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SAMPLE SCRIPT A

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A Mirror

The present invention relates to mirrors and mirror assemblies.

Known mirrors for use in personal grooming, such as vanity, shaving or make-up mirrors, typically comprise a mirror mounted on a stand. The mirror is typically mounted to pivot about a horizontal axis in a U-shaped yoke. The yoke is generally mounted to pivot about a vertical axis on the stand. The stand typically comprises mounting holes for mounting the mirror on a table top or wall.

Known mirrors of this type allow a user to tilt the mirror to a convenient angle. In order to see fine detail, or if the user has poor vision, the user must position themself closer to the mirror. If the mirror is fixed to a table top or wall this may not be convenient or possible.

The present invention aims to overcome or substantially mitigate the limitations of the prior art.

In a first aspect the present invention provides (wording of claim 1). This is advantageous as a user may position the mirror closer to themself by extending the extensible arm. This is particularly beneficial if the mirror assembly is attached to a table top or wall.

The mirror assembly is preferably a personal grooming mirror assembly. Wherein, in the context of the invention, personal grooming refers to mirrors typically used in the bathroom or bedroom for shaving, applying make-up, dressing hair or the like. Such mirrors are often referred to as vanity mirrors.

In a preferred embodiment the mirror is a magnifying mirror such as a concave mirror. This provides the additional benefit of magnification for users with poor vision.

The mirror is preferably mounted for pivotal movement with respect to the extensible arm. This provides extra flexibility in the positions that a user may move the mirror into.

In one embodiment the extensible arm is a lazy tongs type extensible arm. Alternatively, the extensible arm may comprise a telescopic member or other extensible configuration.

In a second aspect, the present invention provides (wording of claim 6). This is beneficial for users with poor vision or for viewing fine detail.

In a preferred embodiment the personal grooming mirror further comprises a plane mirror. This allows the user to view themselves in a normal, as well as a magnefied, view.

Preferably, (wording of claim 8). This is beneficial as the back surfaces of the mirrors will be protected from scratches and other mechanical damage.

Suitably, (wording of claim 9). The mirrors are thus held in a spaced apart relationship further reducing

the likelihood of scratches or mechanical damage. In one embodiment, the magnifying mirror is a concave mirror.

An example of the present invention will now be given with reference to the accompanying drawings in which:

Figure 1 is a front elevational view of a mirror assembly with an extensible arm shown in an extended configuration;

Figure 2 is a front elevational view of the mirror assembly of Figure 1 with the extensible arm shown in an un-extended configuration;

Figure 3 is an cross-sectional view taken through the mirror of Figure 1 along a diameter about which the mirror pivots; and

Figure 4 is a cross-sectional view taken through the mirror of Figure 1 along a diameter at 90° to the diameter of Figure 3.

Figure 1 shows a shaving mirror assembly 10 comprising an extensible arm 50 which carries a mirror 20. The extensible arm 50 is a lazy tongs type of extensible arm comprising a system of jointed bars 52.

The mirror 20 is pivotally mounted in a u-shaped yoke 30 by pins 32 which connect the yoke 30 to an outer peripheral frame 22 of the mirror 20. The yoke 30 is pivotally mounted to a spindle 40 which is in turn carried by upper and lower bearings 42, 44 of the extensible arm 50. The bearings 42, 44 are arranged to allow the spindle 40 to rotate and slide within the bearings 42, 44.

The other end of the extensible arm 50 is mounted on a second spindle 70 by upper and lower bearings 72, 74 which allow the second spindle 70 to rotate and slide with respect to the extensible arm 50. The second spindle 70 is mounted to a wall plate 60 which has pre-formed appertures 62, 64 by which the mirror assembly 10 may be mounted to a wall or the like.

As shown in Figure 2, the extensible arm 50 may be collapsed from its extended configuration (Figure 1) into an un-extended configuration (Figure 2). The bearings 42, 44 and 72, 74 slide up and down the spindles 40, 70 as the extensible arm 50 is extended or retracted.

In another embodiment (not shown) the extensible arm may be a telescopic arm.

As shown in Figures 3 and 4, the mirror 20 comprises an outer peripheral frame 22 which supports a concave mirror 24 and a plane mirror 26. The concave mirror 24 and plane mirror 26 are supported in the frame 22 by respective grooves 28 located on the inner periphery of the frame 22.

The mirrors 24, 26 are supported in the grooves 28 with their backs facing one another in a spaced apart relationship. The grooves 28 define a spacing rib 29 of sufficient width to accomodate the inward curvature of the concave mirror 24.

In another embodiment (not shown), both of the mirrors 24, 26 may be concave or plane. Alternatively, one of the mirrors may be replaced by a cover.

Claims

1. A mirror assembly comprising:
   a mirror, and
   an extensible arm, wherein the mirror is mounted on the extensible arm

2. A mirror assembly as claimed in claim 1, wherein the mirror assembly is a personal grooming mirror assembly.

3. A mirror assembly as claimed in any preceding claim, wherein the mirror is a magnifying mirror.

4. A mirror assembly as claimed in any preceding claim, wherein the mirror is mounted for pivotal movement with respect to the extensible arm.

5. A mirror assembly as claimed in any preceding claim, wherein the extensible arm is a lazy tongs style extensible arm.

6. A personal grooming mirror comprising a magnifying mirror.

7. A personal grooming mirror as claimed in claim 6, further comprising a plane mirror.

8. A personal grooming mirror as claimed in claim 7, further comprising a frame, wherein the magnifying mirror and plane mirror are positioned back to back with respect to one another within the frame.

9. A personal grooming mirror as claimed in claim 8, wherein the frame comprises a pair of grooves located around an inner periphery of the frame, wherein the grooves are arranged to support the magnifying and plane mirrors in a spaced apart relationship with respect to one another.

10. A personal grooming mirror as claimed in any one of claims 6 to 9, wherein the magnifying mirror is a concave mirror.

11. A mirror assembly substantially as described herein with reference to Figures 1 and 2.

12. A personal grooming mirror substantially as described herein with reference to Figures 3 and 4.

Note to Examiner

Independent claims 1 and 6 would most likely be found to lack unity. My strategy would be to file the specification with all of the claims and divide the application out at a later date if a unity objection is raised.

