

No. 621,522.

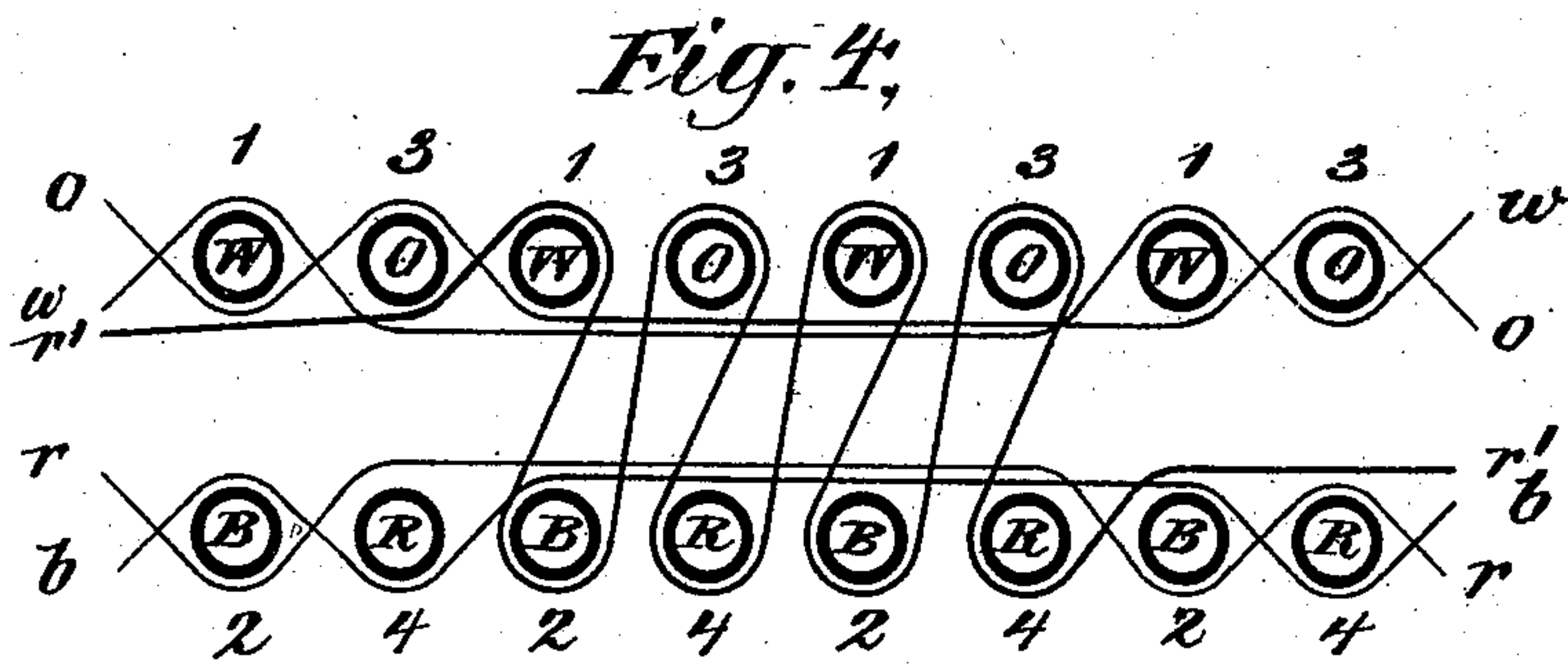
