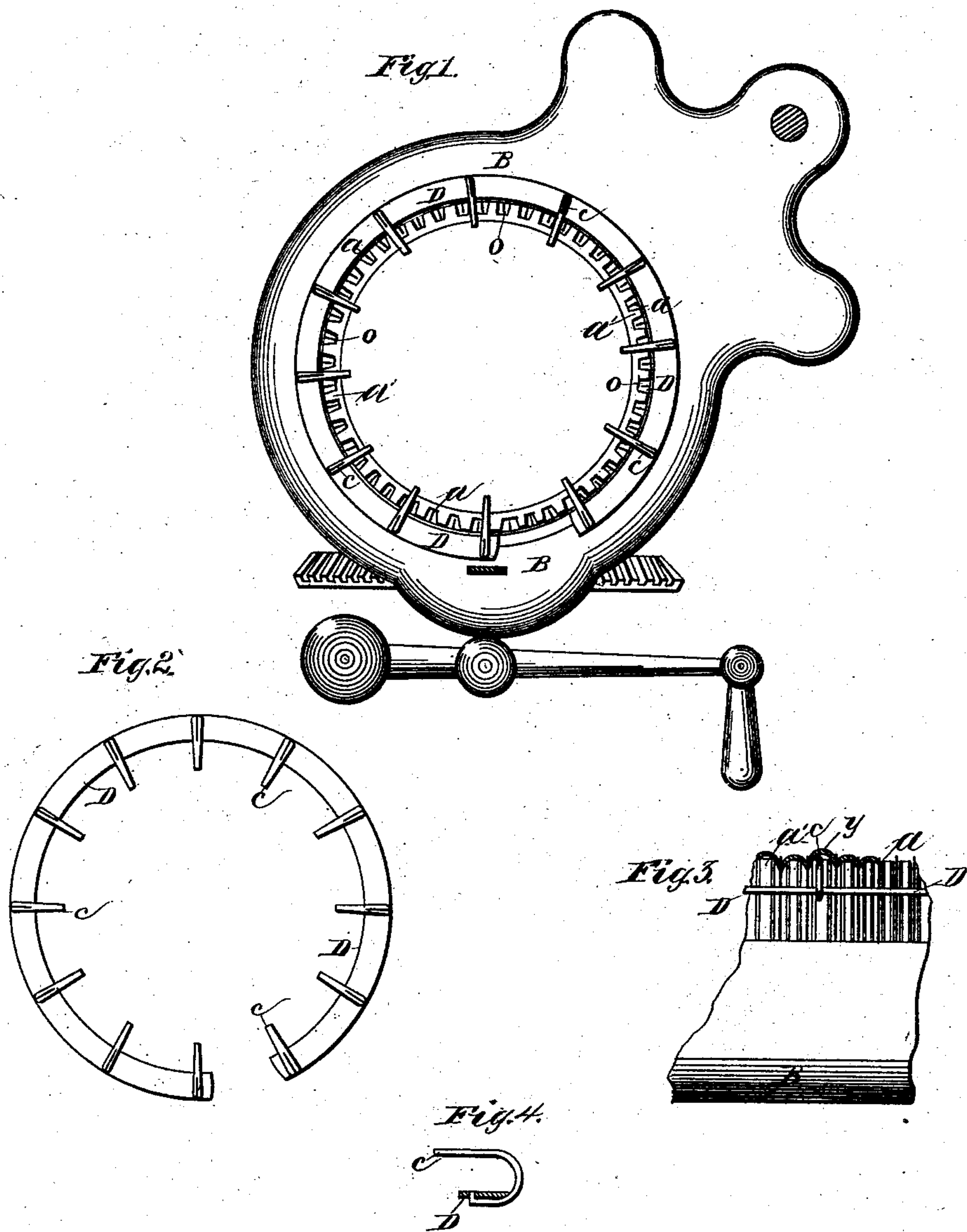


(No Model.)

G. W. LEWIS.  
CIRCULAR KNITTING MACHINE.

No. 248,102.

Patented Oct. 11, 1881.



Witnesses.  
Geo. J. Munroe  
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Inventor.  
George W. Lewis

# UNITED STATES PATENT OFFICE.

GEORGE W. LEWIS, OF JOLIET, ILLINOIS, ASSIGNOR TO HIMSELF AND  
HENRY C. CULLOM, OF SAME PLACE.

## CIRCULAR-KNITTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 248,102, dated October 11, 1881.

Application filed May 9, 1881. (No model.)

*To all whom it may concern :*

Be it known that I, GEORGE W. LEWIS, of Joliet, in the county of Will and State of Illinois, have invented a new and useful Improvement in Circular-Knitting Machines, of which the following is a specification.

My invention relates to that mechanism in a knitting machine by means of which tubular fabrics are ribbed.

Heretofore in most of the knitting-machines in use, when it becomes necessary to rib hosiery or other tubular fabrics, the practice, so far as I have observed, has been to remove every fourth or fifth needle wherever a rib is required, and to replace said needles when plain work only is required.

The object of my invention is to furnish a device by means of which the labor of removing and replacing said needles is entirely done away with, and by reason of the time thus saved the capacity of a knitting-machine is largely increased by the use of my invention.

In the accompanying drawings, which form a part of this specification, Figure 1 represents a plan view of an ordinary circular-knitting machine with my invention thereto attached. Fig. 2 is a plan view of my invention. Fig. 3 is a side elevation of a needle-cylinder with a portion broken away, showing a portion of my invention and the manner in which it accomplishes its purpose. Fig. 4 is a sectional view of my invention.

Like letters of reference made use of in the several figures indicate like parts wherever used.

Referring particularly to the drawings, B is the body or frame of an ordinary circular knit-

ter. D is the body or frame of the ribbing attachment. *c* are the projections, rigidly attached to the frame D. *o* is the needle-cylinder. *a* are the needles. *a'* are the rigid projections or ribs in the needle-cylinder separating the needles, and *y* represents the yarn.

When it becomes necessary to change from plain to ribbed work, instead of removing every fourth or fifth needle, as heretofore, my ribbing attachment, as shown in Fig. 2, is placed upon the needle-cylinder *o*, as shown in Figs. 1 and 3, in such a manner that the projections *c* rest between the needles *a* upon the rigid projections or ribs *a'* in said needle-cylinder. This position causes the yarn *y*, as shown in Fig. 3, to become stretched or expanded into wider stitches at the points where the projections *c* rest upon the rigid projections or ribs *a'* in said needle-cylinder, and a rib is the result. Said ribs may be increased or diminished at pleasure by increasing or diminishing the projections *c*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The ribbing attachment, consisting of the frame or body D, provided with the projections *c*, substantially as described.

2. The combination of the frame or body D, provided with the projections *c*, with the needle-cylinder *o*, having the projections or ribs *a'*, substantially as and for the purpose described.

GEORGE W. LEWIS. [L. S.]

In presence of—

H. C. CULLOM,  
S. W. WETMORE.