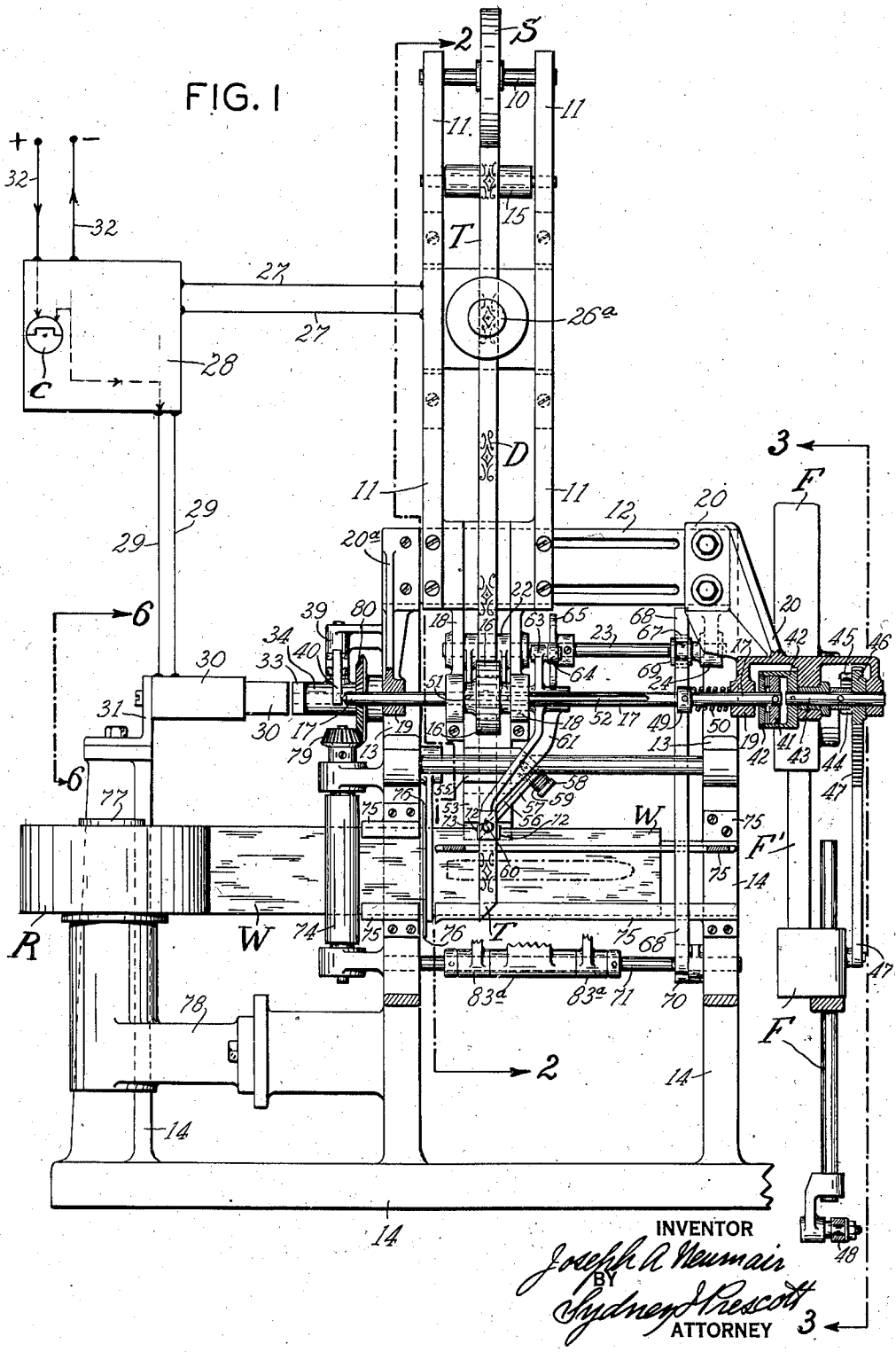
Sept. 20, 1938. J. A. NEUMAIR 2,130,775

TEAR STRIP WRAPPING MACHINE

Original Filed Sept. 18, 1934 3 Sheets-Sheet 1

FIG. 1

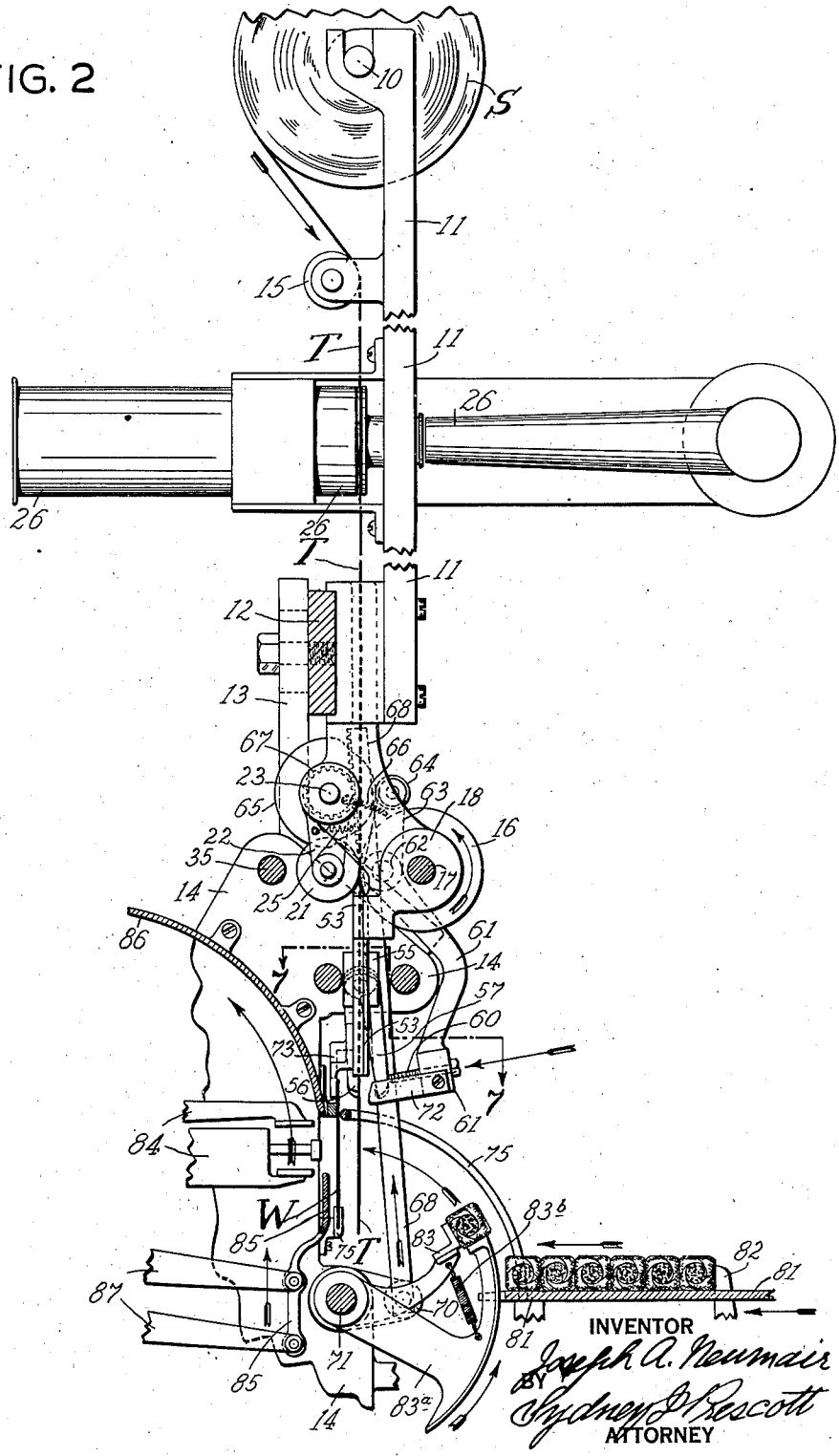


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TEAR STRIP WRAPPING MACHINE

Original Filed Sept. 18, 1934 3 Sheets-Sheet 2

FIG. 2



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TEAR STRIP WRAPPING MACHINE

Original Filed Sept. 18, 1934 3 Sheets-Sheet 3

FIG. 3

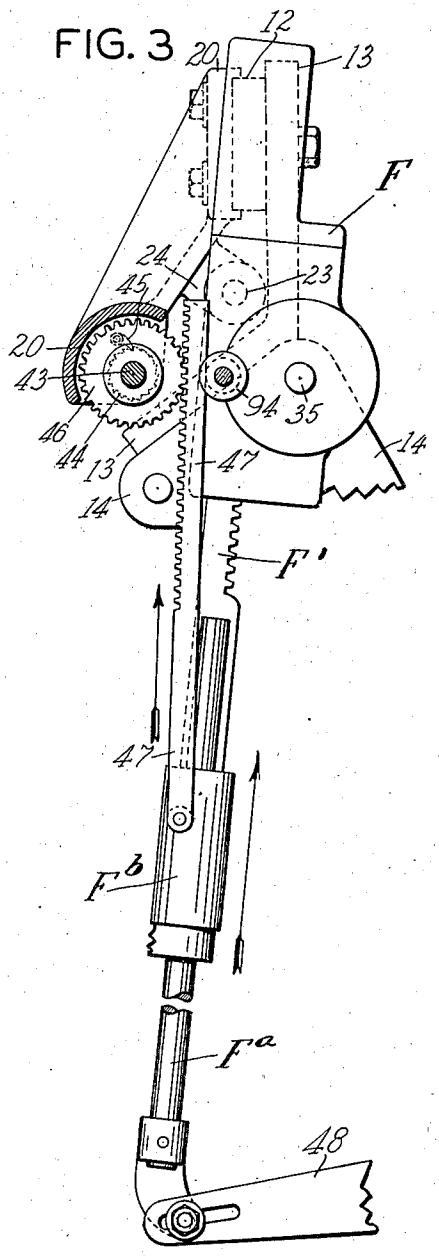


FIG. 4

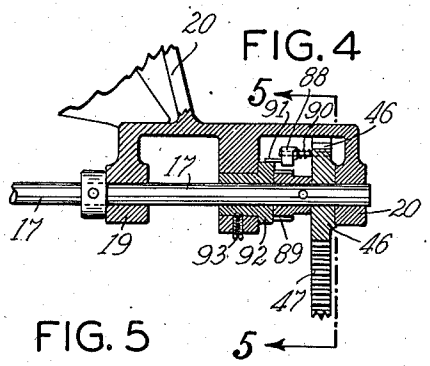


FIG. 5

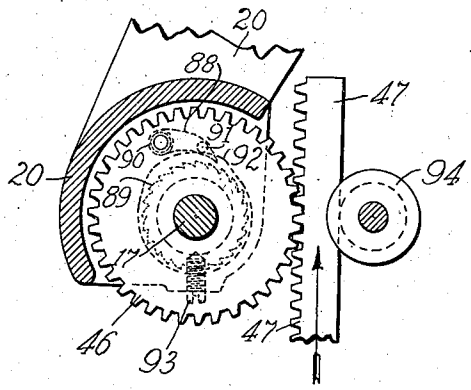


FIG. 6

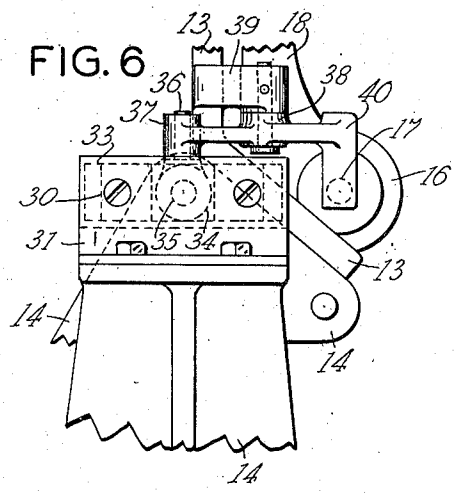
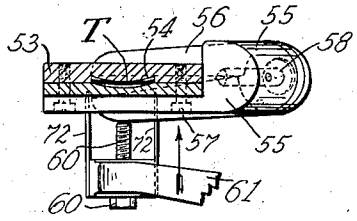


FIG. 7



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Patented Sept. 20, 1938 2,130,775

UNITED STATES PATENT OFFICE

2,130,775

TEAR STRIP WRAPPING MACHINE

Joseph A. Neumair, Hollis, N. Y., assignor to International Cigar Machinery Company, a corporation of New Jersey

Application September 18, 1934, Serial No. 744,597
Renewed September 4, 1937

24 Claims. (Cl. 93—2)

This invention relates to wrapping or enveloping machines, especially those wherein individual cigars are wrapped and sealed in transparent envelopes or wrappers formed of regenerated cellulose coated with a thin layer of fusible moisture proofing composition, or similar material, so that the overlapping portions of the wrapper may be sealed together by fusion of the coating upon application of heat and pressure.

The main object of this invention is to provide an improved machine for producing a sealed envelope containing a cigar, and provided with a tear strip protruding from the seam of said envelope, the package and method of making the same being disclosed in the co-pending application of H. A. Burns, S. N. 722,959, filed April 28, 1934.

