To all whom it may concern:

Be it known that I, Jens A. Bjorn, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented new and useful Improvements in Machines for Graining Wood, of which the following is a specification.

This invention relates to wood graining machines, and comprehends a construction for charging a composition roller with all the characteristic features of the particular wood to be simulated, and transposing these features upon the wood by a single operation.

The nature and advantages of the invention will be more readily apparent when the following detail description is taken in connection with the accompanying drawings.

In the drawings forming part of this specification equal numerals of reference indicate similar parts in the several views and wherein:

Figure 1 is a front elevation of the machine.
Fig. 2 is a side elevation.
Fig. 3 is a top plan view.
Fig. 4 is an enlarged detail view showing the connection between the respective rollers.
Fig. 5 is a sectional view taken on line 5-5 of Fig. 1.

Referring to the drawings in detail, 10 indicates a grain-type cylinder, which has its axis 11 journaled in the bearings 12 of a skeleton frame 13. The latter may be of any suitable construction. A pulley 14 is fixed upon the axis 11 and is driven by a motor (not shown). The grain-type cylinder 10 is of metal, and has its surface polished to the maximum degree of smoothness. All the characteristic features of the particular wood to be simulated is then engraved into the surface of the cylinder. Light and dark shading is obtained by varying the depth of the cut in the surface of the cylinder.

Mounted upon the frame 13, beneath the cylinder 10, is a trough 15 filled with suitable ink or color, while journaled within the trough is a felt-dressed roller 16 adapted to be rotated through the instrumentality of the cylinder 10 with which it contacts. As shown in Fig. 1 the roller 16 is of a length equal to the length of the cylinder 10 or substantially so.

A composition roller 17 has its axis 18 journaled in the forked extremities 19 of the cylinder 10, the latter having their corresponding lower ends pivoted as at 21, whereby the roller 17 may be adjusted toward and away from the cylinder 10. A yoke 22 embraces the standards 20 and is secured to the frame 13, the yoke supporting the standards and limiting the movement of the latter away from the frame 13. Wire frames 23 and 24 respectively are secured upon the standards by means of the springs 25, these frames being connected as at 26. The frame 24 at each side of the cylinder 10 carries a geared wheel 27, adapted to be mounted upon a spiral track 28 carried by each end of the cylinder 10. A spring 29 is carried by each standard 20 and engages the frame 24 to normally hold the grooved wheel 27 spaced from the track 28.

In practice, the cylinder 10 is rotated, and by reason of its contact with the roller 16, it is coated along its entire surface with the ink or color contained in the trough 15. The operator, by placing the grooved roller 27 upon one end of the track 28, provides a connection between the cylinder 10 and the standards 20, whereby the composition roller 17 is brought into close contact with the cylinder 10. A scraper 30, preferably constructed from leather, is yieldably mounted upon the frame 13 by springs 31, and the scraper is firmly pressed against the cylinder 10 to remove the ink or color from the surface thereof, but leaving all the engraved parts filled with the ink or color. When the composition roller is brought into close contact with the cylinder 10, in the manner above stated, the roller 17 has its entire surface charged with the ink or color picked from the engraved design of the cylinder 10. The end of the spiral track is so arranged as to drop the roller 27 as soon as the entire surface of the roller 17 is charged with the characteristics of the wood to be simulated, taken from the cylinder 10. As soon as the rollers 27 become separated from the track 28, the roller 17 and its supporting frame will gravitate to the position illustrated in Fig. 2, being checked in its movement in this direction and supported in the position shown by means of the yoke 22.
The spring 29 prevents the grooved roller from casually coming in contact with the track carried by the constantly revolving cylinder 10. The roller 17 is a hand roller and can be readily and easily removed from the forked extremities 19 of its supporting frame, and then rolled over the surface to be grained. By this action, the color is left on the surface of the work, producing a variety of shades and giving a close imitation of any particular wood with the one operation. A number of men, each having a hand roller, can work with considerable advantage from one machine.

