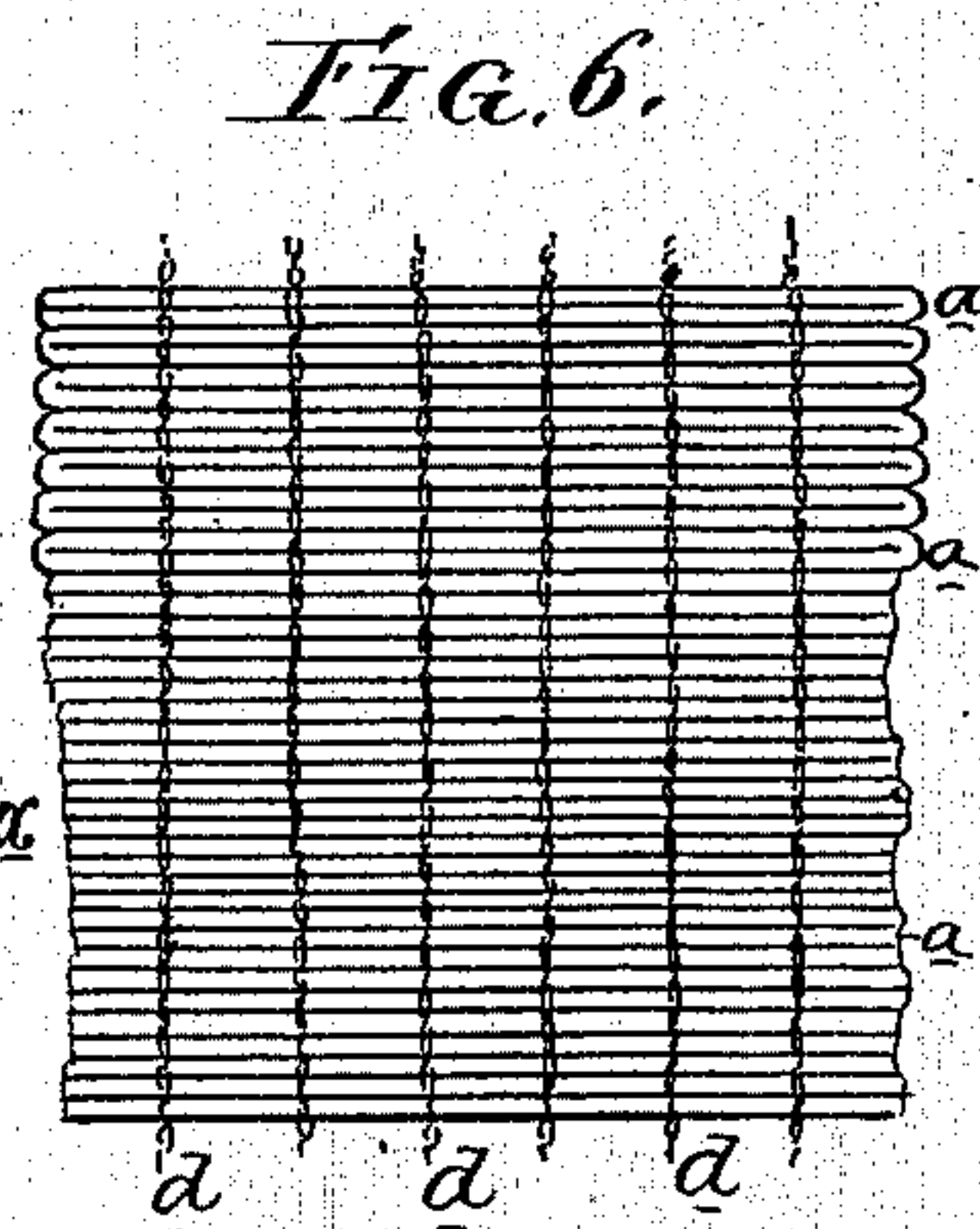
