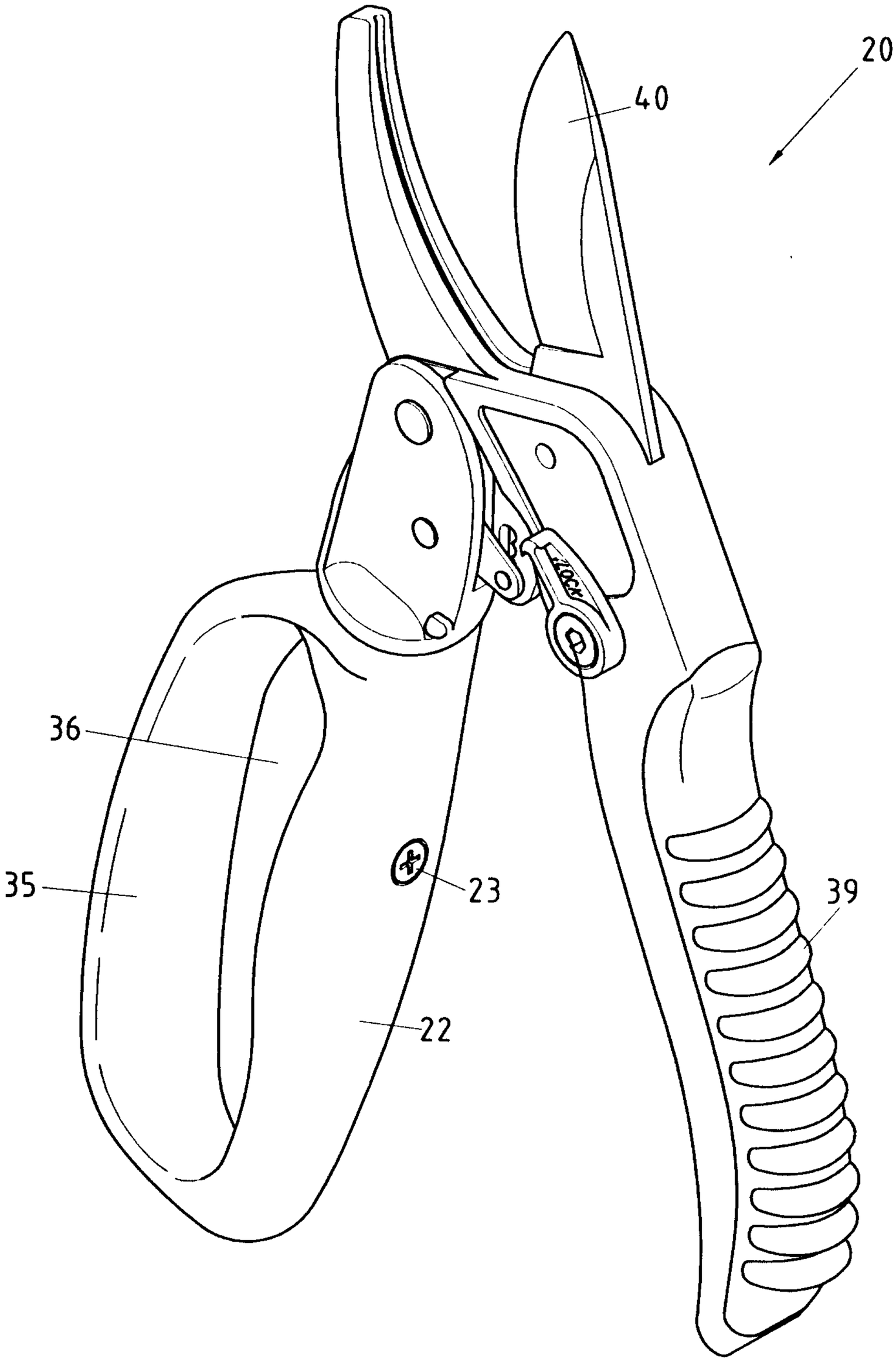


FIG.10