While I have shown and described what I consider the preferred embodiment of the invention, I desire to have it understood that I do not limit myself in this connection, and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What is claimed is:

1. A wood graining machine comprising a grain-type cylinder mounted for rotation, means for rotating the cylinder, a trough arranged beneath said cylinder, an inking roller journaled in said trough and engaging said cylinder, a normally spaced composition roller capable of movement toward and away from the cylinder, and means, controlled by said cylinder whereby said roller is drawn by the cylinder into close contact with the same for a predetermined interval, and subsequently released to gravitate to normal position.

2. A wood graining machine comprising a continuously rotating grain-type cylinder, an ink containing trough, a roller journaled in the trough and arranged to coat said cylinder with ink, a normally spaced composition roller capable of movement toward and away from the cylinder, and a connection between the said composition roller and cylinder, whereby the roller is drawn into close contact with the cylinder and released therefrom at a predetermined interval to gravitate to normal position.

3. A wood graining machine comprising a continuously rotating grain-type cylinder, means for coating the cylinder with printing material, a yieldably mounted scraper for said cylinder, a composition roller capable of movement toward and away from the cylinder and normally spaced therefrom, and means for drawing said roller into close contact with said cylinder and automatically releasing said roller at a predetermined interval.

4. A wood graining machine comprising a continuously rotating grain-type cylinder, means for coating the cylinder with printing material, a composition roller capable of movement toward and away from the cylinder and normally spaced therefrom, means for drawing said roller into close contact with said cylinder and automatically releasing the roller at a predetermined interval, said roller gravitating to normal position when released, and means for limiting the movement of the roller in a direction away from the cylinder.

5. A wood graining machine comprising a continuously rotating grain-type cylinder, means for coating the cylinder with printing material, a pivotally mounted frame, a composition roller removably carried by the frame and capable of movement therewith toward and away from the cylinder, said roller being normally spaced from the cylinder, and means for drawing said roller into close contact with the cylinder and automatically releasing said roller at a predetermined interval.

6. A wood graining machine comprising a continuously rotating grain-type cylinder, means for coating the cylinder with printing material, a composition roller, a support for said roller capable of movement toward and away from the cylinder, said roller being normally spaced from the cylinder, a spiral track carried by each end of the cylinder, a grooved wheel carried by said support and adapted to be arranged on said track, whereby said composition roller is drawn into close contact with said cylinder, and released therefrom when said wheel is dropped by said track, and means for holding said wheel normally out of the path of movement of the track.

7. A wood graining machine comprising a grain-type cylinder mounted for rotation, means for rotating the cylinder, means for coating the cylinder during its rotation, a normally spaced composition roller capable of movement toward and away from the cylinder, a spiral track carried by each end of the cylinder and a detachable connection between the track and roller whereby the latter is drawn in close contact with the cylinder, and subsequently released at a predetermined interval for the purpose specified.

8. A wood graining machine comprising a grain-type cylinder mounted for rotation, means for rotating the cylinder, means for coating the cylinder during its rotation, a normally spaced composition roller capable of movement toward and away from the cylinder, a spiral track carried by each end of the cylinder, an element carried by each end of said roller, and adapted for engagement with the track whereby the roller is drawn in close contact with the cylinder and subsequently released therefrom at a predetermined interval for the purpose specified.

9. A wood graining machine comprising a grain-type cylinder mounted for rotation, means for rotating the cylinder, means for coating the cylinder during its rotation, a normally spaced composition roller capable...
of movement toward and away from the cylinder, a pivoted frame supporting said roller, a spiral track carried by each end of the cylinder and means carried by the frame for engagement with said track, whereby the roller is drawn in close contact with the cylinder, and subsequently released at a predetermined interval, for the purpose specified.

10. A wood graining machine comprising a grain type cylinder mounted for rotation, means for rotating the cylinder, means for coating the cylinder during its rotation, a normally spaced composition roller mounted for movement toward and away from the cylinder, a spiral track carried by each end of the cylinder, the end of each track being spaced, means carried by the support for said roller and including a wheel adapted to engage said track to draw the roller in close contact with the cylinder, and to permit said roller to gravitate to normal position when said wheel moves from the terminal of said track.

In testimony whereof I affix my signature.

JENS AMANDUS BJORN.