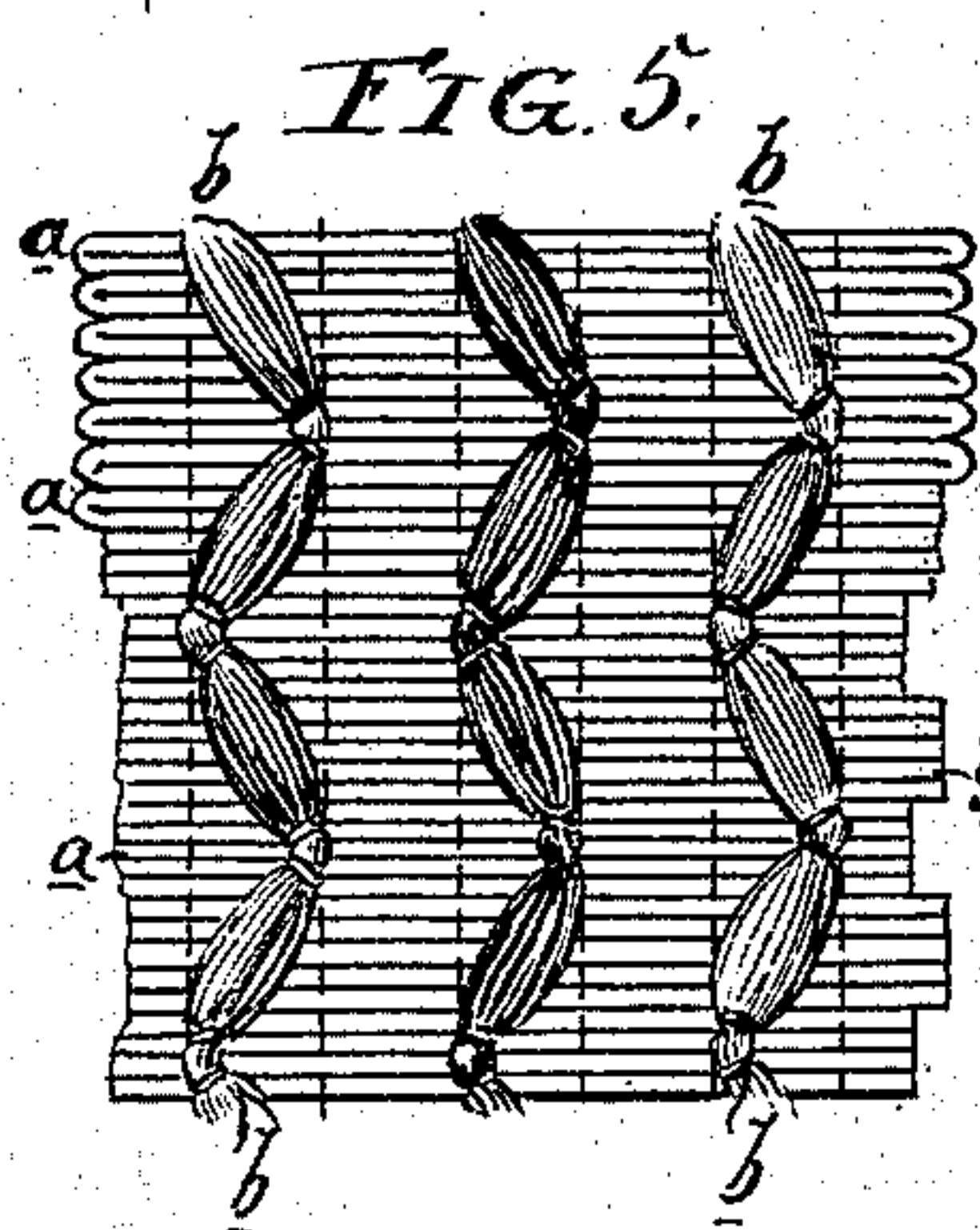
