UNITED STATES PATENT OFFICE.

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TWISTED-NET FABRIC.

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To all whom it may concern:

Be it known that I, FRANK CLEWLEY, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Twisted-Net Fabric, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The object of my invention is to provide a new and improved open work knitted fabric especially adapted for use in the manufacture of laundry bags and dyers' bags.

Such bags are subjected to hard wear and are sometimes cut or torn at different points. It is important, therefore, that they should be so knitted that if so torn or cut the damage will be localized. This necessitates the knitting of the fabric in such manner that the threads of which the fabric is knitted shall be interlocked at very frequent intervals in the knitting operation so that it will be absolutely impossible to ravel any particular thread or chain beyond a very small distance.

The fabric may be knitted on a rib-face machine in which only two guide bars, carrying two sets of needles, manipulating two sets of thread, are rendered operative. Two threads, one of one set and one of another set, are manipulated together as a pair and caused to interloop to form chains extending longitudinally or in the direction in which the fabric is knitted. Any given chain, however, is formed partly of the threads of one pair and partly of the threads of another pair; this being effected by causing the threads of a given pair, after they have been interlooped to form a series of loops of one chain, to be diverted laterally and then interlooped to form a series of loops of another chain, after which they are diverted laterally in the opposite direction, and then interlooped to form another series of loops of the first chain, and so on. Between the first and last named series of loops of the first chain is an intermediate series of loops formed by another pair of threads. At the junction between two series of loops of the same chain, one of the threads of the pair forming one of said two series of loops is looped around one of the threads of the pair forming the other of said two series of loops, thus tying together the two series of loops.

In the preferred form of my invention, one thread of each pair, which I call the locking thread, always performs the locking function, while the other thread of the pair, which I call the locked thread, is the thread which is confined by the loop of the locking thread of another pair; the locked thread at this point being itself formed into a loop through which extends the locking thread of the last named pair in its traverse extension toward the adjacent chain. Thereby the threads are interlocked at this point in such manner that accidental raveling is impossible in the event of breakage of any of the threads adjacent thereto.

The construction will be better understood by reference to the accompanying drawings showing a preferred form of my invention, in which—

Figure 1 is an enlarged face view of the fabric in which, however, the fabric is distorted to show the longitudinal rows of loops extending in a straight line and to accentuate the open-work effect. Fig. 2 is a face view showing more accurately the appearance of the fabric to the eye.

x, y, z, represent three adjacent longitudinally extending chains.

a, b, represent respectively the locking and locked thread of one pair of threads. a', b', represent respectively the locking thread and locked thread of another pair of threads.

It will be understood that the terms "locking" and "locked" are employed somewhat arbitrarily; the fact being that the connection between these two threads is more in the nature of an interlocking connection.

It will be observed that threads a and b are interlooped to form a series of loops in the chain x, whence extend transversely and form a series of loops in the chain y, and thence extend transversely to form another series of loops in the chain z, and so on. Threads a' and b' are interlooped to form a series of loops in the chain y, thence extend transversely and form a series of loops in the chain z, and so on. Thus, the chain y is formed of a number of series of loops