

No. 742,628.

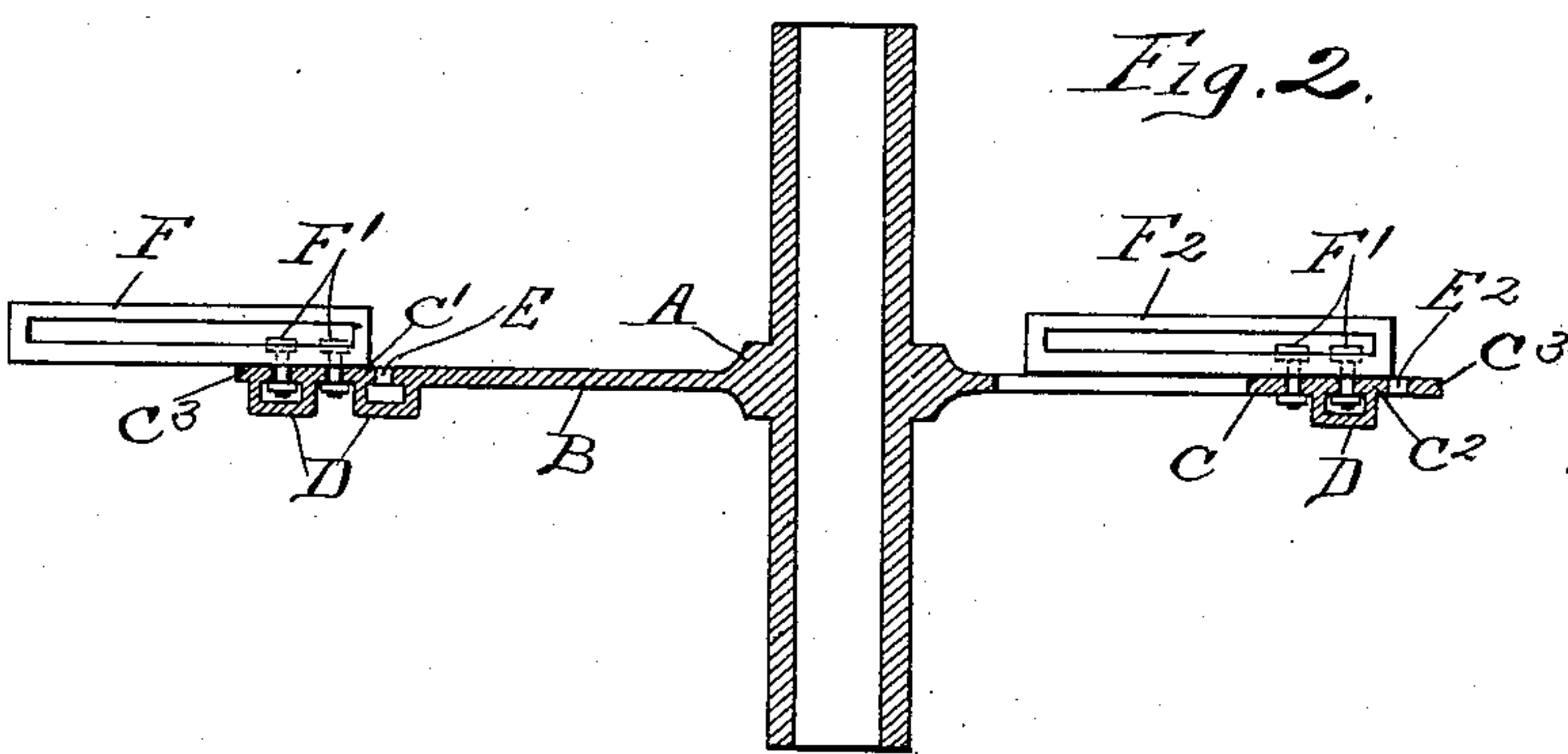
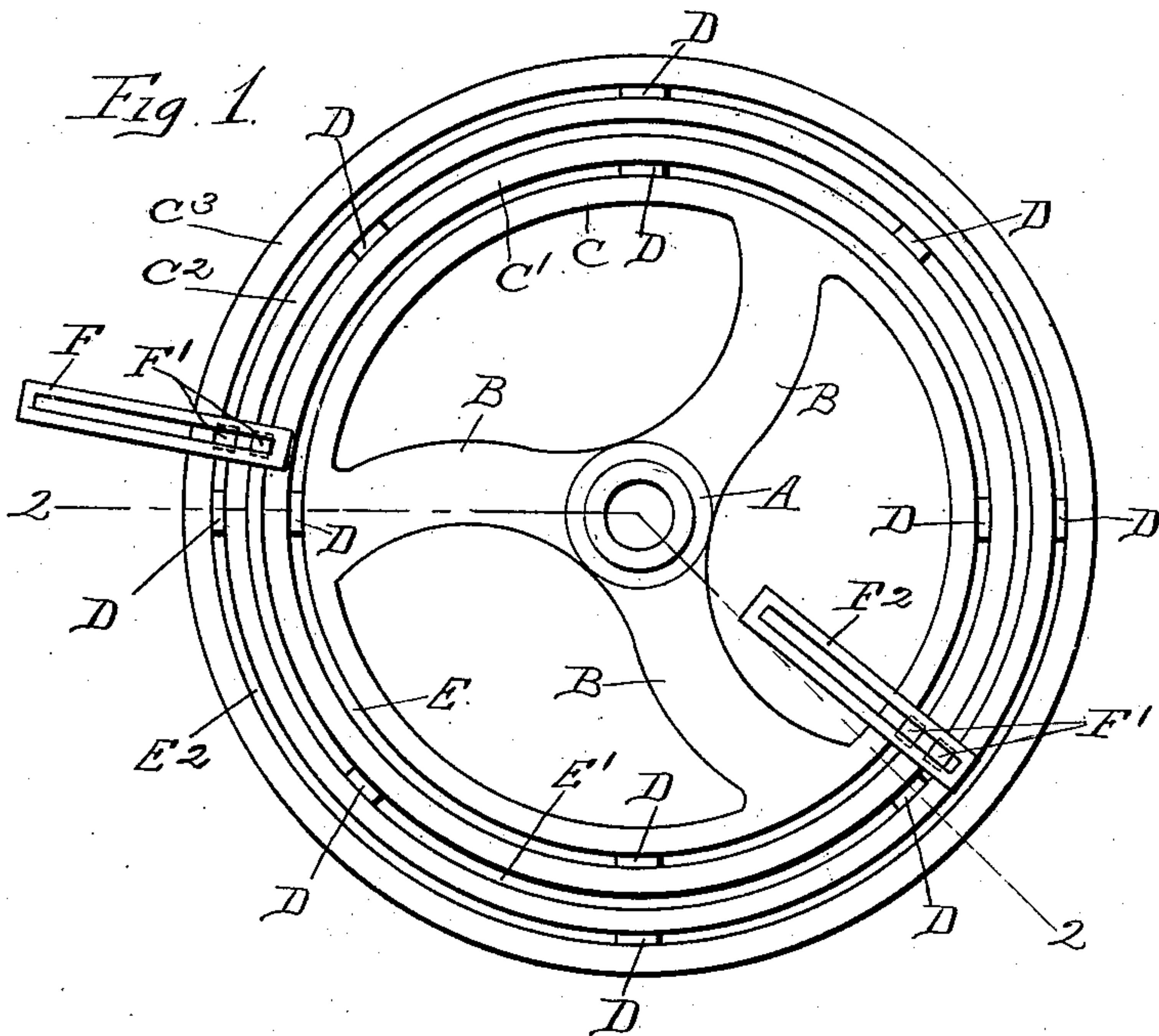
PATENTED OCT. 27, 1903.

