(No Model.)

J. W. PRIESTLEY & A. KUNKLER.

FABRIC FOR CARPETS AND OTHER PURPOSES.

No. 312,220. Patented Feb. 10, 1885.

Fig. 1.

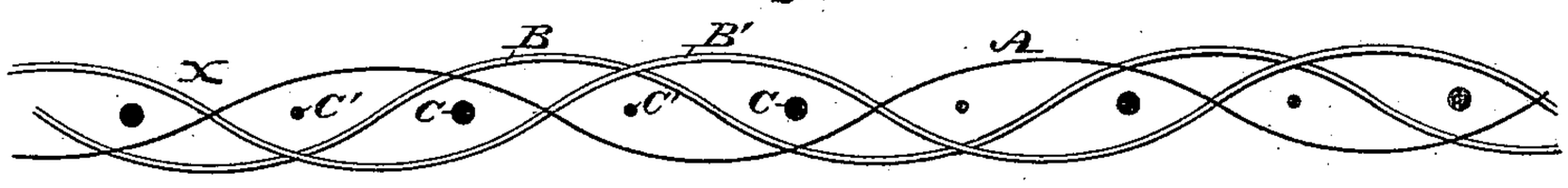
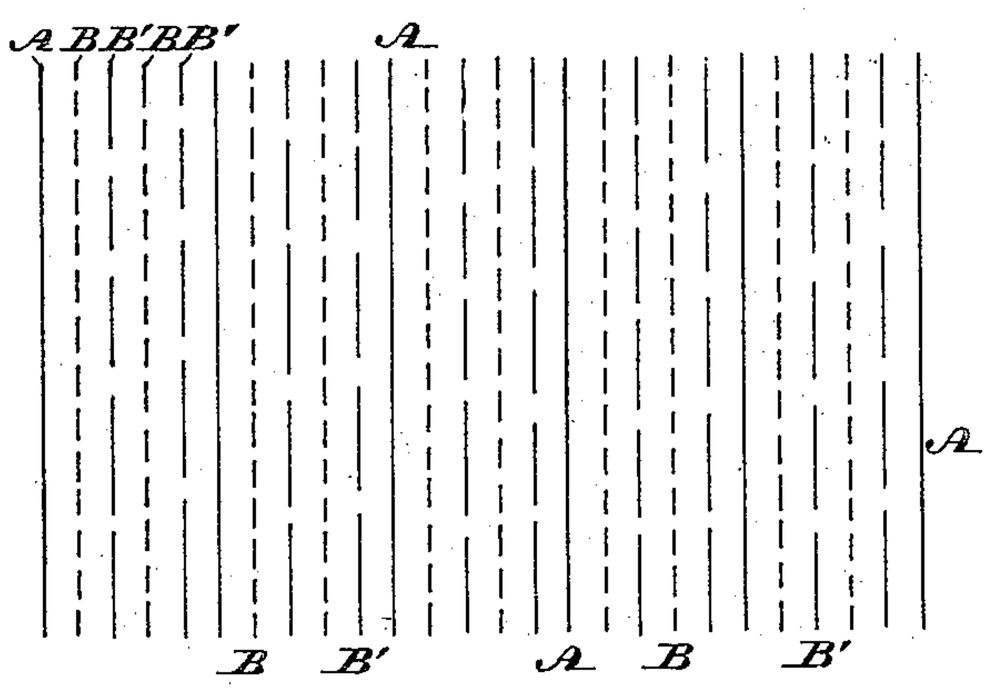


Fig. 2.



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FABRIC FOR CARPETS AND OTHER PURPOSES.

SPECIFICATION forming part of Letters Patent No. 312,220, dated February 10, 1885.

Application filed April 3, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. PRIESTLEY and ALBERT KUNKLER, of the city and county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Fabrics for Carpets and other Purposes, of which the following is a specification.

Our invention is designed more particularly for carpets and fabrics of similar character, but is applicable to woven fabrics generally.

