

**DRAFTING OF PATENT SPECIFICATIONS: 2007**

**PAPER 2**

Date: 25 July 2007

Time: 09h00-13h00 (Candidates requiring extra time are entitled to an additional two hours)

Examiner: J D Whittaker (Tel: 012 676 1026)

Moderator: K E F Brown

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Attached is an instruction from your client detailing an invention and prior art.

You are required to draft a full patent specification for your client's invention, taking into account the prior art. The full patent specification must include: (1) a background to the invention, (2) a summary of the invention, i.e. consistory clauses, (3) a brief description of the drawings, (4) a detailed description of the invention, (5) a set of patent claims, and (6) an abstract.

Marks will be allocated as follows:

- 50% of the marks will be allocated to the claims.
- 50% of the marks will be allocated to the rest of the specification.

In order to obtain a pass for this paper, candidates must obtain not less than 40% for each of these two sections.

Your client writes:

"Mops of various constructions have been used for many years for "wet mopping" of floors. A simple type of mop is one where individual yarn strands are gathered together at one end and permanently attached to a handle. The head of a mop may be formed from various different materials, but preferably the material should have good liquid absorbing and retaining properties.

Figure 1 of the accompanying drawings shows an example of a conventional, free-hanging and wringable mop. The mop includes a head 10 and a connector 12 which serves to connect the head to a mop handle 13. The connector 12 has a pair of opposed jaws 14 and 16 which can be clamped to a headband 20, as shown. The main body of the mop head 10 is formed from a pile fabric material which comprises a base support sheet 22 of relatively high strength, such as a woven fabric, and a plurality of pile yarns 24 with high water absorption characteristics which are attached to the base support sheet 22 by a tufting operation. The main body of the mop head 10 typically is secured to the headband 20 by stitching 20a.

To avoid wet and slippery floors, it is desirable after washing a floor with a mop to also dry or at least partially dry the floor. Although the mop illustrated in Figure 1 is effective in washing a floor, generally it has to be wrung out by hand and is awkward and not always very effective in drying a washed floor.

We have invented a new type of mop which is illustrated in Figures 2 to 4 of the drawings. Figure 2 shows a perspective view of our mop, Figure 3 shows a side view of our mop in a retracted, squeeze-drying condition, and Figure 4 shows a side view of our mop in an operative condition in which the mop may be used to wash or dry a floor.

As can be seen in Figures 2 and 4 of the drawings, our mop includes a handle 30 which is attached to a mount 40 having a generally inverted-U shaped cross-section. The mount 40 defines an inner space 42 (see Figure 4) and a pair of slots 46 which are illustrated most clearly in Figure 2. A pair of primary press bars 50 is located on either side of the inner space 42. Each press bar 50 includes a shaft 52 which is fixed to a mounting portion 44 of the mount 40 and three rollers 54 which are rotatable about the shaft 52. The mop also has a pair of secondary press bars 80 located on either side of the inner space 42 above the primary press bars 50, as shown. The secondary press bars 80 are similar in construction to the primary press bars 50 and also include shafts fixed to the mount 40 and rollers which are rotatable about these shafts. The primary press bars 50 are arranged to extend generally parallel with one another, and the secondary press bars 80 are arranged to extend generally parallel with one another and with the primary press bars 50.

A pull lever 60 is pivotally connected to the handle 30, as shown. With particular reference to Figures 2 and 4 of the drawings, the mop includes two connection rods 65 which are pivotally connected at first ends to the pull lever 60 and which are arranged to extend through the slots 46 in the mount 40 at opposite, second ends.

A mop head 70, which may be formed from any suitable material, has an elongate construction and includes a main body 72 for washing and/or drying a floor, and a connection portion 74. The connection portion 74 is disposed between the two pairs of press bars 50 and 80, and is connected to the second ends of the connection rods 65 via a clamping strip 76. The mop head 70 preferably is formed from a resilient material which can be easily squeeze-dried. In one version, the head 70 is formed from a synthetic, foamed material.

