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 DIAL CONNECTION AND CUTTING ATTACHMENT FOR KNITTING MACHINES.
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1,007,629.

Patented Oct. 31, 1911.

Fig 1

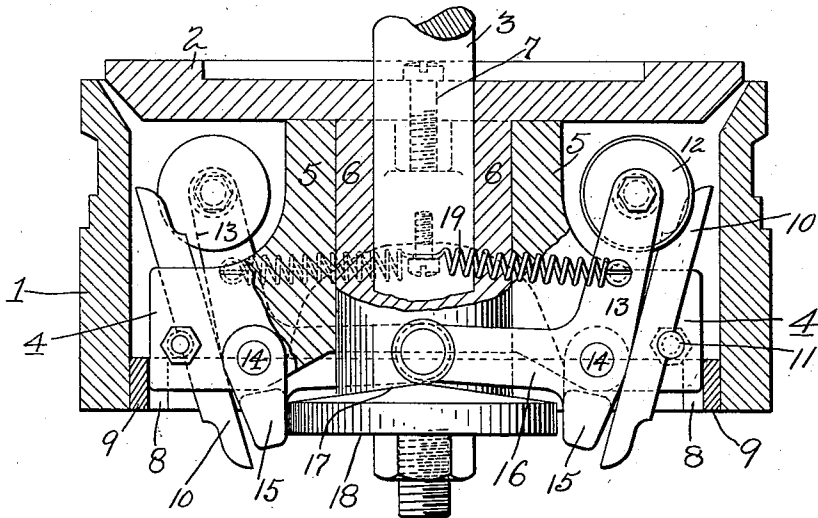
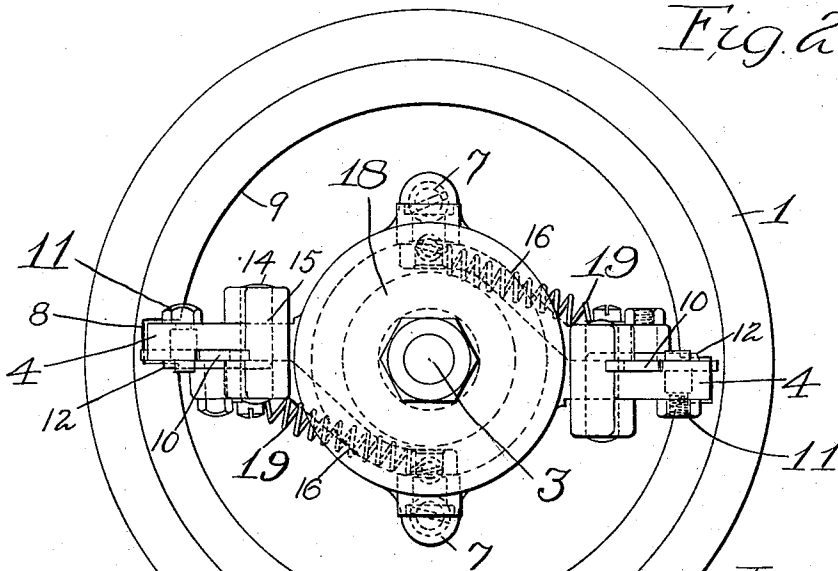


Fig 2.



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UNITED STATES PATENT OFFICE.

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DIAL CONNECTION AND CUTTING ATTACHMENT FOR KNITTING-MACHINES.

1,007,629.

Specification of Letters Patent.

Patented Oct. 31, 1911.

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To all whom it may concern:

Be it known that I, GEORGE L. BALLARD, subject of the King of Great Britain, and resident of Norristown, Pennsylvania, have
5 invented certain new and useful Improvements in Dial Connections and Cutting Attachments for Knitting-Machines, of which the following is a specification.

My invention relates to circular knitting
10 machines having a dial and a cylinder, and it concerns particularly the combination with said parts of means for cutting the fabric as it passes from the needles, the said cutting means being located at the point
15 where the cylinder and dial are connected together to be held in fixed relation to each other, so that the fabric, as severed by the cutting means, passes down in its divided state a portion on each side of the said connecting means between said cylinder and
20 dial.

The invention consists in the features and combination and arrangement of parts hereinafter described and particularly set
25 forth in the appended claims.

In the accompanying drawings Figure 1 is a sectional view of a cylinder and dial with the invention associated therewith; Fig. 2 is a bottom plan view of Fig. 1.

