

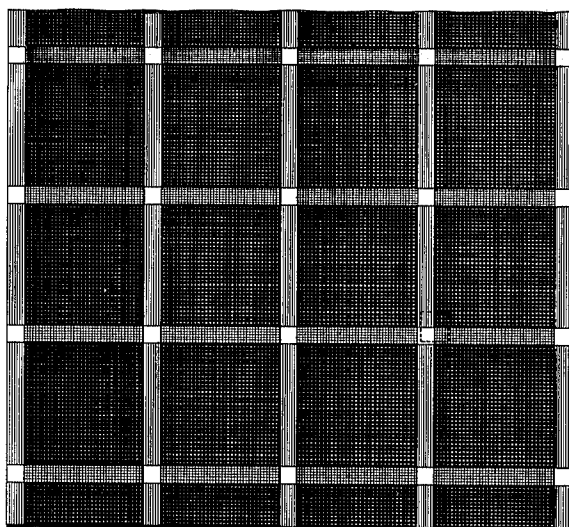
E. A. HIRNER.
CHECKERED PLATED FABRIC AND THE PROCESS OF KNITTING THE SAME.
APPLICATION FILED SEPT. 8, 1908.

951,565.

Patented Mar. 8, 1910.

2 SHEETS—SHEET 1.

FIG. I.



Witnesses
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James H. Bell

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EMIL A. HIRNER,
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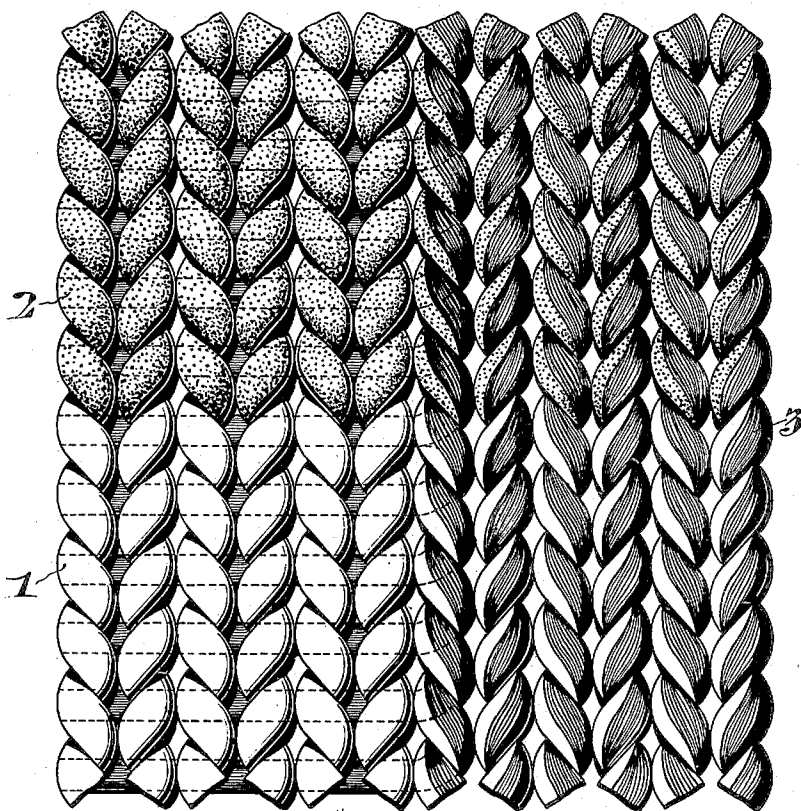
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2 SHEETS—SHEET 2.

FIG. II



WITNESSES:

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EMIL A. HIRNER,
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UNITED STATES PATENT OFFICE

EMIL A. HIRNER, OF ALLENTOWN, PENNSYLVANIA.

CHECKERED PLATED FABRIC AND THE PROCESS OF KNITTING THE SAME.

951,565.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed September 8, 1908. Serial No. 451,960.