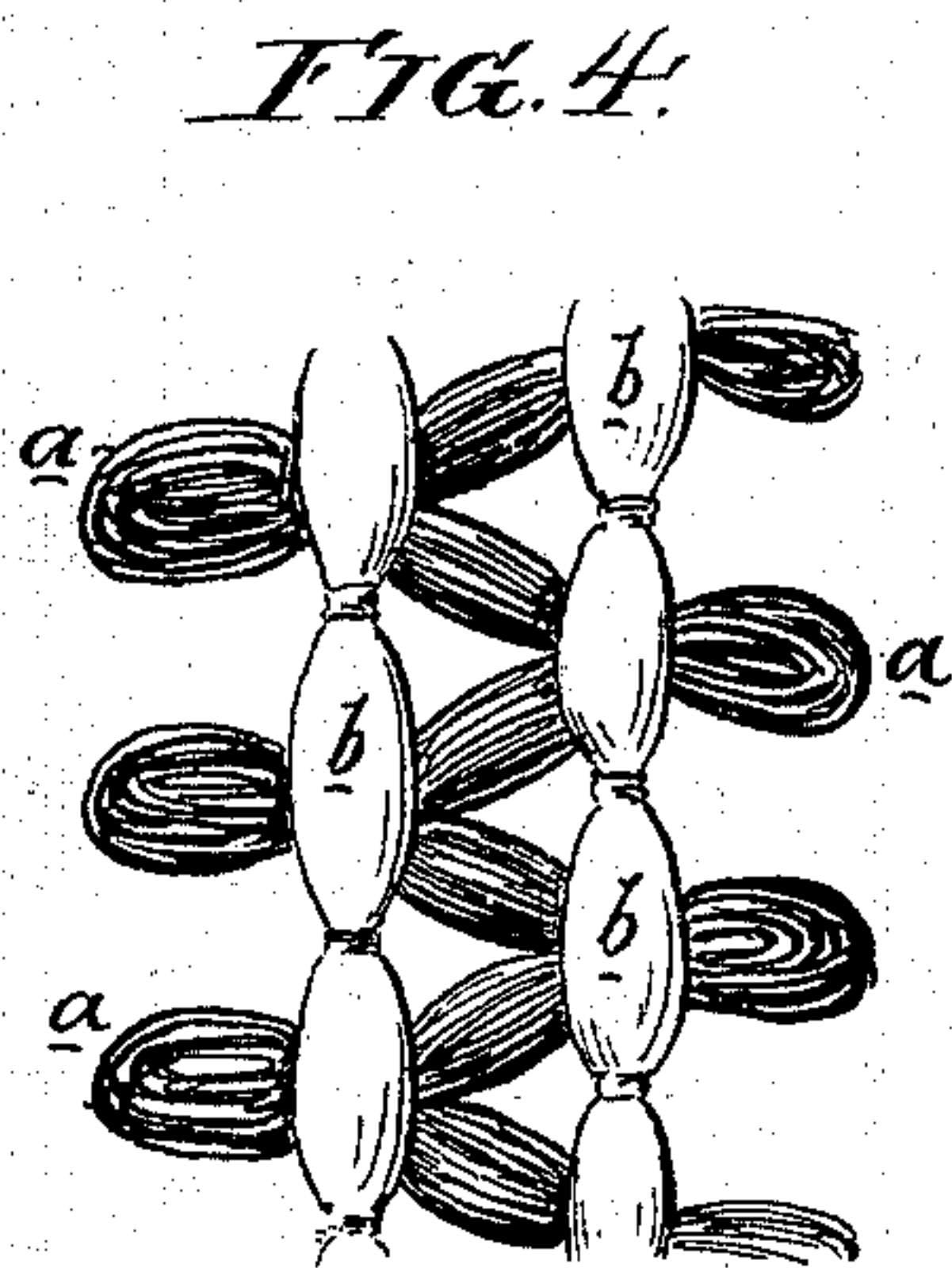