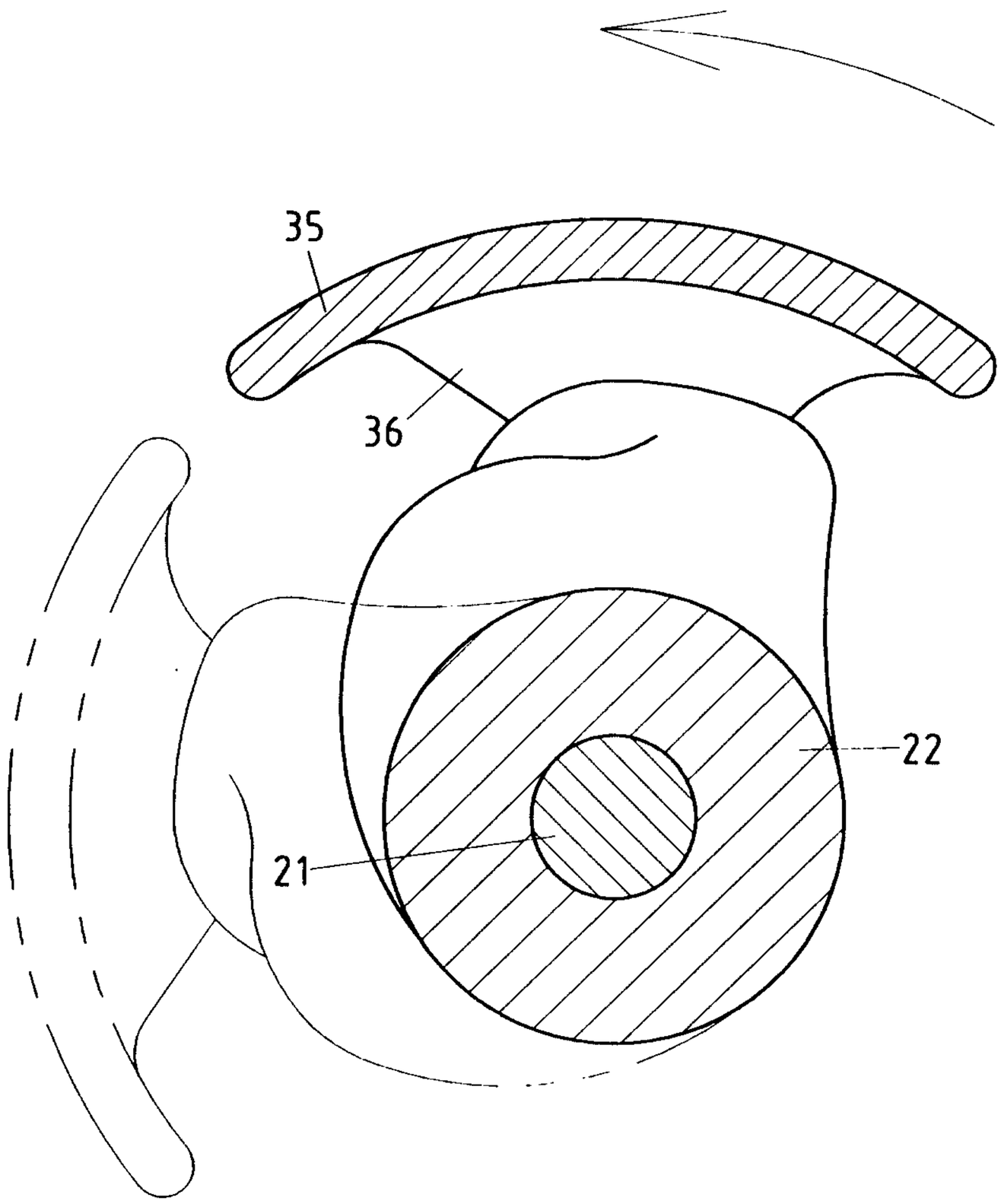


FIG.11

