HAND-HELD LIQUID ABSORBING DEVICE

The present invention provides a liquid absorbent device (24) comprising an absorbing means (30) for absorbing liquid and locating means (26) for location of the absorbing means against the front of the hand, the locating means attaching to the absorbing means, wherein if the locating means is a glove the back of the glove is substantially non-absorbent.
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FIELD OF THE INVENTION

The present invention relates to liquid absorbent devices.

BACKGROUND ART

Cyclists, particularly motorcyclists, typically use visual aids in order to protect their eyes from wind, rain, stones or other material and also to enhance their vision. The visual aids may include visors which are usually attached to a helmet, goggles or sunglasses. One problem with these visual aids is that if liquid is deposited on an outer surface of a visual aid, vision of the rider is impaired. This presents a substantial safety hazard, particularly if the liquid includes substances such as oil and road grime. While there have been proposals for devices to wipe liquid from the external surface of a visual aid, the effectiveness of these devices is questionable.

For example, DE3311251A, WO8701013A, DE29715235U, GB1597837A and United States design patent no. 306366 all disclose motorcycle gloves which include a wiper blade, which can be used to wipe the visor of a helmet. However, the performance of such gloves in removing liquid and particularly grimy liquid from a motorcycle visor is less than satisfactory, since the blade typically serves only to redistribute the liquid or griming liquid over the visor and not to remove it. There are at least two factors which contribute to the unsatisfactory performance:

(1) it is difficult to position a wiper blade, even a wiper blade whose contacting surface which contacts the outer surface of a visor is curved to match the curvature of the outer surface of the visor, appropriately relative to the outer surface of a visor such that it remains in contact with the outer surface of the visor along the length of its contacting surface while both riding a motorcycle and wiping the outer surface of the visor; and
(2) it is difficult to wipe grimy liquid to one side of the outer surface of a visor with a wiper blade without smearing the grimy liquid across the outer surface of the visor, regardless of how much care is taken in ensuring the contacting surface of the wiper blade remains in contact with the outer surface of the visor. Factor (2) above is even more difficult if it is not raining. This is because water aids the wiping process.

There have also been proposals to use gloves to clean up liquid. For example, GB2134371A describes a glove or mitten having an exterior layer made of a liquid absorbent material which covers the entire exterior surface of the glove and an inner, barrier layer which prevents penetration of the absorbed liquid to the hand of the user. The glove has been designed for domestic use for cleaning kitchen surfaces and the like. It will be appreciated that if such a glove were worn when riding a motorcycle or bicycle, the back of the glove would become saturated with liquid which would most likely include substances such as grime and oil. Liquid would also drain inside the liquid absorbent glove or mitten and be retained there by the barrier layer. The absorbent glove or mitten is therefore clearly not suitable for use by a cyclist.

Other proposals such as that made in US4244057A and US4536889 involve a glove with a liquid absorbent portion located on the back of the glove. The purpose of each of these two gloves is to allow a skier to wipe their nose on the liquid absorbent portion. This negates the need to remove the glove and reach into a pocket and withdraw a tissue or handkerchief, wipe the nose and then replace the glove as would otherwise be required. It will be appreciated that the requirement for convenient wiping of the nose necessitates the placement of the absorbent portion on the back of the glove, as this facilitates a natural wiping motion. Placement of the absorbent portion on the back of the glove also
ensures the absorbent portion does not come into contact with handgrips of a skier's poles. Accordingly, it will be appreciated that if such gloves were worn when riding a motorcycle or bicycle, the liquid absorbent portion would quickly saturate and would not be as effective in removing liquid from the visual aid used by the rider. Moreover, in view of the location on the back of the glove, it would be an awkward motion indeed for a rider to wipe a visual aid of this type whilst riding.

Proposals made in US4525877A and FR2498935 disclose sports gloves, the back of which include perspiration absorbing material. As described above in relation to GB2134371A, for the proposed use, the back of the sports glove would become saturated with liquid. Liquid would soak through to the inside of the glove and would also drain inside the glove. A bicycle or motorcycle rider would therefore prefer to avoid using such a glove. Furthermore, as soon as the absorbent portion became saturated, it would not be as effective in removing liquid from the visual aid of a rider.

Thus, there remains a need for a suitable device for effectively removing liquid from a visual aid used by a cyclist, particularly a motorcyclist, when riding.

