March 14, 1944. C. F. RÖBER ET AL 2,344,107

APPARATUS FOR SUPPLYING ADHESIVE

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Fig. 1

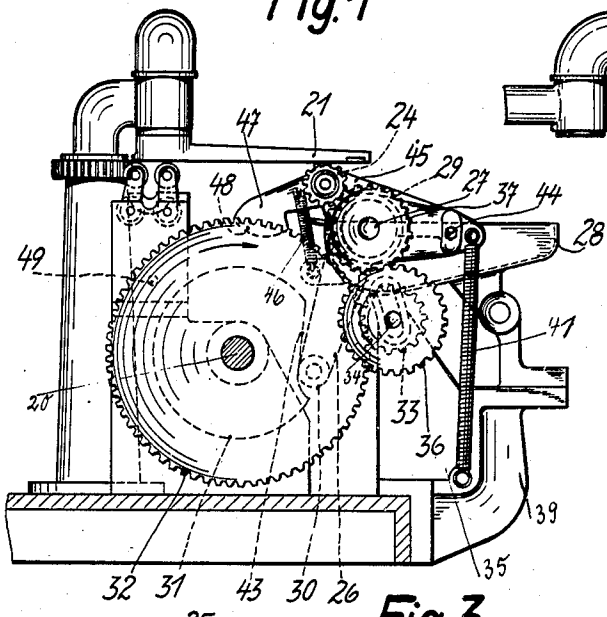



Fig. 2

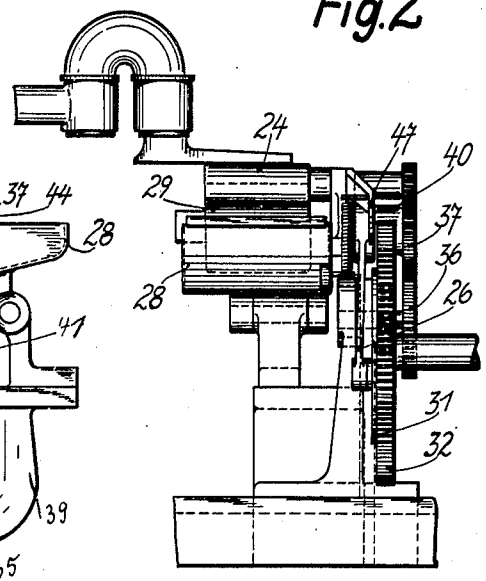



Fig. 3

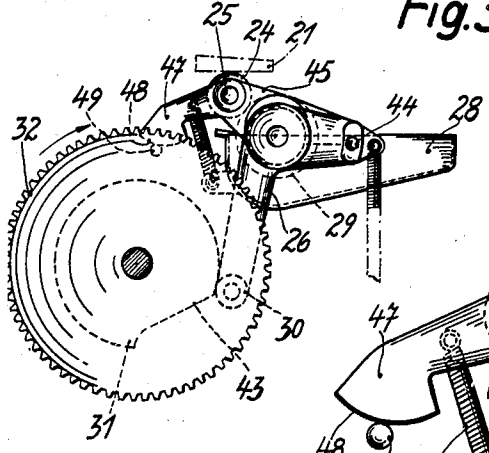
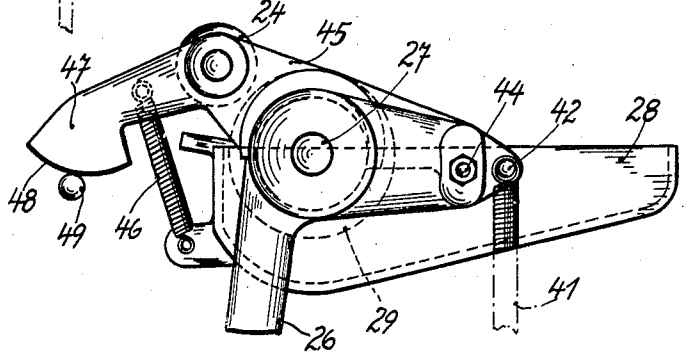



Fig. 4



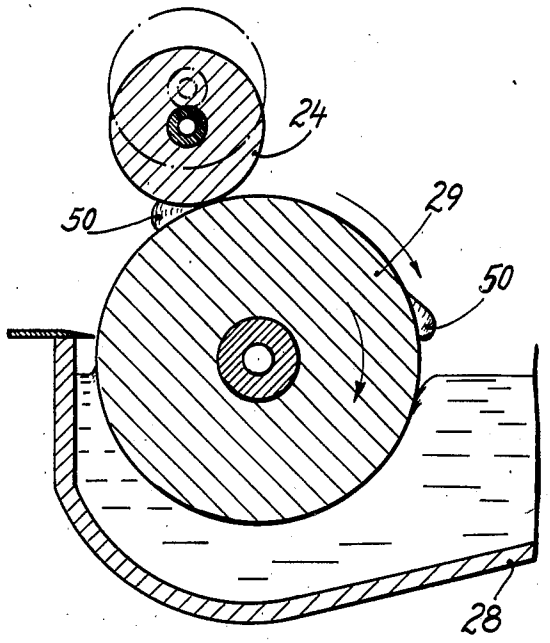

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Fig. 5




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# UNITED STATES PATENT OFFICE

