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DESCRIPTION

Field of the Invention

[0001] The present invention relates to a pocket as well as a garment including/incorporating such a pocket.

Background of the Invention

[0002] In the art it is well-known to provide garments such as for example trousers or shirts with pockets for various reasons. In addition to the traditional pockets provided in most garments it is customary in work wear to provide pockets which are suitable for holding protective pads. Typically such pockets will be provided on the garment such that in use the pocket will be positioned adjacent the user's knees or elbows or back. The present invention is related to such a special pocket which is suitable to hold a protective pad.

[0003] Whenever a pocket is provided in a garment more layers of material will typically be present in the region of the pocket in order to provide the limitations of the pocket as well as its fastening means. This is true for both ordinary pockets and the type of pockets to which the present invention is directed.

[0004] In WO 2017/021845 is disclosed a pocket having an inner layer (the trouser leg as such) and an outer layer, where the inner layer and the outer layer are connected on a substantial part of the pockets outline, leaving an , in use, upwards facing opening closeable with a flap. JPS6082419U and US4731883 disclose garments with a pocket and a ventilation feature between the inner of the garment and the flap which closes the pocket.

[0005] US2013174315 discloses a garment with a pocket which has a front wall for holding the items in the pocket, an outer closing feature and a ventilation feature between the interior of the garment and the interior of the pocket.

[0006] For work wear the pockets designed to hold protective paddings are usually also provided with a surface material which is extremely durable and consequently the material is usually also thicker, heavier and more cumbersome in use. This fact in addition to the fact that the pads stored in the pockets will create a special thick zone causes a user to experience elevated heating and potentially sweating in the area of the body (typically knees, elbows or the back) superposed the pockets with protective pads.

Object of the Invention

[0007] Consequently it is an object of the present invention, which is characterized by the claims, to provide an inventive pocket which alleviates these disadvantages, relating to uncomfortable wear and heat generation and at the same time provides additional advantages.

Description of the Invention

[0008] The invention addresses this by providing a pocket according to claim 1 and the embodiments according to the dependent claims.

[0009] For work wear having pockets for protective pads, in particular working trousers the pockets are usually provided with an opening facing upwards or facing downwards in use. These types of pockets have various advantages, for example when the opening is facing downwards, it is easy to empty the pocket for undesired matter such as gravel, sand and the like, and at the same time rainwater will not accumulate in the pocket if/when it is raining.

[0010] On the other hand, the protective pad will have a tendency to be displaced downwards, and consequently it is necessary to provide means to secure that the pad remains in the pocket.

[0011] For pockets having their opening facing upwards the pocket has a tendency to collect rainwater, gravel and the like and as such is not very useful for these types of jobs. On the other hand, it is easy to insert and withdraw the protective pad from the trousers which may be desirable as the type of work changes during the day thereby providing an easy manner in which to adapt the usability of the trousers.

[0012] If the work includes kneeling, the pads will have a tendency to be displaced and thereby not fulfil their primary object.

[0013] With the present invention where the pocket opening is provided on the side of the pocket which in use is vertical, the disadvantages with the traditional pockets mentioned above, i.e. with the pocket opening upwards or downwards are alleviated. At the same time, by providing a double closing feature it is furthermore foreseen that by allowing the outer closing feature to remain open, the inner closing feature will provide the necessary ventilation and at the same time retain the pad in its proper position in the garment.

[0014] If ventilation is not needed, it is possible to simply close the outer closing feature such that the pocket will be completely enclosed safeguarding the generated heat such that even in cold climates it is possible to retain the heat, particularly around the knees, and safeguard the position of the kneepad.

[0015] In a still further advantageous embodiment the outer closing feature is Velcro® or a zipper.

[0016] Both the suggested closing features are well-known and provide a stable and easy-to-use closing mechanism which provides a reliable closing.

[0017] In a still further advantageous embodiment of the invention the inner closing feature is integrated in the inner layer or outer layer along one side limitation, and releasably attached to the other layer, and where optionally the closing feature comprises a perforated fabric or one or more strips distributed along the pocket's opening.

[0018] By providing the inner closing feature as a flap integrated with the inner layer or the outer layer the inner closing feature is always present. Furthermore, the pocket may easily be closed afterwards, simply by folding the flap over the protective pad inside the pocket and providing means for retaining the flap in this position. By furthermore providing the flap as a perforated fabric, for example in the shape of small or large holes, it is ensured that ventilation in and out of the pocket is provided. Part of the inner closing feature is not inside the inner pocket but is directly between a wearer's skin and the outer layer. This part of the inner closing feature is perforated in order to provide ventilation from the inner side of the garment directly out to the ambient conditions. As the outer closing means are opened the inner closing feature is exposed and thereby the section is exposed, allowing ventilation through the apertures.

