

(No Specimens.)

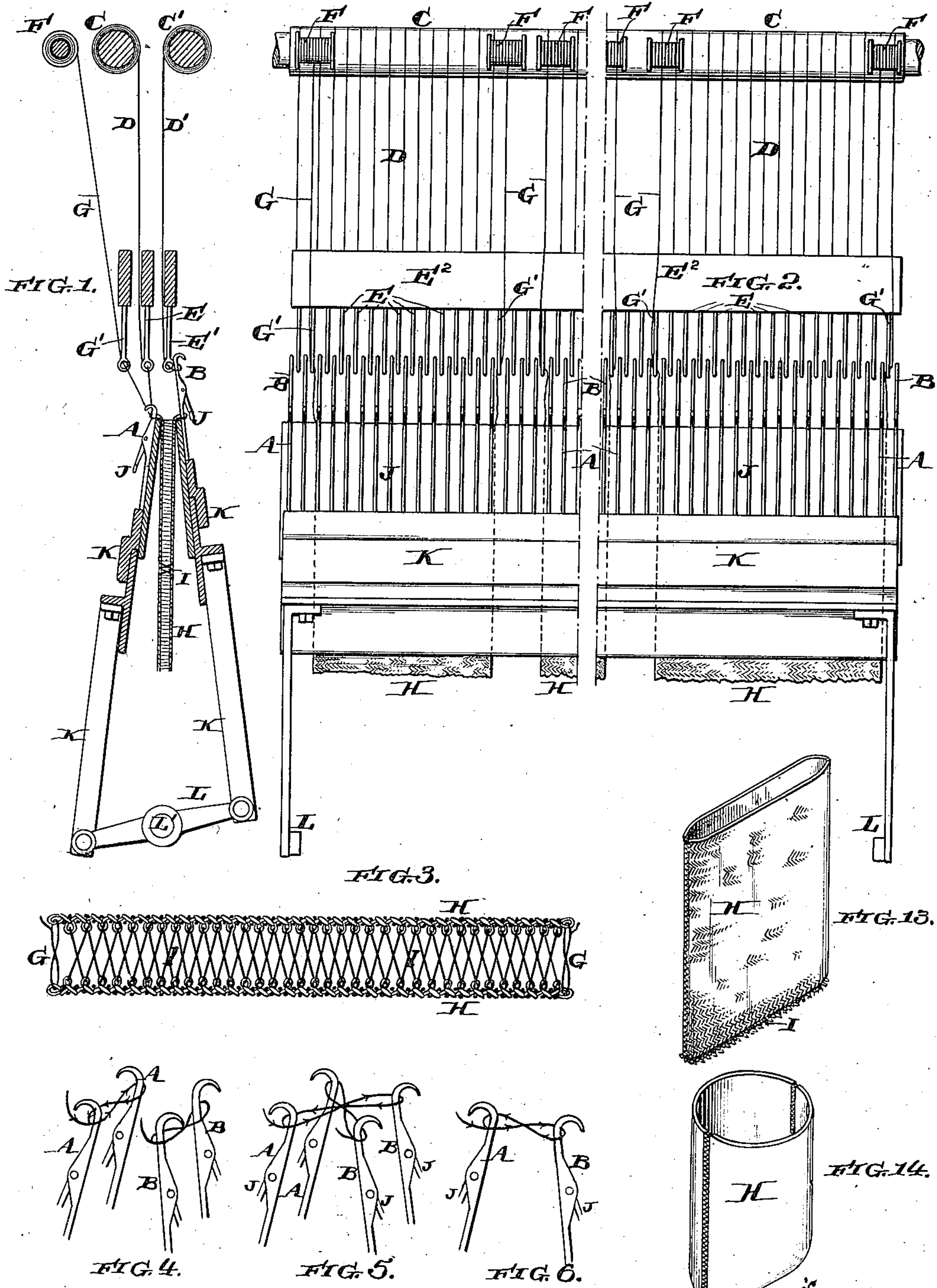
2 Sheets—Sheet 1.

F. CLEWLEY.

KNITTED BAG AND PROCESS OF MAKING THE SAME.

No. 459,866.

Patented Sept. 22, 1891.



Witnesses:
Henry D. Dwyer
Jesse Heller

Inventor:
Frank Clewley
per George E. Buckley
att'y.

(No Specimens.)