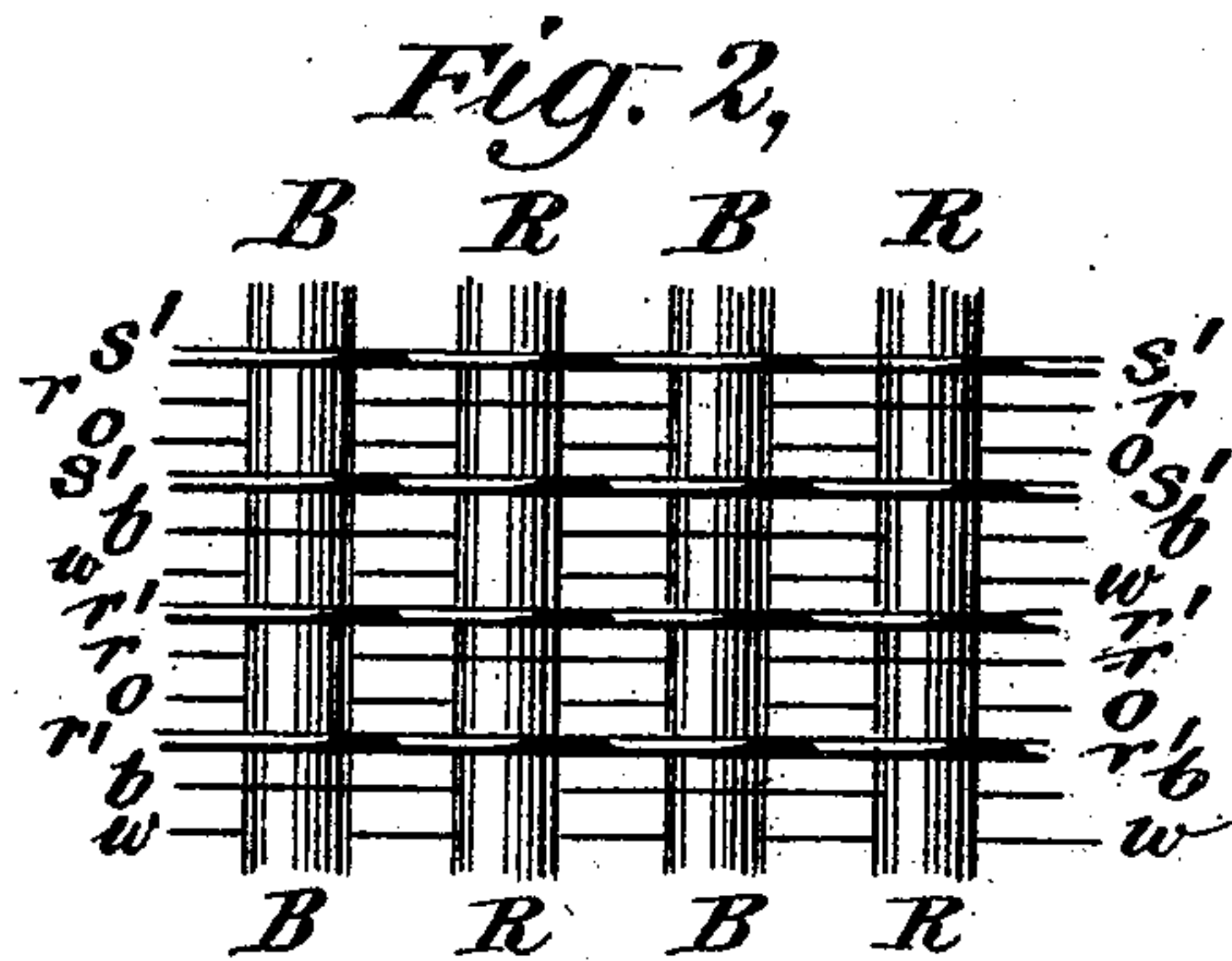
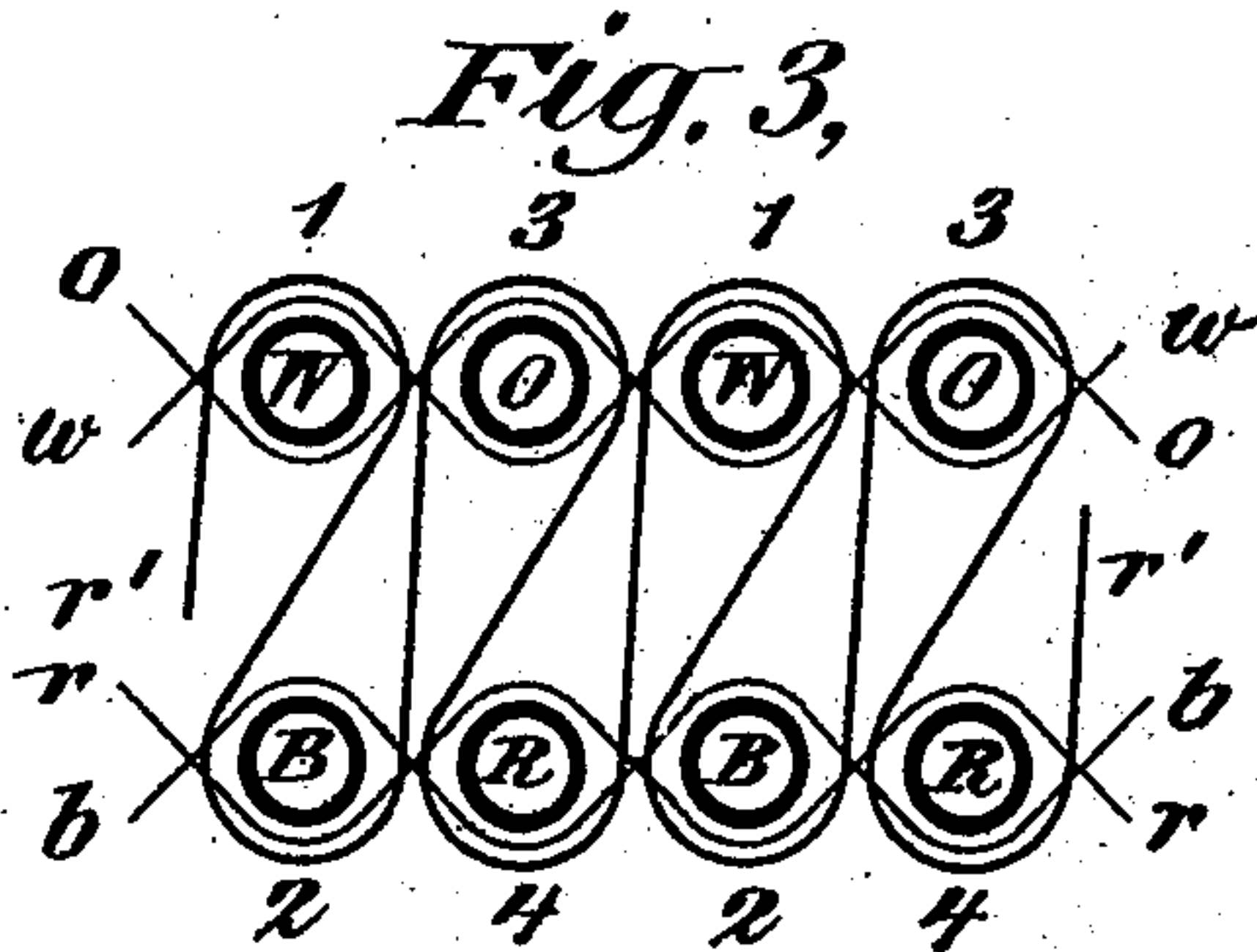