* * * * * * * * * *

2 Pages of drawings follow

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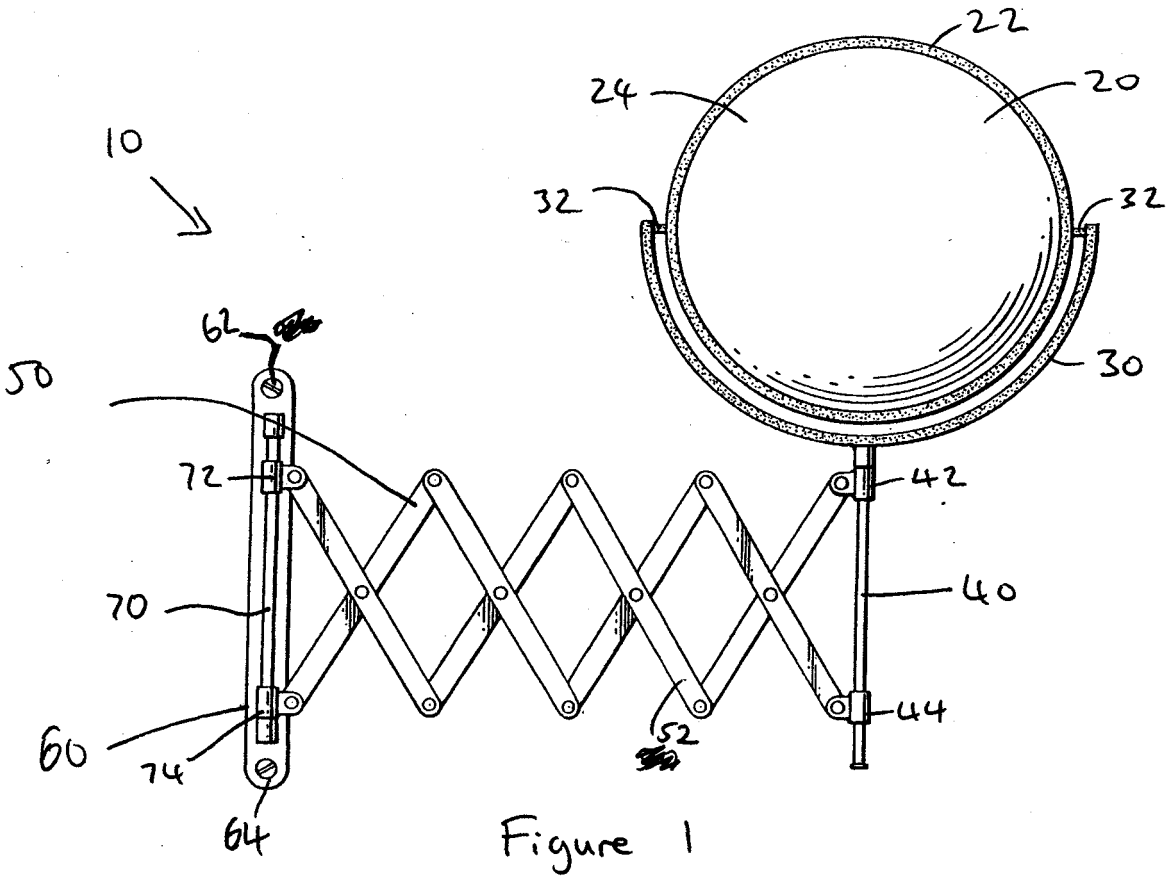

Figure 1

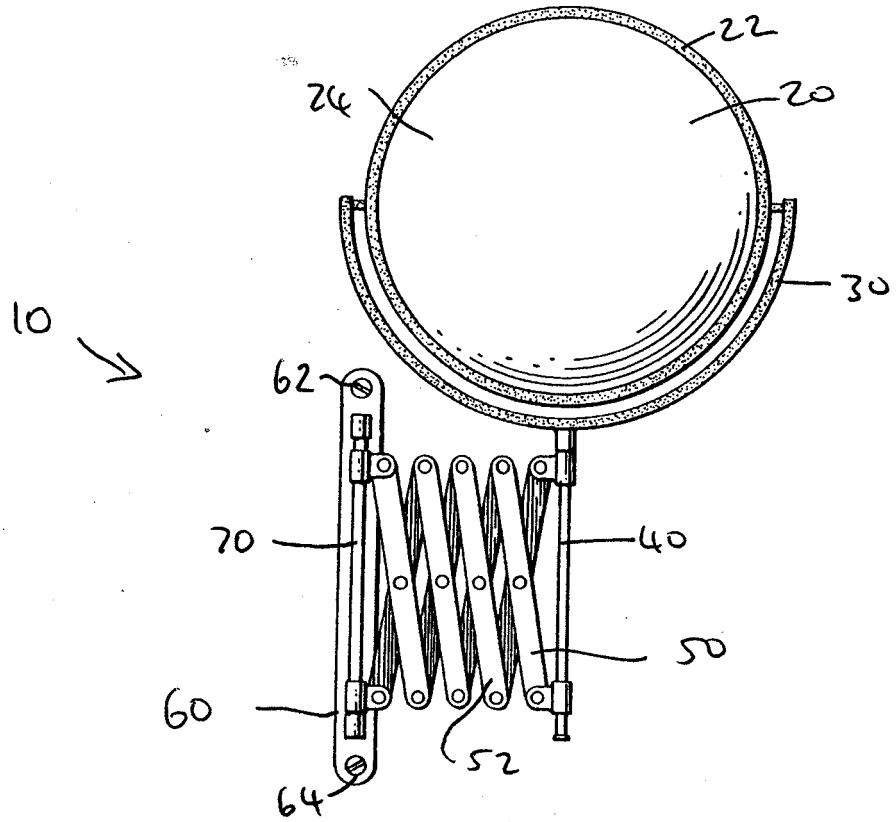

Figure 2

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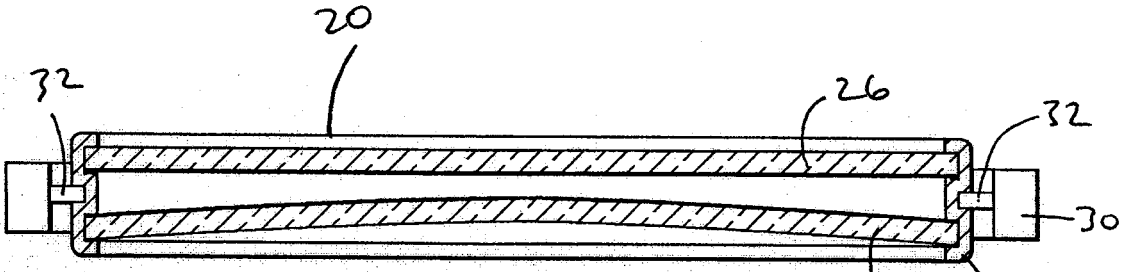

Figure 3

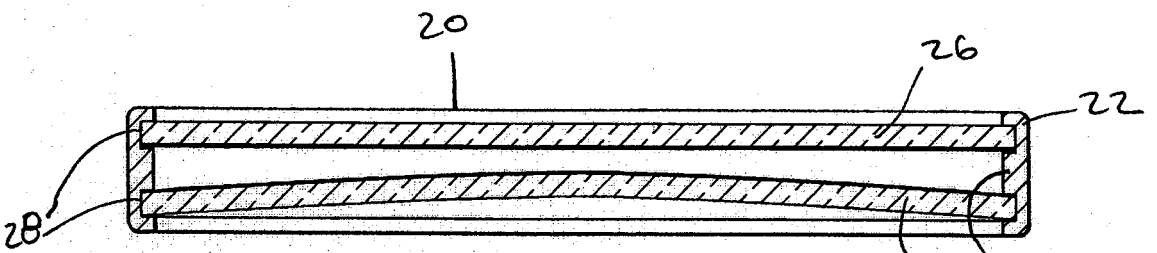

Figure 4

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SAMPLE SCRIPT B

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Note to the examiner

I have drafted 2 independent claims (claims 1 and 3) so there is likely to be a unity objection raised. This objection may be dealt with during prosecution, and a divisional application may have to be filed.

There are 10 dependent claims (claims 2 and 4 - 12) and an omnibus claim.

Enclosed:

- 22 pages of description
- 6 pages of claims
- 2 pages of figures

Finally, all my claims relate to vanity mirrors so there is no claim to just the new (extensible) mount. I am not sure that such a claim would be novel in view of the google search, but extensible mounts sold for use with vanity mirrors may well be caught by contributory infringement.

VANITY MIRROR

Field of the invention

The present invention relates to vanity mirrors such as make-up mirrors or shaving mirrors.