A further object of this invention is to provide means for nicking the web of wrapping material to provide nicks on the outer seam edge of the wrapper blank at either side of the tear strip before the cigar is wrapped therein.

Another object lies in the provision of adjustability of the tear strip web feed mechanism to produce various lengths of tear strips. Still another object is to so arrange the device that the tear strip mechanism can be easily adjusted for different positions of the tear strip within the wrapper. Still another object is to so construct the tear strip web feed mechanism as to enable its ready connection with a web feed control mechanism. With these and other objects not specifically mentioned in view, the invention consists in certain constructions and combinations hereinafter fully described and then specifically set forth in the claims hereunto appended.

These various objects are achieved by the machine shown in the accompanying drawings in which:

Fig. 1 is a front elevation of a cigar enveloping machine provided with the tear strip wrapping device;

Fig. 2 is a sectional side elevation taken on line 2—2 of Fig. 1;

Fig. 3 is a sectional side elevation of the driving mechanism of the tear strip wrapping device, taken on line 3—3 of Fig. 1;

Fig. 4 is a sectional view of a detail of a modified form of feed mechanism used chiefly for plain tear strip webs without designs or prints thereon;

Fig. 5 is a sectional side elevation of the same, taken on line 5—5 of Fig. 4;

Fig. 6 is an end elevation of the feed control mechanism used in connection with a photoelectric registering device for tear strip webs having designs or prints, taken on line 6—6 of Fig. 1; and

Fig. 7 is a cross-section taken on line 7—7 of Fig. 2 of the tear strip web guide showing the relative arrangement of the knives for nicking the wrapper web and the shears for severing the tear strip.

In carrying the invention into effect there is provided a folder pocket, a web feed for feeding a web of wrapping material in front of the pocket longitudinally thereof, means for feeding a tear strip web in front of the wrapper web transversely of the pocket, mechanism for severing a wrapper blank and a tear strip from said webs and nicking one edge of the wrapper web at either side of the tear strip web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into the pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said means when there is no article in position to be transferred to the pocket, folders for folding the longitudinal edges of the wrapper into overlapping relation with the nicked edge outermost so that the tear strip protrudes from the seam between the nicks of the outer wrapper edge, and means for sealing the overlapped wrapper edges to each other and to the tear strip. In the best constructions contemplated the tear strip feeding means is photoelectrically controlled to register printed areas thereon with the wrapper web. These various means and parts may be widely varied in construction within the scope of the claims for the particular arrangement selected to illustrate the invention is but one of many possible concrete embodiments of the same. The invention, therefore, is not to be restricted to the particular construction shown and described.