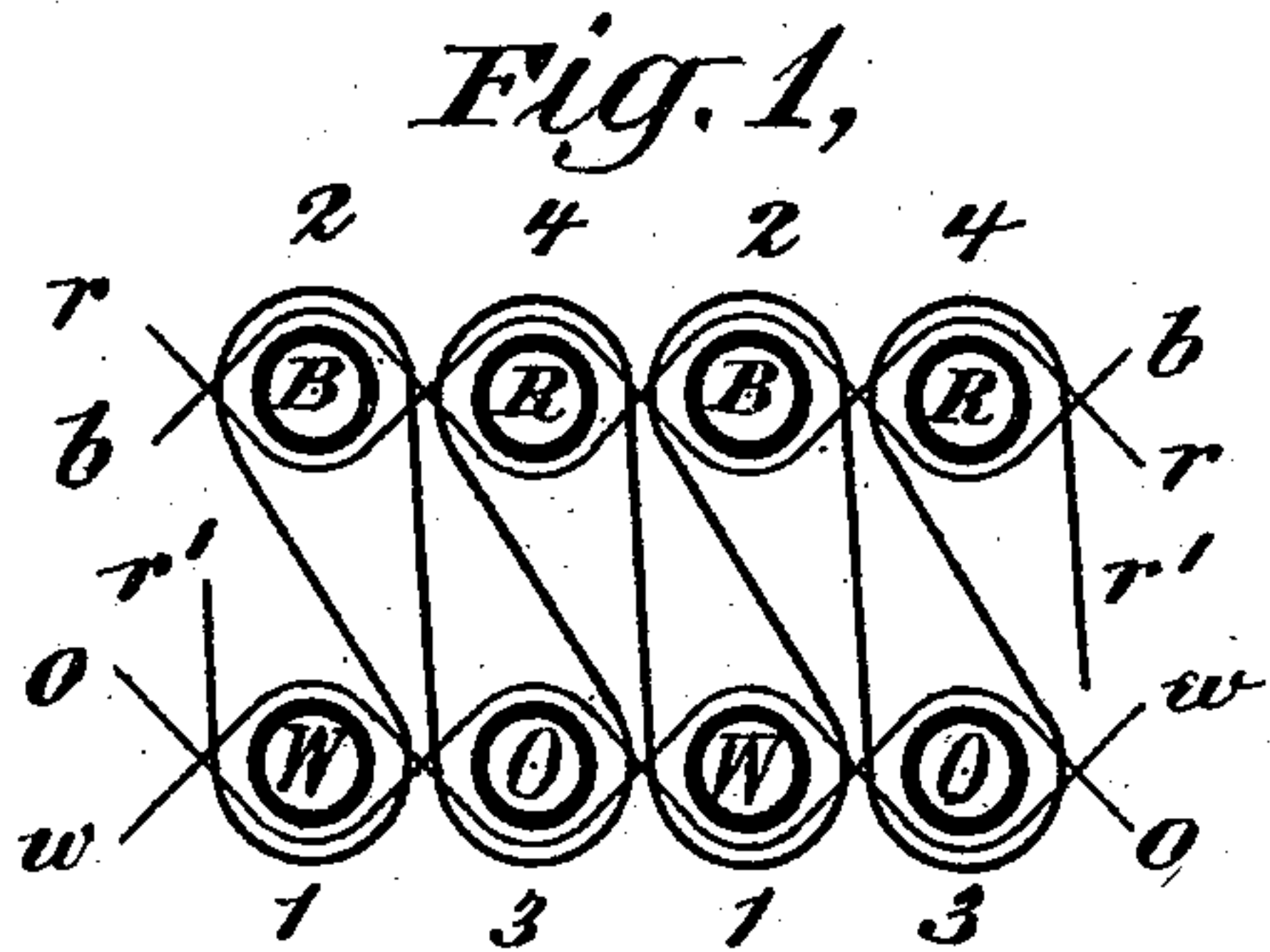
Patented Mar. 21, 1899.