Background of the invention

Vanity mirrors are frequently used in everyday life for shaving or applying make-up or the like. Vanity mirrors may be hand held, such as those often kept in a lady's handbag for touching-up make-up during the day. Alternatively, vanity mirrors may be mounted on a stand for hands-free use in a bedroom or bathroom during shaving or other morning ablutions.

One known type of vanity mirror on a stand comprises a circular mirror in a frame. There is a semi-circular yoke pivotably attached to the frame such that the mirror may pivot about a diameter relative to the yoke. The central point of the yoke is then pivotably attached to an elongate stand extending from a base mount. The yoke can pivot about the longitudinal axis of the elongate stand.

Vanity mirrors of this type have been known for many years. However, problems may arise for users with relatively poor eye-sight whose glasses have either steamed up or have been removed. In addition, it can difficult to find a suitably positioned surface on which to mount a vanity mirror for optimal use.

The present invention aims to overcome some or all of the aforementioned problems by providing an improved vanity mirror.

Summary of the invention

According to a first aspect of the present invention, there is provided a vanity mirror comprising a concave mirror. Concave mirrors magnify, thereby enabling improved useability for users with relatively poor eye-sight or users trying to perform a delicate procedure such as removal of an eyelash from within the eye. A concave vanity mirror according to the present invention could be hand-held or mounted.

It will be understood that the term "vanity mirror" is intended to incorporate shaving mirrors, make-up mirrors and the like.

According to a second aspect of the present invention, there is provided a vanity mirror comprising a mirror, a mount for mounting the vanity mirror on a mounting surface, and an extensible linkage between the mirror and the mount for adjusting a distance therebetween. Such a vanity mirror could be wall mounted at a distance from the optimal mirror position for a user. The mirror could then be extended away from the wall for use by a user. Furthermore, once the user has finished with the mirror, the extensible linkage could be retracted such that the mirror is stowed safely close to the wall, thereby avoiding accidental knocks.

The first and second aspects of the invention may be combined to provide a concave vanity mirror which is extensible from a mounting surface. Thus, all the advantages described above are achieved simultaneously.

Advantageously, a first end of the extensible linkage is pivotably coupled to the mount. Advantageously, a second end of the extensible linkage is pivotably coupled to the mirror. Advantageously, the mirror is pivotable along an axis extending across a face of the mirror and through a central point of the mirror. Each of these pivotable couplings individually and in combination enables more versatile positioning of the mirror by the user. Preferably, the mirror is pivotable about two perpendicular axes in the plane of the mirror.

In a preferred embodiment, the extensible linkage comprises lazy tongs. Such an extensible linkage is easily manufactured, comprises relatively few parts, and is relatively stable and rigid, thereby making it unlikely to fail mechanically.

In a preferred embodiment, the vanity mirror comprises a plane mirror back-to-back with the concave mirror. Thus a user may choose which side to use for a particular purpose. It is particularly easy to flip between the two types of mirror when combined with the feature that the mirror is pivotable along an axis extending across its face as described above.

Optionally, the mirrors may be mounted in a plastics frame. This is a convenient method of mounting which advantageously covers the (possibly sharp) edges of the mirror.

Preferably, the frame comprises a pair of spaced grooves around its inner periphery. This enables easy snap-fitting of the mirrors into the frame. More preferably, the grooves define a spacing rib with a sufficient lateral extent to hold the two mirrors apart. This prevents any damage (such as scratches) to the reflective coatings on the back faces of each mirror.

Further preferred features of the invention are described with reference to the accompanying drawings.

Brief description of the drawings

Figure 1 shows a preferred embodiment of a vanity mirror according to the present invention having an extensible linkage, the extensible linkage is shown in a partially extended configuration.

Figure 2 shows the vanity mirror of Figure 1 with the extensible linkage substantially in a retracted

configuration.

Figure 3 shows a cross-section of the mirror of Figures 1 and 2 along line X -X'.

Figure 4 is a cross-section of the mirror of Figures 1 and 2 along line Y-Y'; the extensible linkage is not shown.

Detailed description of a preferred embodiment

Figures 1 and 2 show a vanity mirror 10 comprising a mirror portion 12, a mount 16, and an extensible linkage 14 between the mirror portion 12 and the mount 16.

The extensible linkage 14 comprises lazy tongs 20 having bearings 22, 24 at either end. The bearings 22, 24 are short tubes pivotably attached to the ends of the lazy tongs 20. The lazy tongs 20 comprise four parallel elongate bars 20a pivotably attached to four parallel elongate bars 20b transverse to bars 20a. Thus, there are four pairs of bars 20a, 20b arranged as four X-shapes in a line. The bearings 22 are attached to the first X-shape, and the bearings 24 are attached to the fourth X-shape.

The mount 16 comprises an elongate mounting plate 30 for attaching the mount 16 to a mounting surface, such as a wall, using screws 32. Mounting parts 34 are rigidly attached to the mounting plate 30. The mounting parts 34 are spaced from one another and there is a spindle 36 extending between them. The mounting parts 34 are formed as short tubes. The spindle 36 is rigidly fixed within the mounting parts 34.

The bearings 22 of the lazy tongs 20 are pivotably mounted on the spindle 36 of the mount 16. Thus, the lazy tongs 20 may rotate around the axis of the spindle 36.

The mirror portion 12 comprises a frame 40, a yoke 42, a spindle 44, a concave mirror 46, and a plane mirror 48 (not shown in Figures 1 and 2). The mirror portion 12, excluding the spindle 44 is shown in more detail in cross-section in Figures 3 and 4. Figure 3 is a cross-section along line X-X', and Figure 4 is a cross-section along line Y-Y'.

The concave mirror 46 and the plane mirror 48 are each circular and are mounted back-to-back in the circular plastics frame 40.

The yoke 42 is semi-circular having a slightly larger diameter than the frame 40. The frame 40 is pivotably mounted between the ends 43 of the semi-circular yoke 42 such that the frame 40 may rotate about its diameter between the ends 43 of the yoke 42.

The centre 45 of the yoke 42 is rigidly attached to the spindle 44. The spindle 44 extends radially away from the centre 45 of the yoke 42.

The bearings 24 of the lazy tongs 20 are pivotably mounted on the spindle 44 of the mirror portion 12. Thus the mirror portion 12 may rotate about the axis of the spindle 44.

The frame 40 has two spaced circular grooves 50, 52 around its inner periphery as shown in cross-section in Figures 3 and 4. The concave mirror 46 is snap-fittable into groove 50, and the plane mirror 48 is snap-fittable into groove 52.

The grooves 50, 52 define a circular spacing rib 54 therebetween. The rib 54 is sufficiently wide such that the backs of the fitted mirrors 46, 48 are spaced from one another. Thus, a wider rib 54 would be required for a more concave mirror 46.

The concave mirror 46 comprises a glass or clear plastics sheet 46a having a reflective coating 46b on

a back side of the sheet 46a. Similarly, the plane mirror 48 comprises a glass or clear plastics sheet 48a having a reflective coating 48b on a back side of the sheet 48a.

With the mirrors 46, 48 assembled back-to-back in the manner shown in Figures 3 and 4, the coatings 46b, 48b are protected against scratches and other mechanical damage.

When not in use, the mirrors 46 and 48 may be stowed parallel to a wall to which the mount 16 is attached, with the lazy tongs 20 in a retracted configuration as shown in Figure 2.

