

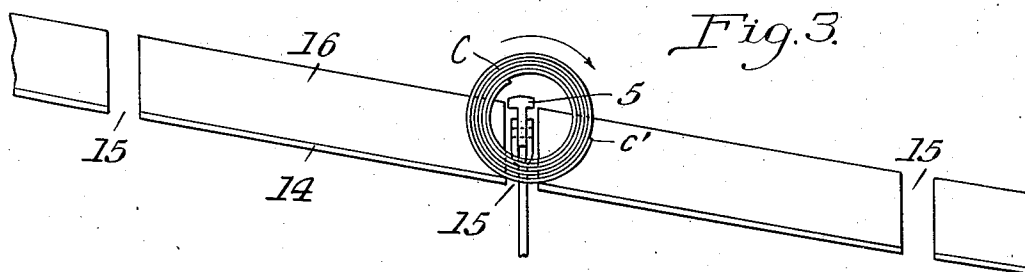
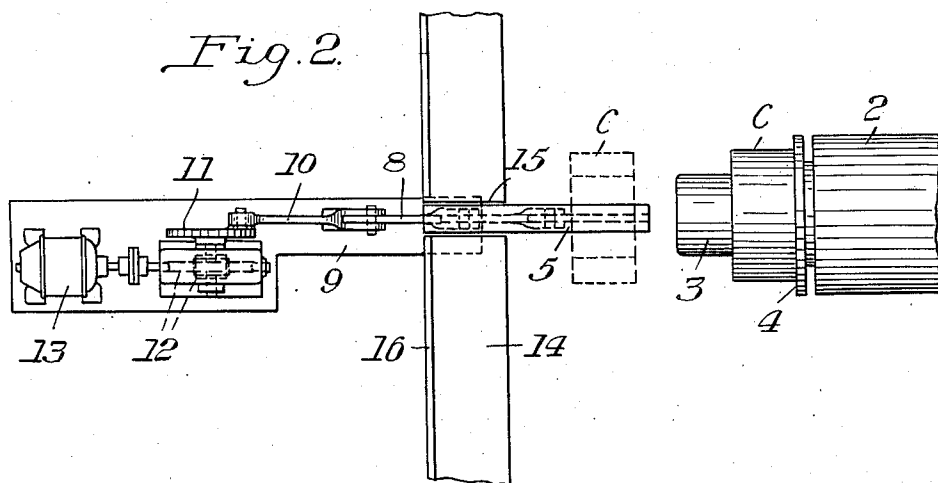
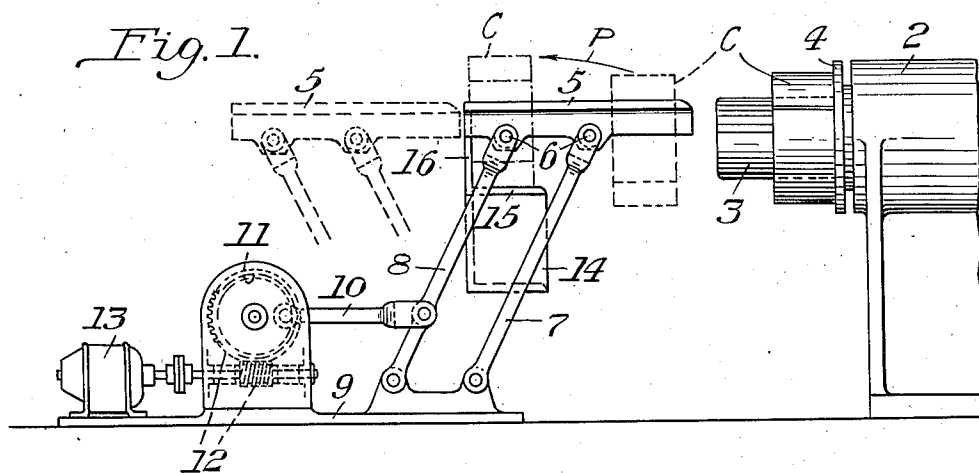
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L. JOHNSON

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APPARATUS FOR TRANSFERRING COILED MATERIAL

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INVENTOR

Lane Johnson  
By his atty.  
Byrnes, Sutton & Hamaker

## UNITED STATES PATENT OFFICE

LANE JOHNSON, OF INGRAM, PENNSYLVANIA, ASSIGNOR TO UNITED ENGINEERING & FOUNDRY COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

## APPARATUS FOR TRANSFERRING COILED MATERIAL

Application filed July 21, 1928. Serial No. 294,374.

This invention relates to transfer mechanism for coiled material and is particularly useful for receiving material as it is ejected from a reel and for transferring the same to a conveyor.

I provide a relatively simple device adapted to receive the coils as they are ejected from the reel and to automatically deposit them on the conveyor. I employ an arm movable from a coil receiving position to a discharge position and so move the arm that it has a downward component of movement adjacent the discharge position. A stripper is provided so that when the discharge position is reached the movement of the coil with the arm is stopped, and continued movement of the arm is effective for stripping the coil therefrom. Since the arm has a downward component of movement the coil is deposited on the conveyor and the arm clears the coil with a minimum of rubbing.

The arm is preferably mounted on rockable links which are pivoted below the conveyor and lie in a vertically extending plane. This forms a simple and effective mounting and the mechanism is out of the way.