SUMMARY OF THE INVENTION

The present invention provides a liquid absorbent device comprising absorbing means for absorbing liquid and locating means for locating the absorbing means against a front of a hand, the locating means attaching to the absorbing means, wherein if the locating means is a glove, the back of the glove is substantially non-absorbent.

The location means may comprise an elongated member which is adapted to extend around the back of a hand.

The elongated member may be resiliently extendable.

The glove may be a mitten.

The mitten may be adapted to leave the fingers and thumb essentially uncovered.
The glove may have separate openings for insertion of each finger and the thumb such that the fingers and the thumb extend through the openings to leave free ends of fingers and thumb essentially uncovered.

The glove may have individual pouches for receipt of a finger and/or thumb. The glove may have a pouch for each finger and thumb.

The location means may be attachable to the front of the glove.

The location means may be removably attachable to the front of the glove.

The location means may be removably attachable to the front of the glove via corresponding flexible hook material and looped pile fabric material of the type marketed and commonly known under the trade mark VELCRO™.

The location means may comprise adhesive.

The absorbent means may be integrally formed with the glove.

The absorbent means may be adapted to locate against a palm of a hand.

The glove may be fitted over another glove subsequent to fitting the other glove over a hand.

At least a portion of the glove may be formed of an expandable material to enable the glove to be fitted over the other glove when the other glove is fitted over a hand.

The back of the glove may be formed of an expandable material.

It is preferred that absorbed liquid is readily expelled from the liquid absorbent portion upon compression of the liquid absorbent portion.

The present invention also provides a method of wiping liquid from an outer surface of a visual aid, the method comprising the steps of:

(a) locating liquid absorbing means adapted to absorb liquid against a front of a hand; and
(b) wiping liquid from the outer surface of a visual aid.

The liquid absorbing means may be secured relative to a front of a hand.

The method may further include the step of; clenching a fist to compress the absorbing means and wringing the absorbing means substantially dry.

The method may comprise wiping liquid from an outer surface of a visual aid as defined above wherein the absorbing means is a glove as defined above.

The absorbing means is preferably located against a front of a left hand for use by motorcyclists.

The absorbent means is preferably located against a front of a right hand for use by bicyclist.

The present invention also provides a kit of parts comprising absorbing means for absorbing liquid and locating means for locating the absorbing means against a front of a hand. The locating means may be suitable for locating the absorbing means against a front of a glove.

The kit of parts may include instructions for location of the absorbing means against the front of a hand. The kit of parts may include absorbing means and instructions for location of the absorbing means against a front of a glove with the use of adhesive.

The kit of parts may include absorbing means and corresponding flexible hook material and looped pile fabric material of the type marketed, and commonly known under the trade mark VELCRO™. The kit of parts may include instructions for attachment of the corresponding flexible hook material and looped hole fabric material to the absorbing means and a front of a glove with the use of adhesive to enable the absorbing means to the removably attached to front of the glove.

The kit of parts may include any of the above defined features.

The kit of parts may also include instructions for assembly of any of the above defined features.
The present invention also provides a system of wiping liquid from an outer surface of a visual aid, the system comprising absorbing means for absorbing liquid; and instructions for location and use of the absorbing means according to a method of wiping liquid from an outer surface of a visual aid comprising the steps of:

(a) locating the liquid absorbing means against a front of a hand; and
(b) wiping liquid from the outer surface of a visual aid.

The phrases “front of a hand” and “front of the hand”, when used throughout the description and claims, refers to that portion of a hand which includes the palm of a hand and the portion of the fingers, thumb and wrist which are coextensive with the palm of the hand, when the fingers and thumb are extended so that they are in a non-clenched position.

The phrases “back of a hand” and “back of the hand”, when used throughout the description and claims, refers to that portion of a hand from which the knuckles of a hand project and the portion of the fingers, thumb and wrist which are coextensive with the knuckles, when the fingers and thumb are extended so that they are in a non-clenched position.

The phrases “front of a glove”, “front of the glove”, and “front of another glove”, when used throughout the description and claims, refers to that portion of a glove which covers the palm of a hand and, where applicable, portions of a glove which cover the portion of the fingers, thumb and wrist which are coextensive with the palm of a hand, when the fingers and thumb are extended so that they are in a non-clenched position.

The phrases “back of a glove”, “back of the glove”, and “back of another glove”, when used throughout the description and the claims refers to that portion of a glove which covers the back of a hand and, where applicable, portions of a glove which cover the portions of the fingers,
thumb and wrist coextensive with the knuckles of a hand, when
the fingers and thumb are extended so that they are in a non-
clenched position.