In use, a user may pull the mirror portion 12 away from the wall, as shown in Figure 1, such that the lazy tongs 20 extend to a desired position. Further adjustments to the position may be made by pivoting the lazy tongs 20 relative to the mount 30, and/or by pivoting the mirror portion 12 relative to the lazy tongs 20, and/or by pivoting the mirrors 46, 48 relative to the yoke 42. Thus, the mirrors 46, 48 may be tilted to a convenient angle depending on which one is in use at the time.

As the lazy tongs 20 are extended or retracted, the bearings 22, 24 can slide up and down the spindles 36, 44 respectively.

Although a preferred embodiment of the invention has been described, alternative embodiments are also envisaged within the scope of the invention as defined by the appended claims.

For example, rather than lazy tongs, a telescopic arm could be used as part of the extensible linkage.

Also, there may be provided a different number of pairs of bars 20a, 20b as part of the lazy tongs.

Also the mount 16 could be mounted to the mounting surface by adhesive rather than by screws.

Also, each pivotable connection need not be pivotable, it could be fixed. However, pivotable connection is preferred in each case.

Also, it is not essential to provide two mirrors (one plane and one concave) back to back. Only one mirror is required. Alternatively, two concave mirrors of different magnifications may be provided.

Claims

1. A vanity mirror comprising a concave mirror.

2. The vanity mirror of claim 1 further comprising:

   a mount for mounting the vanity mirror on a mounting surface; and

   an extensible linkage between the concave mirror and the mount for adjusting a distance therebetween.

3. A vanity mirror comprising:

   a mirror;

   a mount for mounting the vanity mirror on a mounting surface; and

   an extensible linkage between the mirror and the mount for adjusting a distance therebetween.

4. The vanity mirror of claim 3 wherein the mirror is concave.

5. The vanity mirror of any of claims 2 to 4 wherein a first end of the extensible linkage is pivotably coupled to the mount.

6. The vanity mirror of any of claims 2 to 5 wherein a second end of the extensible linkage is pivotably coupled to the mirror.

7. The vanity mirror of any of claims 2 to 6 wherein the extensible linkage comprises lazy tongs.

8. The vanity mirror of any of claims 1, 2 or 4, or any of claims 5 to 7 when dependent on any of claims 1, 2 or 4, further comprising a plane mirror back-to-back with the concave mirror.

9. The vanity mirror of claim 8 wherein the plane mirror and the concave mirror are mounted in a plastics frame.

10. The vanity mirror of claim 9 further comprising a pair of spaced grooves around an inner periphery of the frame the plane mirror and the concave mirror being snap-fittable in the grooves.

11. The vanity mirror of claim 10 wherein the grooves define a spacing rib to hold the concave mirror spaced from the plane mirror.

12. The vanity mirror of any preceding claim wherein the mirror is pivotable along an axis extending across a face of the mirror and through a central point of the mirror.