30 In these drawings, 1 is the needle cylinder, 2 the dial, and 3 the center post. The dial and cylinder are held in fixed relation to each other by arms 4 extending substantially radially outward from a sleeve or collar 5 which surrounds the sleeve or hub 6
35 of the dial, the said collar 5 being fixed to the dial by screws, one of which is indicated in Fig. 1 at 7 in dotted lines, passing through the dial plate into lugs on the collar 5. These outwardly extending arms fit
40 at their outer ends within notches 8 of a ring 9 secured to the needle cylinder, and therefore the cylinder and dial will be held in fixed relation to each other. These outwardly extending arms also form supports
45 for cutting devices, and each of these cutting devices includes a fixed blade 10 clamped within the arm 4 by a screw or bolt 11. Each of these fixed cutting blades
50 10 has associated therewith a movable cutter 12 in the form of a disk mounted upon a lever 13 pivoted to the arm 4 at 14, said lever having an upwardly extending arm, and a lower yoke portion at 15 which embraces the lower edge of the arm 4, so that

its arms come up on each side thereof to be engaged by the pivot pin. Each lever 13 has an arm 16 extending inwardly therefrom and one to each side of the hub of the dial, and each arm has a roller bearing upon
60 the incline 17 of the cam disk 18 which is fixed to the lower end of the post 3. Springs 19 keep the levers 13 retracted and also keep the rollers in contact with the cam 17. The post 3 is connected in the usual manner to
65 the upper cross yoke of the knitting head, and rotates therewith and with the cam rings. It will therefore be understood that as this post rotates with the cam 18, the levers 13 carrying the cutting disks 12 are
70 given an oscillating movement, so that as the tubular fabric passes down from the needles, it will be cut by the action of the cutting disks 12 in cooperation with the fixed cutters 10, and the fabric will thus be
75 divided at substantially diametrically opposite points, and the divided portions will pass down on each side of the arms 4, and the fabric thus cut will be used, as well known in the art, for various purposes.
80 While I have described a construction which I consider the best for the purpose intended, it will be understood that I do not wish to limit myself to the details shown and described. For instance, while I have shown
85 two sets of cutting devices and two outwardly extending arms for connecting the cylinder and dial, one set of these devices may be employed.

I claim as my invention:

90 1. In a circular knitting machine, a needle cylinder, a dial, a connection between the dial and the cylinder to hold the dial in fixed relation to said cylinder, and means for dividing the fabric adjacent said
95 connection to pass down on each side thereof, substantially as described.

2. In combination in a circular knitting machine, a cylinder, a dial, an arm connecting the cylinder and dial to hold them in
100 fixed relation, and a cutter supported on said arm for severing the fabric to pass down on each side thereof, substantially as described.

3. In combination in a circular knitting
105 machine, a cylinder, a dial, an arm connecting the cylinder and dial to hold them in fixed relation, and a cutter supported on said arm for severing the fabric to pass down on each side thereof, said cutter in- 110

cluding a fixed blade and a movable blade with means for operating the latter, substantially as described.

4. In combination in a circular knitting
 5 machine, a cylinder, a dial, an arm connect-
 ing the cylinder and dial to hold them in
 fixed relation, and a cutter supported on
 said arm for severing the fabric to pass
 down on each side thereof, said cutter in-
 10 cluding a fixed blade and a movable blade
 with means for operating the latter, said
 means including a cam and the rotary central
 post connected to said cam for operat-
 ing the same, substantially as described.
 15 5. In combination in a circular knitting
 machine, a needle cylinder, a dial, connec-
 tions between the dial and cylinder at dia-
 metrically opposite sides thereof and a pair
 of cutting devices disposed at said diamet-

rically opposite points within the cylinder 20
 for severing the fabric at said two points
 as it passes down from the needles.

6. In combination a cylinder, a dial, a
 central rotary post, a sleeve surrounding the
 sleeve of the dial and having arms engaging 25
 the cylinder, a fixed cutter on each of said
 arms, an oscillating lever on each of said
 arms, a cutting blade carried by each lever,
 and a cam connected to the rotary post for
 operating the levers, substantially as de- 30
 scribed.

In testimony whereof, I affix my signa-
 ture in presence of two witnesses.

GEORGE LAWSON BALLARD.

Witnesses:

FRANK B. WILDMAN,
 EDITH C. FRICK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
 Washington, D. C."