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(30) Priority: **13.03.2000 US 523624**

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(54) **Pawl for a ratchet-type spanner**

(57) A ratchet-type spanner includes a handle and a box end extended from the handle and having a hole. A slant hole is defined in a web between the handle and the box end and communicated with the hole of the box end. A ratchet gear includes an inner periphery for driving a fastener. The ratchet gear is rotatably mounted in the hole of the box end. A pawl is mounted in the slant hole and includes a first end with teeth for releasably

engaging with teeth of the ratchet gear. A plug is securely mounted in the slant hole by force-fitting engagement with an inner periphery defining the slant hole. An elastic member is mounted in the slant hole and has a first end attached to the second end of the pawl and a second end attached to the plug for biasing the pawl to engage with the ratchet gear. The first end of the pawl includes a beveled face that faces the inner periphery of the slant hole.

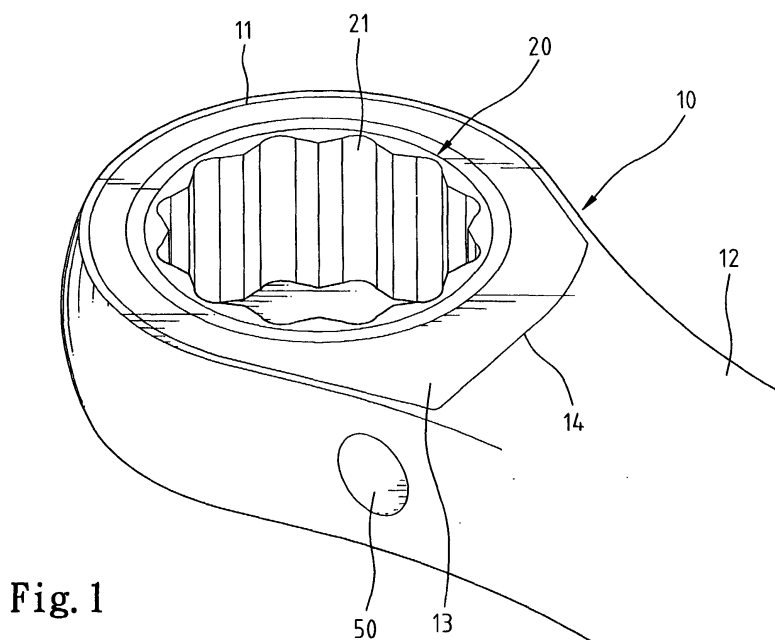


Fig. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 00 12 2394

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	DE 299 01 793 U (HSIEH CHIH CHING) 1 April 1999 (1999-04-01) * page 4, line 21 - line 27; figures 5-7 *	1	B25B13/46
A	US 4 991 468 A (LEE CLARK J) 12 February 1991 (1991-02-12) * column 2, line 34 - line 36; figure 4 *	1	
A	US 2 201 827 A (FROESCHL OTTO P ET AL) 21 May 1940 (1940-05-21) * page 1, right-hand column, line 10 - line 15; figure 4 *	1	
<p>The present search report has been drawn up for all claims</p>			<p>TECHNICAL FIELDS SEARCHED (Int.Cl.7)</p> <p>B25B</p>
Place of search		Date of completion of the search	Examiner
THE HAGUE		21 January 2003	MAJERUS, H
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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Application Number
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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-5



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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 00 12 2394

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-5

Ratchet type spanner with a handle, a box end, a ratchet gear and a spring loaded pawl mounted in a slant hole defined in a web closed by a plug, said plug being mounted by force-fitting engagement to close the slant hole

2. Claims: 6-9

Ratchet type spanner with a handle, a box end, a ratchet gear and a spring loaded pawl mounted in a slant hole defined in a web closed by a plug, said web including an inclined indication area for indicating the ratcheting direction

3. Claims: 10-20

Pawl including a beveled face that faces the inner periphery of the slant hole of a ratchet type spanner and ratchet type spanner with a handle, a box end, a ratchet gear and a spring loaded pawl mounted in a slant hole defined in a web closed by a plug using said pawl

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 12 2394

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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21-01-2003

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 29901793	U	01-04-1999	DE 29901793 U1	01-04-1999
US 4991468	A	12-02-1991	NONE	
US 2201827	A	21-05-1940	NONE	