



PATENT SPECIFICATION

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(54) Title: A chimney sweep brush for difficult bends and various diameters of flue pipes

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Title

A chimney sweep brush for difficult bends and various diameters of flue pipes

Field of invention

- 5 The present invention relates to a chimney sweep brush; in particular the invention relates to a new type of chimney sweep brush that has a fixed guide wheel and a brush section that flexes in and out to suit different diameters of flue liner pipes and bends.

Background to the invention

- 10 The reason I invented the brush was I could not find a suitable chimney sweep brush to negotiate the difficult 90-45 degrees bends and flue pipes of various diameters found at the back of stoves and insert fires to be cleaned manually without taking out the stove or insert fire or by going up on the roof to clean the chimney of these stoves or insert fires. In today's market these methods are not accepted because of health and safety reasons when
- 15 lifting heavy stoves and fire places and going up on the roof give cause for falls and back injuries. The standard chimney sweeping brushes for cleaning the chimney manually on the market today here in Ireland have 4 rows of closely spaced bristles making the brushes too rigid and unable to negotiate the difficult bends and flue pipes of stoves and insert fires.

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Summary of the invention

- According to the invention there is provided, as set out in the appended claims, a chimney sweep brush that's over size design allows for it to sweep going up the chimney and the same coming back down. The brush comes in two sizes of 200mm and 250mm in
- 25 diameter; it has 3 rows of flexible nylon bristles evenly spaced at 25mm apart and will open/close to suit the different diameters of the pipes and bends. The brush has a fixed wheel of 40x40mm mounted on a bracket to its front in order to guide it around the difficult bends. The back end of the brush has an 18mm universal brass connector for to join the chimney sweeping rods to as the brush tackles the complicated task of manually
- 30 cleaning the chimney of stoves and insert fire from the bottom up, leaving the stove or insert fire in place. Because of the brush's overall length 135mm, it guarantees the brush's safe return when negotiating the 90 degrees bend coming down the chimney as the wheel only guides it on the way up. The 3 parts needed to construct the brush are joined by a single bolt and nut making the changing of different size brush sections easy after wear and

5 tear. Because of the brush's strong construction, the brush section is the only part that needs replacing. The larger size brush section will be used for the standard chimneys in modern houses, those built in the last 15-20 years. The smaller brush section will be used for cleaning the chimney of the older types of houses, built more than 20 years ago, that
 10 are fitted with flexible metal liners that connect to the bends and flue pipes. With this new brush system, all stoves and insert fires fitted can be fully sealed, giving no cause for the stove to be undisturbed as the brush sweeps clean. People most likely to use this new brush are fire service personnel chimney sweeps and competent persons. Some people access these stoves by way of using a small brush 75mm diameter mounted on a spring or
 15 propelling the brush around the 90 degrees bend with a power drill. Other ways of accessing the stoves is via a soot door that is located on the vertical flue outlet pipe on the top of some stoves. The dimensions of these soot doors are 100x100mm again using the 75mm brush for cleaning the chimneys that are cleaned using these methods are not fully clean using any one of the brush sections I invented will go in through the soot door
 100x100mm then after passing the various bends and pipes will open out making sure that no soot or dust deposits are left in the chimneys after cleaning.

Brief description of the drawings

20 The invention will be more clearly understood from the following drawings. Figure 1 is a side view of the chimney and stove to be cleaned; showing the brush as it makes its way up through the various bends and flue liners. Figure 2 is showing the parts needed to assemble the brush. Figure 3 is showing the complete brush as it exits the clay flue liner at the top of the chimney.

Detailed description of the drawings

25 Referring now to the drawings and initially figure 1 the stove 1 is left in position for cleaning. The removable baffle plate 2 found inside the stove 1 that has to come out or be moved to the one side for the chimney cleaning purposes; the standard chimney rod 3 connects to the brush as it makes its way up through the chimney 6. The 90 degrees
 30 diameter bend 4 that joins the flue pipe 7 to the stove 1 and reducer. The brush 5 exiting the 90 degrees bend 4 in a closed position. The brush 5B making its way up along the 123mm diameter flue pipe in a closed position. The brush 5B starting to open out as it enters the reducer. The brush 5C exiting the reducer in an open position the brush 5D on root through the flue liners 7 in an open position. The chimney 6 is built with blocks and

plastered. The 200mm diameter clay flue liner 7 that lines the inside of the chimney 6. The brush 5E starting to exit the chimney near the top. The chimney pot 8 is where the brush 5 will reverse and come back down the same root opening and closing before exiting back out through the stove 1. Taking the rods 3 off for use another day.