The tear strip wrapping device hereinafter described may be used in connection with a cigar wrapping or enveloping machine of the type disclosed in Patent No. 1,899,174, granted Feb. 28, 1933, on the application of H. H. Wheeler, and will now be described in combination therewith.

The tear strip web T, for use in one embodiment of the invention, will be of transparent material similar to the wrapper web, such as regenerated cellulose bearing a thin fusible coating. For this embodiment of the invention the web T is provided with printed designs or patterns and fed from a reel S mounted on a shaft 10 loosely

supported in bearings of a reel-holder bracket 11 adjustably secured to a horizontal supporting bar 12 adjustably fastened to brackets 13 mounted on main frame 14 of the wrapping machine. The tear strip web T is led over a guide roller 15 revolubly mounted in the bracket 11, and is pulled off reel S by means of a feed roller 16 splined to a shaft 17 slidably mounted in lugs 18 of bracket 11 and bearings 19 of brackets 20 and 20a (Fig. 1) attached to supporting bar 12. A tension roller 21 (Fig. 2) presses the web T against feed roller 16 and assures good traction of the latter on the web T. Roller 21 is pivoted in a pair of arms 22 loosely mounted on shaft 23 supported in bearings of lugs 18 and a bearing 24 of bracket 20. Arms 22 are provided with tension springs 25 anchored to the adjacent lug 18, whereby the roller 21 presses web T against feed roller 16. It will be observed from the following description that the adjustment of bracket 11 and bar 12 will, respectively, vary the position at which the tear strip is enfolded in the enveloped cigar and increase or diminish the length of the tear strips severed from web T.

In order to control its feed in such a manner that prints or designs on the web T will appear in the same relative position on all tear strips severed therefrom and the enveloped cigars in in which the tear strips are enfolded, the tear strip web T is led between a photoelectric cell 26 (Fig. 2) attached to holder bracket 11 and a lamp housing 26a containing an incandescent lamp arranged to project a beam of light through the web T onto the photocell 26. The photoelectric cell 26 through wires 27 (Fig. 1) is connected with the grid of a thermionic valve (not shown) in a control box 28 (Fig. 1), the anode circuit of the thermionic valve being connected to a relay which controls the circuit in the wires 29 through an electromagnet 30 attached to bracket 31 mounted on main frame 14, and the filament of the thermionic valve, the photocell 26 and the wires 29 being in circuit with the supply mains 32. Control box 28 contains all the elements of an electrical clutch control mechanism such as shown in Fig. 5 of Patent No. 1,998,069, granted April 16, 1935, on the co-pending application of R. J. Beutel, S. N. 611,909, filed May 17, 1933, including a commutator C (Fig. 1) connected in series through the relay to the + line 32 and also connected to one of the leads 29 and acting to break the circuit through the electromagnet 30 after the same has been closed by the relay.

With the passage of a printed design D on the tear strip web T through the light beam projected onto the photoelectric cell 26 the latter will be dark and it passes no current and hence the grid potential of the thermionic valve will be changed so that sufficient current flows in its anode circuit to energize the relay and close the circuit through the electromagnet 30 whereby the latter is energized and attracts an armature plate 33 attached to a sleeve 34 loosely mounted on shaft 35 (Figs. 1 and 6), supported in bearings of main frame 14.

Sleeve 34 carries a vertical stud 36 (Fig. 6) which engages with arm 37 of a double lever 38 pivoted to a lug 39 of pedestal 13. The other arm of double lever 38 is equipped with an operating plate 40 facing the end of the tear strip web feed drive shaft 17. On the latter is mounted the clutch member or disk 41 (Fig. 1) engaging with the clutch member or disk 42. Clutch member 42 is mounted on a housing carried by a drive shaft 43 intermittently rotated in one direction only through a ratchet 44 and a spring pawl 45 from an oscillating gear 46 driven by a reciprocating gear rack 47 connected to a web feed control mechanism F of the general type disclosed in Patent No. 1,875,974, granted September 6, 1932, on the application of T. W. Alm, which is operated by means of a cam lever 48 from the main drive of the wrapping machine.

Feed shaft 17 is equipped with a collar 49 (Fig. 1) and a compression spring 50 to keep the clutch members engaging during the feeding operation. As soon as the beam of light thrown onto the photoelectric cell 26 is intercepted by the prints or designs D of the tear strip web T, the electromagnet 30 is energized and attracts armature plate 33, whereupon the lever 38 presses the operating plate 40 against the end of shaft 17, causing clutch member 41 to disengage clutch member 42 and thereby stop feed roller 16. The latter is splined to the shaft 17 by a key 51 (Fig. 1) slidably engaging in a keyway 52 of shaft 17. In this manner the feeding of the web T is interrupted until the circuit through the electromagnet 30 is broken by the commutator C, whereupon the feeding of the web T is resumed. While the photoelectric cell is illuminated by the beam of light projected thereon through the web T it passes a current which opposes the grid current of the thermionic valve and thus reduces the same sufficiently until there is no current in the anode circuit. The relay is then no longer energized to close the circuit through the electromagnet and latter is thus maintained in a deenergized condition until the light beam is intercepted by a printed area of the web T.

