No. 820,994. PATENTED MAY 22, 1906.

H. W. SMITH.

WOVEN FABRIC.

APPLICATION FILED MAR. 21, 1902.

Fig. 1.

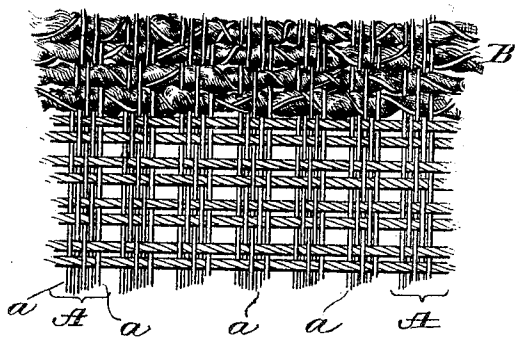

Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

HARRY W. SMITH, OF NORTH GRAFTON, MASSACHUSETTS.

WOVEN FABRIC.

No. 820,994. Specification of Letters Patent. Patented May 22, 1906.

Application filed March 21, 1902. Serial No. 99,275.

To all whom it may concern:

Be it known that I, HARRY W. SMITH, a citizen of the United States, residing at North Grafton, in the county of Worcester and State of Massachusetts, have invented an Improvement in Woven Fabric, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention in woven fabric relates to a novel fabric more especially designed for bath-towels, wherein it is desired the towel take up instantly the water on the body.

This present invention is intended as an improvement on the fabric described in United States Patent No. 671,497, heretofore granted to me, the fabric herein to be described being capable of being manufactured at less cost and on usual plain looms.

My novel fabric comprises warp-threads grouped in sections, three or more in each section, and weft composed of slack soft-twisted, kinky, or bunchy fibrous material, the sections of warp-thread crossing the weft at intervals, leaving the kinks or bunches of the weft uncompressed, so that they may be free to quickly absorb water or moisture.

Figure 1 shows sufficient of a woven fabric embodying my improvements to enable my invention to be understood, and Fig. 2 shows a portion of a weft-thread presenting kinks or bunches.

In accordance with my invention I draw the warp-threads into the usual harnesses and the dents of the reed in sections A, each section of warp-thread containing three or more threads *a*. The drawings herein shown represents five threads in each section. These sections are separated one from the other, leaving a considerable space between one and the next section of warp-threads.

The weft B is composed of a plurality of strands *b b'*, there being preferably one or more strands *b* sufficiently twisted to give to the weft sufficient strength to be handled in a shuttle, the strand *b'* being a roving slightly or but slack or soft twisted and presenting kinks or bunches of fibrous material, the kinks and bunches of the strand *b'* possessing the property of quickly absorbing water or dampness. The threads of the sections of warp will be separated in the operation of the loom-harnesses to form sheds for the reception of the absorbent weft described, and in practice the threads of the sections will be close together in the fabric, leaving portions of the weft between the sections of the warp uncrossed by the warp, so that a very considerable portion of the kinks or bunches of the weft are not crossed by the warp, and consequently the soft and unconfined kinks and bunches are free to quickly take up and absorb moisture. A towel of this kind is applicable for use as soon as made, whereas bath-towels composed of usual twisted yarns having the warps made into a pile do not reach their full efficiency until after they have been worn for some considerable time and the fiber of the pile-loops has been softened by frequent washing.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A fabric for toweling comprising warp-threads arranged in sections, said sections being separated from each other, and a filling composed of soft fibers twisted so as to form kinks or bunches, and the portions of the filling between the sections of warp-threads being left free and unconfined to thereby enhance the moisture-absorbing quality.

2. A towel fabric comprising plain woven warp-threads arranged in separate sections, each section containing three or more warp-threads, and a filling composed of soft-twisted kinky, or bunchy fibrous material intertwisted with a harder-spun yarn, said filling being bound by the plain woven warp-threads of each section leaving the portion of the filling between the sections free to quickly absorb moisture.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY W. SMITH.

Witnesses:
CHARLES F. ALDRICH,
GRACE O. BEMIS.