In use, with the pull lever 60 positioned in the Figure 4 condition, the mop head 70 can be soaked in a liquid such as water and detergent. After soaking, the main body 72 of the mop head 70 can be used to wash a floor. Once the floor has been washed, the mop can be rinsed in water and then dried by simply pulling the lever 60 upwards. As the lever 60 is

displaced, it pulls the connection rods 65 upwards and consequently draws or retracts the mop head 70 into the space 42 between the press rods 50 and 80 (see Figure 3). Compression of the mop head 70 as it is squeezed between the press rods 50 and 80 causes liquid in the mop head to be expressed and the mop head to be squeeze-dried. Returning the lever 60 to the lowered position illustrated in Figure 4 then exposes the mop head 70 for drying or at least partially drying the washed floor.

The pull lever 60 can be displaced upwardly and downwardly relatively easily. As a result, it is simple and quick to squeeze-dry the mop head 70 and our mop can be easily used to effectively wash and dry a floor.

Please prepare a patent specification for our mop.”

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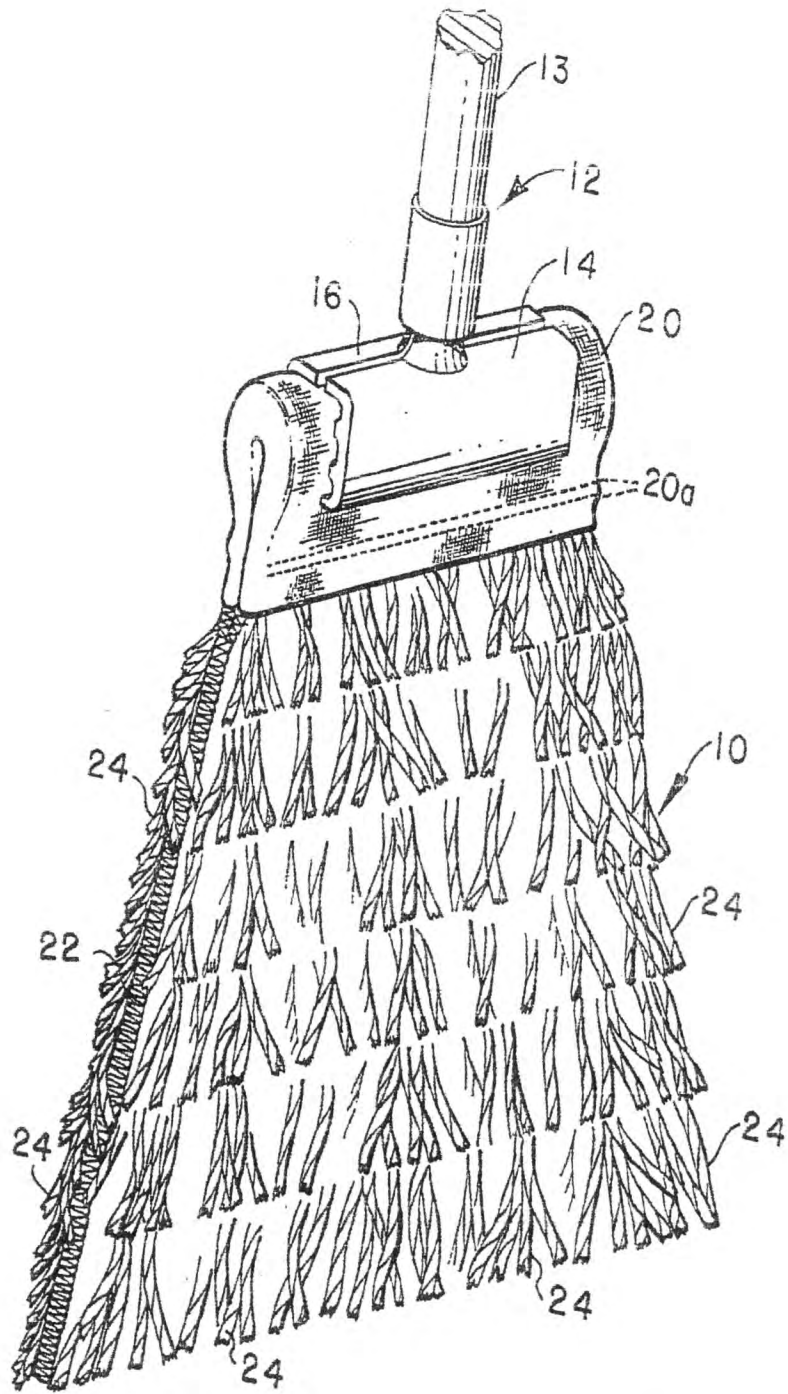