13. A vanity mirror substantially as shown in the accompanying figures with reference to the accompanying text.

* * * * * * * * * *

2 Pages of drawings follow

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Figure 1

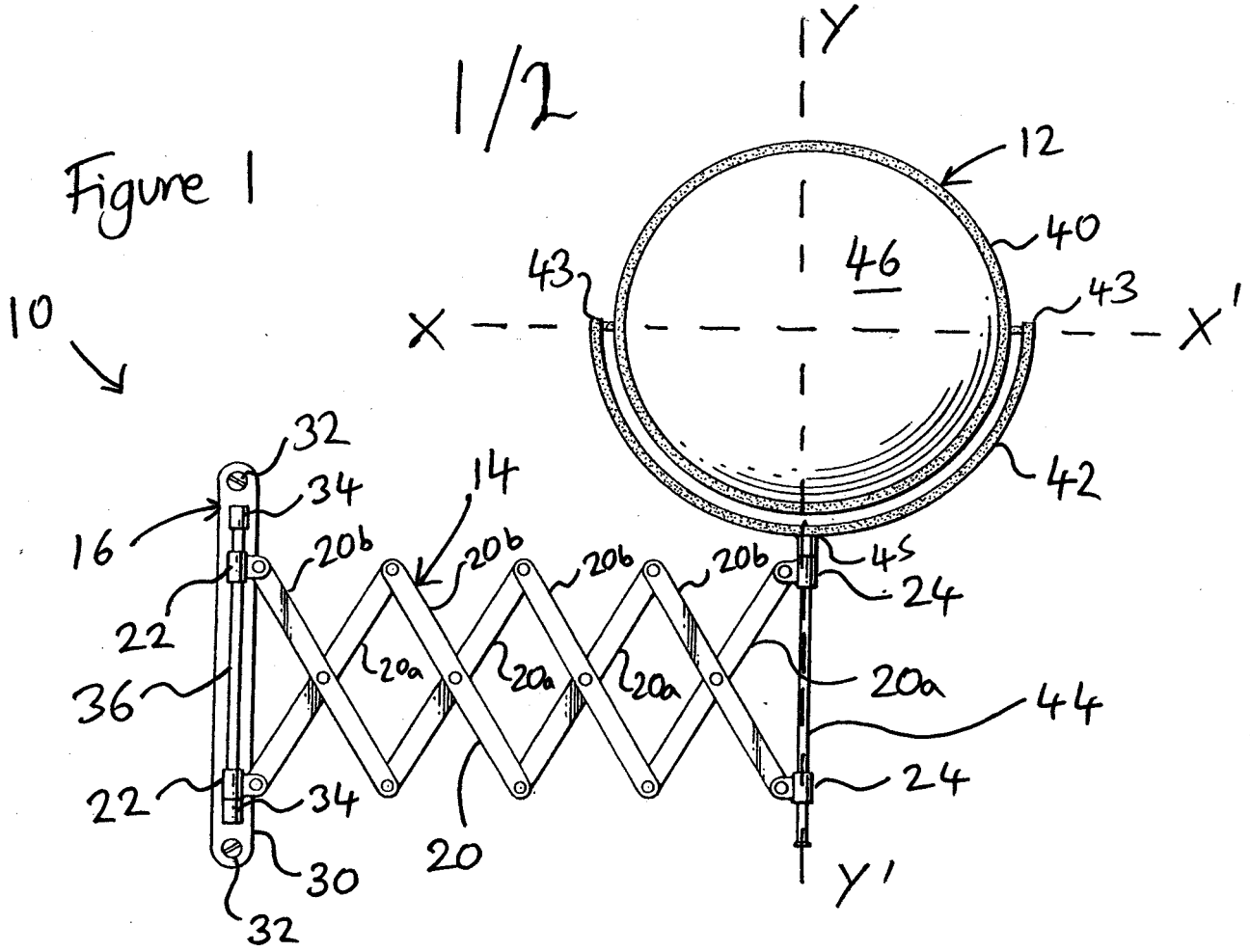


Figure 2

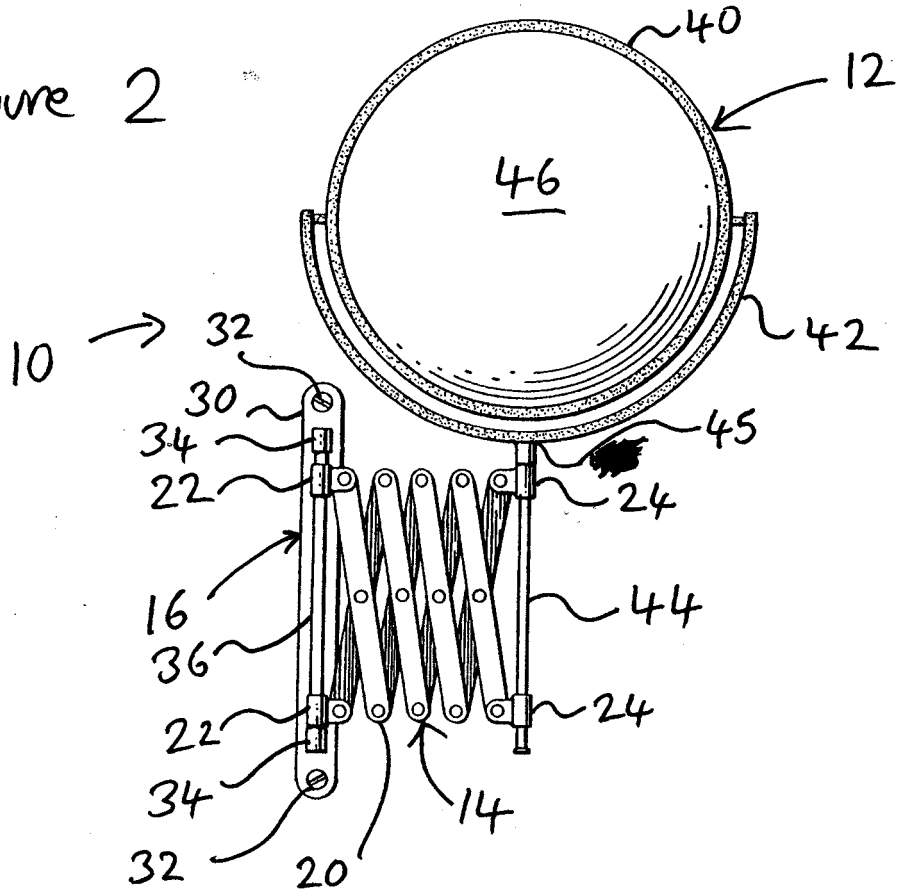


Figure 3

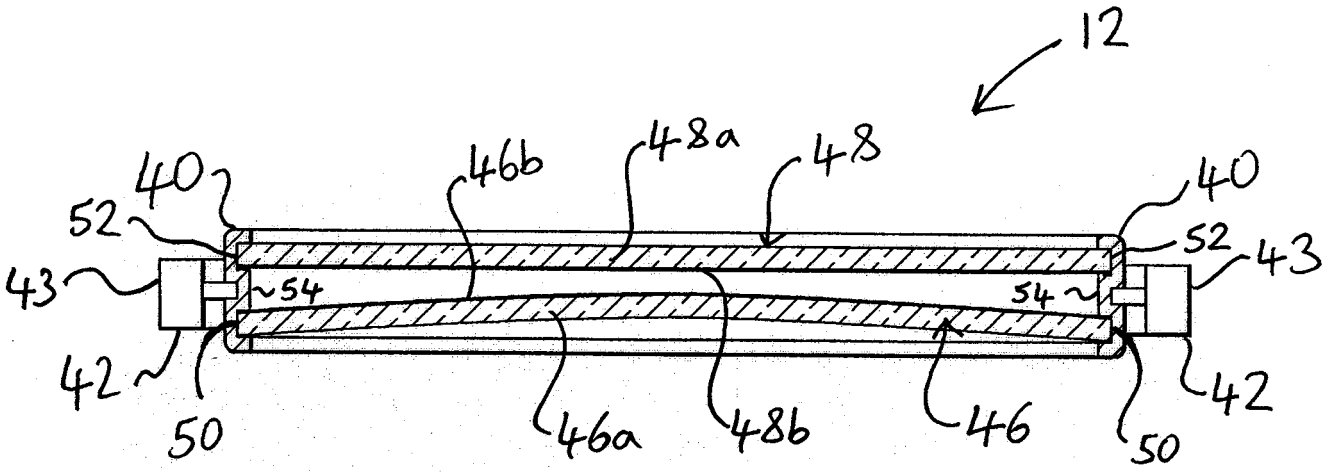
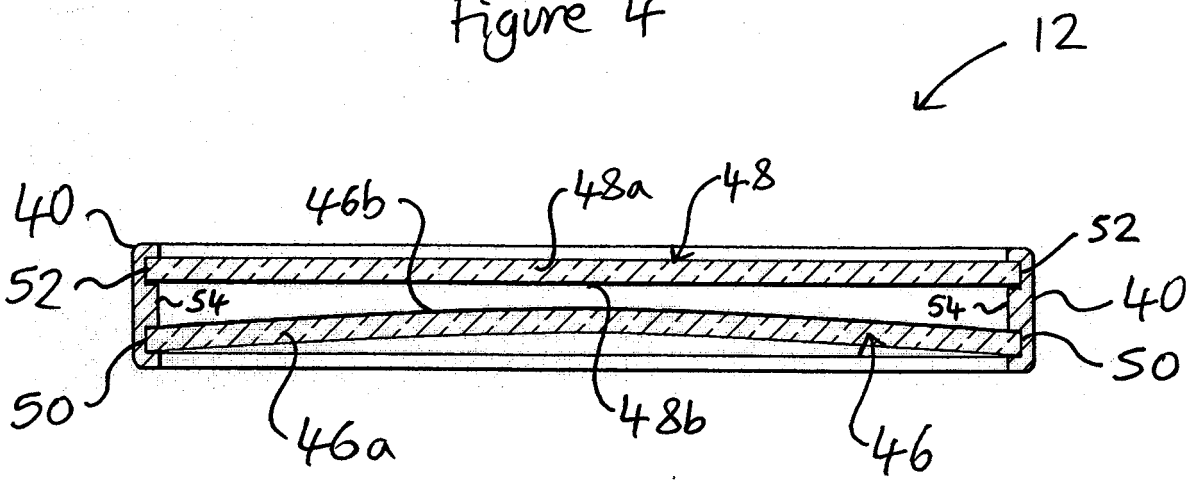


Figure 4



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SAMPLE SCRIPT C

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A Mirror

The present invention relates to mirrors, for example mirrors for us in bedrooms or bathrooms.

Mirrors for shaving, for applying make up, vanity mirrors and the like are known, and use a reflective surface to enable a person to see their face.

One example of a known mirror is a make-up mirror consisting of a round mirror on a stand. The mirror is mounted to pivot about a horizontal axis in a U-shaped yoke, and the yoke is fixed to the top of the stand so as to be pivotable about a vertical axis.

This mirror requires a person to be close to the mirror in order to use it, and as a result the user can be required to assume an uncomfortable or inconvenient position to lean toward the mirror, and the mirror can impede movement of the users hands about the face, for example when applying make up, or when shaving. Further, in a bathroom, where spectacles fog up and may need to be removed, it is particularly difficult for a short sighted person to then use this type of mirror.

Viewed from a first aspect, the present invention provides a mirror comprising magnifying mirror, the mirror being arranged for bedroom or bathroom use.

The use of a magnifying mirror enables the user to see detail without being close to the mirror. This is particularly advantageous when using the mirror to work on the face. In addition, in a bathroom setting spectacles tend to fog up, and thus a magnifying mirror is advantageous for short sighted people, as it allows use without spectacles - avoiding problems with fogging up. By a mirror arranged for bedroom or bathroom use, it is meant a mirror for use as a shaving mirror, a vanity mirror, a mirror for applying make-up or the like. Such a mirror could also be used for washing, brushing teeth, putting in contact lenses and other activities generally carried out in a bedroom or bathroom.

