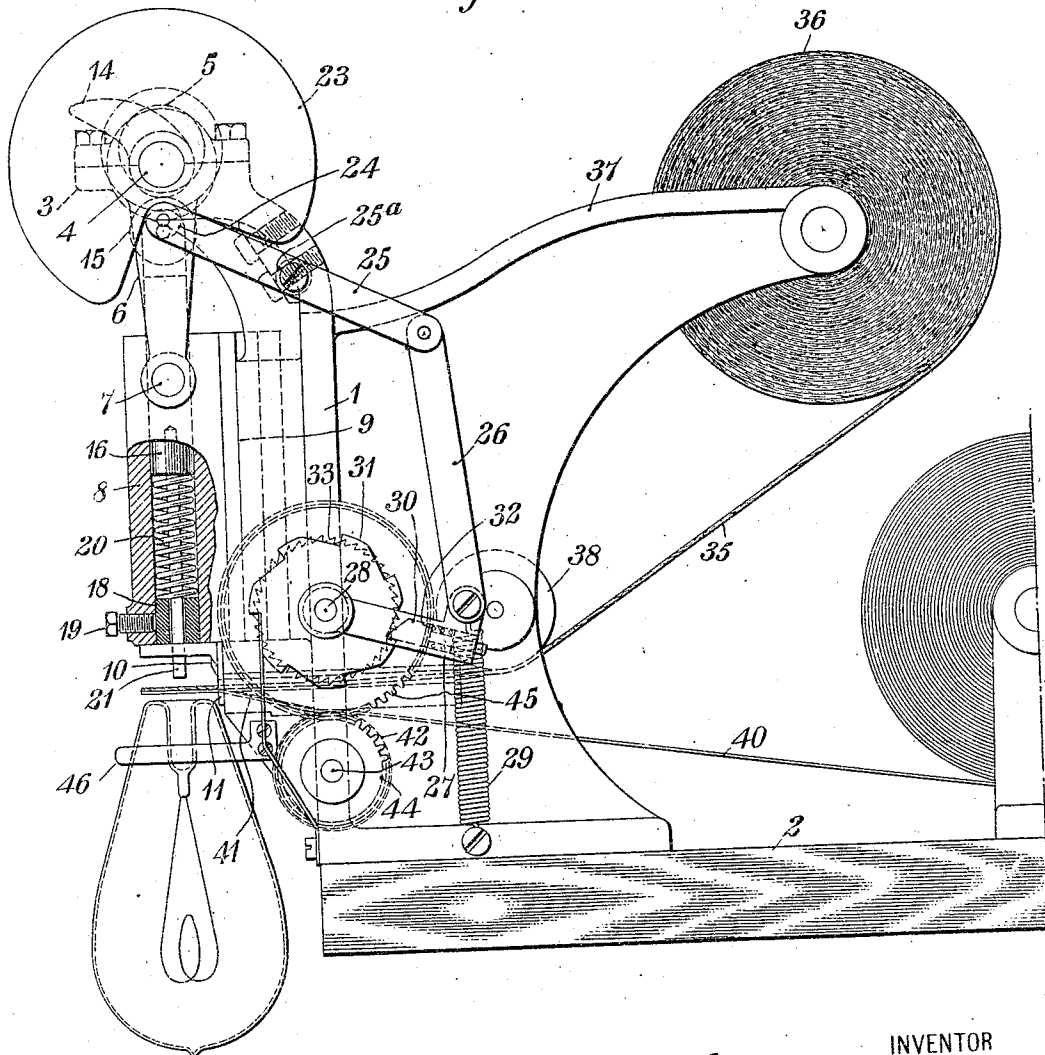


1,031,770.

Fig. 1.



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1,031,770.

2 SHEETS—SHEET 2.

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GEORGE W. BEADLE, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO WESTINGHOUSE LAMP COMPANY, A CORPORATION OF PENNSYLVANIA.

LAMP-MANUFACTURING MACHINE.

1,031,770.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed July 19, 1909. Serial No. 508,538.

To all whom it may concern:

Be it known that I, GEORGE W. BEADLE, a citizen of the United States, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Lamp-Manufacturing Machines, of which the following is a specification.

My invention relates to machines employed in the manufacture of incandescent electric lamps, and it has for its object to provide a machine whereby the production of lamps may be greatly facilitated.

In the manufacture of incandescent electric lamps, it is usual to insert small pieces of felt in the stems for the purpose of maintaining the leading-in wires separate and out of engagement, and also, at the same time, to insert labels bearing advertising matter or information with reference to the lamps. The felt and labels heretofore used have been first cut into the desired lengths or forms and then inserted individually and manually by means of tweezers into the lamp stems. The present invention is provided for the purpose of reducing the manual labor involved in inserting the felt and labels into the lamp stems, and is adapted to cut the pieces of felt and the labels from continuous lengths that are carried upon reels and from which they are drawn at the rate required.

Figure 1 of the accompanying drawings is a side view of a machine that embodies the present invention, some of the parts being shown in section for the sake of clearness of illustration, and Fig. 2 is a front view of the machine of Fig. 1.