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Referring now to figure 2; according to the invention it shows the 3 parts needed to make the brush 5 in figure 3 function and how it can be assembled. The guide wheel 12 is mounted on a bracket 11 and secured by way of nut and bolt 13. Then the bolt 14 goes in through a 10mm hole drilled in the center of the brass connector 9 that you can not see and then the bolt 14 carries on through the 10mm hole drilled in the center of the brush section 10 that you can not see and connects to a hole on the bracket 11 by way of nut and washer, the bolt 14 is tightened with a spanner. The 3 parts 9/10/11 become secure. The brush 5 is complete and ready to use.

15 Referring now to figure 3; the complete 250mm diameter brush 5 exiting the 200mm chimney pot 8. The standard chimney rod 3 is connected to the brush 5 which in turn then connects to the chimney rod 3A which is one of at least 11 needed to complete the cleaning of a 2-story house chimney.

20 The invention is not limited to the embodiments previously described but may be varied in both construction and detail.

Claims

1. A chimney sweep brush for manually cleaning chimneys of stoves and insert fires, of various diameter flue pipes and bends, comprising:

a specially constructed brush section (10) that flexes in and out to suit the different diameters of pipes and bends;

a permanently fixed wheel (12) mounted on a bracket (11) by nut and bolt (13) to the upper brush section (10) to guide it around the bends;

a universal brass connector (9) to connect the lower brush section (10) to standard chimney rods (3) allowing extension of the overall length of the apparatus;

wherein the overall size of the above parts joined together preferably does not exceed 135mm in length to allow stability of the brush to negotiate difficult bends on the way back down the chimney, and

wherein the brush section (10) sweeps clean going both up and down the chimney to ensure no soot or dust deposits are left.

2. A chimney sweep brush as claimed in claim 1, wherein the separate parts (10, 12, 9) are joined together by a single bolt (14) with nut and washer, and can come apart if the brush section (10) needs replacing because of wear and tear.
3. A chimney sweep brush as claimed in claims 1 or 2, wherein a larger brush section (10) will be used for newer types of houses and a smaller brush section (10) will be used for older types of houses, such as those fitted with flexible metal liners connected to stoves.
4. A chimney sweep brush for manually cleaning chimneys of stoves and insert fires, of various diameter flue pipes and bends, as herein described with reference to the accompanying drawings.

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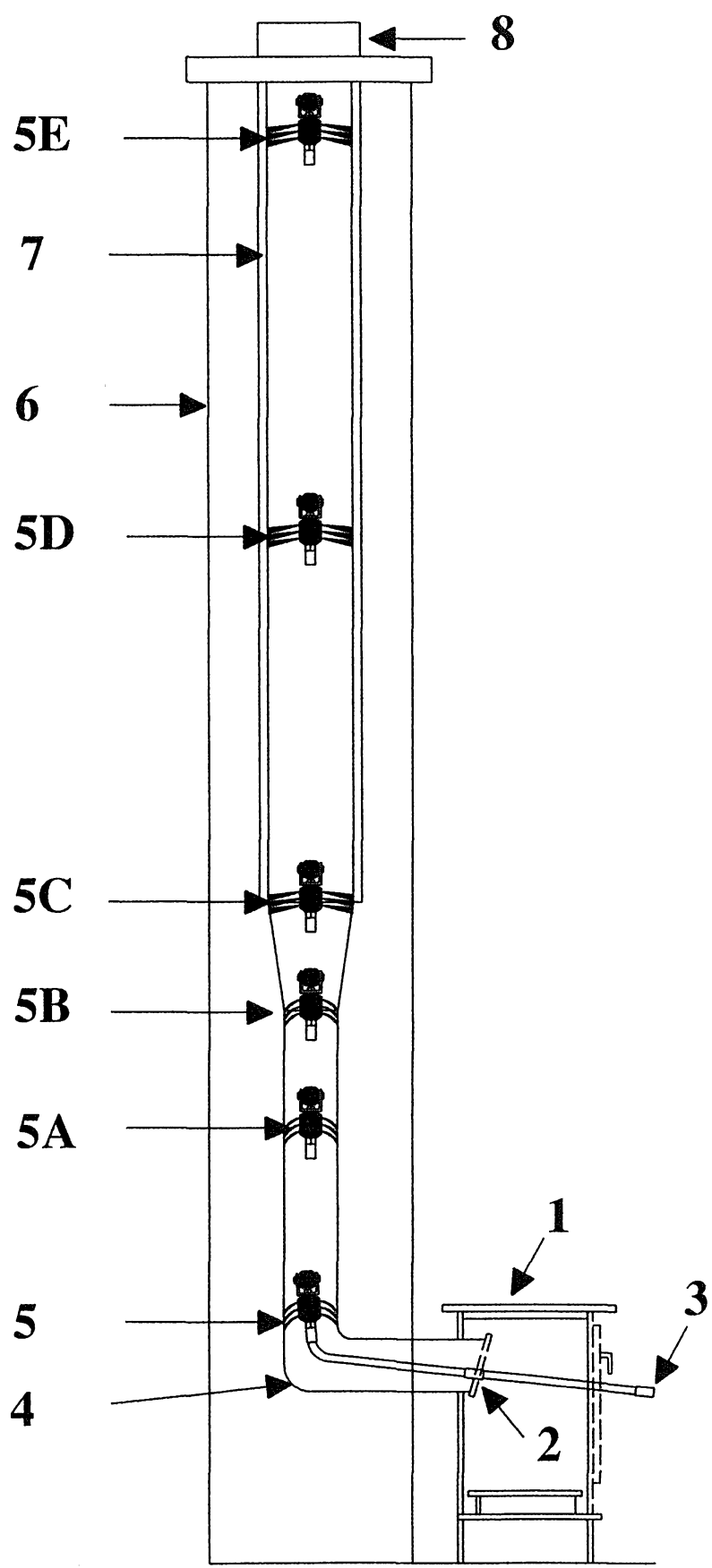