The woven fabric in which our invention is comprised is one ribbed on both faces, the figure or design, in case there should be any, being also presented on both faces, thus producing a carpet or other fabric which may be used on either face, as desired.

In our improved fabric the body-warps and filling-wefts for the ribs are combined with binder-warps and binder-wefts in such manner that a fabric is produced which is ribbed on both faces, with the ribs on the one face opposite to the grooves between the ribs on the other face, the ribs on both faces being formed by one and the same set of body-warps. It is this feature which characterizes our invention. The binder-wefts serve to define the ribs and to hold them in place, and the binder-warps, in addition to their function as binders, serve to determine on which of the two faces of the fabric the ribs shall appear, the ribs being always on that face of the fabric opposite to the binder-warps.

The invention, as above stated, is designed with more particular reference to the manufacture of carpets, and it is in that connection that we shall now proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 represents a longitudinal section of the fabric in a line parallel with the warp-threads. Fig. 2 represents a top or plan view of the body-warps and binder-warps.

In the actual fabric the strands are of course closely packed together. In the drawings, however, they are represented as widely separated, in order that the structure of the fabric can be more readily perceived. The binder-warp A in Fig. 1, for the same reason, is represented as sinuous. In practice, however, these warps during the process of weaving are under heavy tension, and they lie almost straight in the fabric. The fabric shown is supposed to be a figured carpet.

B B′ represent the colored warps; C, the filling-wefts; C′, the binder-wefts, and A the binder-warps. The binder-wefts and the binder-warps are much finer or smaller in diameter than the body-warps and filling-wefts.

To produce the carpet we make use of an ordinary two shuttle Jacquard loom, well known in the art to which our invention relates, with the addition of instrumentalities for controlling the binder-warps, and also for raising and lowering at stated periods, as hereinafter set forth, all of the body-warps.

For the binder-warps an independent set of harness is provided, the same being operated through any of the well-known intermediaries used for like purposes from a cam on the picker-shaft.

The raising and lowering of the body-warps is effected through the action of a lever mechanism controlled by a cam or cams in such manner as to lift and let down the "comber-board" of the jacquard at stated times.

The jacquard operates intermittently, being in action only when the body-warps are to be split into sheds for receiving the filling-wefts.

The sheds for the binder-wefts are formed by the binder-warps on the one hand, and by all the body-warps on the other hand.

The movements of the several parts of the loom are so timed as to accomplish the weaving as follows, starting from the point marked *x* in Fig. 1: The binder-warps A are raised, and all of the body-warps B B′ are lowered, thus forming a shed through which the fine binder-weft C′ is passed. Next, with the binder-warps up as before, the body-warps are split to form a shed for the filling-weft C, (which, like the binder-weft C′, first mentioned, is below the binder-warps A,) and as the fabric is beaten up by the lay a rib will be formed on the under face of the fabric. Next the binder-warps are lowered and all of the body-warps are raised, thus forming a shed for the second binder-weft, C′, which passes above the binder-warps; and, next, with the binder-warps down, the body-warps by the jacquard are split into a shed for the second filling-weft, C, which in this shed passes above the binder-warps,

and by the beat of the lay a rib is formed upon the upper face of the fabric. These four motions are repeated in the order specified, and thus the weaving proceeds, a rib being formed alternately on each face of the fabric, and the ribs on the one face being opposite to the grooves between the ribs on the other face.

The binder-warps, as hereinbefore stated, are under heavy tension, and lie practically straight in the completed fabric.

The binder-wefts alternate with the filling-wefts. The wefts of each set lie alternately above and below the binder-warps, and the successive ribs always appear on that face of the fabric opposite to the binder-warps.

Having now described our improvement, what we claim as new and of our own invention is—

A ribbed woven carpet or other fabric in which the body-warps and the filling-wefts are combined with binder-warps and binder-wefts, substantially in the manner hereinbefore set forth, whereby a fabric is produced with ribs on both of its faces formed by one and the same set of body-warps, the ribs on the one face being opposite to the grooves between the ribs on the other face.

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Witnesses:
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