FIG. 1

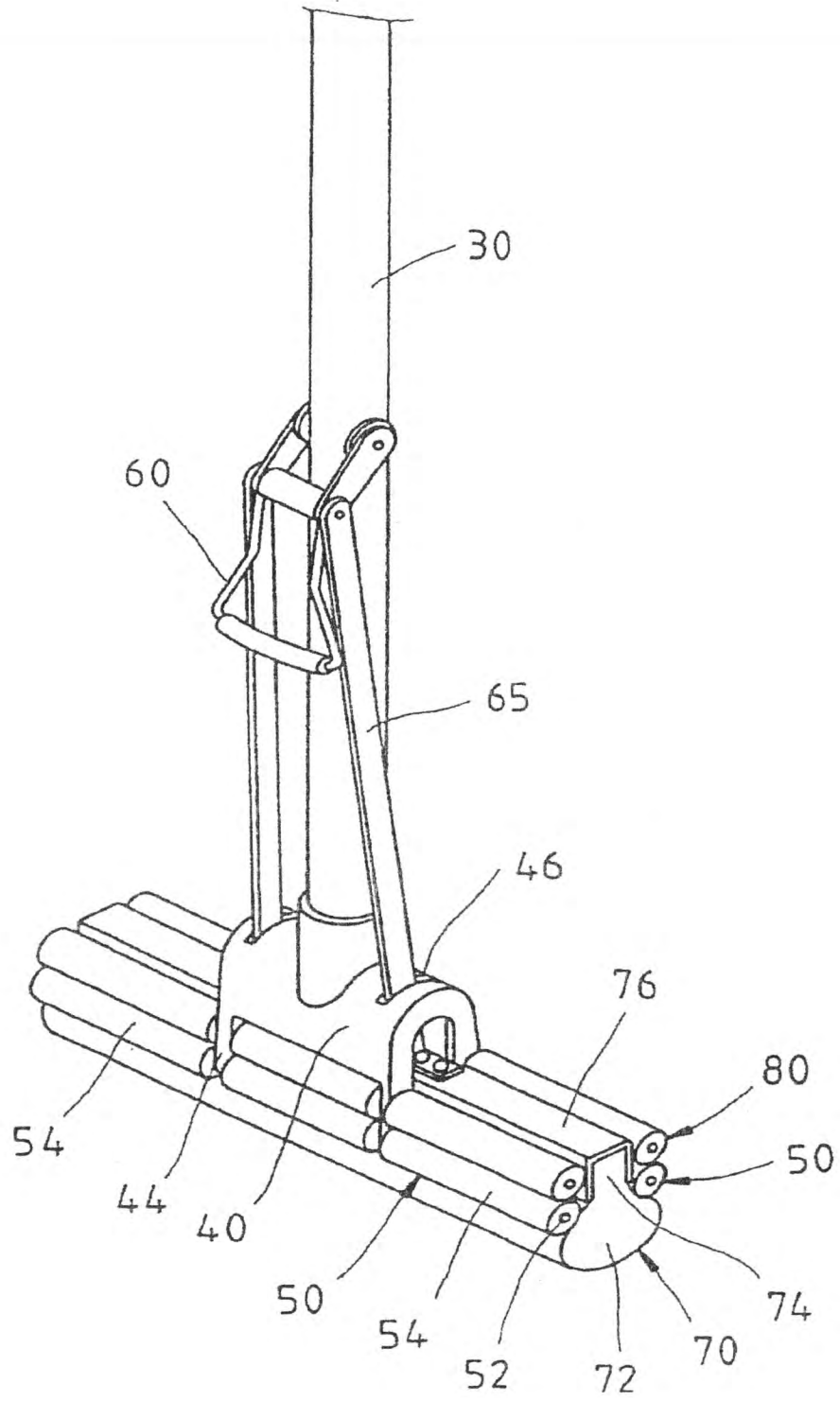


FIG. 2

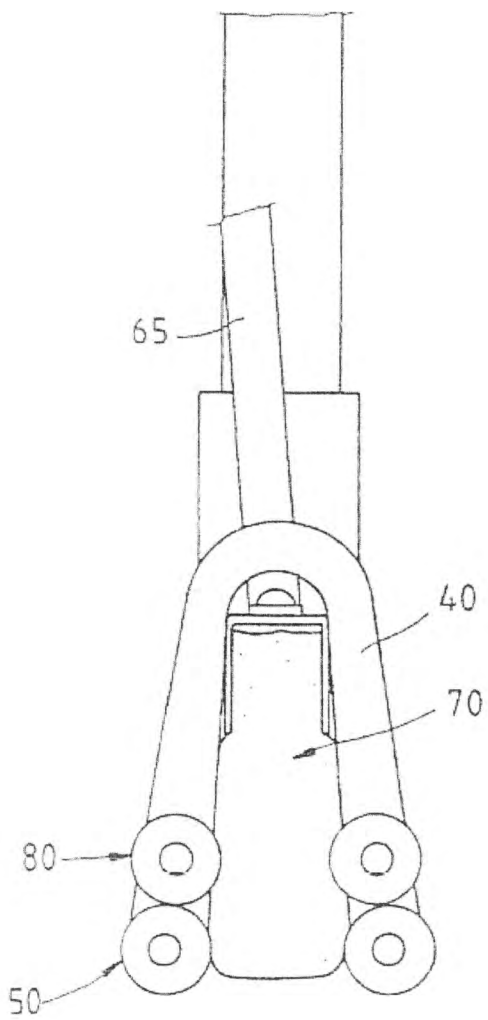


