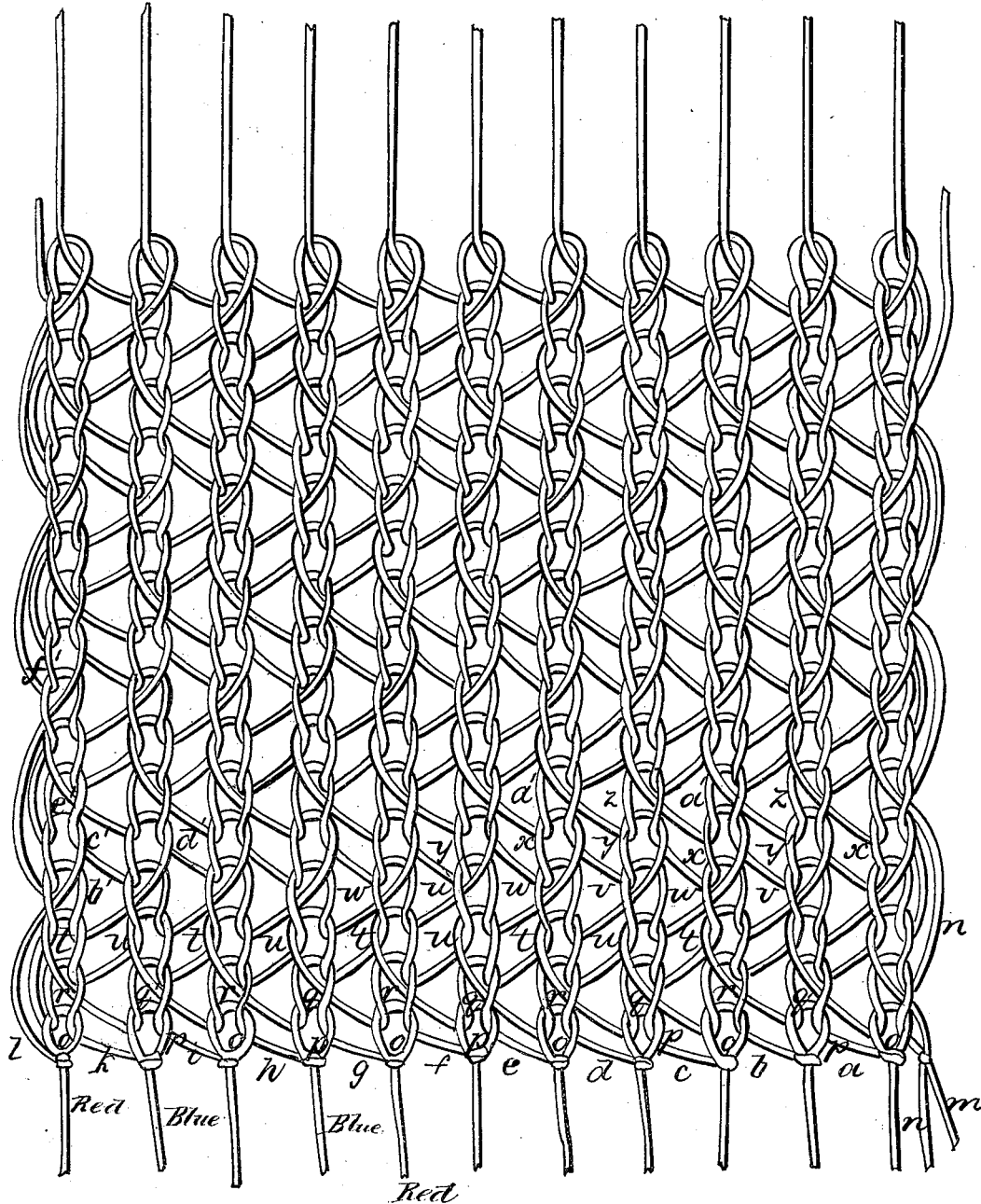


*J. S. Glover.*  
*Net Fabric.*

*N<sup>o</sup> 4,607.*

*Patented Jun. 27, 1846.*



# UNITED STATES PATENT OFFICE.

JAMES S. GLOVER, OF IPSWICH, MASSACHUSETTS, ASSIGNOR TO GEORGE W. HEARD.

## IMPROVEMENT IN WARP-NET FABRICS.

Specification forming part of Letters Patent No. 4,607, dated June 27, 1846.

*To all whom it may concern:*

Be it known that I, JAMES S. GLOVER, of Ipswich, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Warp-Net Fabrics; and I do hereby declare that the nature of the same is fully set forth and described in the following specification and accompanying drawing, letters, and references thereof.