Whilst a mirror arranged to be used in the bedroom or bathroom is preferred, it will be appreciated that the mirror of the first aspect will also be advantageous in other circumstances, for example in a dressing room, salon, hairdressers or beauticians.

Preferably the magnifying surface is provided by a concave mirror. This type of mirror produces an even magnifying effect, and can be produced of a range of different magnifications. In an alternative embodiment, a lens could be used to produce the magnifying effect.

The mirror may include a plane mirror arranged back-to-back with the magnifying mirror. This provides the benefit of two different mirror surfaces for different uses. For example the plane or flat mirror may allow a person to see their whole face, whereas the magnifying mirror allows close-up work on the eyes etc. The back to back mirrors have their reflective sides facing outward, and when conventionally constructed mirrors are used, the reflective surface is protected on the inner side of the mirror and the glass or plastic sheet faces outwards.

Preferably the mirror comprises [A-A from claim 4].

This arrangement provides a secure fitting of the mirrors into the frame, with the spacing rib holding the two mirrors apart from one another. With the use of a concave mirror, a plane mirror cannot be simply backed onto the rear surface of the concave mirror, as it is curved.

The spacing rib may be curved to accommodate a curve of the magnifying mirror. This is particularly useful with a concave mirror, which is generally a concave surface which has no flat parts.

The frame may be moulded from plastic, or alternatively a metal frame may be used. In a preferred embodiment the frame is resilient and allows a snap fit of the mirrors bit the frame, in particular a snap fit into grooves on the inner periphery of the frame. Thus a grooved frame is advantageous as it allows a simple assembly of the mirror.

The mirror may be pivotally mounted. The mirror may be pivotally mounted on a U-shaped yoke as in the known mirror discussed above. A further pivot may allow rotation about a vertical axis.

Preferably the mirror comprises [B-B from claim 6].

The spacing rib protrudes between the two grooves and hence provides a thicker region of the frame for mounting the pivot. Thus the mounting point for the pivot is stronger, and the frame can also be made thinner.

The mirror may include a stand for standing on table or the like, or may be mountable to a table or wall surface, for example using a bracket and screws.

Viewed from a second aspect the present invention provides a mirror mounted on an extensible arm.

This arrangement allows a mirror to be moved toward and away from the user, thus avoiding inconvenient leaning, and allowing different mirror positions to be easily achieved for close up and far away work. This is particularly useful for bathroom and bedroom mirrors and similar mirrors as discussed above. For example, in a bathroom where short sighted persons may need to remove their glasses, the extensible arm can be used to move the mirror closer than the distance required by a less myopic person.

By extensible arm it is meant that the mirror can be stood on or mounted to a surface and the arm allows the mirror to be moved toward and away from the user, the end of the arm not mounted to the mirror being moved closer and further from the mirror accordingly.

In a preferred embodiment the mirror of the first aspect is mounted on an extensible arm. The preferred feature of the first aspect may be present as discussed above.

The combination of a magnifying mirror and an extensible arm provides a greater flexibility and range of use than either the arm or magnifying mirror alone.

The extensible arm is advantageous as it can be used to enable a mirror to be stowed away when not in use.

The extensible arm may be a telescopic arm like a car aerial , or a spring lever of the type used in angle poise desk lamps. A system of sliding and/or pivoted joints may be used as appropriate to give the desired type and range of movement.

In a preferred embodiment, a lazy tong mechanism is used for the extensible arm.

Lazy tongs are a system of jointed bars capable of great extension, originally used for picking up something at a distance, and hence originally having grippers at one end and handles at the other. In the present case the lazy tongs are attached at one end to the mirror and at the other end are arranged to be attached to a stand or bracket or the like, to mount the mirror to a surface.

Lazy tongs are advantageous as they allow a large range of movement, whilst folding up compactly when retracted. They are also a simple and reliable mechanism.

Only the bars are necessary to form a lazy tongs mechanism, but preferably several pairs of bars are used for greater extension.

Preferably [C-C from claim 10].

The use of a sliding system of this type allows both bar ends to be mounted at one surface, such as a wall, with free movement of the tongs not impeded. Preferably the free ends of the bars comprise bearings and are mounted slidably on a rod or spindle. The slidable mounting may be at the mirror end of the tongs, or the opposite end.

Advantageously a sliding mounting can be provided at both ends, which maintains the rods, spindles or the like at both ends in a parallel configuration as the tongs are extended or retracted.

The mirror may be [D-D from claim 11].

This allows the mirror to be rotated about a vertical axis as the user requires, and where the arm can be rotated it is possible to swing the mirror or the arm in an arc relative to the mounting surface to hence move it to a desired position. The combination of extending arm and rotation on spindles allows the mirror to be placed anywhere in an area enclosed by an arc of movement of the arm at its greatest extension.

The mirror of either of the aspects above and their preferred embodiments may be arranged to be used to see a face for close up work. For example for shaving and the like as discussed above.

Viewed from a further aspect the present invention provides a method of manufacturing a mirror as described above.

Where the mirror comprises a magnifying mirror the method comprises fitting a magnifying mirror into a frame, preferably snap fitting the mirror into a groove in the frame. In a preferred embodiment a plane mirror is fitted into the frame back-to-back with the magnifying mirror. The frame may be moulded from plastics.

When the mirror is moulded on an extensible arm, the method comprises mounting a mirror to an extensible arm. Preferably the mirror is mounted onto pivots and/or spindles as discussed above. The pivot may be provided so as to allow horizontal rotation of the mirror when in use. The spindles may be provided so as to allow vertical rotation.

Other preferred features of the mirror discussed above may be provided by the method.

In all of the above aspects the mirrors may be round. Other shapes such as oval, square, rectangular mirrors may be used. A round mirror is preferred as a round magnifying mirror is easy to produce and to use, and a round mirror is also a convenient shape for viewing the face, and for mounting in horizontal and vertical pivots.

Preferred embodiments of the invention will now be described by way of example only and with reference to the accompanying drawings in which:

Figure 1 shows a mirror mounted on a lazy tong mechanism in an extended configuration;

Figure 2 shows the mirror of figure 1 with the lazy tong mechanism in a retracted configuration;

Figure 3 shows a cross section along III-III of figure 1, where the mirror includes a magnifying mirror, and

Figure 4 is a cross section along IV-IV of figure 1, with the yoke and spindle not shown.

In figure 1 a mirror 1 is mounted on an extending arm in the form of lazy tongs 2.

The mirror comprises a mirror surface 3 mounted in a frame 4. The mirror surface 3 is made in the usual way, with a reflective coating on the back of a glass or clear plastic sheet.

The frame 4 holds the mirror surface 3 in place and is pivotally mounted to a U-shaped yoke 5 by pivots 6.

The yoke 5 is pivotally mounted on a mirror spindle 7, which forms a rod upon which sliding bearings 8 on the ends of bars 9 of the lazy tongs 2 are mounted.

The lazy tongs 2 in this case consists of four pairs of bars 9, connected at the middle of each pair by a pivot, and connected to adjacent pairs by pivots at the ends of the bars 9. At the other end to the mirror spindle 7 the free ends of the furthest pair of bars 9 have sliding bearings 8 slidably mounted on a bracket spindle 10 fitted to a bracket 11. The bracket 11 has screw fittings for mounting the mirror to a wall.

