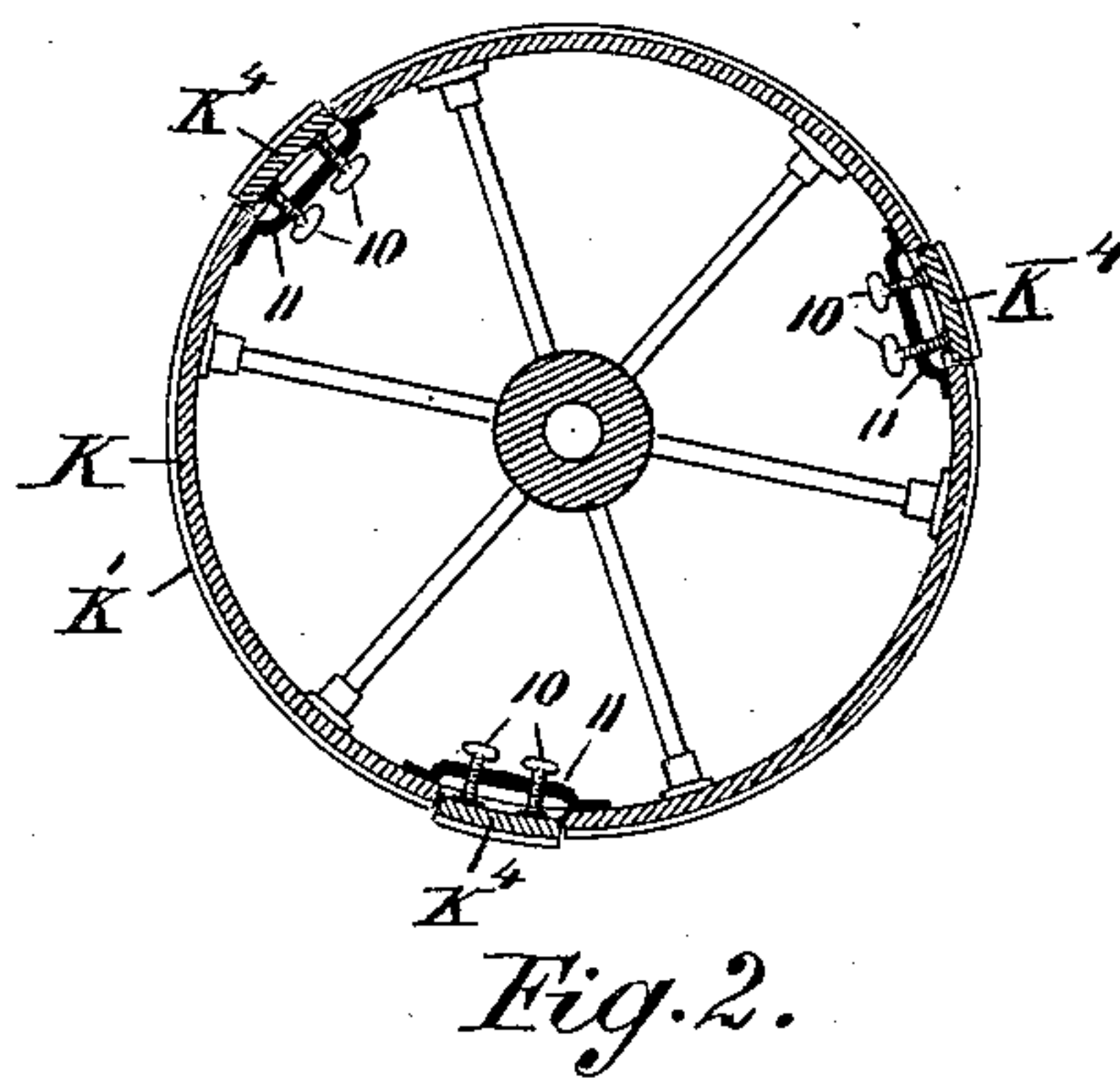