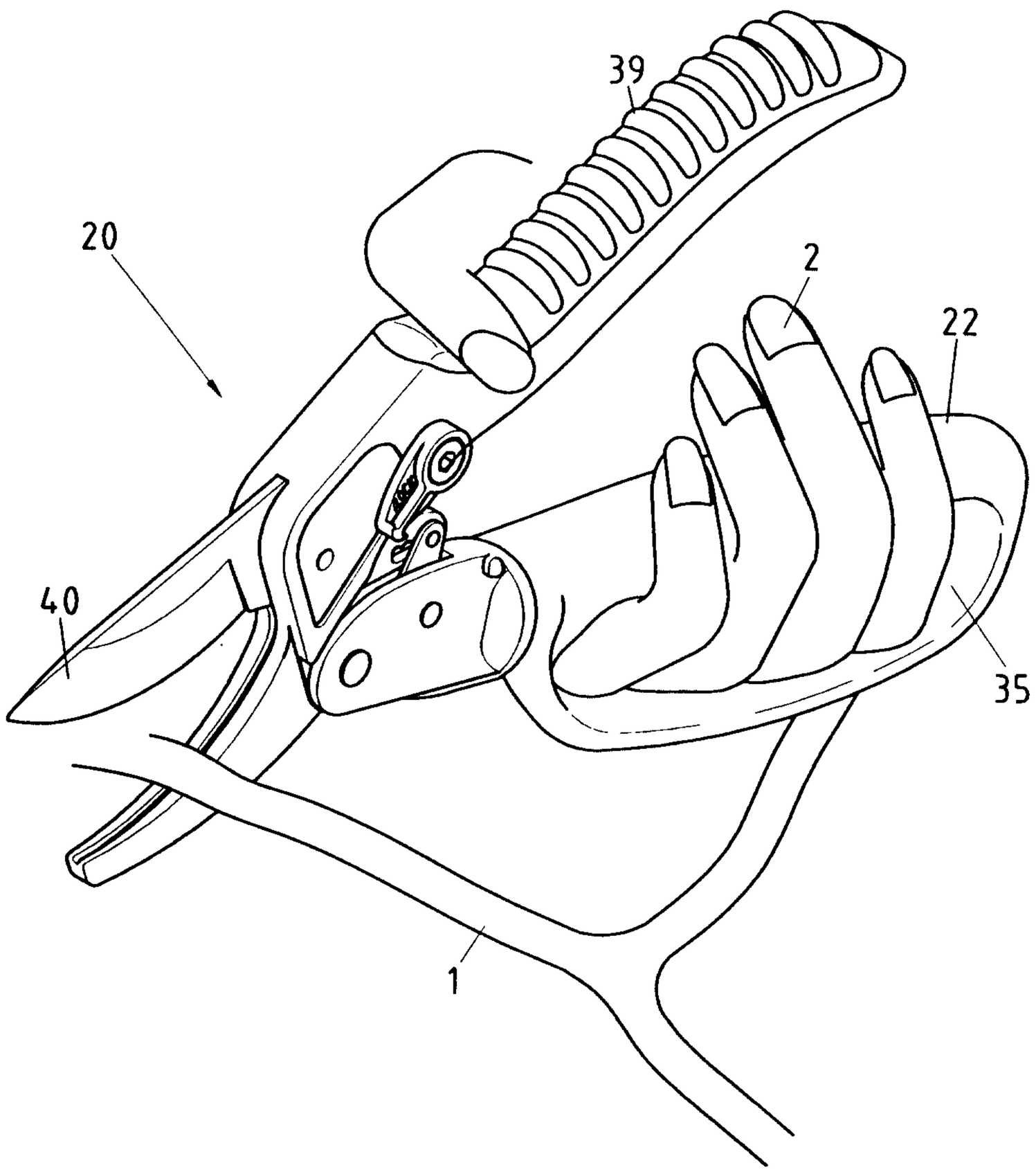


FIG.12

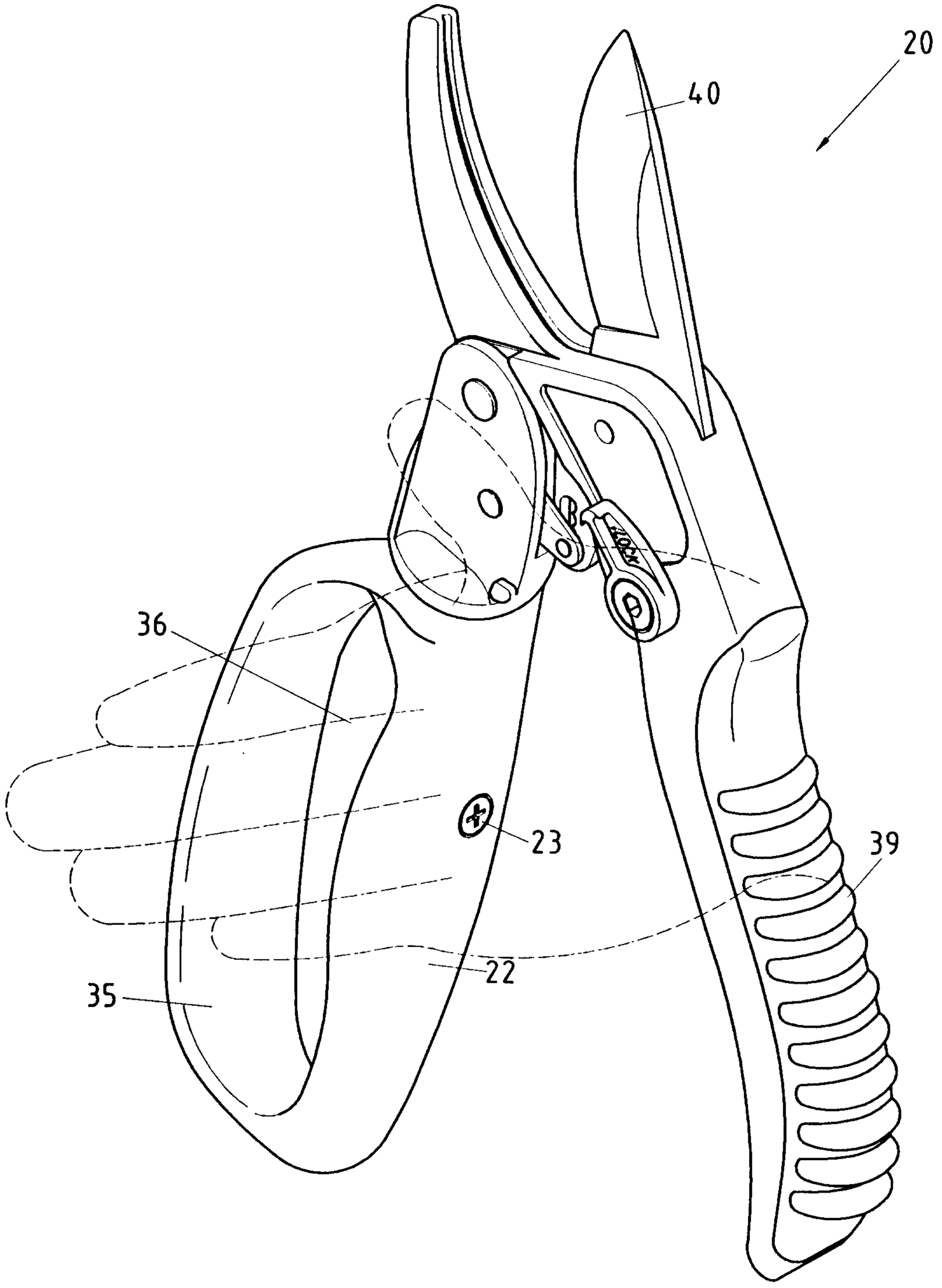