After passing feed roller 16 the tear strip web T is led through a vertical guide 53 attached to lugs 18. Guide 53 is provided with a concave channel 54 (Fig. 7), the shape of which will minimize the friction of the tear strip T while passing therethrough, and serve to increase the stiffness of the free end of the tear strip web T, thus assuring that it will be fed into position to be enfolded in the enveloped cigar.

To guide 53 is attached a knife holder bracket 55 on which is mounted a stationary ledger plate 56. A swingable knife blade 57 is pivoted on stud 58 set in bracket 55 and disposed obliquely of the tear strip web T to form a pointed tab on the severed tear strip. Knife blade 57 and stud 58 are connected by means of a torsion spring 59 (Fig. 1) for the purpose of keeping blade 57 while it is at inoperative position, in contact with the adjusting screw 60 of the knife operating lever 61. The latter is fulcrumed on a stud 62 (Fig. 2) set in one of the lugs 18. Arm 63 of the lever 61 carries a cam roller 64 engaging the plate cam 65 mounted on oscillating shaft 23. Roller 64 is held in engagement with cam 65 by means of a tension spring 66. Shaft 23 carries a gear 67 (Figs. 1 and 2) which is actuated by means of a reciprocating gear rack 68 guided by the roller 69 (Fig. 1) and connected to an operating lever 70 mounted on a rocker shaft 71 actuated from the main drive of the wrapping machine to sever the web T while the same is at rest.

Knife operating arm 61 is also equipped with a pair of nicking knives 72 for the purpose of nicking the outer seam edge of the wrapper web W at either side of the tear strip web T in order to start the tearing of the wrapper when the pointed tab on the protruding end of the tear

strip T is pulled, after the same has been enfolded in the enveloped cigar, to remove the wrapper from the cigar. To the back of guide 53 is attached a ledger plate 73 (Fig. 2) through the slots of which the nicking knives 72 will pass during the nicking operation, thus assuring clean cutting of the nicks.

The wrapper web W is fed from a roll R by means of a web feed of the type shown in the Patent No. 1,796,073, granted March 10, 1931, on the application of R. J. Beutel, comprising a pair of rollers 74 (Fig. 1) into horizontal guides 75 attached to main frame 14, and a desired length of wrapper is cut off therefrom by means of a knife 76 actuated from the main drive of the wrapping machine in the manner shown in said Patent No. 1,796,073. Roll R is supported by a stub shaft 77 loosely mounted in a bracket 78 fastened to main frame 14. Feed rollers 74 are driven intermittently by means of a bevel gear 79 (Fig. 1) meshing with a bevel gear 80 fast on shaft 35 operated by means of the rack F′ of the wrapper feed drive and control mechanism F (Fig. 3), the rack F′ being geared to shaft 35 to turn it one direction only.

The cigars to be enveloped are advanced sidewise in a row on a table 81 (Fig. 2) with a step-by-step motion by means of pusher fingers 82 towards a pair of oscillating transfer arms 83 attached to shaft 71, the pusher fingers being mounted on an intermittently driven endless chain forming a part of the control mechanism F and actuated in the manner shown in the Alm Patent No. 1,875,974 hereinbefore cited. Transfer arms 83 are fast on the shaft 71 and the pushers 83*a*, which are loose on shaft 83*a* and connected to arms 83 by tension spring 83*b*, coact therewith to take one cigar at a time from the row on table 81 and push the same with the cut tear strip T and wrapper blank W (Fig. 2) into a turret or folder pocket 84, the cutting of the tear strip T taking place as the cigar in arms 83 touches the strip T and wrapper blank W. After the cigar with the tear strip and wrapper is pushed into folder pocket 84, a folding plate 85 moves upward and folds the lower outstanding edge of the wrapper W and strip T onto the cigar. The other longitudinal edge of the wrapper is folded over the inner edge by means of a stationary folding plate 86 as the turret advances in the direction indicated by the arrow in Fig. 2, the pointed tab of the tear strip protruding from the seam so formed, between the nicks of the outer seam edge. Stationary folder plate 86 is attached to main frame 14 and folding plate 85 is vertically oscillated by means of a pair of levers 87 operated from the main drive of the machine.

In case the pusher fingers 82 fail to advance a cigar into position to be transferred to the folder pocket the control mechanism F will be incapacitated in the manner shown in the Alm Patent No. 1,875,974 referred to above, thereby temporarily stopping the wrapper web and tear strip web feeds until a cigar is advanced into position to be transferred into the folder pocket. For this purpose the present machine is provided with a feeler (not shown) disposed in the path of the cigars being advanced by the pushers 82 and connected to linkage (not shown herein) carrying a knock-out screw (not shown) which engages the tail of a latch lever (not shown) pivotally mounted on the rod F^a connected to the cam lever 48 and thereby disengages the hooked end of the latch lever from the upper end of a collar F^b loosely mounted on the rod F^a, unless the feeler is pushed back by an advancing cigar. The collar F^b is pivotally connected to the lower ends of the racks 47 and F^1, wherefore the absence of a cigar in the row of cigars being advanced by the pushers 82 will cause the latch lever to be uncoupled from the collar F^b and thereby interrupt the motion of the racks 47 and F^1, as fully shown and described in the Alm patent referred to above.