2,344,107

## APPARATUS FOR SUPPLYING ADHESIVE

Constantin Friedrich Röber and Ernst Gustav Röthig, Dresden, Germany; vested in the Alien Property Custodian

Application June 14, 1940, Serial No. 340,600
In Germany June 30, 1939

5 Claims. (Cl. 91—50)

When supplying adhesive to labels, edge-strips, outer leaves of cigars and the like it is important that the adhesive supplying roller which finally supplies the adhesive to the work piece, is always covered with a uniform adhesive layer. The reason for a non-uniform layer is that a certain quantity of adhesive sticks together and dams up in the corner existing between the adhesive feeding roller partly dipping into the adhesive bath of an adhesive receptacle and the supply roller on which the equal layer is to be formed when these two rollers engage each other. The reason for this is that the adhesive feeding roller must always carry abundant adhesive and that it is impossible to maintain a perfectly equal adhesive layer on said roller. The said quantity of adhesive accumulating and sticking together moves irregularly and is unequally divided and therefore prevents the formation of a uniform adhesive layer on the supply roller especially if said layer must be as thin as possible.

In order to obviate such disadvantage according to the invention means are provided for disengaging the supply roller and if desired also the transfer rollers inserted between the supply and the feed rollers from the adhesive feed roller and to reengage same immediately by means of a gearing controlled by the main drive.

In this way by the momentary disengagement of the supply roller from the feed roller it is effected that the quantity of adhesive existing in the corner is taken away by the feed roller and carried beyond the engaging point of the two rollers, whereupon a new coaction of the two rollers begins immediately before the adhesive of the feed roller has enough time to set.

It must be said that it is not undesirable generally that a small quantity of adhesive shall accumulate in the said corner since this adhesive favours the formation of an equal adhesive layer on the supply roller but the excessive accumulation of adhesive in said corner is very disadvantageous and is prevented according to the invention.

In many cases it may be necessary that the disengagement shall take place once or several times during each revolution of the rollers, while in other cases the disengagement is only necessary after a number of revolutions of the rollers. Preferably the controlling means for controlling the disengagement may be adjustable.

It is to be understood that it is generally known, in combination with inking rollers, to provide means enabling the disengagement of the ink transfering rollers from each other or from the printing block during the working of the machine. However in these cases the disengaging of the transfer rollers has the purpose to facilitate the cleansing of the rollers or to avoid the ink from incrusting during a transitory standstill and not to avoid or to equalize a sticking together of the ink in the corner between the rollers.

The drawings show by way of example an embodiment of the invention in combination with an adhesive supplying device of a cigar making machine known per se.

Fig. 1 is a side view of the adhesive supplying device,

Fig. 2 is a front view thereof,

Fig. 3 is a side elevation of a portion of Fig. 1, showing the parts in another working position,

Fig. 4 is a side elevation of a portion of Fig. 2 on an enlarged scale and

Fig. 5 is a sectional view of the adhesive feeding roller and the supply roller showing the removal of the accumulated adhesive existing between the two rollers.

On the arm 39, forming a part of the machine or apparatus frame, the adhesive receptacle 28 is mounted. An adhesive feeding roller 29 dips into the adhesive contained therein, said roller being rotatably mounted on the shaft 27 journalled on opposite sides of the adhesive receptacle. The shaft 27 also carries a bell-crank lever 26 which may oscillate about the shaft. On one end of said bell-crank lever an antifriction roller 30 is provided engaging a curved disc 31 fixed on a shaft 20 journalled in the machine frame. On the opposite end of said bell-crank lever there is fastened one end of a spring 41, the other end of which is fixed to the frame 39. The spring holds the roller 30 in engagement with the curved disc 31 and when the roller engages the part 43 of the circumference of said disc, the bell-crank lever rotates in a clockwise direction.