[0019] It is furthermore advantageous to let the flap be made from the material of the inner layer in that the outer layer material of the pocket typically will be a very heavy material in that it is extremely wear resistant and durable.

[0020] This is the subject of a further advantageous embodiment of the invention where the outer layer is made from an elastic wear resistant material comprising Cordura® and/or Kevlar® and/or Dyneema®. This type of material is not very pliable and as such if the flap is made from the material of the outer layer, the flap will be very strong and durable, but will be less pliable and as such not be very comfortable or easy to use.

[0021] The outer layer made from the elastic, wear resistant material comprising Cordura®, Kevlar® and/or Dyneema® is extremely strong and wearable and at the same time relatively elastic meaning that it can be extended in two directions.

[0022] This provides for wearability and adaptability to the shape of the work wear such that the user will be able to shape the wear resistant patches and at the same time achieve a very durable interface with the surfaces on which the work wear and particularly the pocket comes into contact.

[0023] The invention is also directed at a garment incorporating one or more pockets as disclosed above.

[0024] Garments will typically be trousers, but also for shirts or jackets it is customary to provide protective paddings at the elbows, and as such the same principle is suitable to be applied to shirts and the like.

Description of the Drawing

[0025] Embodiments of the invention will now be described with reference to the accompanying drawing wherein

Figure 1

illustrates a pair of trousers

Figure 2

illustrates a working shirt or jacket

Figure 3

illustrates the outer closing feature in the shape of a zipper

Figure 4

illustrates the pocket with the outer closing feature opened

Figure 5a, 5b

illustrate cross-sections of two alternative embodiments through a typical pocket

Figure 6

illustrates a situation where the protective pad is partly inserted into the pocket

Detailed Description of the Invention

[0026] In figure 1 and 2 examples of garments are illustrated. In figure 1 a pair of trousers 10 is schematically illustrated where in the trouser leg's superposed where the knees will be during wear a pair of knee pockets 11, 12 is provided.

[0027] Likewise, in figure 2 a working shirt or jacket 15 is illustrated where the sleeve 16 is provided with a pocket 17 superposed where the elbow will be in use, which pocket is suitable to accommodate an elbow protection pad. The pockets 11, 12, 17 are provided with access openings 13, 18 on the outline of the pockets which in use will be substantially vertical or in other words as already mentioned above the access openings 13, 18 are provided parallel to the longitudinal direction of the arm or leg which will be inserted into either the sleeve or the trouser leg 10, 15.

[0028] The access openings 13, 18 are provided with a double closing feature as will be explained below. The outer closing feature may as illustrated in figure 3 be a zipper 30 or other easily openable and closable feature. In this context Velcro® is often used. When opening the outer closing feature access is made to the second closing feature which is the inner closing feature 32, see figure 4.

[0029] In figure 4 the outer closing feature 30 in the shape of a zipper has been opened such

that the two parts 31, 31' will more or less form the rim of the opening thereby providing access to the inner closing feature (see fig 5a and 5b). Adjacent the inner closing feature and visible through the outer closing feature 31, 31' is in this embodiment provided a section with apertures 33 such that ventilation may be provided to the inside of the pocket 11, 12. This section may also be made from netting or other fabric allowing easy exchange of air. The protective resilient pad may be inserted over the section indicated by 33 and under the upper part of the zipper 31'.

[0030] In fig 5a and 5b are illustrated two different embodiments of the inner closing feature 32. Turning briefly to figure 5a and 5b which are cross-sections through a typical pocket 11, 12 along the line A-A in fig 1, it is clear that the pocket is created in a space 36 between the inner layer 10' which may be part of the material from which the entire garment 10 is made and an outer layer 19. A section 40 of the inner layer is here provided with apertures 33, but may as already mentioned above also be made from netting or other fabric allowing easy exchange of air. The outer layer 19 will typically be made from a strong wear resistant material and in one embodiment of the invention the material is made such that it is elastic and comprising Cordura®, Kevlar® and/or Dyneema® fibres. These fibres are extremely wear resistant and may in the right mixture be very pliable such that although the outer layer 19 is wear resistant the outer layer is still very pliable.