To all whom it may concern:

Be it known that I, EMIL A. HIRNER, of Allentown, in the State of Pennsylvania, have invented certain new and useful Improvements in Checkered Plated Fabrics and the Process of Knitting the Same, whereof the following is a specification, reference being had to the accompanying drawings.

The operation of plating is well known in knitting and consists in so feeding two threads simultaneously to the needles as to cause them to be knit together but in such a way that one thread called the plating yarn, always appears upon the face of the fabric.

Heretofore checkered fabrics have been knit with one body yarn and two differently colored plating yarns. By intermittently plating for a few courses horizontal stripes were formed, and by floating the plating thread at intervals of a few wales, vertical stripes were formed. Thus the courses of plain knitting and the regions wherein the plating yarns were floated formed stripes having the body yarn color. The plated regions were mixtures composed of the body yarn with either of the plating yarns. By the use of these three threads a checkered fabric was thus produced having three color fields.

I have found that without increasing the number of yarns, or in any way complicating the machine a check with greater variety may be secured, for by the employment of two differently colored body threads and one plating thread a plaid fabric having four color fields may be produced. Thus although the number of threads is the same as heretofore employed, the number of color fields is increased from three to four.

According to my invention the body fabric is striped horizontally by changing the body thread, but the plating thread remains constant although thrown into and out of action intermittently for a few courses to produce horizontal stripes and floated at intervals of a few wales to produce vertical stripes. During the courses in which the plating yarn is idle, horizontal plain colored yarn stripes are knit, the color of which will be varied according as the body yarn is changed.

In the accompanying drawings, Figure I, represents a length of tubular checkered fabric embodying my invention. Fig. II, shows

on an enlarged scale a small portion of this fabric (indicated by the dotted square on Fig. I) sufficient to illustrate the construction of my fabric.

Referring to the fabric, the construction of which is represented in Fig. II, the unshaded thread 1, is plain white body yarn, the mottled thread 2, is plain red body yarn, and the striated thread 3, is black plating yarn.

As various machines may be employed for producing the changes in the threads, it will not be necessary to describe the mechanism, as my present invention relates to the process of combining the threads, and the resulting fabric. By plating with black thread 3, on white thread 1, a black on white field will be produced, as illustrated in the lower right hand corner of Fig. II, and, if the black thread 3, be floated at intervals of a few wales a pure white field will be produced at the regions where the black thread 3, is floated, as illustrated in the lower left hand corner of Fig. II. If this is repeated for a few courses, white vertical stripes or checks will be produced at the regions where said black thread is floated, according to the number of courses for which it is repeated. By plating with black thread 3, on the red thread 2, a black on red field will be produced, as illustrated in the upper right hand corner of Fig. II, and if the black thread be floated at intervals of a few wales, a pure red field will be produced at the regions where said black thread is floated, as illustrated in the upper left hand corner of Fig. II. If this be repeated for a few courses red vertical stripes or checks will be produced according to the number of courses for which this repetition occurs. Thus it will be noted that by varying the number of courses during which a given sequence of operations is repeated or continued, and also by varying the number of wales for which the plating thread is floated and the frequency of the intervals a far greater variety of patterns may be produced than has heretofore been possible with employment of the same number of yarns.

Having thus described my invention, I claim:

1. The process of knitting plated checkered fabric from a plurality of yarns, which consists in forming horizontal stripes therein by variation of the body yarn only, and

vertical intersecting stripes by repeated intermission of the plating operation for a few consecutive wales.

2. A plated checkered knit fabric having
5 body yarns knit alternately for a plurality of courses to form horizontal stripes, and a single plating yarn which is thrown in and out for successive wales of said horizontal stripes, the alternations being repeated
10 course after course, to form vertical stripes

of which every alternate stripe shows the body yarns only.

In testimony whereof, I have hereunto signed my name, at Philadelphia, Pennsylvania, this fourth day of September, 1908. 15

EMIL A. HIRNER.

Witnesses:

JAMES H. BELL,
E. L. FULLERTON.