In the claims which follow in the proceeding
summary of the invention, except where the context requires
otherwise, due to express language or necessary implication,
the words "comprising", "comprises" or "comprise" are used in
the sense of "including"; that is, the feature specified may
be associated with further features in various embodiments of
the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

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

Figure 1 shows a front elevation of a glove according to
the present invention.

Figure 2 shows a front elevation of a front of a
motorcycle glove which is adapted for attachment thereto of a
corresponding absorbent pad; and

Figure 3 shows a front elevation of an absorbent pad
which is adapted to removably attach to the glove of Figure
2.

BEST MODE FOR CARRYING OUT THE INVENTION

Referring to Figure 1, the left handed glove 10 has
individual pouches 12 for insertion of fingers, individual
pouch 14 for insertion of a thumb and an elastic strap 16. A
front portion 18 of the glove 10 includes that portion of a
glove which covers the palm of the hand and portions of the
glove which cover the portions of the fingers and thumb which
are coextensive with the palm of the hand when the fingers
and thumb are extended so that they are in a non-clenched
position. The front portion 18 is formed of liquid absorbent
material which may be chamois material and is stitched to the
back (not shown) of the glove 10. The glove 10, excepting the
front portion 18, is formed of an open weaved, substantially
non-absorbent, stretchable fabric. With the elastic strap 16
in the position of Figure 1, the glove 10 is appropriately

SUBSTITUTE SHEET (Rule 26) (RO/AU)
fitted to a left hand such that the front portion 18 fits against the front of the left hand.

An outside surface of the elastic strap 16 and inside surface of a free end 19 of the strap 16, which is not attached to the glove 10, have corresponding flexible hook material and looped pile fabric material of the type marketed and commonly known under the trade mark VELCRO™ to enable the strap 16 to be wrapped appropriately around a wrist which extends from a hand for the purpose of securing the glove 10 to a hand. The VELCRO™ which is attached to the outside surface of the strap 16 extends away from a fixed end 21 of the strap 16 which is attached to the glove 10, but may not extend the entire length of the strap 16.

With the chamois 18 positioned appropriately against the front of a left hand, the glove 10 can be used to wipe liquid and/or grime from an outside surface of a motorcyclist’s visual aid while the motorcyclist is riding a motorcycle as follows. The motorcyclist’s left hand is removed from the handlebars of the motorcycle and the thumb and fingers of the hand are extended such that the glove is in a position corresponding to that of Figure 1. The front portion 18 of the glove 10 is then wiped across the outside surface of the visual aid that the motorcyclist is wearing to wipe off liquid and/or grime. By closing the fingers and thumb of the hand inwardly, toward the palm of the hand, the motorcyclist can clench his/her fist to consequently wring liquid from the chamois. By using a left handed glove 10 a motorcyclist is able to continue to control the throttle of the motorbike while removing liquid and/or grime from an outside surface of his/her visual aid.

A bicyclist could also use the left handed glove 10 in the same manner as that described above for the motorcyclist; however, for safety reasons it is preferred that a bicyclist uses a right handed glove (not shown) so that any sudden braking which is carried out while the bicyclist’s right hand is removed from the handle bars is actioned via the left hand which controls the rear brakes of the bicycle rather than the
right hand which controls the front brakes of the bicycle.

It is preferred that the size of the glove and elasticity of the stretchable fabric are such that the glove 10 is fittable over a left handed motorcycle glove as fitted to a hand. Similarly, a right handed glove (not shown) corresponding to the glove 10 may be of suitable size and elasticity to enable it to be fitted over a right handed bicycle glove.

Alternatively, the front absorbent chamois portion 18 could be provided by gluing or stitching an appropriately shaped and sized sheet of chamois material to a front portion of a motorcycle glove which corresponds to the front portion 18 of Figure 1.

Referring to Figure 2 a palm portion of the front of a left handed motorcycle glove 24 which corresponds to the palm of a left hand has 3 VELCRO™ pads 26 spaced relative to each other in a triangular formation; however, other numbers and formations of VELCRO™ pads 26 may be more desirable depending on the size of the glove 24 and manufacturing considerations such as time and expense of production. Alternatively, a larger single VELCRO™ pad may be more desirable. The VELCRO™ pads 26 may be stitched to the glove 24 or alternatively, may be attached to the glove 24 via adhesive.