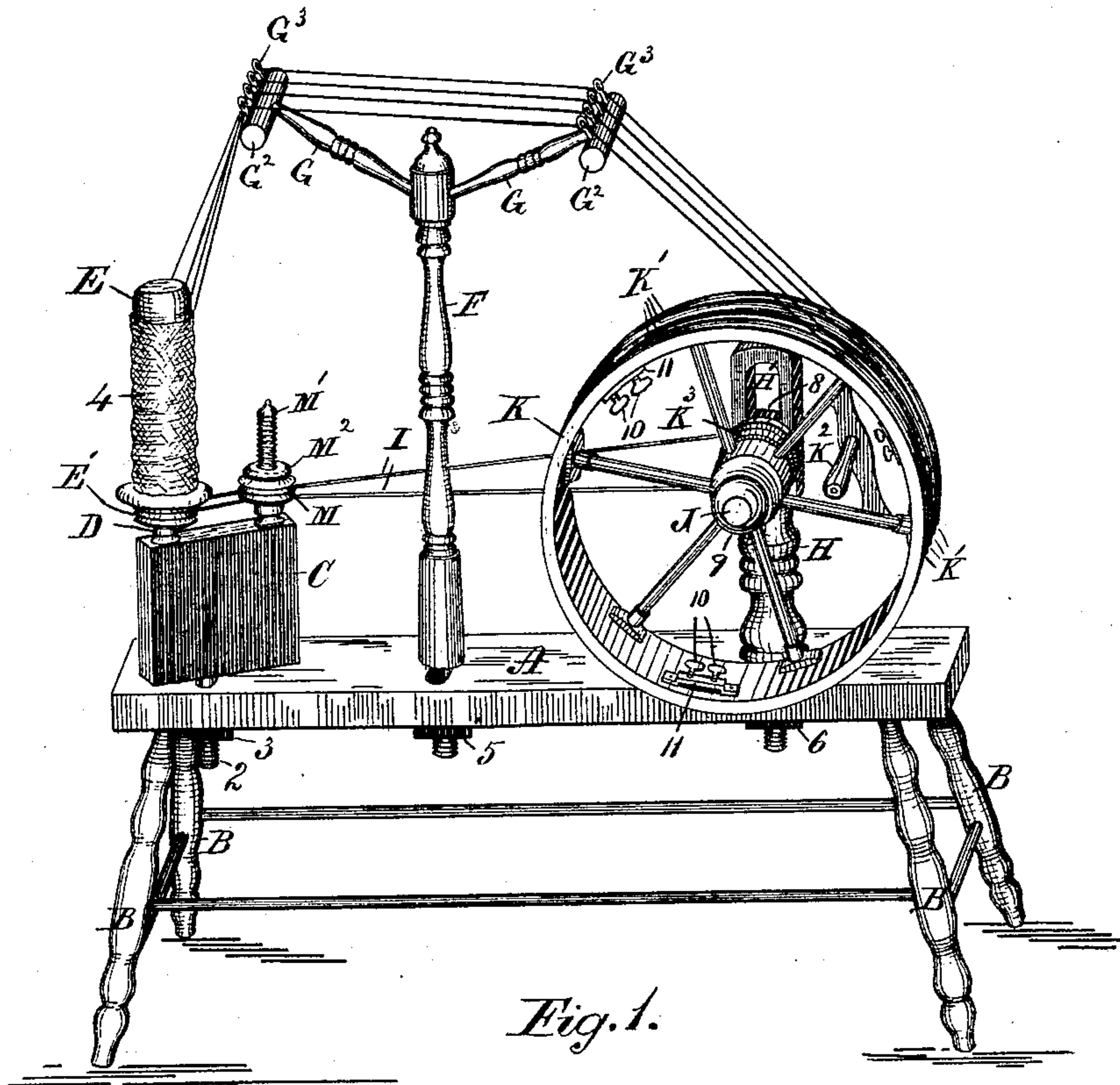