T. B. DORNAN & R. CUSCADEN.

INGRAIN CARPET FABRIC.

(Application filed Mar. 25, 1898.)

(Specimens.)



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INGRAIN CARPET FABRIC.

SPECIFICATION forming part of Letters Patent No. 621,522, dated March 21, 1899.

Application filed March 25, 1898. Serial No. 675,158. (Specimens.)

To all whom it may concern:

Be it known that we, THOMAS BENTON DORNAN and ROBERT CUSCADEN, citizens of the United States, and residents of the city of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Ingrain Carpet Fabrics, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

Our invention relates to ingrain carpet fabrics, and has for its object to increase the pattern and color capabilities of such fabrics. According to our invention additional warp-threads are provided which are not dependent upon or subject to the arrangement of weft-threads, as are the regular warp-threads, but may be brought to the surface at any time or in any color effect, and when thus brought to the surface pass from ply to ply, covering all weft-threads and producing embossed effects solely of the color or colors of the additional warp-threads. These additional warp-threads may be larger or of greater diameter than the regular warp-threads and by covering and concealing the weft-threads and regular warp-threads may be made the only visible threads at portions of the fabric, and thus solid color effects may be produced of the color or colors of the additional warp-threads. These additional warp-threads may be of different colors along different longitudinal lines, and in a suitable pattern these additional colors may be brought to the surface, so as to produce handsome colorings of great variety.

We will now describe our invention, more particularly referring to the accompanying drawings, representing fabrics embodying our invention.

In all of the drawings fabrics or portions of fabrics are diagrammatically represented containing the ordinary four sets of warp-threads and figuring weft-threads arranged in sets of four figuring weft-threads, each of two-ply ingrain carpet fabrics and also containing the additional warp-threads.

Figure 1 is a longitudinal section or section parallel to the warp-threads, showing the ordinary warp and weft threads arranged as in the effect figure up, but covered by ad-

ditional warp-threads to produce an effect of the colors of the additional warp-threads. Fig. 2 is a plan or face view of the same. Fig. 3 is a longitudinal section showing the ordinary warp and weft threads arranged as in the effect ground up, but covered by the additional warp-threads. Fig. 4 is a similar section of the effect ground up and an effect of the additional warp-threads with the ordinary warp-threads between the plies where the additional warp-threads pass from ply to ply and cover the weft-threads.