Referring to Figure 3 a back 28 of an absorbing pad 30, whose shape and size corresponds to the palm portion of the front of the left handed motorcycle glove 24, is covered with VELCRO™ material which is suitable for being removably attached to the VELCRO™ pads 26. The absorbing pad 30 is appropriately attached to the glove 24 by turning the absorbing pad 30 over and placing it on the palm portion of the front of the glove 24 such that the absorbing pad 30 completely covers the pads 26 and the VELCRO™ material 28 contacts the pads 26. The VELCRO™ pads 26 and corresponding VELCRO™ material 28 may be lightly pressed together to ensure the absorbing pad 30 is attached to the glove 24. When the absorbing pad 30 is attached to the glove 24 as described above, absorbing material (not shown) which may be chamois
material is exposed and covers part of the palm portion of the front of the glove 24. The glove 24 can then be used as described above in relation to the glove 10 to remove liquid from a motorcyclist's visual aid.

A bicyclist's glove could be adapted in a similar manner to that described in relation to the motorcycle glove 24 for removable attachment of a similar absorbing pad to the absorbing pad 30. However, as described above in relation to the glove 10, it is preferred that an absorbing pad similar to the absorbing pad 30 is attached to a right handed bicyclist's glove.

The absorbing pad 30 may be appropriately shaped and sized to correspond to a front portion of a cyclist's glove corresponding to the front portion 18 of the glove of Figure 1. In such a situation it is preferable that VELCRO™ pads corresponding to the 3 VELCRO™ pads 26 are spaced over the portion of the front of a glove which corresponds to the front portion 18 of the glove of Figure 1.
THE CLAIMS DEFINED IN THE INVENTION ARE AS FOLLOWS:

1. A liquid absorbent device comprising absorbing means for absorbing liquid and locating means for locating the absorbing means against a front of a hand, the locating means attaching to the absorbing means, wherein if the locating means is a glove, the back of the glove is substantially non-absorbent.

2. Absorbing and locating means as claimed in claim 1 wherein the absorbing means is positioned against a front portion of a hand including the palm of a hand and the portion of fingers and thumb which are coextensive with the palm the hand, when the fingers and thumb are extended so that they are in a non-clenched position.

3. Absorbing and locating means as claimed in claim 1 wherein the absorbing means is positioned against a palm of a hand.

4. The absorbing and locating means as claimed in any one of claims 1 - 3 wherein the liquid absorbing portion is adapted to readily expel absorbed liquid upon compression of the liquid absorbing portion.

5. The absorbing and locating means as claimed in any one of the preceding claims wherein the locating means comprises an elongated member which is adapted to extend around the back of the hand.

6. The absorbing and locating means as claimed in claim 5 wherein the elongated member is resiliently flexible.

7. A glove comprising absorbing means for absorbing liquid wherein the absorbing means is positioned at a front of the glove and the back of the glove is substantially non-absorbent.

8. A glove as claimed in claim 7 wherein the absorbing means is removably attached to the glove.

9. The glove as claimed in claim 7 or claim 8 wherein the liquid absorbing means is removably attached to an external surface of the glove.

10. A glove as claimed in any one of claims 7 - 9 wherein the absorbing means is removably attached to the glove via
corresponding flexible hook material and looped pile fabric material of the type marketed and commonly known under the trade mark VELCRO™.

11. A glove as claimed in claim 10 wherein VELCRO™ material is either stitched to the glove or secured via adhesive and corresponding VELCRO™ material is either stitched to the absorbing means or secured via adhesive.

12. A glove as claimed in claim 7 wherein the absorbing means is attached to the glove.

13. A glove as claimed in claim 12 wherein the liquid absorbing means is integrally formed with the glove.

14. A glove as claimed in any one of claims 7 - 13 wherein the glove, excepting the liquid absorbing means is substantially non-absorbent.

15. A glove as claimed in any one of claims 7 - 14 wherein the liquid absorbing means is positioned at a front portion of a glove; the front portion of a glove including that portion of a glove which covers the palm of a hand and portions of a glove which cover the portions of the fingers and thumb which are coextensive with the palm of a hand, when the fingers and thumb are extended so that they are in a non-clenched position; when the glove is fitted over a hand.

16. A glove as claimed in any one of claims 7 - 14 wherein the liquid absorbing means is positioned at a palm portion of a glove which corresponds to a palm of a hand when the glove is fitted over a hand.

17. A glove as claimed in any one of claims 7 - 16 wherein at least a portion of the glove is formed of an expandable material to enable the glove to be fitted over another glove subsequent to the other glove being fitted over a hand.