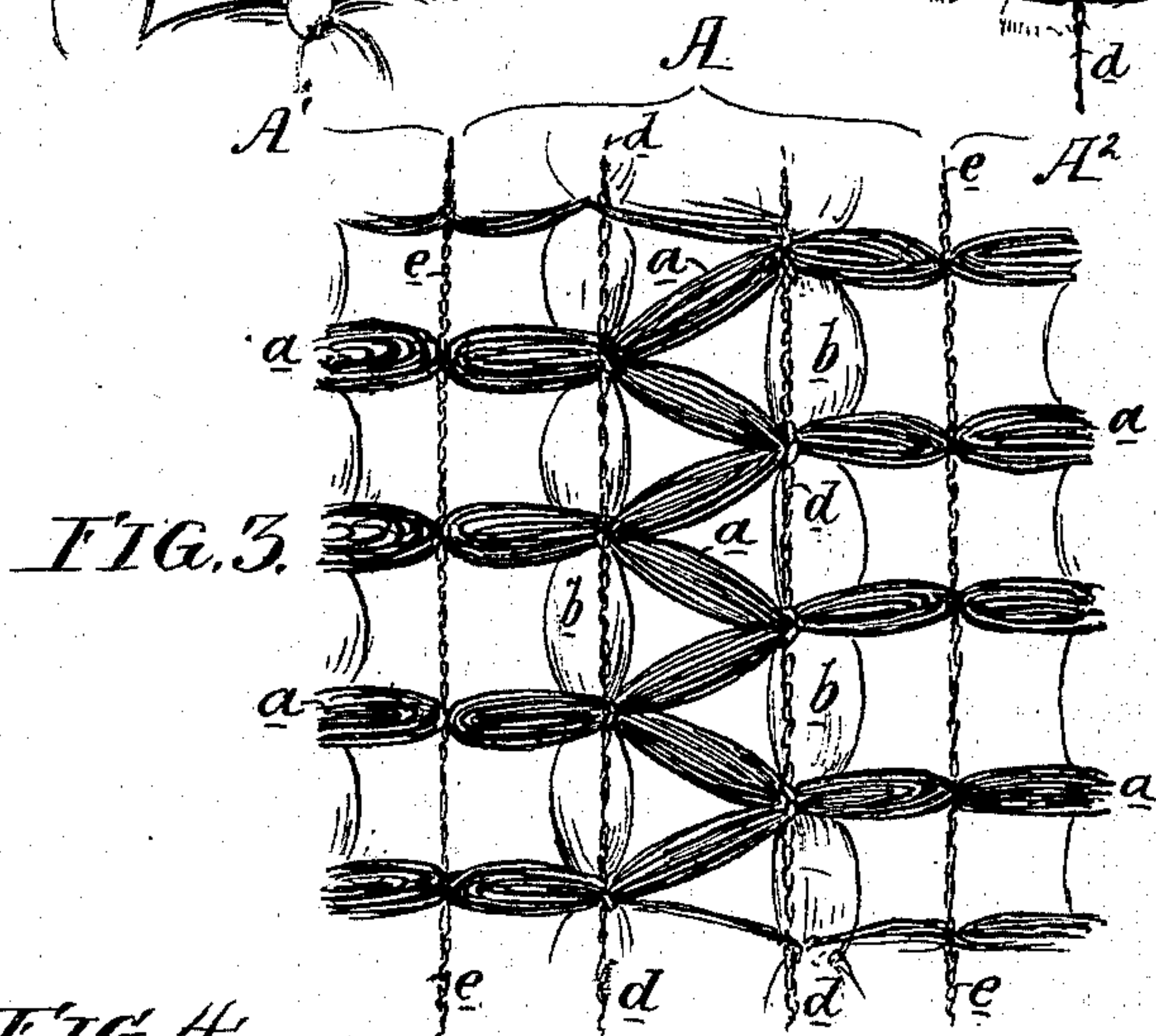
