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(54) Composable handle for room cleaning tools.

(57) A handle formed of two or more longitudinal pieces (1, 3) which can be screwed together while being axially aligned, the externally threaded (2) end of one piece (1) being capable to be screwed into the partially threaded (4) socket of a second piece (3), the partial thread being formed by upwardly projecting relief elements.

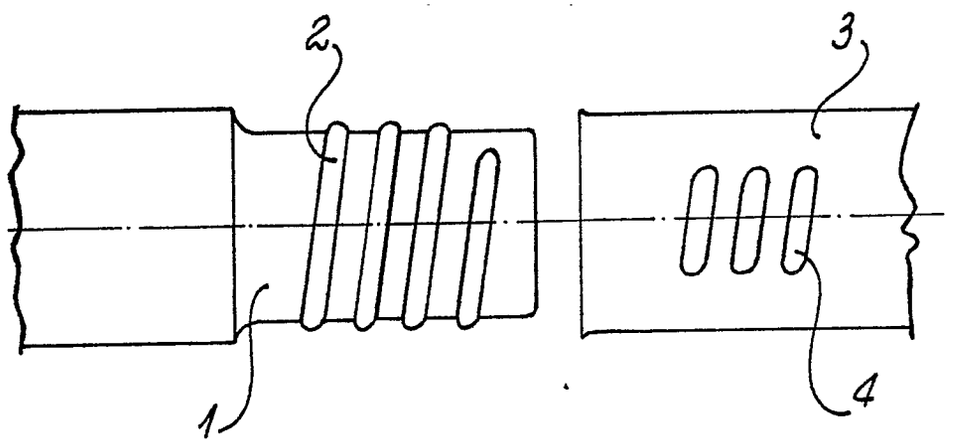

FIG. 1

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Composable handle for room cleaning tools

The invention refers to a collapsible handle to be used on tools for room cleaning, such as brooms, brushes of other, which -as a principle- can be mounted without interposition parts, allows a high resistance when connected and determines a retention effect apt to carry out a solidarily binding working condition.

In order to reduce the manufacturing, storage and transport costs, and particularly in the case of sales by correspondence, the exigency is felt of decomposing the above lengths in longitudinal parts which can then be compacted in manufacturing according to encumbrances admitted for despatch by mail and manual transport.

Some connecting devices are well known which, for the use, show interposition parts working as activators of binding means. One of these systems uses an automatism with a spring pivot which, when getting outwards, blocks the connecting parts in binding seat. In another device, a ring-shaped part is used which can be put in expansion by rotating in advancement a connecting coaxial part. These systems require rather high costs and their fragility, with the time, brings to inefficiency or anyhow to degradation of the means due to the parts disjunction. At present, the conventional means for directly connecting the parts consists in carrying out a coaxial composibility by screwing a threaded pin in a spiral seat of the coaxial part. However, when carrying out the screwing shaping on the sheet tubolar of the coaxial component, its structure is weakened and, therefore, it is no longer fit to resist to the handle overstressing; moreover, this system does not allow a sensible retention effect of the parts to disengaging.Since handles exceeding some thickness cannot be used, as they would be considerably heavy, this system consequently turn out to be at present unfit.

Starting from these conventional use techniques, the invention carries out the solution of the above mentioned problems by adopting a new conception system in carrying out the screwing seat of the connecting coaxial component. This system avoids the structural weakening of the said part and determines a balanced retention effect to the conventional disengaging overstressing on the handle.

Substantially, the handle can be decomposed in two or more longitudinal lengths which can be connected by screwing. For connecting the parts, these ones are brought into direct screwing up to the beating limit of the threaded pin on the axial part into the corresponding screwing seat with special conformation of the coaxial part. This seat consists of counterposed sets of screw-shaped lengths, singularly emerging from the inside wall of the cylindrical structure. The proceeding avoids to weaken the coaxial part, which would occur if carrying out the complete screwing of this part; furthermore, by means of the counterposed sets of bombed reliefs, which singularly press into the helical furrows of the axial body, it performs a permanent balanced retention effect which tends to perform a solidarily binding condition between the connection parts. This because the push ing and, therefore, pressing effect of a bombed part emerging from an inside cylindrical wall is stronger than the one of a plate structure with helical shaping.