In figure 1 the lazy tongs 2 are extended and hence the sliding bearings 8 are relatively close together on the spindles 7, 10. Figure 2 shows the same mirror 1 with the lazy tongs 2 in the retracted position, and in this case the sliding bearings 8 are correspondingly further apart on the spindles 7, 10.

In figure 3 a cross-section along line III-III is shown, i.e. a horizontal section through the mirror surface 3 and frame 4 along the diameter about which the frame 4 pivots in the yoke 5.

The mirror surface 3 comprises a concave, magnifying, mirror 3a and a plane mirror 3b. The two mirrors 3a, 3b are placed back to back. Hence the reflective layers are inside the two mirrors 3a, 3b and the frame 4, and are protected from scratching and other damage by the outer glass or plastic sheets of the mirror 3a, 3b. The mirrors 3a, 3b are snap fitted into grooves 12 in the inner periphery of the frame 4, and a spacing rib 13 is defined between the grooves 12. The pivots 6 are fixed into the outer periphery of the frame 4 at a position corresponding to the position of the spacing rib 13 on the inner periphery. The grooves 12 extend outward from the inner periphery to approximately the same distance through the frame 4 that the pivots extend to inwardly from the outer periphery.

Figure 4 shows a cross-section along a diameter 90^{O} to that of figure 3, i.e. along IV-IV in figure 1, without the yoke 5 or mirror spindle 7 shown. As can be seen, the curvature of the concave mirror 3a is the same in both sections, and hence the concave mirror 3a produces an even magnification.

The spacing rib 13 and groove 12 for the concave mirror 3a provide a curve to accomodate the curvature of the concave mirror 3a, and the spacing rib 13 allows room to accomodate the curved surface of the concave mirror 3a within the frame 4.

The frame 4 can be plastics, for example injection moulded plastics. The yoke 5, pivots 6, spindles 7, 10 and lazy tongs 2 can also be plastics, but the various parts can be metal or other suitable material. The various parts may be plated, painted or coloured for aesthetic effect or protection.

The pivots 6 allow the mirror 1 to rotate about a horizontal axis, and thus the user can select either the plane mirror 3b or the concave mirror 3a, and can position the mirror at a convenient angle. The mirror

spindle 7 allows the yoke 5 and hence the mirror 1 to rotate about a vertical axis. The lazy tong A mechanism 2 allows the mirror 1 to be moved toward and away from the surface it is mounted to, for example a wall or cupboard, and the sliding bearings 8 on the spindles 7, 10 maintain the mirror spindle 7 parallel with the bracket spindle 10, and hence keep the yoke 5 upright.

The bracket spindle 10 allows the tongs 2 to swing about the bracket 11, and hence allows the mirror 1 to be placed at any point in an area enclosed by the arc of the mirror 1 when the tongs 2 are at maximum extension.

The concave mirror 3a provides a magnifying effect allowing the user to see more clearly, particularly when the user is short sighted.

The mirror of figures 1 to 4 is advantageously a shaving mirror for mounting in a bathroom, although it will be appreciated that other uses are possible.

In an alternative embodiment a concave mirror 3a as shown in figures 3 and 4 can be mounted on a conventional make-up mirror stand. Thus the yoke 5 of figures 1 and 2 is mounted on a stand rather than being joined to the lazy tong mechanism 2.

In addition, the lazy tong mounting of figures 1 and 2 may be used with a conventional plane mirror in place of the magnifying mirror. Two plane mirrors back to back can be provided, or a single plane mirror encased in a protective frame.

The bracket 11 may be replaced by a bracket adapted to mount the mirror to a horizontal surface, such as a table top, or cupboard bottom, rather than to a vertical surface.

The sliding bearings 8 can be simple friction bearings, for example plastic bearings on a metal rod, or a ball race could be used.

The spindles 7, 10 can be round rods, allowing rotation of the arm/mirror by rotation of the sliding bearing 8 about the rods, or they can be a different section, eg a hexagonal bar or square section, allowing only up and down sliding of the bearings 8, with rotation being enabled by pivots elsewhere, for example a pivot joining the yoke 5 to the mirror spindle 7, and pivot joining the bracket 11 to the bracket spindle 10.

A means of adjusting the height as well as the horizontal reach of the mirror may be provided. For example a vertical sliding bar mounted on the bracket, or a screw thread to raise and lower the mirror.

[N.B. Queried “10 dependent claims” with invigilator who advised that this “10" did not include add^{nl} independent claims/omnibus claims].

CLAIMS

1. A mirror comprising a magnifying mirror, the mirror being arranged for bedroom or bathroom use.

2. A mirror as claimed in claim 1, comprising a concave mirror surface as the magnifying mirror.

3. A mirror as claimed in claim 1 or 2, comprising a plane mirror arranged back to back with the magnifying mirror.

4. A mirror as claimed in claim 3, comprising A [a frame wherein the plane and magnifying mirrors are mounted in grooves around an inner periphery of the frame, the grooves being spaced by a

spacing rib.] A

5. A mirror as claimed in claim 4, wherein the portion of the magnifying mirror mounted in its groove is curved, and the spacing rib is curved to accomodate the curvature of the magnifying mirror.

6. A mirror as claimed in claim 4 or 5, comprising B [a pivot mounted to the frame to enable the mirror to be rotated relative to a stand when in use, wherein the pivot is joined between the stand and the outer periphery of the frame, and joins the outer periphery at a position corresponding to the position of the spacing rib on the inner periphery.] B

7. A mirror mounted on an extensible arm.

8. A mirror as claimed in any of claims 1 to 6 mounted on an extensible arm.

9. A mirror as claimed in claim 7 or 8, wherein the extensible arm comprises a lazy tong mechanism.

10. A mirror as claimed in claim 7, 8 or 9, wherein C [an end of the lazy tongs comprises two free ends of two bars of the lazy tongs, and the free ends are mounted so as to be slidable on a mounting relative to one another as the lazy tongs are extended or retracted.] C

11. A mirror as claimed in any of claims 7 to 10, wherein the mirror is D [arranged to be mounted to a surface in use, wherein one or both ends of the extensible arm is/are attached to spindles such that the arm and/or mirror can be rotated relative to the surface.] D

12. A method of manufacturing a mirror as claimed in any preceding claim.

13. A mirror substantially as herein before described with reference to figures 1 and 2 or figures 3 and 4.

14. A method of manufacturing a mirror substantially as herein before described with reference to figures 1 and 2 or figures 3 and 4.