The nature of my invention consists in a peculiar manner of internetting or interlooping a series of woolen or other proper warp-threads in order to compose an elastic fabric suitable for the manufacture of shirts, stockings, drawers, &c., and possessing advantages over the common warp-net fabrics as usually made for such articles, inasmuch as it is of a looser and more elastic texture and is not liable to shrink up during the process of washing it.

For the purpose of clearly explaining my new and peculiar manner of interlooping warp-threads to constitute a new manufacture or net-fabric, I have represented the same in the drawing on an enlarged and extended scale, or, in other words, I have exhibited the loops as loosely interwoven together or as placed at a somewhat greater distance from each other than they would generally occupy, as will be readily understood by warp-net weavers.

In the drawing, *abcd efghiklmn* denote a series of warp-threads, all but the last two of which have a series of starting-loops *op o p*, &c., made upon them, respectively, as therein seen. Each of the threads *a b*, &c., has a loop *q* or *r* made or formed upon it, which is passed underneath and drawn through the starting-loop of the thread next adjacent to it on the left—that is to say, the second loop *q* of the thread *a* is pulled through the first or starting loop *p* of the thread *b*. So with regard to the second loop *r* of the thread *b*. It is passed through the first or starting loop *o* of the thread *c*. All the remaining threads, with the exception of those designated by the letters *lmn*, which are the selvage-threads, are treated in a similar manner, as denoted by the drawing, and thus I form the second row of loops. Next upon each of the threads *a b c*, &c., (excepting the thread *k*, which is also a selvage-thread,) I form a third loop *t* or *u*,

which I pass underneath and through the second loop *r* or *q* of the thread *a* or *b*, &c., as seen in the drawing. I thus make the third row of loops. I next form a fourth loop *v* or *w* upon each thread and reverse or change the direction of the thread, and pass said loop *v* or *w* through the loop *u* or *t* of the thread on the right of the thread to which the said loop *w* or *v* may belong, thus forming a fourth row of loops. I next continue each thread toward the right and form upon it a fifth loop *x* or *y*, which I pass through the fourth loop *w* or *v* of the thread immediately adjacent on the right to its thread, thus forming the fifth row of loops. I next reverse the direction of the threads or carry them toward the left and form loops *z a'*, &c., which I pass through the loops next adjacent in the same manner as the loops *q r* of the second row were passed through the starting-loops *p o*, as was hereinbefore described. So I continue on throughout the whole fabric, looping each thread twice while it passes toward the right, then reversing its direction and again looping it twice, the loops being interwoven, as hereinabove specified.

It was hereinbefore stated that the threads *lmn k* are used to form the selvages or side edges of the cloth. For this purpose the thread *k* has a third loop *b'* made upon it, which is passed through the third loop *t'* of the thread *i*. The said selvage-thread *k* is next passed toward the right, and has a loop *d'* made upon it and in continuation of the main fifth row of loops *xy xy*, &c. Next the direction of the thread *k* is reversed—that is, it is carried toward the left—has a loop *e'* formed upon it, which is passed through the second loop *c'* of the thread *l*. Thence it continues vertically as it did from the loop *r*, and is looped and passed through another loop of the thread *i*, and so on, as seen in the drawing. The third loop of the thread *l* is denoted at *f'* as passing through a loop of the thread *k* and receiving another loop of the same thread. The opposite selvage-threads *m n* are similarly looped and interwoven with each other and the main thread, as will be seen by reference to the drawing.

My improved manufacture may be woven, and I intend to weave it upon a common warp-net loom having its mechanism by which the

thread-guides are moved constructed and made to operate in a manner suitable to effect the same.

Having thus described my invention, that which I claim is—

1. The above-specified mode of looping and interlooping or interweaving the several warp-threads in opposite directions—that is to say, the advancing each thread toward the left and looping it twice and passing each of the loops so formed through loops of the adjacent thread on the left, then reversing the direction of each thread or carrying it toward the right and forming two more loops upon it, and introducing said loops respect-

ively through two loops of the thread immediately adjacent on the right and so on throughout the whole fabric to be woven.

2. The afore-described manner of forming the selvages or combining and uniting the selvage-threads with one another and the main warp-threads, the same being represented in the drawing.

In testimony whereof I have hereto set my signature this 18th day of April, A. D. 1846.

JAMES S. GLOVER. [L. S.]

Witnesses:

A. C. SHERBURNE,  
GEORGE HASKELL.