[0031] The outer closing feature 30 is in the embodiment illustrated in figure 5a slightly opened such that it may be seen that access is provided to the inner closing feature 32. In this embodiment the inner closing feature 32 is fastened/integrated to the inner layer 10' of the pocket and is in the shape of a flap such that the flap is folded back along the inside of the outer layer 19. Between the inner closing feature 32 and the inside of the outer layer 19, releasable fastening means or friction means, for example in the shape of Velcro® or the like, may be provided such that when the outer closing feature is opened in order to provide ventilation access into the pocket 11, 12, the inner closing feature 32 remains in place such that the protective pad 34 remains in position.

[0032] In fig. 5b is illustrated a variation of the embodiment illustrated in fig. 5a. Here the inner closing feature 32 is provided by two strips or pads 41, 42 of Velcro® or similar function, i.e. something which can be easily connected and disconnected - in the illustration they pads or strips 41, 42 are disconnected allowing insertion or removal of the pad 34.

[0033] In figure 6 is illustrated a situation where the protective pad 34 is partly inserted into the pocket 11, 12. In the illustration the outer closing feature in the shape of the zippers 31, 31' are parted in order to reveal the inner closing feature 32. In order to insert the protective pad 34 into the cavity 36 (see figure 5) inside the pocket, the pad 34 slides above the ventilation layer/inner closing feature 32. Otherwise the embodiments illustrated in fig 5a and 5b are substantially identical.

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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- JPS6082419U [0004]
- US4731883A [0004]
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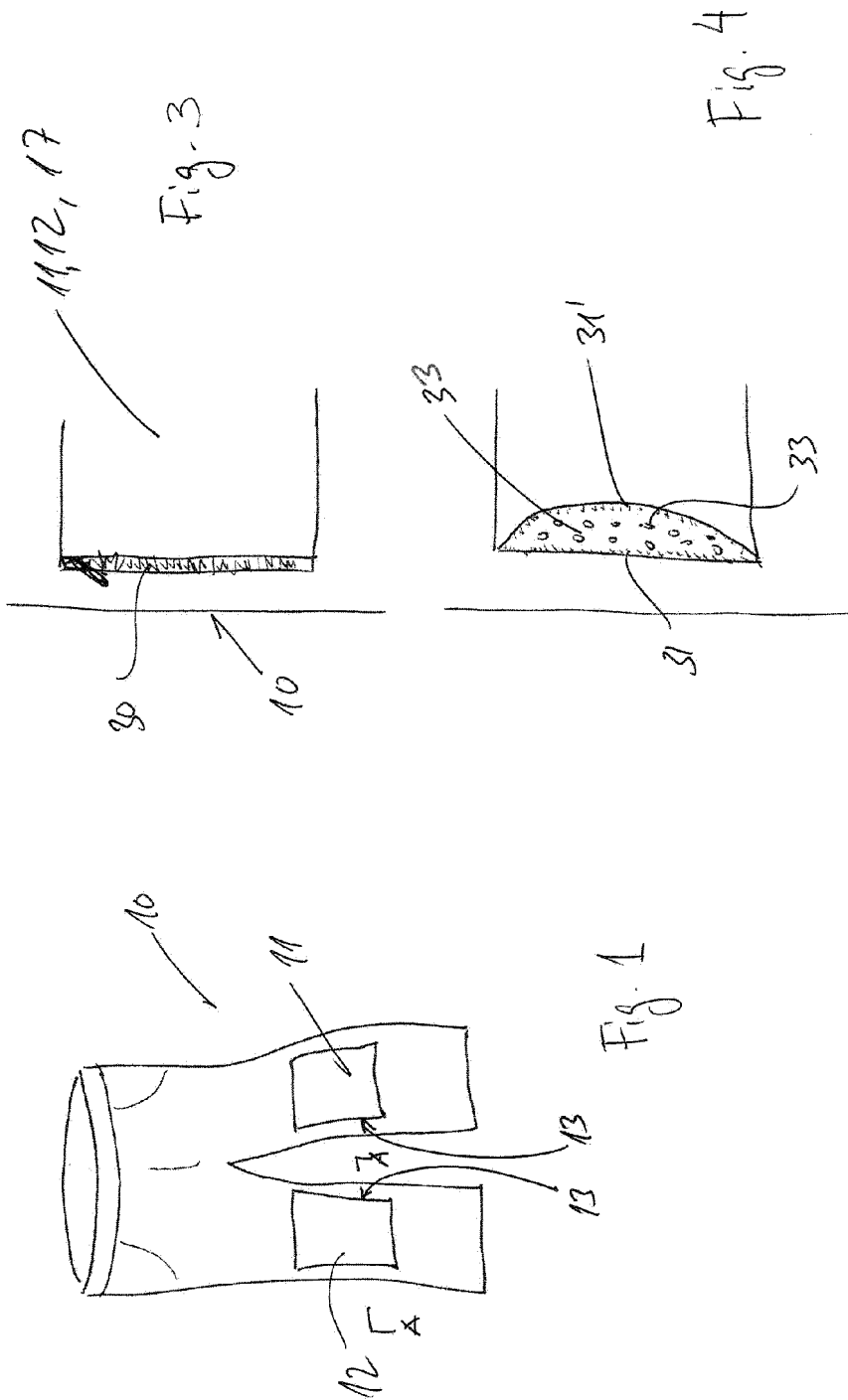
PATENTKRAV