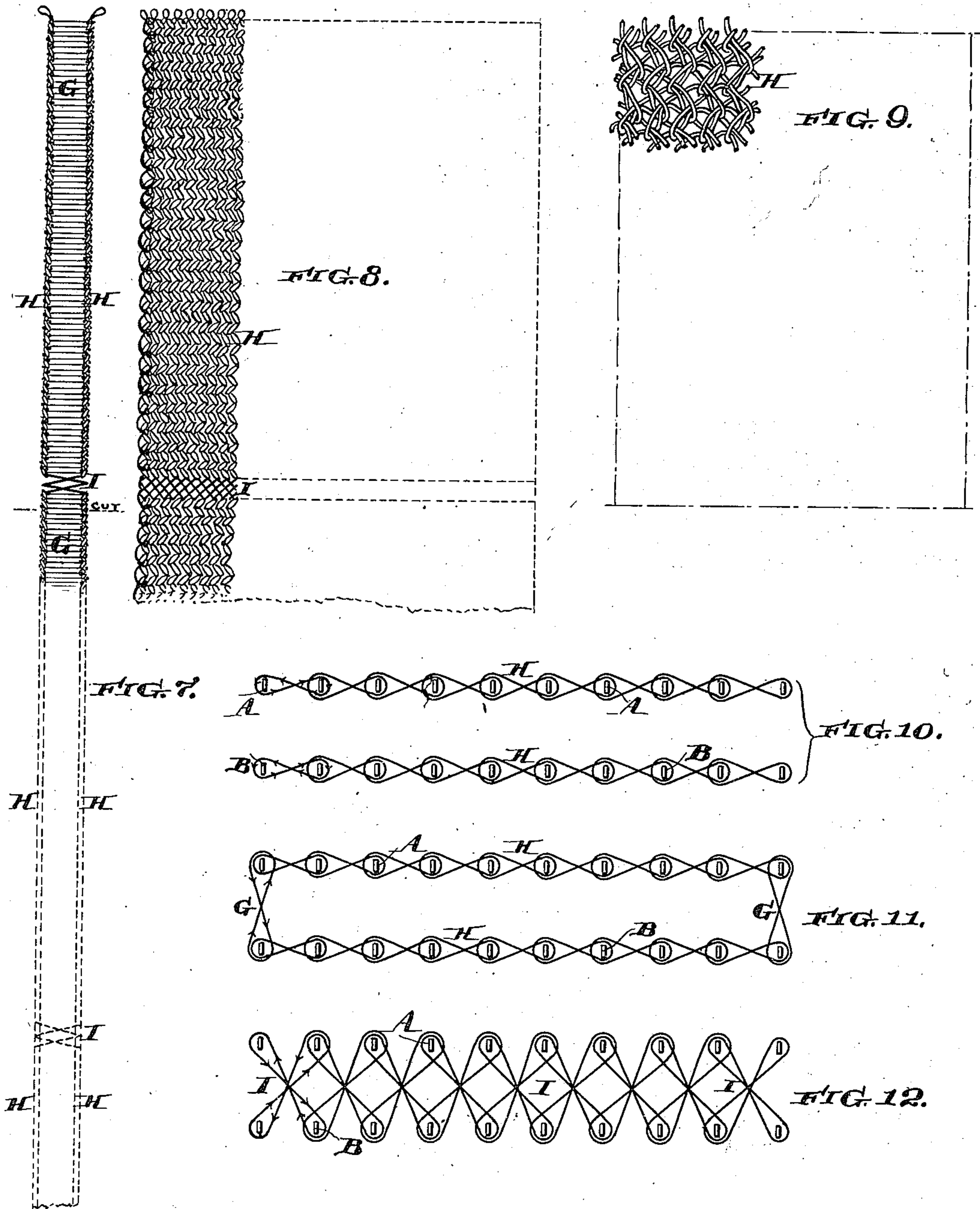
2 Sheets—Sheet 2.

F. CLEWLEY.

KNITTED BAG AND PROCESS OF MAKING THE SAME.

No. 459,866.

Patented Sept. 22, 1891.



Witnesses:

Henry D. Dury
Jesse Heller.

Inventor:

Frank Clewley
per George E. Duckley
att.

UNITED STATES PATENT OFFICE.

FRANK CLEWLEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO HUGH MCGILL, OF SAME PLACE.

KNITTED BAG AND PROCESS OF MAKING THE SAME.

SPECIFICATION forming part of Letters Patent No. 459,866, dated September 22, 1891.

Application filed December 30, 1890. Serial No. 376,209. (No model.)

To all whom it may concern:

Be it known that I, FRANK CLEWLEY, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Knitted Bags and Process of Making the Same, of which the following is a description, reference being had to the annexed drawings, making part hereof.

My invention relates to knitted bags, which I produce by knitting a tube upon a straight-knitting machine provided with a double row of needles. At intervals I interknit the two opposite sides of the tube, so as to join them with a seamless transverse joint. Then the tubular formation is continued and at the desired interval the two sides are again interknit, as described, and the tubular formation again continues, and so on indefinitely. The product is a long tubular fabric crossed at intervals by interknittings of the sides. This fabric can then be formed into separate bags by cutting it across below each of the transverse interknitted joints, each joint thus forming the bottom of the bag. By increasing the lengths of the needle-rows bags of greater width can be produced, or a number of the tubular strips of knitted fabric with transverse interknittings can be simultaneously knitted upon the long needle-rows.