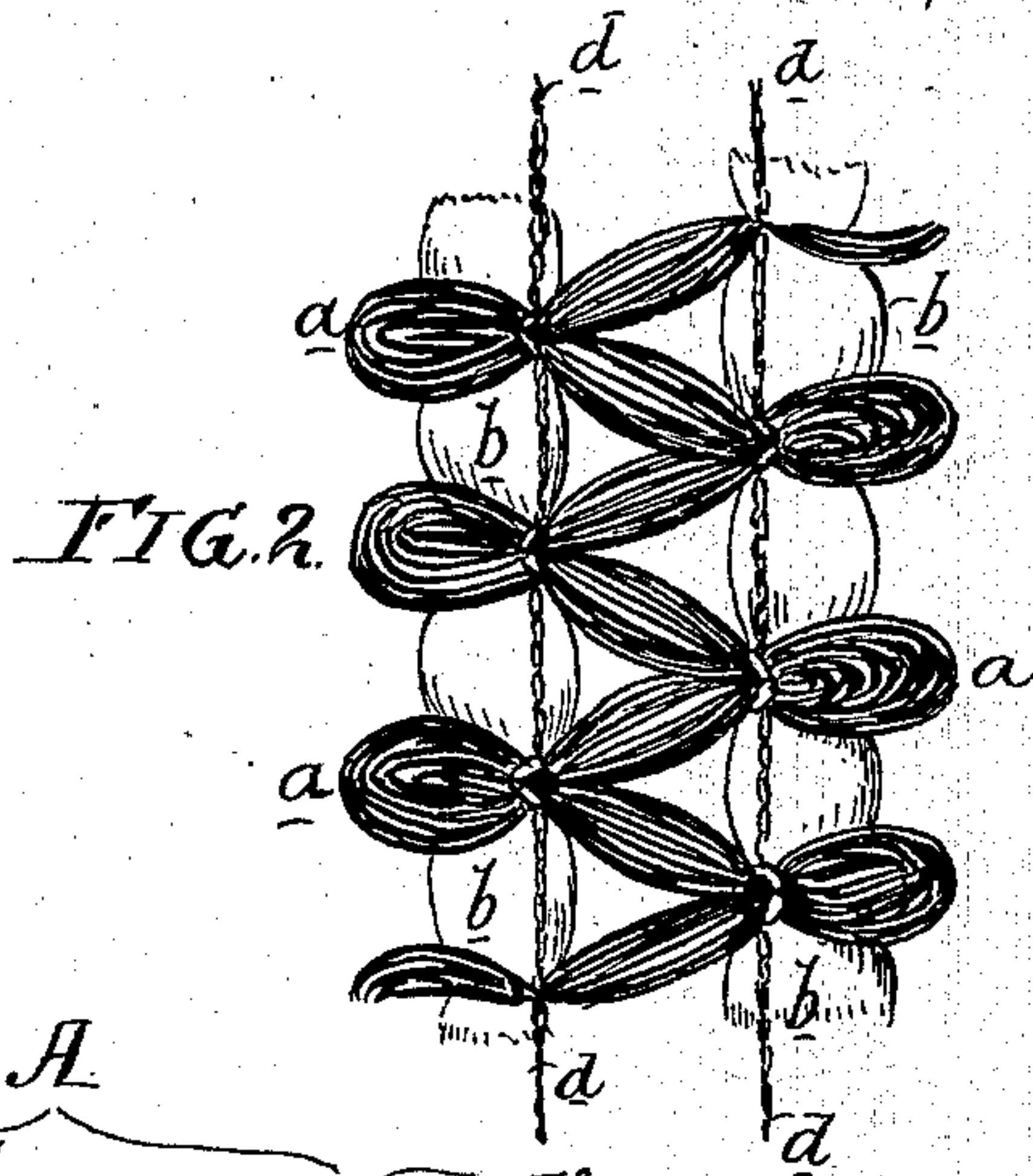