* * * * * * * * * *

2 Pages of drawings follow

P3

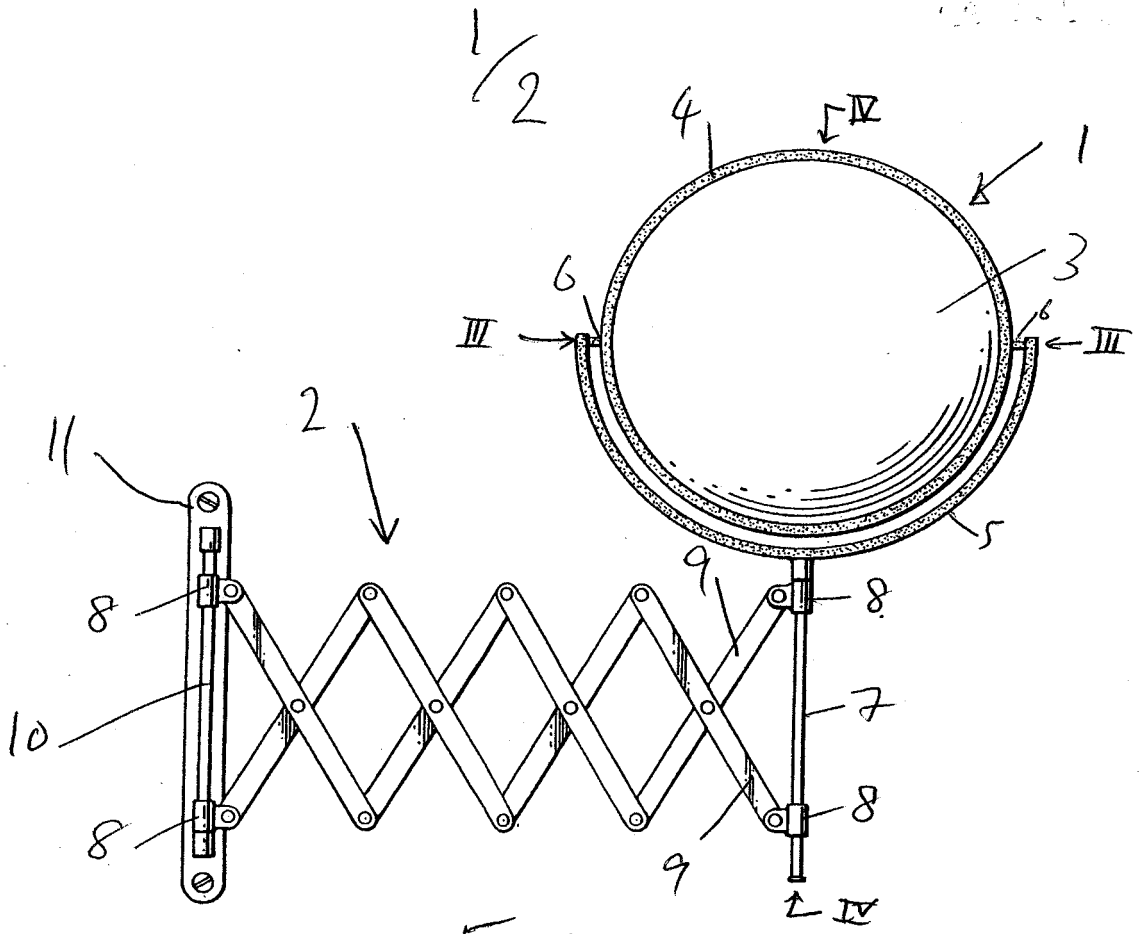

Fig. 1.

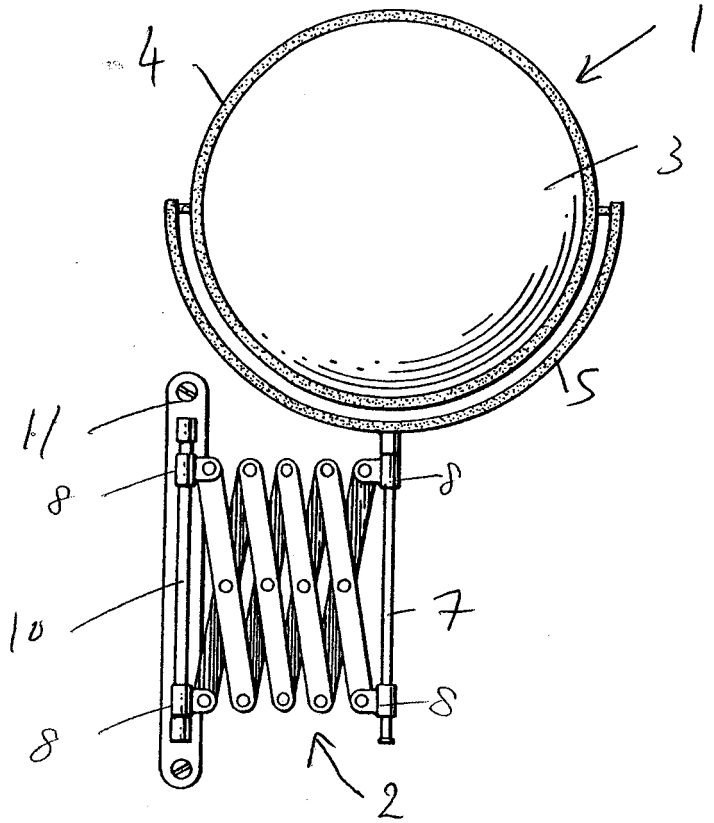

Fig. 2

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P3

2/2

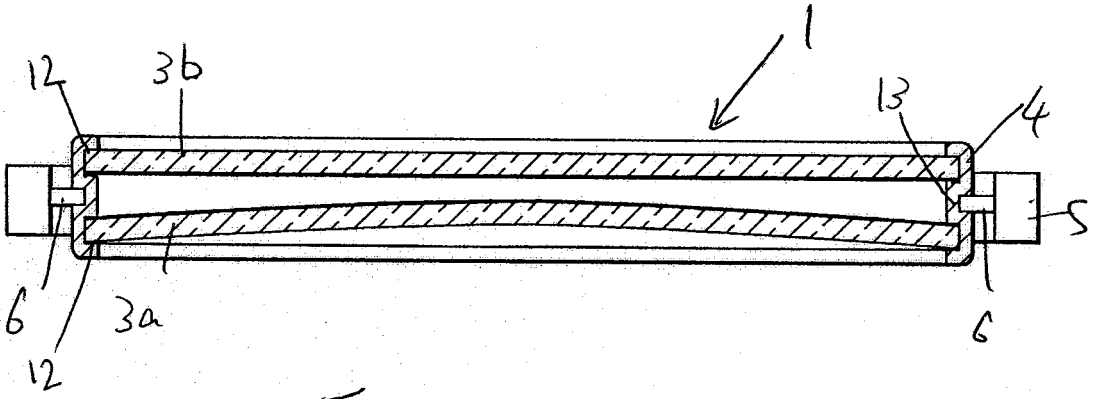

Fig. 3

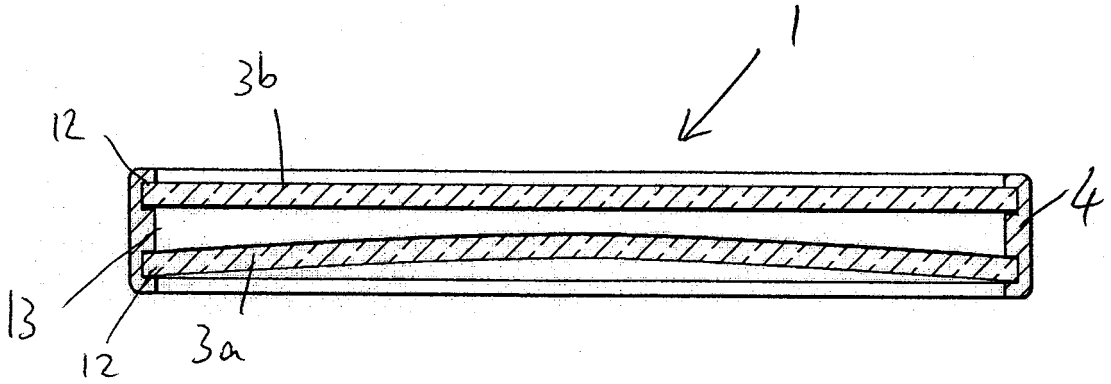

Fig. 4