For use with plain tear strips—without any marks or designs—the tear strip feed drive for the same is somewhat modified as shown in Figs. 4 and 5. The photoelectric cell 26 and the electromagnet 30 are then eliminated and feed drive shaft 17 is extended to loosely support gear 46, as shown in Figs. 4 and 5. The latter carries a pawl 88 acting upon a ratchet 89 mounted on shaft 17. Pawl 88 is equipped with a spring 90 urging it against the ratchet 89 and provided with a pin 91 projecting over a stationary cam 92 having its hub loosely mounted on shaft 17. By means of a set screw 93 the cam 92 can be fastened to shaft 17 in any desired position to control the feed for the length of tear strip T desired. As soon as pin 91 rides onto the high portion of cam 92, pawl 88 disengages from ratchet 89 and thereby arrests the tear strip feed. Reciprocating gear rack 47 is always held in engagement with oscillating gear 46 by a guide roller 94 pivoted to the rear portion of bracket 20.

While the invention has been illustrated in connection with the cigar enveloping machine shown in the Wheeler Patent No. 1,899,174, it will be understood that the invention may be applied to cigar enveloping machines of other types, such as that shown in Patent No. 1,964,411, granted on the application of R. J. Beutel. With the latter machine, when regenerated cellulose coated with a thin layer of fusible material is used for the wrapping material and the tear strip web, the overlapped wrapper edges will be heat sealed to each other and to the end of the tear strip protruding from the seam so formed. One advantage resulting from the union of the tear strip and the wrapper edges is that when the tab of the tear strip is grasped to tear open the wrapper, the tear strip cannot be pulled out from between the wrapper edges without rupturing the wrapper as in prior arrangements in which the overlapped wrapper edges are unsealed.

It will also be understood while the invention has been described in conjunction with cigar enveloping machines, it may be applied to candy, bread, and chewing gum wrapping machines, cigarette packaging machines and the like.

What is claimed is:

1. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, photoelectrically controlled means for feeding a printed web transversely of said pocket in front of said wrapper web and registering the printed areas of the printed web with said wrapper web, mechanism for severing a wrapper blank and a tear strip from said wrapper web and printed web respectively and nicking one edge of the wrapper web at either side of the printed web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitat-

ing said photoelectrically controlled means when there is no article in position to be transferred to said pocket, and folders for folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge.

2. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, photoelectrically controlled means for feeding a printed web transversely of said pocket in front of said wrapper web and registering the printed areas of the printed web with said wrapper web, mechanism for severing a wrapper blank and a tear strip from said wrapper web and printed web respectively and nicking one edge of the wrapper web at either side of the printed web, and a device for periodically advancing a row of articles and transferring an article from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said means when there is no article in position to be transferred to said pocket, folders for folding the longitudinal edges of the wrapper into overlapping relation with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge, and means for sealing said overlapped edges to each other and to said tear strip.

3. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, photoelectrically controlled means for feeding a printed web transversely of said pocket in front of said wrapper web and registering the printed areas of the printed web with said wrapper web, mechanism for severing a wrapper blank and a tear strip from said wrapper web and printed web respectively and nicking one edge of the wrapper web at either side of the printed web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said photoelectrically controlled means when there is no article in position to be transferred to said pocket, and folders for folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge, said mechanism including a knife blade arranged to sever the tear strip web diagonally in order to provide a pointed tab on the tear strip end protruding from said seam.

4. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, photoelectrically controlled means for feeding a printed web transversely of said pocket in front of said wrapper web and registering the printed areas of the printed web with said wrapper web, mechanism for severing a wrapper blank and a tear strip from said wrapper web and printed web respectively and nicking one edge of the wrapper web at either side of the printed web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said photoelectrically controlled means when there is no article in position to be transferred to said pocket, and folders for folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge, said mechanism including a stationary ledger plate, a pivoted knife blade arranged to sever the tear strip web obliquely in order to provide a pointed tab on the tear strip end protruding from said seam, a cam-operated arm engaging said knife, and a spring urging said knife against said arm.

5. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, photoelectrically controlled means for feeding a printed web transversely of said pocket in front of said wrapper web and registering the printed areas of the printed web with said wrapper web, mechanism for severing a wrapper blank and a tear strip from said wrapper web and printed web respectively and nicking one edge of the wrapper web at either side of the printed web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said photoelectrically controlled means when there is no article in position to be transferred to said pocket, and folders for folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge, said mechanism including a pivoted knife blade arranged to sever the tear strip web obliquely in order to provide a pointed tab on the tear strip end protruding from said seam, a cam-operated arm engaging said knife blade, a spring urging said knife blade against said arm, a pair of spaced nicking knives on said arm arranged to nick one edge of the wrapper web at either side of the tear strip web, and a stationary ledger plate provided with slots aligned with said nicking knives.

6. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, photoelectrically controlled means for feeding a printed web transversely of said pocket in front of said wrapper web and registering the printed areas of the printed web with said wrapper web, mechanism for severing a wrapper blank and a tear strip from said wrapper web and printed web respectively and nicking one edge of the wrapper web at either side of the printed web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said photoelectrically controlled means when there is no article in position to be transferred to said pocket, and folders for folding the longitudinal edges of the

wrapper into overlapping relation to form a seam with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge, said means including a pair of feed rollers arranged to feed the tear strip web transversely of said pocket, a driven shaft, pawl and ratchet mechanism for intermittently rotating said driven shaft, an axially movable shaft on which one of said feed rollers is splined, clutch members connecting said shafts, an electromagnetic device for shifting said feed roller shaft axially to disengage said clutch members, a photoelectric cell arranged on one side of said tear strip web, a circuit connecting said cell with said electromagnetic device, and a source of light arranged to project a beam of light through said tear strip web onto said cell, whereby when the light beam is intercepted by a printed area of the tear strip web said electromagnetic device is energized to shift said feed roller shaft axially and thus stop the rotation of the feed roller thereon.

7. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, means for feeding a tear strip web in front of said wrapper web transversely of said pocket, mechanism for severing a wrapper blank and a tear strip from said webs and nicking one edge of the wrapper web at either side of the tear strip web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said means when there is no article in position to be transferred to said pocket, and folders for folding the longitudinal edges of the wrapper into overlapping relation with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge.

8. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, means for feeding a tear strip web in front of said wrapper web transversely of said pocket, mechanism for severing a wrapper blank and a tear strip from said webs and nicking one edge of the wrapper web at either side of the tear strip web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said means when there is no article in position to be transferred to said pocket, folders for folding the longitudinal edges of the wrapper into overlapping relation with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge, and means for sealing the overlapped edges to each other and to said tear strip.

9. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, means for feeding a tear strip web in front of said wrapper web transversely of said pocket, mechanism for severing a wrapper blank and a tear strip from said webs and nicking one edge of the wrapper web at either side of the tear strip web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said means when there is no article in position to be transferred to said pocket, and folders for folding the longitudinal edges of the wrapper into overlapping relation with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge, said mechanism including a pivoted knife blade arranged to sever the tear strip web, a cam-operated arm engaging said knife blade, a spring urging said knife blade against said arm, a pair of spaced nicking knives on said arm arranged to nick one edge of the wrapper web at either side of the tear strip web, and a stationary ledger plate provided with slots aligned with said nicking knives.

10. The combination with a folder pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, means for feeding a tear strip web in front of said wrapper web transversely of said pocket, mechanism for severing a wrapper blank and a tear strip from said webs and nicking one edge of the wrapper web at either side of the tear strip web, a device for periodically advancing a row of articles and transferring an article sidewise from said row into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, mechanism controlled by the advancing movement of the articles in said row for incapacitating said means when there is no article in position to be transferred to said pocket, and folders for folding the longitudinal edges of the wrapper into overlapping relation with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge, said means including a pair of feed rollers arranged to feed the tear strip web transversely of said pocket, a shaft on which one of said rollers is fixed, a gear loose on said shaft, a reciprocable rack meshing with said gear, a ratchet fast on said shaft, a spring pawl pivoted on said gear to engage said ratchet, and a stationary cam engaging said pawl to disengage it from said ratchet at a predetermined point, said cam being adjustable to vary the length of the web fed.

11. The combination with a pivoted knife blade arranged to sever a tear strip web, of a cam-operated arm engaging said knife blade, a spring urging said knife blade against said arm, a pair of spaced nicking knives on said arm arranged to nick one edge of a wrapper web disposed at right angles to the tear strip web, and a stationary ledger plate provided with slots aligned with said nicking knives.

12. The combination with a pair of feed rollers arranged to feed a printed tear strip web, of a driven shaft, pawl and ratchet mechanism for intermittently rotating said driven shaft, an axially movable shaft on which one of said feed rollers is splined, clutch members connected to said shafts, an electromagnetic device for shifting said feed roller shaft axially to disengage said clutch members, a photoelectric cell arranged on one side of the tear strip web, a circuit connecting said cell with said electromagnetic device, and a source of light arranged to project a beam of light through said web onto said cell, whereby

when the light beam is intercepted by a printed area of the web said electromagnetic device is energized to shift said feed roller shaft axially and thus stop the rotation of the feed roller thereon.

13. The combination with a pair of feed rollers arranged to feed a tear strip web, of a shaft on which one of said rollers is fixed, a gear loose on said shaft, a reciprocable rack meshing with said gear, a ratchet fast on said shaft, a spring pawl pivoted on said gear to engage said ratchet, and a fixed cam engaging said pawl to disengage it from said ratchet at a predetermined point during its forward movement and thus arrest the feeding of the web, said cam being adjustable to vary the length of web fed.

14. In an article wrapping machine, the combination with mechanism for bringing an elongated envelop sheet and a cigar together, of means for advancing one end of a continuous strip of band material transversely of said sheet to position the same between said sheet and cigar, said means including a channeled member engaging the strip to bow the same and thereby stiffen the projected portion thereof.

15. The combination with a web feed for intermittently advancing a web of wrapping material lengthwise along articles to be wrapped, of photoelectrically controlled means for feeding a printed band between the web of wrapping material and the article transversely of the latter and stopping the band with a printed area thereon in register with said wrapper web, and thereafter restarting the feeding of the band, mechanism for severing a wrapper blank and tear strip from said wrapper web and band respectively while the same are at rest and nicking one longitudinal edge of the wrapper blank at either side of the band, mechanism for folding the wrapper blank and tear strip about the article to lap the nicked edge of the wrapper on its opposite edge and form a seam from which the tear strip protrudes between the nicks of the outer edge of the wrapper.