The several figuring weft-threads are indicated in the drawings by the letters W B R O and may be, respectively, of the colors white, black, olive, and red, the color being indicated by the initial letter. The ordinary warp-threads are indicated by the letters *w b r o* and may be, respectively, of the colors above named, the color being indicated by the initial letter.

The numerals 1 2 3 4 designate the figuring weft-threads in the sequence of weft-shots in each set.

The additional warp-threads are represented in the drawings by a heavier line than the ordinary warp-threads or by double lines, and we propose to employ for the additional warp-threads a yarn heavier or larger in diameter than that employed for the ordinary warp-threads.

The additional warp-threads are indicated by the characters *r'* and *s'*. The character *r'* appears in all views of the drawings and may be taken as indicating that the additional warp-threads so designated are of red color. The character *s'* appears only in Fig. 2 to designate additional warp-threads arranged similarly to the additional warp-threads *r'*, but of a different color, as sea-drab.

The additional warp-threads are preferably arranged with two ordinary warp-threads intervening between each additional warp-thread, as shown in Fig. 2, in which case with a reed which included four ordinary warp-threads in each split thereof there would be two additional warp-threads to each split of the reed. The additional warp-threads should usually be controlled by the jacquard mechanism, and as they are not necessarily

associated with any particular weft-thread or weft-threads, and are not required to bind the weft-threads, as are the ordinary warp-threads, they may be brought to the surface independently of the arrangement of weft-threads and regular warp-threads.

According to our invention the additional warp-threads, where desired in the pattern, are passed from ply to ply, covering all weft-threads, tightly tying the plies together, and producing an embossed effect wherein all other threads are concealed, so that where the additional warp-threads are all of one color a solid effect of that color is produced, and thus the fabric may be provided with solid-colored portions of a color entirely different and, if desired, in striking contrast with ordinary colorings produced by the variations of weaving of the ordinary warp-threads and weft-threads. The ordinary color effects of the fabric are not changed and the ordinary construction of the fabric is not changed in any part of the fabric in the constructions shown in Figs. 1 to 3, inclusive. The additional warp-threads may be allowed to float between the plies where they are not required on the surface or may be cut off at suitable distances on either side of their exposed portions, as desired.

Where the ordinary warp-threads are not controlled by journals or by other means compelling the lifting of all regular warp-threads of one color when the weft-thread of corresponding color is shot, a variation of structure, such as is shown in Fig. 4, is possible, the additional warp-threads binding all the weft-threads on both faces of the fabric and all of the regular warp-threads being between the plies where the additional warp-threads are on the surface.

The additional coloring may be varied transversely of the fabric by introducing additional warp-threads of different colors on different longitudinal lines, as indicated in Fig. 2, where red additional warp-threads r' appear on one part of the fabric shown and sea-drab additional warp-threads s' appear at another part. These variations of additional color-

ings may be adjusted to pattern requirements, so as to produce exceedingly handsome effects.

It is evident that in the various applications of our invention many modifications may be made on the constructions above described and shown in the drawings and that various combinations and colorings may be employed. We do not therefore limit our invention to the particular construction shown; but

What we claim, and desire to secure by Letters Patent, is—

1. An ingrain carpet fabric composed of warp-threads and figuring weft-threads and also containing additional warp-threads, said fabric exhibiting at parts thereof color effects produced by said warp-threads and figuring weft-threads and said fabric exhibiting at the other parts thereof color effects solely of the color or colors of the additional warp-threads, said additional warp-threads at the parts of the fabric where they are thus exhibited passing from ply to ply so as to cover all weft-threads, substantially as set forth.

2. An ingrain carpet fabric composed of figuring warp-threads and figuring weft-threads and also containing additional warp-threads, said figuring warp-threads and figuring weft-threads being interwoven throughout the fabric and said fabric exhibiting at parts thereof color effects produced by said figuring warp-threads and figuring weft-threads and said fabric exhibiting at other parts thereof color effects solely of the color or colors of the additional warp-threads, said additional warp-threads at the parts of the fabric where they are thus exhibited passing from ply to ply so as to cover all weft-threads, substantially as set forth.

This specification signed and witnessed this 23d day of March, 1898.

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Witnesses:

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