fig 1

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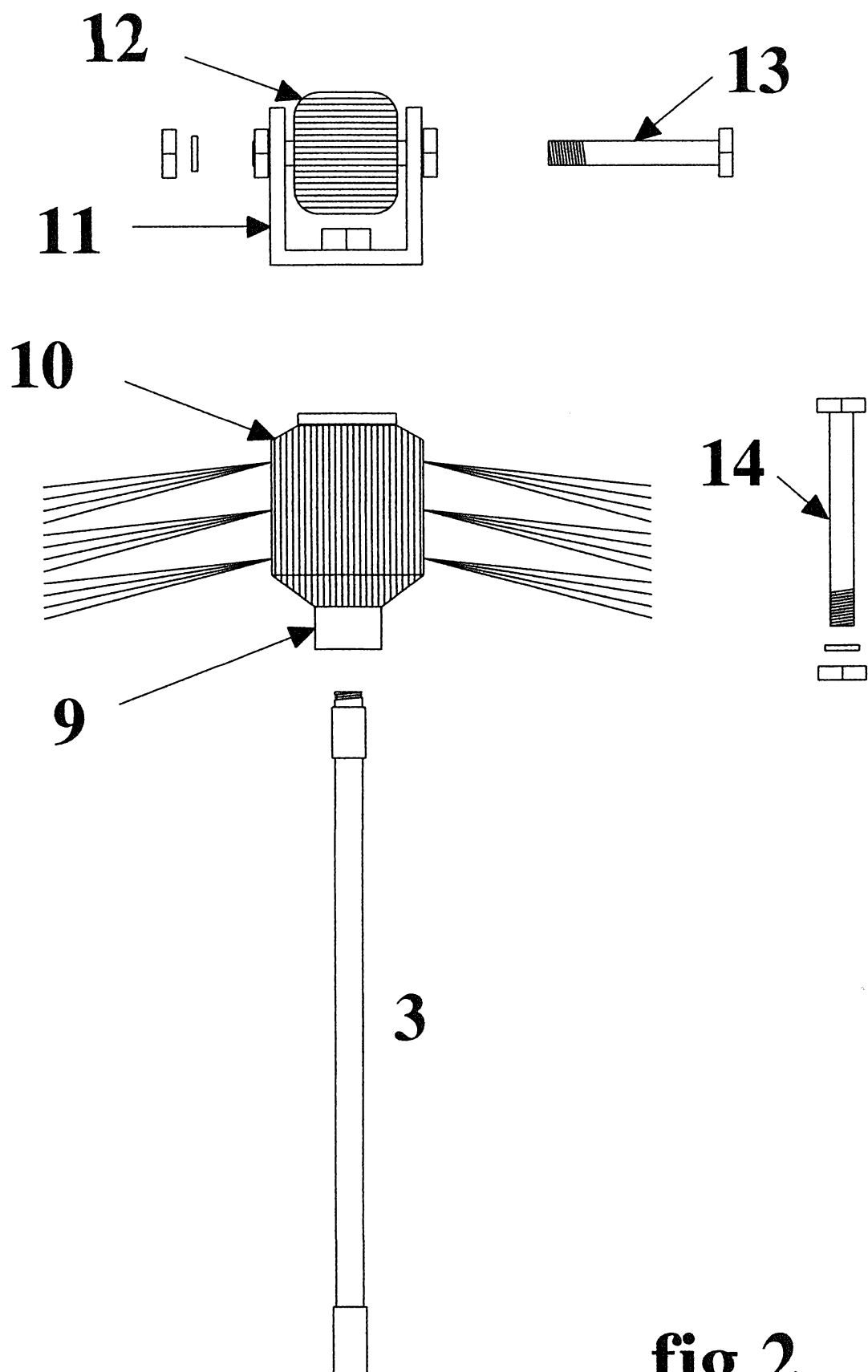