An execution form is illustrated in a merely indicative way in the drawings of table 1.Referring to this table, fig. 1 represents the detached connecting parts seen from one side in order to evidence the furrows that inside determine the set of the threading relief lengths. Fig. 2 is the view of the same components observed from the other side to point out the relevant other set of threading furrows. In fig. 3 the above components are in connection. Fig. 4 is the perspective view of the joined connection terminals as above. Fig. 5 shows a large brush and a broom mounted on handles according to the present system.

The version uses components in tubular sheet. Axial pivot 1 with helical threaded shapes 2 are foreseen and the coaxial part 3 with counterposed threading lengths 4 and 5 emerging from the inside cylindrical wall of the above coaxial component.

Practically, the form of the shapes, the section and thickness of the connecting components, the materials, the number of components of the set and anything else in this connection may be foreseen in different way.

Claims

1) Composable handle for room cleaning tools, characterized by the fact that it can be decomposed in two or more longitudinal parts which can be coaxially connected by means of screwing. To connect the parts, these ones are brought in direct screwing by inserting them up to the beating limit of the screwed pin (1) of the axial part into the corresponding screwing seat, with particular conformation, of the coaxial part (3). This seat consists of a counterposed set of threaded lengths (4 and 5) singularly emerging from the inside wall of the cylindrical structure. This proceeding avoids to weaken the coaxial part (3), what would occur by performing the complete threading of this part, and furthermore, by adopting the counterposed set of bombed reliefs, singularly pressing in the relevant

furrows of the axial part, assures a permanent retention effect which tends to perform a solidarily acting binding condition.