18. A glove as claimed in claim 17 wherein the glove, excepting the liquid absorbing means is formed of expandable material.

19. A glove as claimed in any one of claims 7 - 18 wherein the absorbing means is adapted to expel liquid when compressed.

20. A glove as claimed in any one of claims 7 - 19 wherein
the glove has individual pouches for receipt of a finger
and/or thumb.
21. A glove as claimed in claim 20 wherein the glove has a
pouch for each finger and thumb.
22. A glove as claimed in any one of claims 7 - 19 wherein
the glove is a mitten.
23. A glove as claimed in any one of the preceding claims
wherein the glove is adapted to be fitted over a left hand
for use by motorcyclists.
24. A glove as claimed in any one of the preceding claims
wherein the glove is adapted to be fitted over a right hand
for use by bicyclists.
25. A method of wiping liquid from an outer surface of a
visual aid, the method comprising the steps of:
(a) locating liquid absorbing means adapted to absorb liquid
against a front of a hand; and
(b) wiping liquid from the outer surface of a visual aid.
26. A method as claimed in claim 25 wherein the absorbing
means is located against a front of a hand via a glove as
claimed in any one of claims 7 - 24.
27. A method as claimed in claim 26 wherein the following
steps are substituted for step (a):
(d) fitting a hand into another glove; and
(e) fitting the other glove into a glove as claimed
in any one of claims 7-24.
28. A kit of parts comprising absorbing means for absorbing
liquid and locating means for locating the absorbing means
against a front of a hand.
29. A kit of parts as claimed in claim 28 wherein the
locating means are suitable for locating the absorbing means
against a front of a glove.
30. A kit of parts as claimed in claim 28, the kit of parts
including instructions for location of the absorbing means
against the front of a hand.
31. A kit of parts as claimed in claim 29, the kit of parts
including instructions for location of the absorbing means
against a front of a glove.
32. A kit of parts as claimed in claim 29 or claim 31 wherein the locating means includes corresponding flexible hook material and looped pile fabric material of the type marketed and commonly known under the trade mark VELCRO™ or adhesive.

33. A kit of parts comprising absorbing means for absorbing liquid and instructions for location of the absorbing means against the front of a hand or glove.

34. A kit of parts as claimed in claim 33 wherein the instructions include instructions for location of the absorbing means against a front of a glove with the use of adhesive.

35. A system of wiping liquid from an outer surface of a visual aid, the system comprising absorbing means for absorbing liquid; and

    instructions for location and use of the absorbing means according to a method of wiping liquid from an outer surface of a visual aid comprising the steps of;

    (a) locating the liquid absorbing means against the front of a hand or glove; and

    (b) wiping liquid from the outer surface of a visual aid.

36. Absorbing and locating means substantially as herein described with reference to any one of the accompanying drawings.

37. A glove substantially as herein described with reference to any one of the accompanying drawings.

38. A method substantially as herein described with reference to any one or more of the accompanying drawings.
FIG. 1
**INTERNATIONAL SEARCH REPORT**

**International application No.**
PCT/AU 99/00627

**A. CLASSIFICATION OF SUBJECT MATTER**

Int Cl°: A41D 19/00, 19/01

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC AS ABOVE

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

AU: IPC AS ABOVE (1975-1999)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

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**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
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<td>GB 2113977 A (SMITH) 17 August 1983</td>
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<td>See page 1 lines 40-60</td>
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<td>P, X</td>
<td>GB 2322791 A (ROBERTS) 9 September 1998</td>
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<td>US 4843652 A (KUWAHARA) 4 July 1989</td>
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[X] Further documents are listed in the continuation of Box C

See patent family annex

* Special categories of cited documents:
  - "A" document defining the general state of the art which is not considered to be of particular relevance
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  - "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

**Date of the actual completion of the international search**
25 August 1999

**Date of mailing of the international search report**
26 AUG 1999

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Form PCT/ISA/210 (second sheet) (July 1998)
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<td>US 5682612 A (SCHWARZ) 4 November 1997 Whole document</td>
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**INTERNATIONAL SEARCH REPORT**

**Box I** Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
   because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.: 36-38
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

   Claims 36-38 do not comply with PCT Rule 6.2(a) in that they rely on references to the description and drawings.

3. ☐ Claims Nos.:
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

**Box II** Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.

**Remark on Protest**

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet(1)) (July 1998)