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Sweeper head support.

This invention relates to a sweeper head support comprising a plate shaped elongated part (10) having a fastening means for a shaft. The part (10) comprises a downwardly facing flat surface (11) on which a softer layer (12) might be applied and an upwardly facing surface (13) on which there is a fastening arrangement for the sweeper head (27). The lastmentioned arrangement comprises edge parts (14) extending at the opposite longitudinal sides

of the elongated part each edge part having a flange (15) which is directed inwards and which is mainly parallel to and placed at a distance from the upwardly directed surface. The fastening arrangement also comprises at least one leaf spring (20) clamped between the flange (15) and the upwardly facing surface (13) the spring being so arranged that it presses the sweeper head (27) towards the flange.

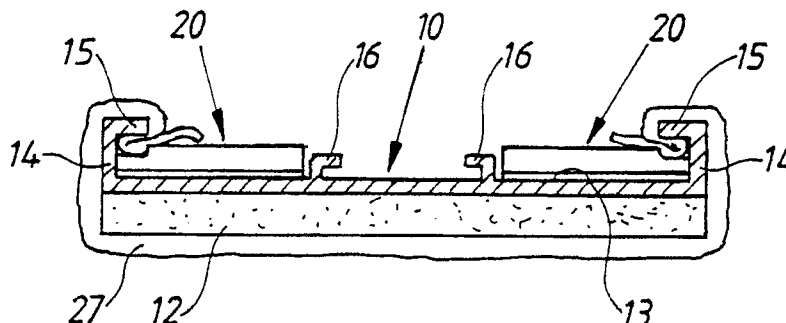


Fig. 2

SWEEPER HEAD SUPPORT

This invention relates to a sweeper head support, comprising a plate shaped elongated part with a fastening means for a shaft, said elongated part comprising a downwardly facing flat surface on which a softer layer may be applied and an upwardly facing surface on which there is a fastening arrangement for the sweeper head this arrangement comprising edge parts extending at the opposite longitudinal sides of the elongated part each edge part having a flange which is directed inwards and which is mainly parallel to and placed at a distance from the upwardly facing surface.

Sweeper head supports of the above mentioned type are previously known by Swedish patent 7512094-9. In order to fasten the sweeper heads at this supports a threadlike spring which is clamped between the edge parts is used the flanges preventing the threadlike spring to separate from the support. However, these threadlike springs have a complicated design and the production of the springs comprises several bending operations which are comparatively expensive.

The purpose of this invention is to create a simple fastening arrangement for the sweeper heads and which is based on the previously known support. This is achieved by an invention having the characteristics mentioned in the claims.

An embodiment of the invention will now be described with reference to the accompanying drawing in which Fig. 1 is a plan view of the support according to the invention without any sweeper head whereas Fig. 2 is a section in a larger scale on the line II-II in Fig. 1 but with an associated sweeper head and Fig. 3 is a perspective view of a spring being used for fastening the sweeper head.

As appears from the Figures the sweeper head support comprises an elongated plate 10 which preferably is an aluminium profile having a downwardly facing flat surface 11 on which a softer layer 12 for instance of rubber or plastic is glued. The upwardly facing surface 13 of the support has two opposite upwardly extending edge parts 14 each having a flange 15 which is directed towards the opposite edge.

Moreover the upwardly facing surface 13 has two central L-shaped flanges 16 which are parallel to the edge parts 14 and serve as spring holders between which a fastening means 17 for an universal joint 18 is clamped. The universal joint 18 is connected to a socket 19 for a shaft, not shown.

Between the flanges 16 and the edge part 14 there are several leaf springs 20 each leaf spring comprising an elongated plate which is so bent that when seen in a longitudinal section there is a flat

end part 21 which via an upwardly inclined section 22 is connected to a central flat surface 23. This central surface 23 has a width which is somewhat less than the width of the remaining part of the leaf spring and continues into a further flat section 24 which is inclined downwards the leaf spring in the transition area between the surface 23 and the section 22 and 24 having rounded edge parts 25. The largest width of the leaf spring is somewhat less than the distance between the flange 16 and the edge part 14 which means that the leaf spring can be inserted between the flange 15 and the surface 13 so that the edge parts 25 are pressed towards the flange 15. In order to retain the leaf spring 20 at the surface 13 of the support - if the spring forces should not be sufficient - it is possible to fasten the end part 21 at the surface 13 by means of gluing, selfadhesive tape, spotwelding and so on. Since the central surface 23 has a width which is less than the remaining part of the leaf spring a narrow slot 26 is created between the edge of flange 15 and the outwardly directed edge of the surface 23. This means that one or several above each other placed sweeper heads 27 can, as it is shown in Fig. 2, be folded - about the sweeper head support and with their opposite edges be inserted between the leaf spring 20 and the flange 15 and by clamp action be fixed at the support.

In order to loosen a sweeper head from the support either the central surface 23 of the leaf spring is pressed down or it is possible to pull the sweeper head from the support by applying a pulling force directly at the edge part of the sweeper heads.

The leaf spring 20 also has a fastening surface 28 for other types of sweeper heads the fastening surface comprising a Velco® tape which when folding a sweeper head about the support holds the sweeper head at the support.