FIG.13

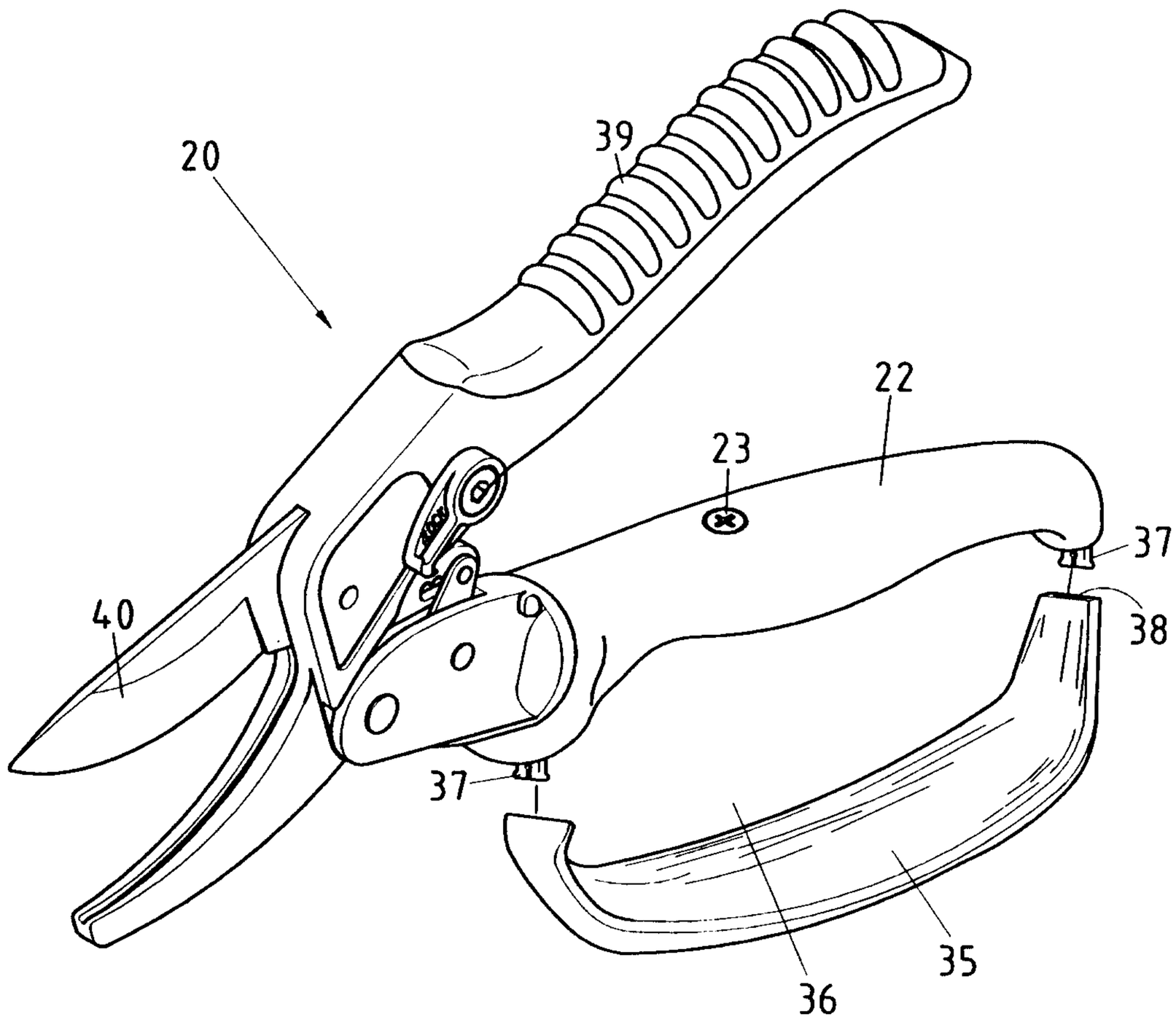
