No. 714,457. Patented Nov. 25, 1902.

J. CUNNING.

ROLLING, WRAPPING, OR WINDING MACHINE.

(Application filed Oct. 22, 1901.)

(No Model.)

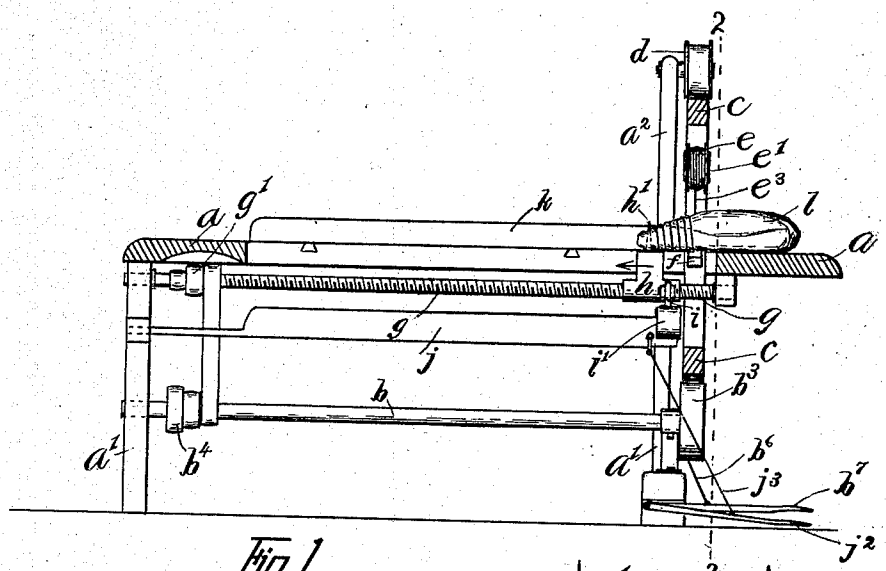


Fig. 1.

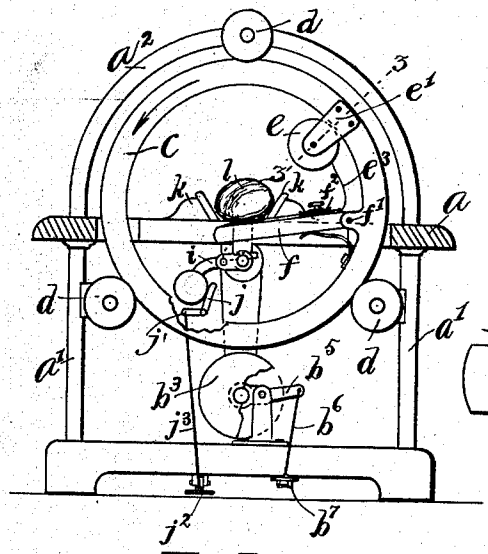


Fig. 2.

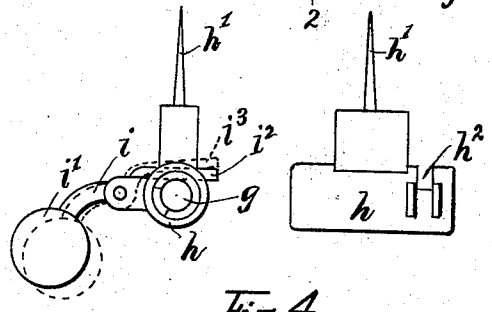


Fig. 4.

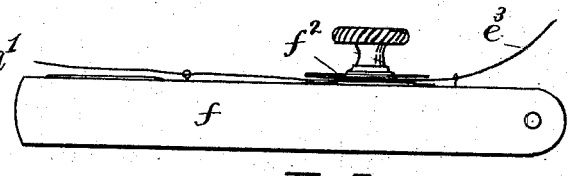


Fig. 5.

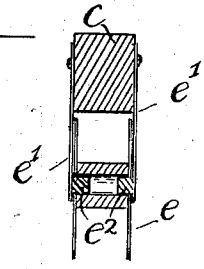


Fig. 3.

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ROLLING, WRAPPING, OR WINDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 714,457, dated November 25, 1902.

Application filed October 22, 1901. Serial No. 79,499. (No model.)

To all whom it may concern:

Be it known that I, JAMES CUNNING, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Wrapping and Winding Machines, of which the following is a specification.

My invention relates specially to machines and apparatus used for winding or wrapping cord around certain rolls of meat, but is also useful by slight and apparent changes or adaptations for use in other classes of manufacture, and the chief objects are convenience, efficiency, cheapness, and durability. I attain these objects by the general construction and arrangement described in the following specification and illustrated in the accompanying drawings, in the different views of which similar letters of reference refer to similar parts.

Figure 1 is partial central vertical section longitudinally through my device. Fig. 2 is vertical section through line 2 2. Fig. 3 is a partial section on line 3 through reel and bobbin. Fig. 4 is an enlarged detached side and end view of feeding or gaging device, and Fig. 5 is an enlarged detached view of a follower and tension device.