(No Model.)

N. TOURANGEAU.
REEL FOR UNRAVELING TUBULAR KNITTED GOODS AND WINDING
THE YARN.

No. 482,932.

Patented Sept. 20, 1892.



Witnesses:
John Grist
H. H. Morsey.

Inventor:
Napoleon Tourangeau
By Henry Grist.
Attorney.

UNITED STATES PATENT OFFICE.

NAPOLÉON TOURANGEAU, OF MONTREAL, CANADA, ASSIGNOR OF ONE-HALF
TO JOSEPH ODILON MARCEAU, OF SAME PLACE.

REEL FOR UNRAVELING TUBULAR-KNITTED GOODS AND WINDING THE YARN.

SPECIFICATION forming part of Letters Patent No. 482,932, dated September 20, 1892.

Application filed May 14, 1892. Serial No. 432,958. (No model.)

To all whom it may concern:

Be it known that I, NAPOLÉON TOURANGEAU, of the city of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Reels for Unraveling Tubular-Knitted Goods and Winding the Yarn; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my unraveling and reeling machine; and Fig. 2 is a section of the winding drum or reel, showing adjustable sections to enlarge the winding circumference of a portion of said drum or reel.

My invention has for its object to construct a machine which will unravel tubular-knitted goods having one, two, or more yarns and wind said yarns separately on a reel, whereby said yarns may be again knitted.

My invention consists in the construction and combination of parts, as will be herein- after described, and set forth in the claims.

A is a table-top having legs B, and said top and legs constitute the stand for supporting the operating parts of the machine.

C is the spindle-carrier, the lower end connected adjustably to said stand by a stem 2, provided with a screw-thread and passing through a slot in the table-top A, said stem having a nut 3, screwing against the under side of the stand, to clamp the spindle-carrier adjustably, whereby it can be moved to suit the number of yarns to be unraveled.

The spindle-carrier C is provided with a post D, on which sleeves a socket-spindle E, over which is stretched the tubular-knitted fabric 4 to be unraveled, and said spindle is interchangeable for one of greater or less size to suit the tubular capacity of the goods.

F is the yarn-carrier post, stepped or footed into a slot in the top A and provided with a thread and a nut 5, screwing thereon and against the underside of the table or stand, to hold the post adjustably in the slot, and said post or carrier near the top is provided with arms G G, each having a cross-head G², provided with yarn-guides G³, each guide direct-

ing a yarn after being unraveled on its passage to the reel.

H is a post footed in a slot in the table-top A and provided with a screw-thread and nut 6, screwing against the under side of the table, to hold the post adjustably. The post is provided with a slot H' vertically near the top.

J is an arm or axle having one end reduced and inserted through the slot H', the exterior end being provided with a screw-thread having a nut 8, screwing against the post, to hold the axle horizontally and permitting it to be adjustable vertically in the slot H', and said axle passes through the hub 12 of the wheel or winding-drum K and is provided with a nut 9 or other suitable means to prevent the drum moving off the axle while rotating, said reel or drum being carried rotatively by the said arm or axle J.

The periphery of the reel or drum K is provided with grooves or channels K' side by side, and each of said channels winds a yarn. Portions or sections K⁴ of the periphery of one of the grooves or channels K' in said reel or drum K are cut out and secured loosely to the end of thumb-screws 10 10, which pass through a bridge-piece 11, spanning the orifice and secured to the inner periphery of the drum, so that by turning said screws the sectional portions or pieces K⁴ will be moved out from the periphery, whereby the winding circumference of the channel or groove will be enlarged to increase the winding speed of the longer yarn and the winding tension of the yarns equalized.

The winding drum or reel K is provided with a handle K² for rotating the same by hand-power. By adjusting the axle or arm J in the slot of post H the reel or drum may be raised more or less from the table-top or stand to allow more or less yarn to be reeled, as occasion may require.

The hub of the reel or drum K has a pulley K³, and the socket-spindle E has a pulley E', and said pulleys are connected by an endless belt or cord 1, whereby the rotation of the drum or reel K rotates the spindle E, on which the knitted goods are placed, so that when the stitches, following one another, arrive at the point of unraveling, regulated by the yarn-

guides G^3 , the stitches will unravel and the yarns be separately wound on the drum or reel K.

M is a loose pulley on a post M' , footed into the adjustable spindle-carrier C, and said post is provided with a screw-thread, on which screws a nut M^2 to adjust the tension of the pulley, and by adjusting the spindle-carrier more or less rotatively the driving belt or cord 1 may be tightened or loosened to the required tension.

I claim as my invention—

1. The combination of the spindle-carrier C, having a socket-spindle E, the yarn-carrier having separating-guides G^3 , and a reel or drum K, winding the yarn separately, as set forth.

2. The combination of the reel or drum K for winding the yarns, having a series of peripheral grooves or channels to divide or separate the several yarns, a yarn-carrier having guides G^3 , dividing or separating the yarns of knitted goods, a spindle-carrier C, having a socket-spindle E, on which to sleeve the knitted goods, and an endless driving-belt 1, connecting the said reel and spindle, whereby the several yarns of a knitted fabric are simultaneously unraveled and separately wound upon said reel, substantially as set forth.

NAPOLÉON TOURANGEAU.

Witnesses:

A. BISS-ANNETTE,
AM. ARCHAMBAULT.