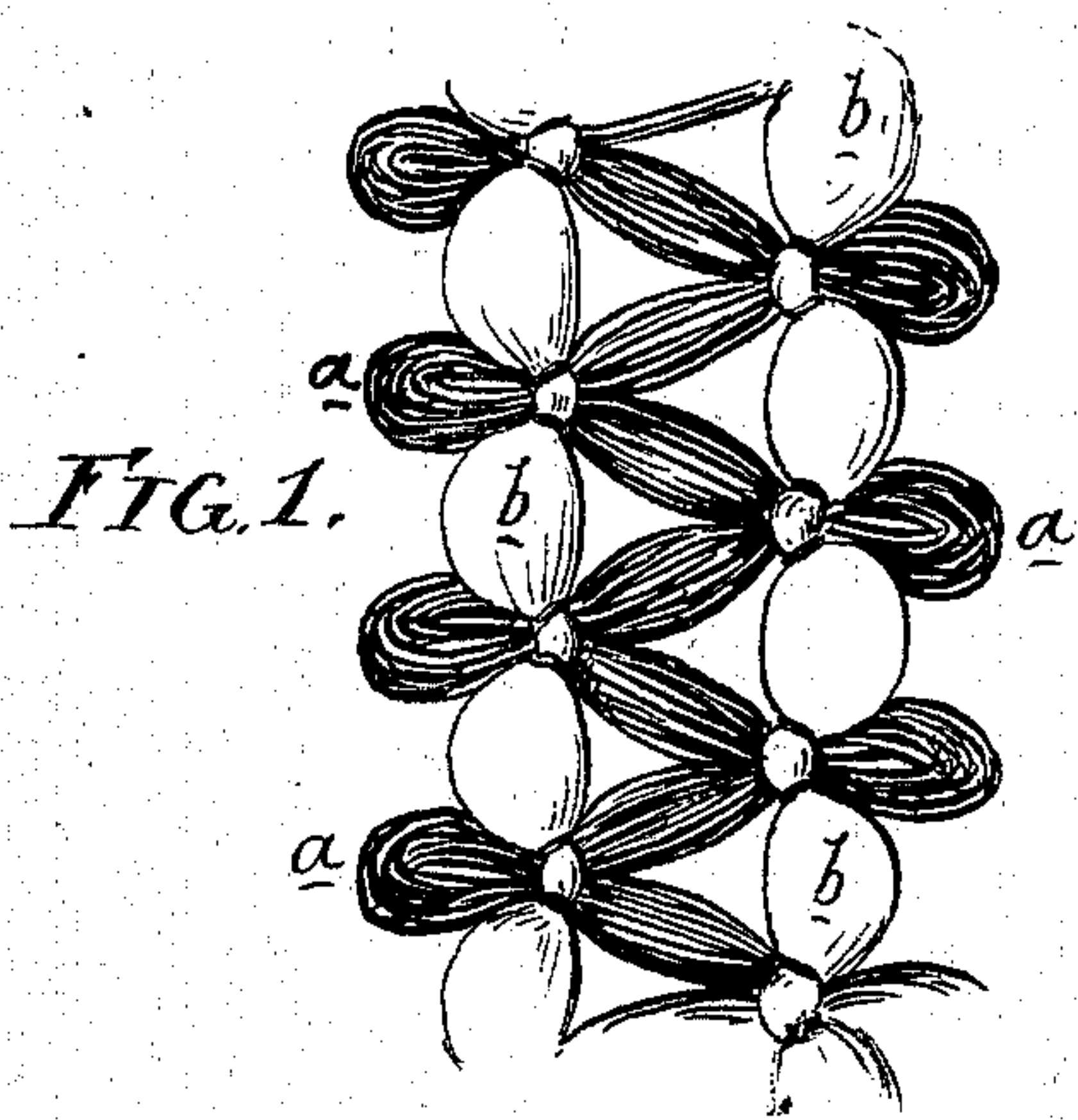