R. W. GORMLY.

FEED CIRCLE FOR CIRCULAR KNITTING MACHINES.

APPLICATION FILED MAR. 29, 1898.

NO. MODEL.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT W. GORMLY, OF TROY, NEW YORK.

FEED-CIRCLE FOR CIRCULAR-KNITTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 742,628, dated October 27, 1903.

Application filed March 29, 1898. Serial No. 675,534. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. GORMLY, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Feed-Circles for Circular-Knitting Machines, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings and the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in both figures.

Figure 1 of the drawings is a top plan view of my improved feed-circle. Fig. 2 is a vertical section of the same, taken on the broken line 2 2 in Fig. 1.

The object of my invention is to provide a more stable support for the brackets or stands of a circular-knitting machine and at the same time to adapt the feed-circle of such machines for use with cylinders of widely-different size without the removal of the brackets or stands; also, to facilitate the adjustment of the stands.

Referring to the drawings, I have shown my invention in its preferred form embodied in a feed-circle comprising the central hub A, the radiating spokes or arms B, three in number, and the concentric rings C, C', C², and C³, with connecting subjacent bridge-pieces D. The rings are separated from each other by narrow annular channels concentric with each other and with the rings. The channel E separates the ring C from the ring C', the channel E' separates the ring C' from the ring C², and the channel E² separates the ring C² from the ring C³. These channels are adapted to receive the shanks of the attaching-bolts for the brackets and stands, as will be hereinafter more clearly explained. The innermost ring is connected with the central hub by means of the spokes or arms B, and the neighboring rings are connected one to another by means of the bridge-pieces D, which are subjacent to the rings and channels, and are offset, as shown, to afford an

unimpeded passage-way for a bolt-head or nut. Each of the outer rings is connected with the hub by means of these bridge-pieces, one or more of the inner rings, and the spokes or arms B.