The machine comprises a main supporting frame or standard 1 that is mounted upon the edge of a table 2 and is provided at its top with bearing brackets 3 for a main driving shaft 4, that is provided between, and adjacent to, the bearing brackets 3 with eccentrics 5. The eccentrics 5 are operatively connected, by means of links 6, to laterally projecting pins 7 carried by a block member 8 for which guides or ways 9 are provided in the front vertical face of the frame 1, so that, as the shaft 4 is rotated, the eccentrics 5, through the links 6, effect vertical reciprocation of the block 8. The block 8 carries, at its lower end, a knife 10 that is adapted to cooperate with a plate 11, se-

cured to the front vertical face of the frame 1, to cut pieces of felt and the labels from the continuous lengths thereof.

Upon the shaft 4, between the eccentric 5, is a cam 14 in the path of movement of which is a roller 15 that is mounted in the upper end of a vertical rod or plunger 16. The block 8 is provided with an aperture that extends vertically therethrough from top to bottom to provide a mounting and guide for the plunger 16, the lower end of the aperture being partially closed by a bushing 18 that is secured in position by means of a set screw 19, and a helical compression spring 20 being interposed between the top of the bushing 18 and the bottom of the plunger 16 for the purpose of resiliently maintaining the plunger in its uppermost position. Secured in the lower end of the plunger 16, and extending downwardly through the spring 20, the bushing 18, and an aperture in the knife 10, is a rod or auxiliary plunger 21 that is provided for the purpose of pressing the pieces of felt and the labels into the stems of the lamps.

Upon the end of the shaft 4 is a notched cam 23 the edge of which engages a roller 24 that is mounted at one end of the lever 25, the said lever being fulcrumed to a laterally projecting bracket 25^a that is secured to the frame 1. The lower end of the lever 25 is connected, by means of a link 26, to an arm 27 that is pivotally and loosely mounted upon the shaft 28, a helical tension spring 29 being provided for the purpose of maintaining the roller 24 in engagement with the cam 23. The arm 27 carries a pawl 30 that is maintained in engagement with a ratchet wheel 31 by means of a spring 32, the ratchet wheel 31 being mounted upon and secured to the shaft 28. Also rigidly mounted upon the shaft 28 is a toothed feed roll 33 that projects through the side of a guide 34 for a strip of felt 35, the roll 33 serving to feed or advance the strip of felt 35 as the shaft 28 is rotated. The felt 35 is drawn from a reel 36 that is carried by an arm 37 formed integral with the frame 1, and just previous to passing into the guide 34 it passes over a roll 38.

A strip 40 of labels is fed through a guide 41 by means of a roll 42, carried by the shaft 43 and operated by means of a gear 44 that meshes with a gear 45, carried by the

shaft 28. The labels 40 are thus fed at the same rate, and simultaneously with, the felt 35, the felt being above the labels.

In the use of the machine, the lamps to which the pieces of felt and labels are to be applied are placed, with the open ends of their stems up and directly beneath the plunger 21, in an annular bracket 46, and strips of felt and paper are fed upon the upper end thereof by means of the feed rolls 33 and 42, the operation of the feed rolls being effected by the pawl 30 which advances the ratchet wheel 31 a distance represented by the angular distance between its teeth for each revolution of the cam 23 and of the main driving shaft 4. Immediately after the felt and paper strips have been advanced the full distance, the eccentrics 5 cause a downward movement of the block 8 and the knife 10; thus pieces of the felt and paper are cut off, and are immediately inserted in the stem of the lamp by means of the rod or auxiliary plunger 21, which is caused to descend by the cam 14. During the continued operation of the machine, the rod or auxiliary plunger 21 is withdrawn from the stem of the lamp and the block 8 and knife 10 are raised, and also, the pawl 30. The roller 24 on the end of the arm 25 is also pressed downwardly, and the pawl 30 is thereby raised to engage the next tooth of the ratchet 31. The lamp in which the felt and label have been inserted may then be removed and another one substituted therefor.

I claim as my invention:

1. A machine of the class described com-

prising a plurality of guides for the materials operated upon the exits of which are immediately adjacent, feed devices for advancing the materials through the guides, means for actuating the same intermittently, a reciprocating knife for severing the materials as fed, and a plunger for disposing of the severed pieces of material.

2. A machine of the class described comprising a plurality of guides for the materials operated upon the exits of which are immediately adjacent, feed devices for advancing the materials through the guides, a ratchet for advancing the materials through the guides, a ratchet connected to the feed devices, a pawl engaging the ratchet, means for actuating the same intermittently, a reciprocating knife for severing the materials as fed, and a plunger for disposing of the severed pieces of material.

3. A machine of the class described comprising a plurality of superposed guides for the materials operated upon the exits of which are immediately adjacent, separate feed devices for advancing the materials through the guides, means for actuating the same intermittently, a reciprocating knife for severing the materials at the ends of the guides, and a plunger for disposing of the severed pieces of material.

In testimony whereof, I have hereunto subscribed my name this 7 day of July, 1909.

GEORGE W. BEADLE.

Witnesses:

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R. C. KORCHNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."