Claims

1. Sweeper head support comprising a plate shaped elongated part (10) with a fastening means (19) for a shaft, said elongated part comprising a downwardly facing flat surface (11) on which a softer layer (12) may be applied and an upwardly facing surface (13) on which there is a fastening arrangement for the sweeper head (27), this arrangement comprising edge parts (14) extending at the opposite longitudinal sides of the elongated part each edge part having a flange (15) which is directed inwards and which is mainly parallel to and placed at a distance from the upwardly facing

surface **characterized** in that the fastening arrangement also comprises at least one leaf spring (20) intended to act between the flange (15) and the upwardly facing surface (13) the spring being so arranged that it presses the sweeper head (24) towards the flange. 5

2. Sweeper head support according to claim 1, **characterized** in that the leaf spring (20) comprises a - in plane view seen - rectangular bent plate with at least one end part (21) which rests on the upwardly facing surface (13) and which via a flat section (22) which is inclined upwards continues into a mainly central flat surface (23) which continues into a downwardly inclined flat section (24). 10 15

3. Sweeper head support according to claim 2, **characterized** in that the largest width of the leaf spring (20) is mainly as large as the distance between the edge part (14) and an upwardly extending flange (16) on the upwardly facing surface the flat surface (23) having a width which is less than the width of the remaining parts. 20

4. Sweeper head support according to claim 3, **characterized** in that the flat surface (23) has such a width that a narrow slot is created between the edge of the spring (20) and the edge of the flange (15). 25

5. Sweeper head support according to any of the preceding claims, **characterized** in that on at least one of its upwardly facing surfaces is provided with a Velcro® tape area (28). 30

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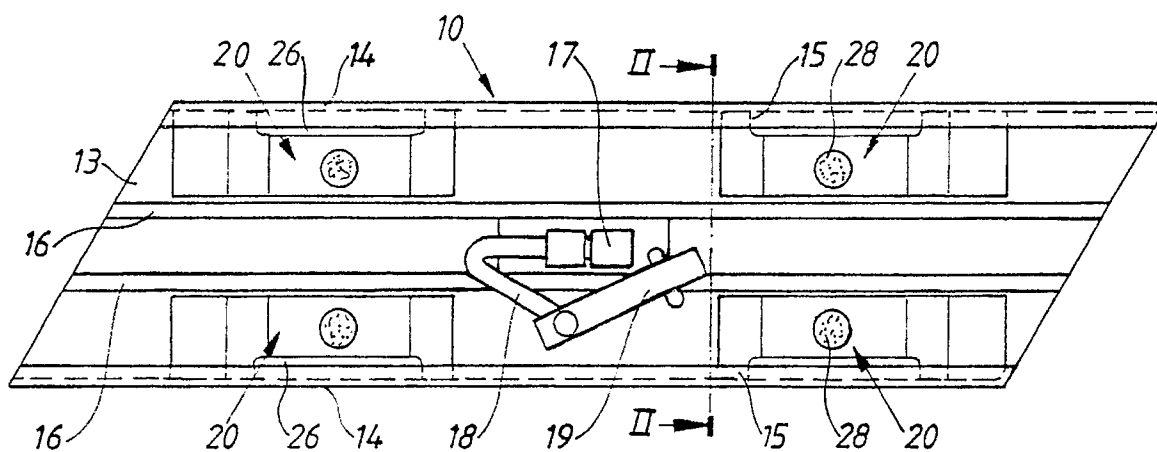


Fig. 1

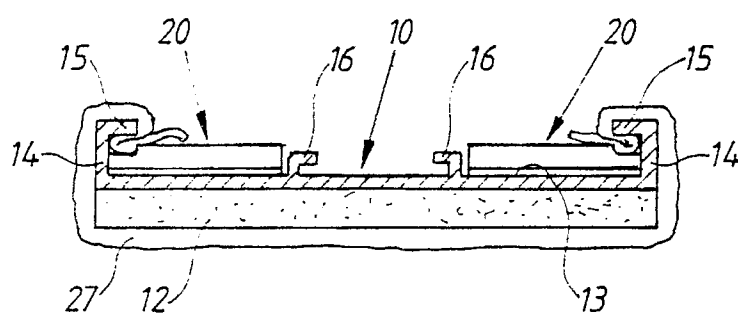


Fig. 2

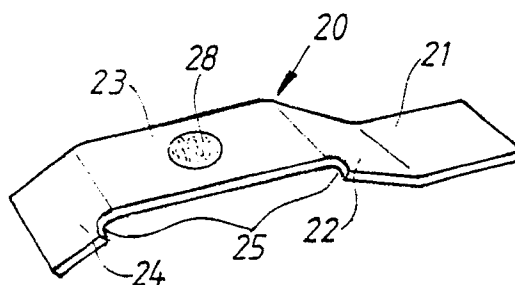


Fig. 3



European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 85 0297

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.5)
D,A	SE-A-7 512 094 (I.W.E. STÄLGREN) * Figures 1,2 * - - -	1,2,3	A 47 L 13/256 A 47 L 13/44
A	EP-A-0 277 102 (K.A. OLOFSSON) * Figures 1,2 * - - -	1,2,3	
A	US-A-4 685 167 (J.H. MURRAY) * Abstract; figure 1 * - - - - -	4	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A 47 L
The present search report has been drawn up for all claims			
Place of search		Date of completion of search	Examiner
The Hague		02 December 90	HENNINGSEN O.P.
CATEGORY OF CITED DOCUMENTS 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 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			