If desired, a number of transfer devices may be arranged to feed to the same conveyor. The conveyor usually consists of an inclined runway and the discharge point of the several transfer devices may easily be properly located relative to the conveyor by changing the length of the pivoted arms.

In the accompanying drawings illustrating the present preferred embodiment of the invention,

Figure 1 is a transverse view showing the transfer device in side elevation;

Figure 2 is a top plan view, and

Figure 3 is an end view showing the relationship of several transfer devices to a single conveyor.

In the drawings there is shown a reel 2 having a drum 3 and a stripper 4. Strip material is wound on the drum to form a coil C. After the coil has been completed the stripper 4 is actuated to push the coil off the end of the reel 3 onto a transfer arm 5. The arm 5 is pivotally connected at 6 to links 7 and 8, which links are substantially parallel

and are pivoted to a base plate 9. The link 8 is connected by a link 10 to a crank disk 11 which is driven through worm gearing 12 by a motor 13. After the coil has been transferred to the arm 5 the motor is actuated to swing the arm 5 to the left, thus causing the coil to travel upwardly and to the left along a path indicated by the arrow P in Figure 1. This movement carries the coil over a conveyor 14 having a slot 15 therein to accommodate the arm 5 and the links 7 and 8. A side guide 16 on the conveyor constitutes a stripper and as the arm 5 continues its movement to the left the side guide 16 engages the coil and strips it from the arm. The arm moves to the dotted line position 5' of Figure 1, thus completely clearing the coil and permitting it to move along the conveyor. The conveyor is inclined and as soon as the coil has been stripped from the arm 5 it rolls along the conveyor.

As shown in Figure 3, the conveyor is inclined in such direction that the outer end c' of the coil rotates "under" instead of "over," thus insuring that the coil will remain tight.

Continued rotation of the crank disk 11 causes the arm 5 to move back to its position adjacent the drum 3 ready to receive another coil.

In Figure 3 the conveyor 14 is shown as having a number of slots 15 in which different transfer devices cooperating with different reels may work. The different transfer devices may have to be arranged to lift the coils in different amounts because of the inclination of the conveyor, but this can readily be arranged for by using links 7 and 8 of different lengths in the several transfer devices.

While I have illustrated and described the present preferred form of my invention, it is not limited to this form but may be embodied within the scope of the following claims:

I claim:

1. In combination with a reel having a drum with a horizontally extending axis and a stripper, a coil transferring device comprising a substantially horizontally extending coil supporting arm capable of receiving, supporting and transporting a coil discharged from the drum, means for placing

the arm in a receptive position in extension of and substantially axially of the drum and for moving the arm from such position in a predetermined direction and for a predetermined distance to a discharge position, and a receiver having horizontally and vertically extending portions facing the reel, said receiver having an opening therein, the arm being arranged to move through the opening in the receiver and also arranged to have a downward component of movement as it moves through the opening in the stripper causing both a horizontal and vertical pressure to be exerted by the receiver, thereby stripping the coil from the arm.

2. In combination with a reel having a drum with a horizontally extending axis and a stripper, a substantially horizontally extending arm capable of receiving and supporting a coil discharged from the drum, and in combination with a pair of substantially parallel links pivotally connected to the arm, a base, the links being also pivotally connected to the base, and means for rocking the arm and the links, the links moving in the direction of movement of the arm, a receiver having horizontally and vertically extending portions lying transversely of the direction of movement of the arm, the receiver having an opening therethrough through which the arm travels, the receiver being adapted to strip the coil from the traveling arm as it passes therethrough, the arm being arranged to have a downward component of movement as it moves through the opening in the stripper.

3. In combination with a reel having a drum with a horizontally extending axis and a stripper, a substantially horizontally extending arm capable of receiving and supporting a coil discharged from the drum, and in combination with a pair of substantially parallel links, pivotally connected to the arm, a base, the links being also pivotally connected to the base, and means for rocking the arm and the links, the links moving in the direction of movement of the arm, a receiver having horizontally and vertically extending portions and facing the reel and lying transversely of the direction of movement of the arm, the receiver having an opening therethrough through which the arm travels, the receiver being adapted to strip the coil from the traveling arm as it passes therethrough, and being inclined so as to cause the coil to be carried to a place of deposit.

4. In combination with a reel having a drum with a horizontally extending axis and a stripper, a coil transferring device comprising a substantially horizontally extending coil supporting arm capable of receiving, supporting, transporting and discharging on edge a coil discharged from the drum, means for placing the arm in a receptive position and for moving the arm from such position

in a predetermined direction and for a predetermined distance to a discharge position, and means for stripping the coil from the arm in a vertical position and free to roll away.

5. In combination with a reel having a drum with a horizontally extending axis and a stripper, a coil transferring device comprising a substantially horizontally extending coil supporting arm capable of receiving, supporting, transporting and discharging on edge a coil discharged from the drum, means for placing the arm in a receptive position and for moving the arm from such position in a predetermined direction and for a predetermined distance to a discharge position, and a receiver having a horizontally and vertically extending portion and having an opening therethrough through which the arm travels, the receiver being adapted to strip the coil from the arm and receive it in a vertical position and free to roll.

In testimony whereof I have hereunto set my hand.

LANE JOHNSON.