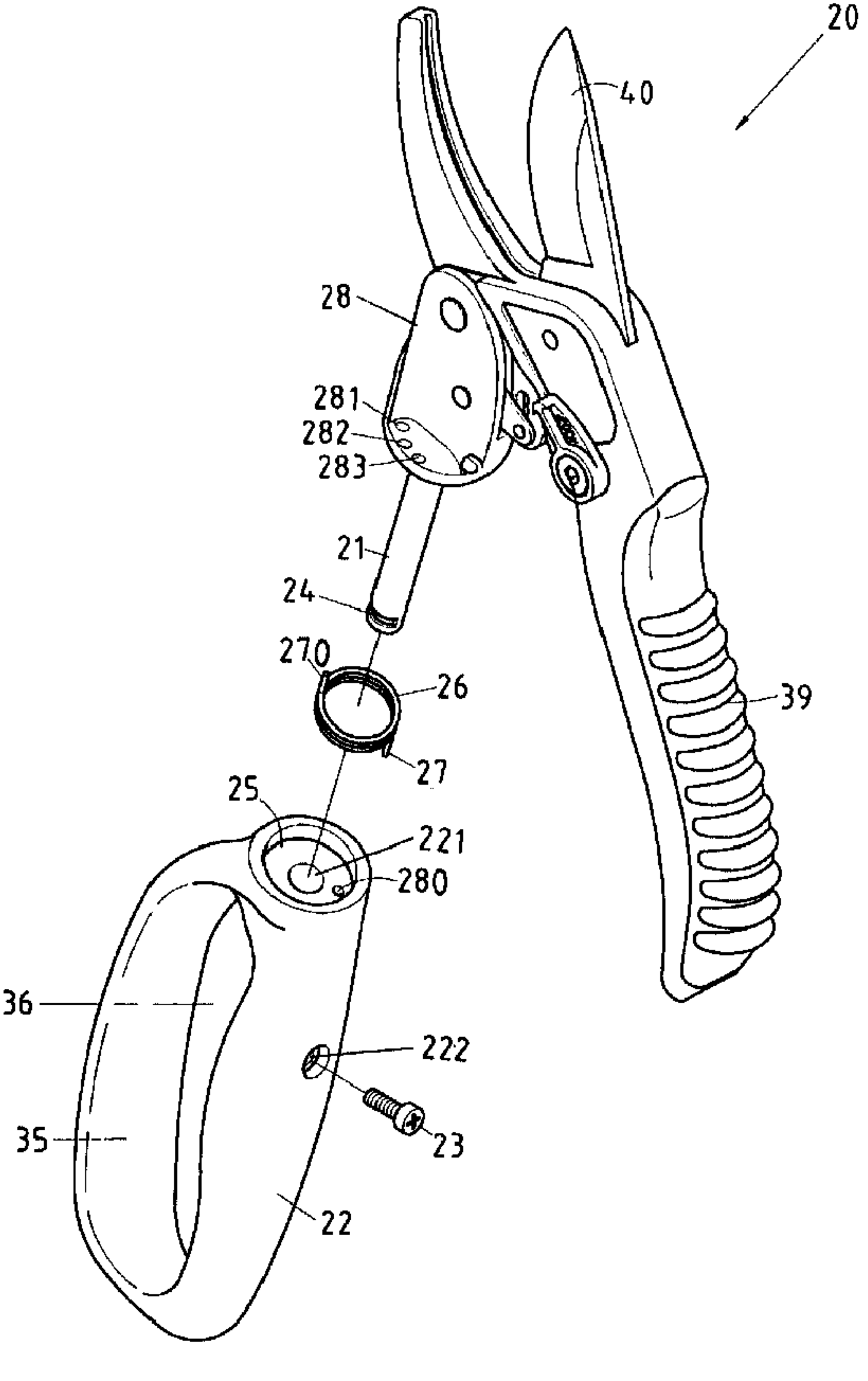


FIG.14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