Near one end of the bell-crank lever 26 a second lever 45 is pivoted thereto by the pivot 44. This lever is the bearing for the adhesive supply roller 24 engaging the adhesive feed roller 29 and supplying the adhesive to the outside-leaf of a cigar, said leaf being supported by the leaf carrier 21. Near the front end 47 of said lever 45 there is fastened one end of a spring 46, the other end of which is connected to the machine frame. This spring 46 pulls the lever 45 against an abutment (not shown) provided on the lever 26, so that the lever 45 participates in the oscillating movements of the bell-crank lever 26. If therefore the lever 26 rotates about the axis 27

in the clockwise direction, a lever **45** also rotates in the same sense. Thus the roller **24** is lifted and engages the outside-leaf on the leaf-carrier **21** for the purpose to apply the adhesive.

The end **47** of the lever **45** is provided with a curved portion or cam **48** adapted to engage an abutment **49** secured on the side face of a spur wheel **32** on the shaft **20**. If the abutment strikes against the cam **48**, the lever **45** is swung about the pivot **44** against the action of the spring **46**. In this way the roller **24** is disengaged from the adhesive feed roller **29** and the accumulated adhesive **50** (Fig. 5) may pass between the two rollers and return into the adhesive receptacle. After the abutment **49** has passed the cam **48** the spring **46** returns the lever **45** again to its former position and reengages the rollers **24** and **29**.

The spur wheel **32** which is driven by the main drive of the machine meshes with a spur wheel **33** mounted on a shaft **34** secured on the block **35** forming a part of the machine frame. The spur wheel **33** is securely connected with a second spur wheel **36** meshing with a spur wheel **37** on the shaft **27** which also carries the roller **29**, so that the said roller is driven by means of the described gearing. To avoid a slipping of the roller **24** a spur wheel **40** is fastened on the end of the shaft **25** bearing the roller **24**, said wheel **40** meshing with the spur wheel **37**.

Although we have described and illustrated the invention in combination with a cigar making machine it is to be understood that it also may be used in combination with other machines and that many alterations may be made without departing from the spirit of the invention.

We claim:

1. Apparatus for transferring adhesive to articles such as labels, edge-strips and the like, comprising, in combination, means for supporting one of said articles, an adhesive receptacle, a feed roller projecting into said receptacle, a second roller engaging the feed roller and receiving the adhesive therefrom, means for bodily rotating said second roller, while simultaneously engaging said feed roller, and said supported article, and means to momentarily disengage the said second roller at certain intervals from the feed roller to remove and return an accumulation of adhesive from in front of the engaging rollers.

2. Apparatus for transferring adhesive to articles such as labels, edge-strips and the like, comprising, in combination, means for supporting one of said articles, an adhesive receptacle, a feed roller projecting into said receptacle, an adhesive supplying roller engaging the feed roller and receiving the adhesive therefrom, means for bodily rotating said second roller, while simultaneously engaging said feed roller, and said supported article, and a cam and spring means to momentarily disengage the said supplying roller at certain intervals from said feed roller and to reengage the supply roller to remove and return an accumulation of adhesive from in front of the engaging rollers.

3. Apparatus for transferring adhesive to articles such as labels, edge-strips and the like, comprising, in combination, means for supporting one of said articles, a main drive, an adhesive receptacle, a feed roller projecting into said receptacle, an adhesive supplying roller engaging the feed roller and receiving the adhesive therefrom, said supply roller being oscillatably mounted for bodily movement about the axis of rotation of said feed roller towards and away from said supported article, a gearing between the main drive and the feed roller and driven by the main drive of the apparatus and means to disengage the said supplying roller momentarily at certain intervals from said feed roller to remove and return an accumulation of adhesive from in front of the engaging rollers.

4. Apparatus for transferring adhesive to articles such as labels, edge-strips and the like, comprising, in combination with the frame of the apparatus, means for supporting one of said articles, an adhesive receptacle mounted on said frame, a feed roller projecting into said receptacle, an adhesive supplying roller engaging the feed roller and receiving the adhesive therefrom, means for bodily rotating said supply roller, while simultaneously engaging said feed roller, and said supported article, a movable carrier in which said supplying roller is rotatably mounted, said carrier being pivoted eccentrically of the axis of rotation of said roller, and means adapted to move said carrier about its pivot thereby disengaging the said supplying roller momentarily at certain intervals from said feed roller and reengaging the supply roller to remove and return an accumulation of adhesive from in front of the engaging rollers.

5. Apparatus for transferring adhesive, comprising, in combination with the frame of the apparatus, an adhesive receptacle mounted on said frame, a feed roller projecting into said receptacle, an adhesive supplying roller engaging said feed roller, a lever oscillatable about the axis of said feed roller means for oscillating said lever, a second lever pivotally connected to said first mentioned lever and carrying said supplying roller, and means to oscillate said second lever with respect to the first mentioned lever thereby disengaging the said supplying roller momentarily at certain intervals from said feeding roller and reengaging the supply roller to remove and return an accumulation of adhesive from in front of the engaging rollers.

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