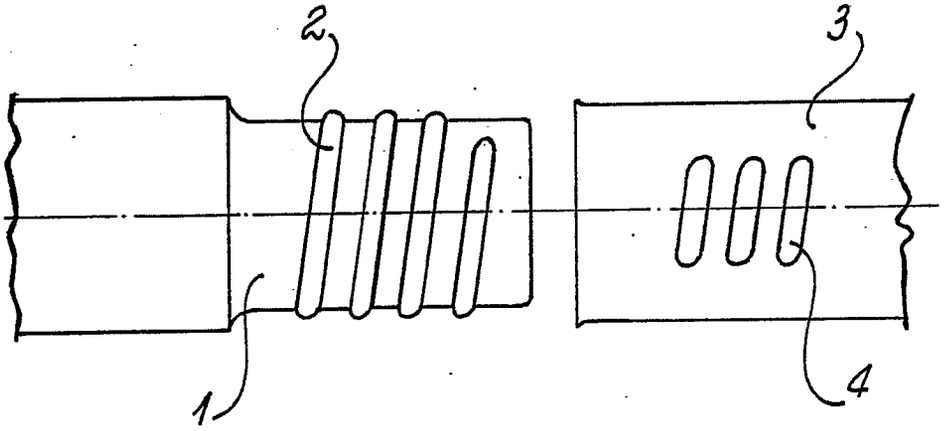

FIG. 1

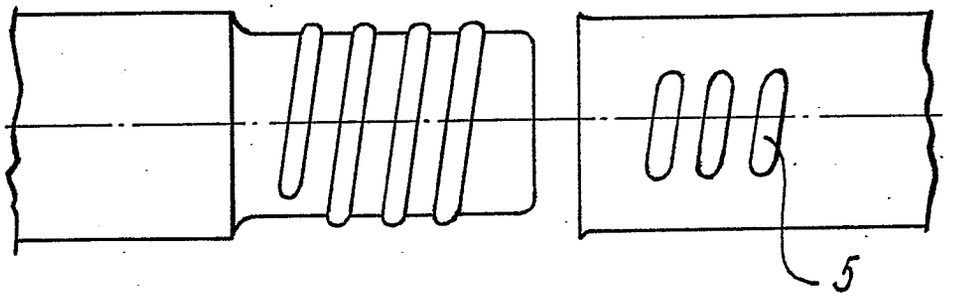

FIG. 2

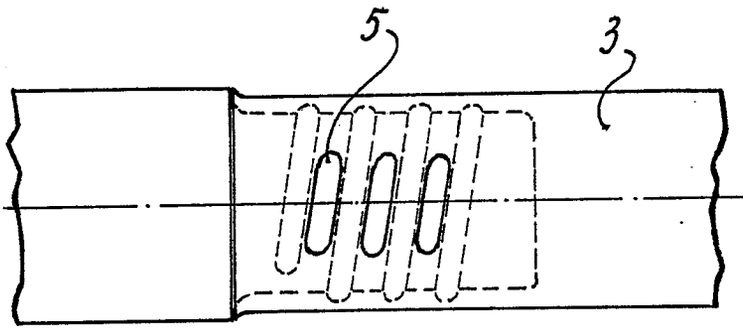

FIG. 3

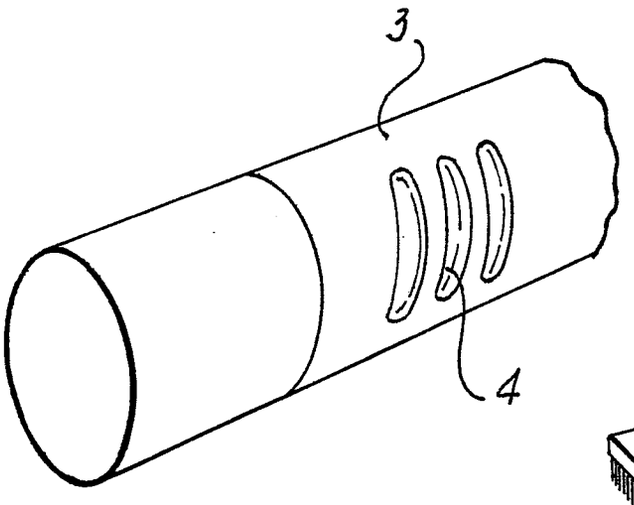

FIG. 4

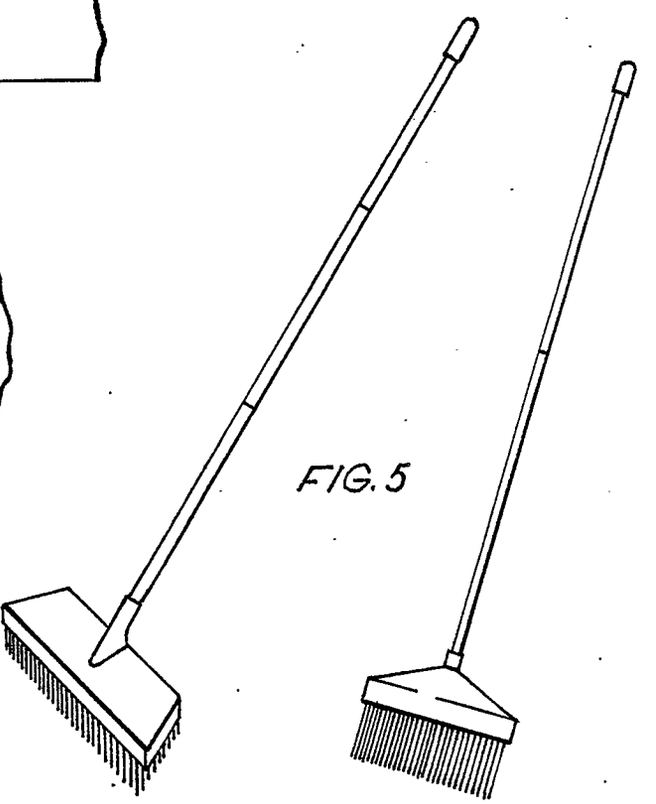

FIG. 5

European Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 88 10 8181

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.4)
X	FR-A-2 495 039 (VEB METALL MIESTERHORST) * Figures 1-4; claim 3 *	1	B 25 G 1/04 B 25 G 3/30

TECHNICAL FIELDS SEARCHED (Int. Cl.4)

B 25 G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	30-01-1989	CARMICHAEL D.G.

CATEGORY OF CITED DOCUMENTS

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