My improved feed-circle is adapted for use with slotted brackets in the usual manner for supporting the usual uprights or stands of a circular-knitting machine, such brackets being commonly provided with one or more slots to receive the bolts which attach the bracket to the feed-circle and attach the stands to the respective brackets.

My improved feed-circle affords facilities for the use of two or more bolts in attaching the slotted bracket to the feed-circle, whereby the bracket can be rigidly fixed to the circle in any desired position.

I have shown in the drawings a form of bracket shown and described in United States Letters Patent No. 587,957, issued to me August 10, 1897, to which patent reference may be had for a more complete understanding of the form and use of such a bracket and of the relation of the feed-circle to other parts of the knitting-machine. I have shown two of such brackets, one, F, attached to the feed-circle by means of bolts F', inserted in the two outer channels E' and E² and extending outwardly from the circle approximately its limit of length, and the other, F², attached to the circle by similar bolts F', inserted through the two inner channels E and E' and extending inwardly toward the hub of the circle approximately its limit of length. Both of these adjustments are extreme; but in either case the double bolt connection afforded by my improved feed-circle would enable the bracket to support upon its extreme end a heavy stand without liability of changing its position during use either by an accidental rotary or other movement.

The wide range of adjustment permitted by my improved feed-circle, as illustrated by the extreme positions of the brackets shown in Fig. 1, enables me to adapt a knitting-machine to different sizes of cylinders with great facility.

The offset bridge-pieces afford an unobstructed channel for the movement of the bolts through a complete revoluble movement, if desired, in adjusting the brackets,

as shown and described in my said Patent No. 587,957.

My improved feed-circle may be either stationary, as in the ordinary form of machines, or may be rotary, as shown in my said patent, and it may be used with any known form of slotted bracket as well as with that shown in my said patent.

Three or more concentric rings and two or more bolt-channels are essential in carrying out my invention.

The continuity of the slots is interrupted in a measure by the bridge-pieces, for which reason the bridge-pieces connecting an intermediate ring with a neighboring ring on one side are arranged to alternate with the bridge-pieces connecting such intermediate ring with a neighboring ring on its opposite side, whereby the unbridged portions of the slots are caused to break joints. When the bolt-heads are held against turning in the brackets, the bolts are secured by turning the nuts on their lower ends, as by means of a wrench applied thereto, and when the presence of a bridge in one groove at a point where it is desired to locate a stand interferes with the insertion of the bolt or application of a wrench to the nut thereon the attaching-bolt can be inserted in a neighboring slot which has no bridge at such point.

Each of the brackets can be adjusted and secured in any circumferential position on the feed-circle or stand-bed. For example, should it be desired to adjust and secure the bracket F^2 directly over the adjacent bridge D the bolt in the channel E' could lie dormant in the bridge-groove, the other bolt, lying in an unbridged portion of channel E , where its nut would be accessible, being made to do all the work of clamping the bracket, or the bolt in channel E' could be removed therefrom before adjusting the bracket and inserted in the unbridged portion of channel E^2 , where its nut would be accessible and the bracket secured by two bolts at a greater distance from the cylinder. It will thus be seen that while the continuity of the slots is

thus interrupted in a measure by the bridge-pieces it is yet possible to secure a stand in any desired position upon the bed.

By increasing the number of rings and channels or slots and having the bridges alternate, as shown, each bracket can be secured by any desired number of bolts at any desired circumferential point and at any desired distance from the cylinder.

The object of the bridge-grooves is to permit of sliding a bolt from one unbridged portion of a slot to another without removing the nut on its lower end in case such a wide circumferential adjustment should be desired, which does not happen frequently except in first setting up the machine.

What I claim as new, and desire to secure by Letters Patent, is—

1. A stand-bed for circular-knitting machines comprising a series of concentric annular portions with intervening slots and a plurality of connections between the neighboring annular portions, the connections between an intermediate annular portion and its neighboring annular portion on one side alternating with the connections between said intermediate portion and its neighboring annular portion on the opposite side.

2. A feed-circle for circular-knitting machines comprising three or more concentric rings connected together by subjacent bridge-pieces and separated each from its neighboring ring by an annular bolt-channel wholly open above and below between the bridge-pieces for the reception of a bolt, and open above the bridge-pieces for the free passage of a bolt-nut, the bridge-pieces on the outer side of an intermediate ring alternating with those on its inner side, substantially as described.

In testimony whereof I have hereunto set my hand this 24th day of March, 1898.

ROBERT W. GORMLY.

Witnesses:

FRANK C. CURTIS,
THOMAS H. GUY.