In the drawings, Figure 1 is a vertical cross-section from front to back of part of a straight-knitting machine provided with two rows of needles, showing the two lines of warp-threads and a spool with its thread for joining the side edges of the flat strips forming the tubes. It also shows the thread-guides. Fig. 2 is a front view of the same. Fig. 3 is a plan view of one of the cut-off bags, looking into it, and showing the two sides thereof slightly separated, and also showing the formation of the transverse joint. Fig. 4 is a broken perspective view of two adjacent needles of each row, showing them taking the warp-threads to form the tubular sides. Fig. 5 is a similar view showing them taking the warp-threads when forming the transverse interknitted joint. Fig. 6 is a similar view showing two of the opposite needles taking a side thread to join the two contiguous vertical edges of the fabric to unite them in form-

ing the flat tube. Fig. 7 is a vertical cross-sectional view from front to back of one of my tubes before it is cut into bags, showing the cross-joints. Fig. 8 is a side view showing the fabric composing the finished tube. Fig. 9 is a side view simply showing one form of loop for the tubular fabric, showing the loops loosely connected. Fig. 10 is a plan view showing the ends of the two flat strips not united. Fig. 11 is a similar view showing the two flat strips with their two vertical edges joined. Fig. 12 is a plan view of the transverse seam, showing, for illustration, the loops loose and not drawn closely together. Fig. 13 is a detached perspective view of one of the bags immediately after being cut off from the tube. Fig. 14 is a similar view showing the cut-off part turned inside out to form a bag ready for use.

It will not be necessary to enter into a detailed description of straight-knitting machines, as they are well known to those skilled in the knitting art. I will therefore set forth only so much as is necessary to describe my invention.

A B are two rows of needles on the straight-knitting machine.

C C' are the two beams carrying the warp-threads D D'.

E E' are guides to carry the warp-threads around the needles.

F is a supplemental or independent spool to carry a thread G, which passes through a guide G', one of which spools and guides is located upon each side edge of the width of material to be formed for a tube, sufficient of the warp-threads being inclosed between two of such spools as will serve to furnish material for a width. The number of these spools and guides G' can be increased (six being shown) to increase the number of tubes which it is desired to knit across the face of the machine.

J J are the needle-latches, and K K the lifts for holding the needles, which are raised and lowered by the lever L, pivoted at its middle I'.

H H are the two opposite strips of knitted fabric, which are united at their edges by the threads G G from spools F F.

I I are the transverse interknitting-stitches. The spools F F turn independently of the

beams C C', as their threads are drawn more rapidly from them than the warp-threads are from the beams. The warp-threads being in position in each row of needles, the machine is started and the knitting of the two flat layers of fabric begins. While the warp-threads D D' engage, respectively, their needles A and B, each thread G is carried by its guide G', so as to engage both of two opposite needles A and B (see Fig. 6) at the selvages of the two warp fabrics continuously and knits them together at their selvages of the two fabrics, thus forming the tube. Now when a length of fabric long enough for the desired depth of bag is formed the guides F' are automatically carried across so as to make one loop of warp D' over needles A, and the guides E are next carried across so as to make one loop over needles B, and this reciprocation of the stitches is sustained until the two opposite fabrics are thoroughly united in an interknitted joint. The regular formation of the tube is then resumed until a sufficient length for a bag is again attained, when the cross-knitting is again resumed, and so on indefinitely. If I desire to form a number of tubes simultaneously, I simply leave intervals between warp-threads—that is, I omit a few at intervals—and interpose spools F, two of the latter for each section of tubing to be formed. Thus I can make a number of tubes and bags simultaneously upon one machine. After the tubes are formed they are cut off below the cross-joint, as shown in Fig. 13, and turned inside out, as shown in Fig. 14, ready for use.

The interknitting of the two fabrics crosswise forms a cross-seam at intervals of the tube.

I do not confine myself to the special form of loop shown, as various forms of loop can be used, as will be readily understood by any skilled knitter.

What I claim as new is—

1. The method of knitting bags, consisting of simultaneously knitting two sides thereof and interknitting their selvages and at intervals in the formation of the tube so formed transversely joining the two sides thereof by interknitting the same, and then continuing the tubular construction, substantially as described.

2. A tube for the formation of bags, consisting of two flat knitted sides H H, interknitted at their selvages and transversely interknitted at intervals one with the other and adapted to be cut at or about the transverse joints thus formed to make bags, substantially as set forth.

3. A tube for the formation of bags, consisting of two flat knitted sides H H interknitted at their selvages, said two flat sides being cross-seamed at intervals one with the other and adapted to be cut at or about the said transverse seams to form bags.

In witness that the above is my invention I have hereunto set my hand.

FRANK CLEWLEY.

Witnesses:

GEORGE E. BUCKLEY,
THOMAS DOWLING.