J. PHIPPS.
Knit-Fringes or Borders.

No. 139,810.

Patented June 10, 1873.



Witnesses, Hubert Howson
Thomas McIlwain

James Phipps
by his Attys.
Havens and Son

UNITED STATES PATENT OFFICE

JAMES PHIPPS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO MARTIN LANDENBERGER AND COMPANY, OF SAME PLACE.

IMPROVEMENT IN KNIT FRINGES OR BORDERS.

Specification forming part of Letters Patent No. 139,810, dated June 10, 1873; application filed April 4, 1873.

To all whom it may concern:

Be it known that I, JAMES PHIPPS, of Philadelphia, Pennsylvania, have invented an Improved Knitted Fringe or Border, of which the following is a specification:

The object of my invention is to produce upon a knitting-machine borders or fringes of the character generally known as "peg-work," which have heretofore been produced entirely by hand.

I attain this object, in the manner best observed in the front and rear views, Figures 1 and 2, of the accompanying drawing, by tying or binding together the zigzag and the longitudinal threads *a* and *b* which form the body and surface of the fringe, by chains of needle-thread *d*, extending longitudinally over the back of the fabric.

Heretofore borders or fringes of this character have been produced by hand, as follows: The longitudinal threads *b b* are secured at their opposite ends to pegs, which retain them in their proper relative positions, and the thread *a* is then passed around a double row of pegs, first to one side and then to the other, so as to give it a zigzag course across the threads *a*, as shown, after which the two series of threads are tied together by hand at the points where they cross each other.

Borders or fringes produced by this tedious process are necessarily expensive and more or less imperfect, objections which I have overcome by producing the same upon a knitting-machine in a manner which will be readily understood from the following detailed description, reference being had to the rear view Fig. 3, of the accompanying drawing.

A series of borders or fringes *A A¹ A²*, &c., are knitted simultaneously, and side by side, the bunches of threads *a* and *b* being fed by ordinary guides, so operated as to lay the threads *b* in straight lines, and in the direction of the length of the fringe, while the threads *a* are laid across the threads *b* in a zigzag course as shown, and simultaneously with this laying of the body or surface threads, two finer threads *d d*, also fed by guides, are

interlocked, each by a single needle, with the said body-threads at the points where they cross each other, these needle-threads forming a simple chain at the back of the fabric where they are entirely concealed by the longitudinal body-threads *b*. Other needle-threads *e*, are also, as the knitting progresses, interlocked with the zigzag threads *a* of the adjoining fringes *A A¹*, &c., for the purpose of maintaining the same in proper position, these threads taking the place of the double row of pegs used in producing the fringe by hand. After the knitting of the fringes, they may be separated by simply cutting and drawing out the connecting-threads *e*.

Fringes differing in design, but all possessing the same general characteristics, may be produced in accordance with my invention. In Fig. 4, for instance, a somewhat different effect is produced by interlocking or tying the threads *a* and *b* separately to the needle-threads, instead of at the points, where they cross each other; and in Figs. 5 and 6, which represent front and rear views of the same fringe, the threads *a* are laid transversely and closely together, while the threads *b* are zigzagged, the whole being bound together by longitudinal chains of needle-threads *d*, at the back of the fabric, as before described. A peculiar edging may be produced upon this latter fringe by cutting the body-threads *a* in the manner shown at *x*.

I claim as my invention—

A knitted fringe or border consisting of body or surface threads *a* and *b*, crossing each other, one or both in zigzag lines, and bound together by chains of needle-thread *d*, extending longitudinally over the back of the fabric, substantially as herein described.

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

JAMES PHIPPS.

Witnesses:

ROBERT MCCONNELL,
H. DORNEMANN.