fig 2

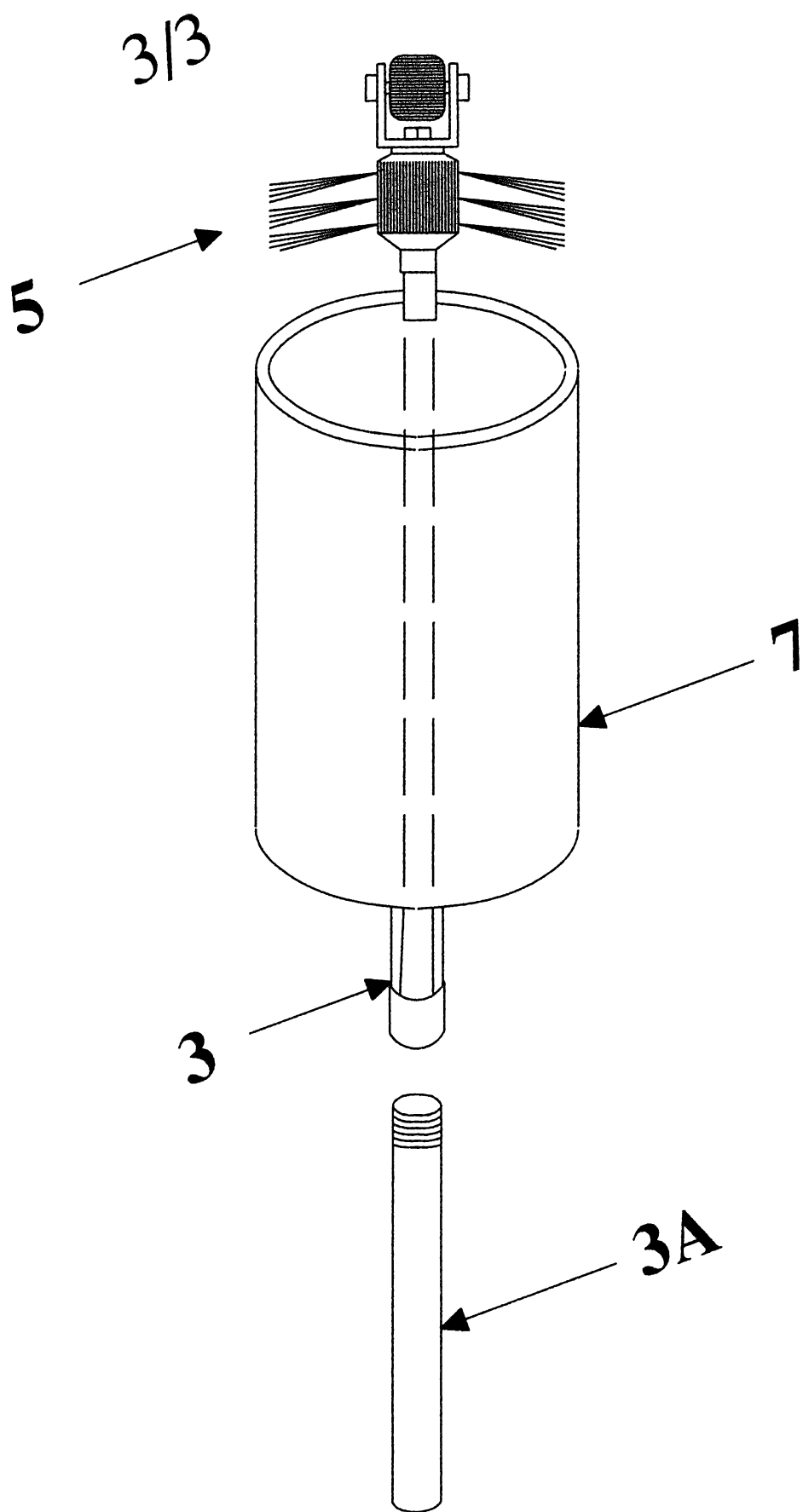


fig 3