FIG. 3

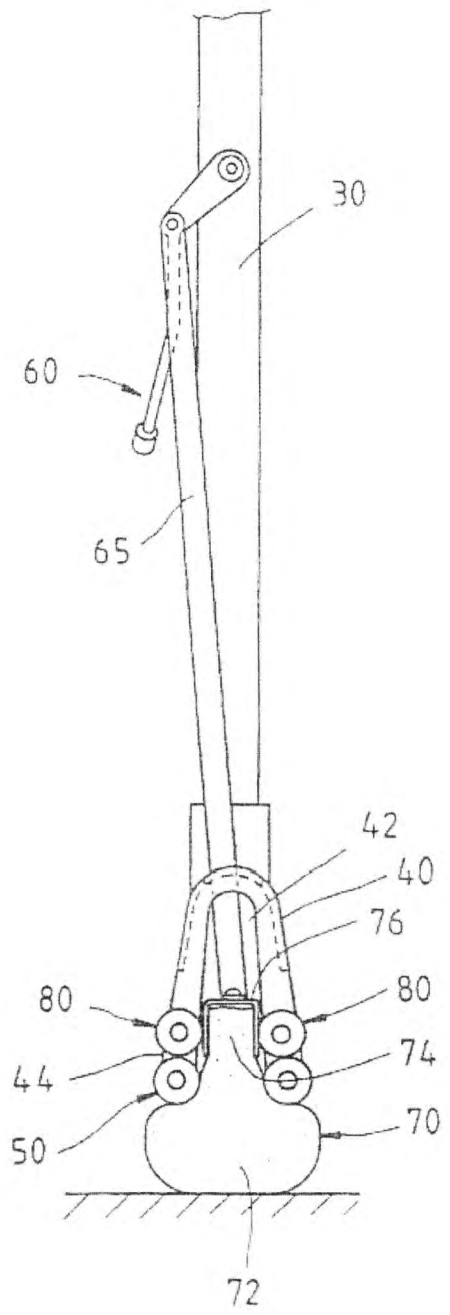


FIG. 4