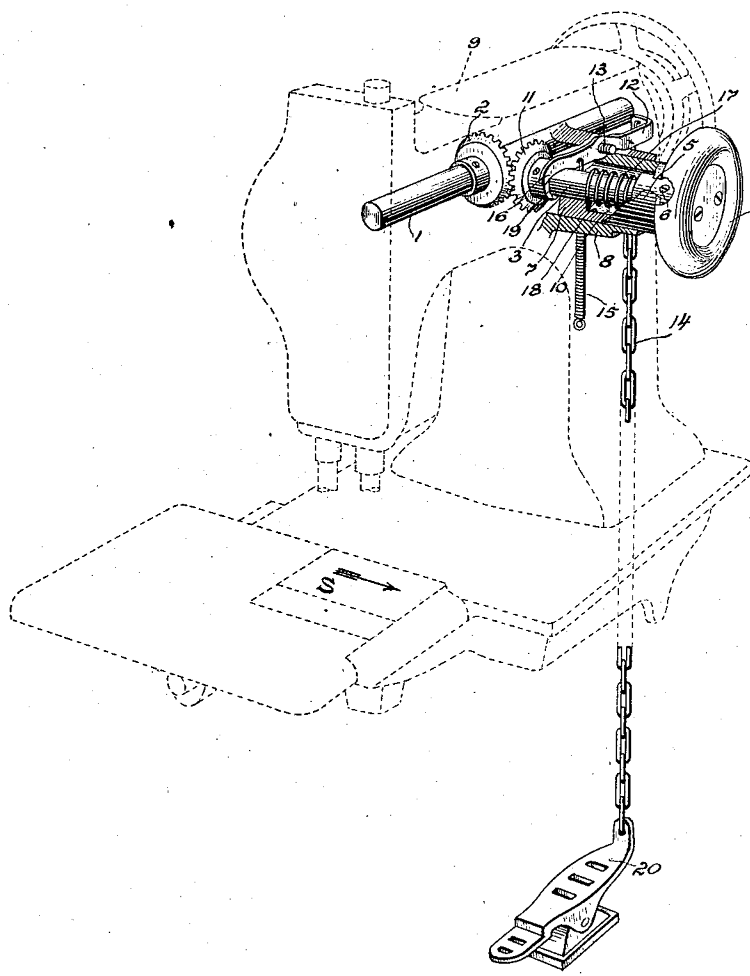
J. C. RINGE.

GEARING.

APPLICATION FILED JULY 14, 1910.

1,014,772. Patented Jan. 16, 1912.



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GEARING.

1,014,772. Specification of Letters Patent. Patented Jan. 16, 1912.

Application filed July 14, 1910. Serial No. 571,885.

To all whom it may concern:

Be it known that I, JOHN C. RINGE, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Gearing, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in sewing machines and has particular reference to the means employed for manually determining the vertical position of the needles with respect to the fabric when the sewing machine is at rest.

In the manufacture of certain classes of productions, it is desirable to mount the sewing machine head with its front end facing the operator, and when the frame is of the ordinary length and the arm standard of the ordinary height the commonly-employed hand or belt wheel mounted upon the rear end of the needle-driving shaft is so far removed from the operator that its manual manipulation for registering the needle in a given position with respect to its limit of vertical movement is impracticable.

The object of the present invention is to provide improved means, normally disconnected from the actuating mechanism of the sewing machine, whereby the operator may conveniently effect the desired adjustments of the needle.

The single figure is a perspective view of the improved mechanism, together with a like dotted line view of the sewing machine frame, cloth-plate, bracket arm, arm standard and belt wheel.

1 represents the commonly-employed main or needle bar-actuating shaft, 2 a bevel gear wheel or power-transmitting member carried by said shaft, 3 the hand wheel shaft, 4 the hand wheel provided with a hub 5 and secured by screw 6 upon the shaft 3, the latter at its inner end being mounted in a bearing 7 formed in a boss 8, which latter in the present instance is cast integral with the sewing machine bracket arm 9, the hub 5 being mounted in the tubular portion 10 of the boss 8. Carried by the shaft 3 is a bevel gear wheel or power-transmitting member 11 which at the will of the operator, through the manipulation of the hand wheel 4, is caused to mesh with the member 2 to turn the shaft 1.

Located inside of the bracket arm is a catch lever 12 pivoted upon a screw 13, the rear end of said lever having secured to it one end of a chain connection 14, the opposite end of which latter is connected with a suitable foot treadle 20, a spring 15 normally acting to hold the free end 16 of said catch lever downward.

17 is a spring mounted upon the shaft 3 with its inner end seated against the wall 18 of the bearing 7, the opposite end of said spring acting upon the inner end of the hub 5 to normally hold the member 11 out of engagement with the member 2.

The arrow *s* indicates the direction of the feed of the material.

While a preferred form of wheel for operatively connecting the main shaft with the hand wheel shaft is herein shown, it will be evident that the commonly-employed power-transmitting friction disks might be substituted therefor, and that the gear carried by the main shaft might comprise the adjustable power-transmitting element instead of the gear carried by the hand wheel shaft, without materially affecting the utility of the improved mechanism, the gist of the invention lying in providing said main shaft with temporarily connected means for rotating it independent of its belt driven pulley.

In the operation of the device, supposing the parts to occupy the positions shown in the drawing and it is desired to commence the stitching operation, the operator rocks the lever 12, in opposition to the spring 15, which removes the end 16 of the catch lever from engagement with the wall 19 of the member 11, thus permitting the spring 17 to disengage the member 11 from engagement with the member 2, which releases the manually-controlled mechanism from engagement with the actuating mechanism of the sewing machine during the stitching operation. When the machine is again brought to rest and it is desired to register the needle at a point different from that at which it was brought to rest, the operator, through the manipulation of the hand wheel 4, moves the member 11 into operative relationship with

the member 2 where it is held by the end 16 of the lever 12 acting against the wall 19 of the member 11, as shown in the drawing.

Claim:

In a power-transmitting mechanism, a rotary main-shaft, a rotary hand-wheel shaft having its axis of rotation in a direction transverse to the axis of said main-shaft and having sliding movements in the direction of its length, power-transmitting members one of which is carried by said main-shaft, its coacting member being carried by said hand-wheel shaft, a latch for holding said transmitting members in engagement, and means including a spring and a treadle for discontinuing the engagement of said power-transmitting members.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JOHN C. RINGE.

Witnesses:

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