1. Lomme (11,12,17), især en lomme (11,12,17) til anvendelse i en arbejdsbeklædningsgenstand (10,15), hvor nævnte lomme (11,12,17) har et indvendigt lag (10') og et udvendigt lag (19), hvor nævnte indvendige lag (10') og nævnte udvendige lag (19) er forbundet på en væsentlig del af lommens kontur, hvor lommens åbning (13,18) i brug er på en vertikal side af beklædningsgenstanden (10,15), og hvor lommen har en dobbelt lukkefunktion - en indvendig og en udvendig lukkefunktion (32,30), hvor den udvendige lukkefunktion (30) lukker lommen (11,12,17) fuldstændig, hvor lommen er **kendetegnet ved, at** den indvendige lukkefunktion (32) har ventilationsåbninger.
2. Lomme ifølge krav 1, hvor den udvendige lukkefunktion (30) er Velcro® eller en lynlås.
3. Lomme ifølge krav 1, hvor den indvendige lukkefunktion (32) er integreret i det indvendige lag (10') eller udvendige lag (19) langs en sideafgrænsning, og løsbart fastgjort til det andet lag, og hvor den indvendige lukkefunktion (32) eventuelt omfatter et perforeret stof eller en eller flere strimler (41,42), som er fordelt langs lommens åbning.
4. Lomme ifølge et hvilket som helst af de foregående krav, hvor det udvendige lag (19) er fremstillet af et elastisk, slidstærkt materiale, som omfatter Cordura® og/eller Kevlar® og/eller Dyneema®.
5. Lomme ifølge krav 1, hvor mellem den indvendige lukkefunktion (32) og den udvendige lukkefunktion (30), er en sektion, som omfatter åbninger (33), en del af det indvendige lag (10').
6. Beklædningsgenstand (10,15), som indeholder en eller flere lommer (11,12,17) ifølge et hvilket som helst af kravene 1 til 5.
7. Beklædningsgenstand ifølge krav 6, hvor beklædningsgenstanden er et par arbejdsbukser (10), som er forsynet med forstærkninger og slidstærke lapper, hvor lommer

(11,12,17) ifølge et hvilket som helst af kravene 1 til 5 er placeret på knæene, og hvor knæbeskyttelsespudder (34) eventuelt er indført i lommerne (11,12,17).

- 5 8. Beklædningsgenstand ifølge krav 6, hvor beklædningsgenstanden er en arbejds-skjorte eller arbejdsjakke (15) forsynet med lommer (11,12,17) ifølge kravene 1-5, som er placeret ved albuerne.

DRAWINGS



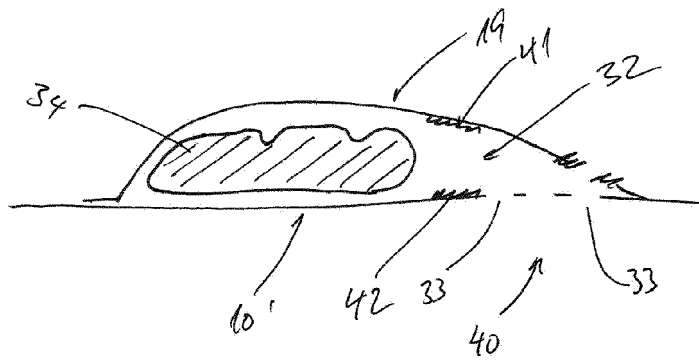


Fig. 5b