In the characters of reference here employed the letter a represents the table, provided with legs a' and an upwardly-extending arch or extension a^2 to support portions of operating parts, described farther on.

b denotes a rotating shaft mounted in suitable bearings and provided with a suitable driving-pulley or other means of power transmission and a friction-wheel b^3, adapted to engage with a reel or bobbin-carrier c, held in rotative position by sheaves d, and is provided with yielding brackets or holders e', adapted to retain bobbin e and by a slight pressure against the sides of said bobbin to resist slightly the rotation thereof that cord may not be unwound therefrom too freely, said reel being also provided with a winding arm or pendant f, pivotally mounted at f', and a tension device f^2, provided on said arm, whereby tension is imparted to the winding or wrapping cord e^3, so the cord is tightly drawn in winding it around any object or article being wound, a spring tending to retain arm against work l.

g is a feed-screw journaled in suitable bearings at each end thereof at under side of table and is provided, preferably, with the cone-pulley g', which is driven by belt from cone-pulley b^4 on main shaft b, cone-pulleys being desirable that a higher or lower speed of rotation may be given to said screw relative to the speed of the main shaft that in wrapping the spiral turns of cord may be varied or spaced as desired. On said screw is placed a loose sleeve h, provided with the upwardly-projecting pointed stem h' or hook, upon which is placed a roll of meat l, that is to be wound with cord. Said sleeve has also mounted upon it a weighted cam-lever i, provided at i^2 with a section so formed as to engage with the threads of said screw when pressed into the slot h^2 in said sleeve, providing means whereby the said sleeve is moved by said screw in direction of the arrow and away from the operator. Said cam-lever i is pressed and held in engagement with said screw by means of a pressure-plate j, which is pivotally mounted beneath the table in suitable bearings and is adapted by means of lever j' and treadle j^2, with intervening link j^3, to be retained in such engagement at will of the operator by pressure of his foot on said treadle, and by the weight i' the said cam-lever is released from engagement with said screw. When the operator releases the said treadle when the meat or work being wound is finished, the sleeve with its point is readily moved back to point of beginning. Thus also when it is desired by the operator to wind one or more turns of cord at the beginning or at any intermediate point or finish of the work the operator releases momentarily for such purpose the treadle j^2, while weight i' then being in position disengaging the projection i^2, as seen at i^3, Fig. 4, the reel moves on, and the movement of the object wound being retarded while the cord continues being wound one or more turns may be put on at any such point, when said treadle again being pressed the cam-lever again engages with the screw, and work then again being moved at a constant rate the winding of cord continues again spirally to the point of finish, where it is usu-

ally desired to put two or more turns on next to one another to facilitate the fastening of the cord.

The friction-wheel b^3, which continues rotation, is pressed into frictional contact with the rotative carrier c by means of foot-pressure on treadle b^7, acting through link b^6 and lever b^5.

k k are adjustable guards placed at convenient distance from center of table to suit work being done.

As there are various changes that might be resorted to in the arrangement of my winding or wrapping device practically within the range of mechanical equivalents, I desire it understood that I do not hold myself to the exact construction here shown, but deem myself at liberty to make any such alterations that may fall fairly within the spirit and scope of my invention.

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

1. In a rolling, wrapping or winding machine, the combination of a ring-shaped reel, a bobbin, and inwardly-extending yielding plates preferably of thin metal secured to said reel providing a space between them adapted to receive said bobbin and studs provided on said plates projecting within a central opening provided in said bobbin, from either side thereof whereupon said bobbin is adapted to revolve, said yielding plates being adapted to pinch lightly against said bobbin that it will not unwind the wrapping-cord too freely, and means whereby the object being wound may be fed through said reel at intervals as desired, as set forth.

2. In a rolling, wrapping or winding machine the combination of a rotating ring-shaped reel and bobbin carried thereby a table or rest and a winding-lever pivoted to said reel and extending inwardly and means whereby the object being wound may be retarded or held during one or more turns of the said reel, as set forth.

3. In a rolling, wrapping or winding machine, a rotating bobbin-carrying reel, a winding-lever, a tension device provided on said lever and a table or rest through which said bobbin and winding-lever are rotated, as set forth.

4. In a rolling, wrapping or winding machine, a rotating bobbin-carrying reel, a winding and tension arm, a table or rest to support the work a feed-screw an adjustably-secured feed stem or hook mounted on said screw adapted to move longitudinally along said table to draw the work with it, and means to stop or start said feed-hook at intervals during the continuous rotation of said bobbin-carrying reel as set forth.

5. In a rolling, wrapping or winding machine, a table, a feed-screw and point or hook moved along the table, a cam-lever attached to said point, a pressure-plate adapted to press said cam-lever into engagement with said screw and a treadle adapted to operate said pressure-plate, as set forth.

6. In a rolling, wrapping or winding machine, a rotating bobbin-carrying reel, a winding and tension arm pivoted within said reel, a rotating friction-wheel adapted to engage frictionally with said reel and to drive it thereby and a treadle adapted to press said friction-wheel into engagement with said reel at intervals as desired, as set forth.

7. In a rolling, wrapping or winding machine, a rotating bobbin-carrying reel, sheave-wheels arranged about the circumference of said reel adapted to carry and support said reel, a table and guides adapted to support the work to be done, a longitudinally-moving feeding point or hook, means for moving said point at certain intervals and means for setting said reel in motion at certain intervals, as set forth.

8. In a winding, wrapping or rolling machine, a rotating bobbin-carrying reel, a winding-lever, a tension device, a table, a transverse space in said table wherein said reel is adapted to rotate and means to feed the object being wound through said reel at or near its center, and means to operate said feed steadily or at intervals, as and for the purposes set forth.

9. In a rolling, wrapping or winding machine, a rotating bobbin-carrying reel, a winding-lever, a tension device on said lever, a table with suitable space in which said reel is adapted to play, means to set said reel in motion or at rest when desired and means to feed the work to be wound at intervals or at a steady rate of travel, as may be desired, through said reel, at or near its center, as set forth.

That I claim the foregoing I have hereunto set my hand this 15th day of October, 1901.

JAMES CUNNING.

Witnesses:
HENRY A. O. SPEERS,
JUSTUS N. ADAMS.