16. The combination with a web feed for intermittently advancing a web of wrapping material lengthwise along articles to be wrapped, of means for feeding a band between the web of wrapping material and the article transversely of the latter, mechanism for severing a wrapper blank and tear strip from said wrapper web and band respectively and nicking one longitudinal edge of the wrapper blank at either side of the band, mechanism for folding the wrapper and tear strip about the article to lap the nicked edge of the wrapper on its opposite edge and form a seam from which the tear strip protrudes between the nicks of the outer edge of the wrapper, said means periodically advancing the band.

17. The combination with a web feed for intermittently advancing a web of wrapping material to bring it into proximity with articles to be wrapped, of means for separately feeding a band to bring it between the web of wrapping material and the article, the band being narrower than the web, mechanism for stopping and thereafter restarting said band-feeding means, mechanism for severing a wrapper blank and tear strip from said wrapper web and band respectively while the same are at rest and nicking one edge of the wrapper blank at either side of the tear strip, and mechanism for folding the wrapper blank and tear strip about the article to lap the nicked edge of the wrapper on its opposite edge and form a seam from which the tear strip protrudes between said nicks.

18. The combination with a web feed for intermittently advancing a web of wrapping material to bring it into proximity with articles to be wrapped, of means for separately feeding a band to bring it between the web of wrapping material and the article, the band being narrower than the web, mechanism for stopping and thereafter restarting said band-feeding means, mechanism for severing a wrapper blank and tear strip from said wrapper web and band respectively while the same are at rest and nicking one edge of the wrapper blank at either side of the tear strip, mechanism for folding the wrapper blank and tear strip about the article to lap the nicked edge of the wrapper on its opposite edge and form a seam from which the tear strip protrudes between said nicks, and means for sealing the lapped wrapper edges to each other and the tear strip.

19. The combination with a web feed for intermittently advancing a web of wrapping material to bring it into proximity with articles to be wrapped, of means for separately feeding a band to bring it between the web of wrapping material and the article, the band being narrower than the web, mechanism for stopping and thereafter restarting said band-feeding means, a device for severing a wrapper blank from the web of wrapping material while the same is at rest, means for severing a tear strip from the band while the feeding of the latter is interrupted and nicking one edge of the wrapper blank at either side of the tear strip, and mechanism for folding the wrapper blank and tear strip about the article to lap the nicked edge of the wrapper on its opposite edge and form a seam from which the tear strip protrudes between said nicks, said band-feeding means being adjustable bodily together with said strip-severing and wrapper-nicking means to vary the position at which said strip protrudes from the seam.

20. The combination with means for advancing wrapping material, of photoelectrically controlled mechanism for moving a printed web into predetermined relation with said wrapping material, members for severing a strip from said web and weakening a portion of the wrapping material, and means for enfolding an article within the severed strip and wrapping material with the strip protruding from the weakened portion of the wrapper, said mechanism automatically resuming feeding of the web after said enfoldment.

21. The combination with means for advancing wrapping material, of photoelectrically controlled mechanism for moving a printed web into predetermined relation with said wrapping, members for severing a strip from said web, and means for enfolding an article within the severed strip and wrapping material with the strip within the wrapper, said mechanism automatically resuming feeding of the web after said enfoldment.

22. The combination with means for advancing wrapping material, of photoelectrically controlled mechanism for moving a printed web into predetermined relation with said wrapping, members for severing a strip from said web, means for enfolding an article within the severed strip and wrapping material with the strip within the wrapper, said mechanism automatically resuming feeding of the web after said enfoldment, and a device for heat sealing the severed strip to the wrapping material.

23. The combination with a support for a cigar, means for feeding a continuous strip of wrapper

material and for severing lengths therefrom, said wrapping material being of a width sufficient to circumferentially enwrap a cigar and coated with a fusible heat sealing agent and having smooth longitudinal edges, mechanism cooperating with said means for nicking one of said edges in predetermined relation to the line of severance to facilitate tearing of the wrapper material transversely of its length, and devices coacting with said support and said means to wrap the severed and nicked length of material about the cigar with the nicked edge overlapping the other longitudinal edge of the wrapper, and heat sealing means including a heat sealing element acting on said edges to unite the same together.

24. The combination with a support for a cigar, of means for feeding a continuous strip of wrapper material and cutting lengths therefrom, said wrapper material being coated with a fusible heat sealing agent, the wrapper material having smooth edges, mechanism cooperating with said means for nicking one of said edges in a predetermined relation to the line of severance to facilitate tearing of the wrapper material transversely of its length, means for positioning a length of narrow tear strip material having a fusible heat sealable coating thereon into predetermined position relative to the severed length of said material with a portion of the tear strip adjacent the nick in the edge, and devices coacting with said means and said support to wrap the severed and nicked length of material about the cigar with the nicked edge in engagement with the other longitudinal edge of the wrapper and with an end of the tear strip extending between said edges adjacent said nick, and heat sealing means including a heated element acting on said edges to unite together the edge portions of the wrapper and said tear strip.

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