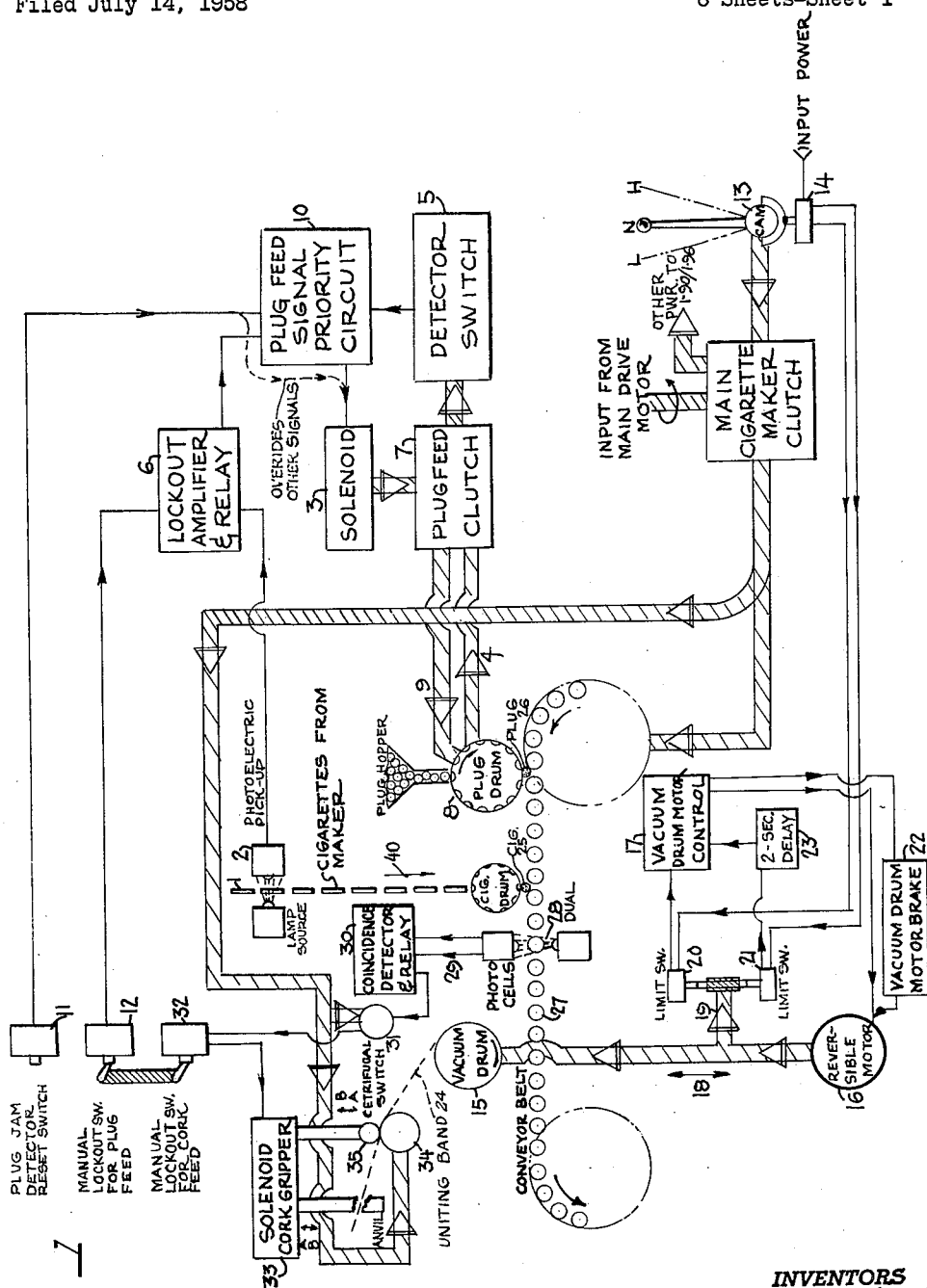


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CIGARETTE MAKING MACHINE FOR MOUTHPIECE CIGARETTES

Filed July 14, 1958

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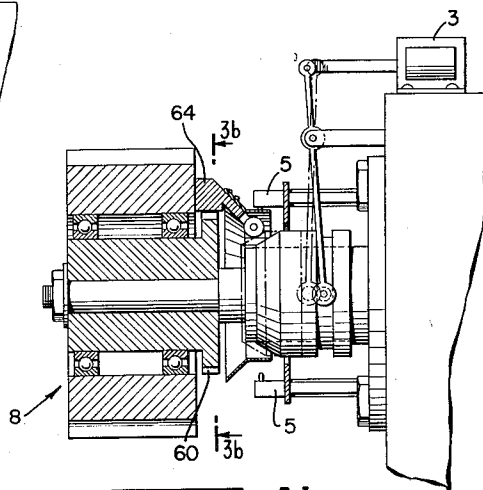
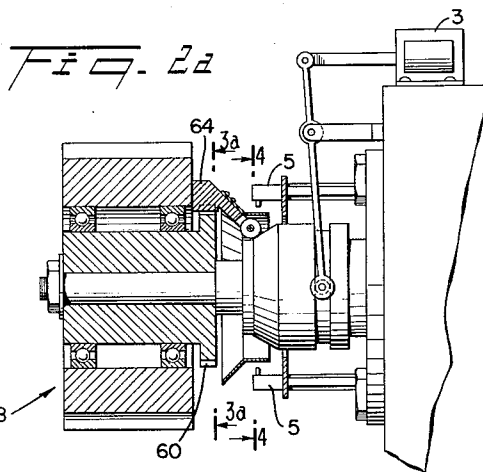


Fig. 2b

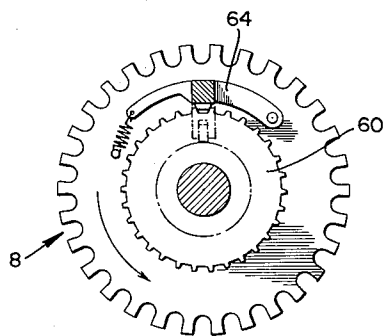


Fig. 3a

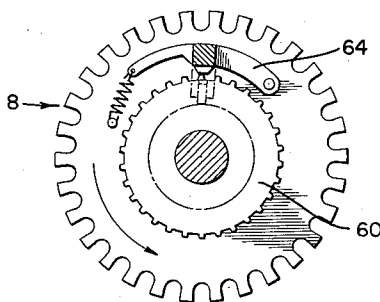


Fig. 3b

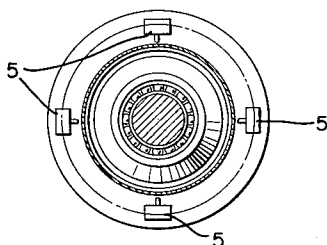


Fig. 4

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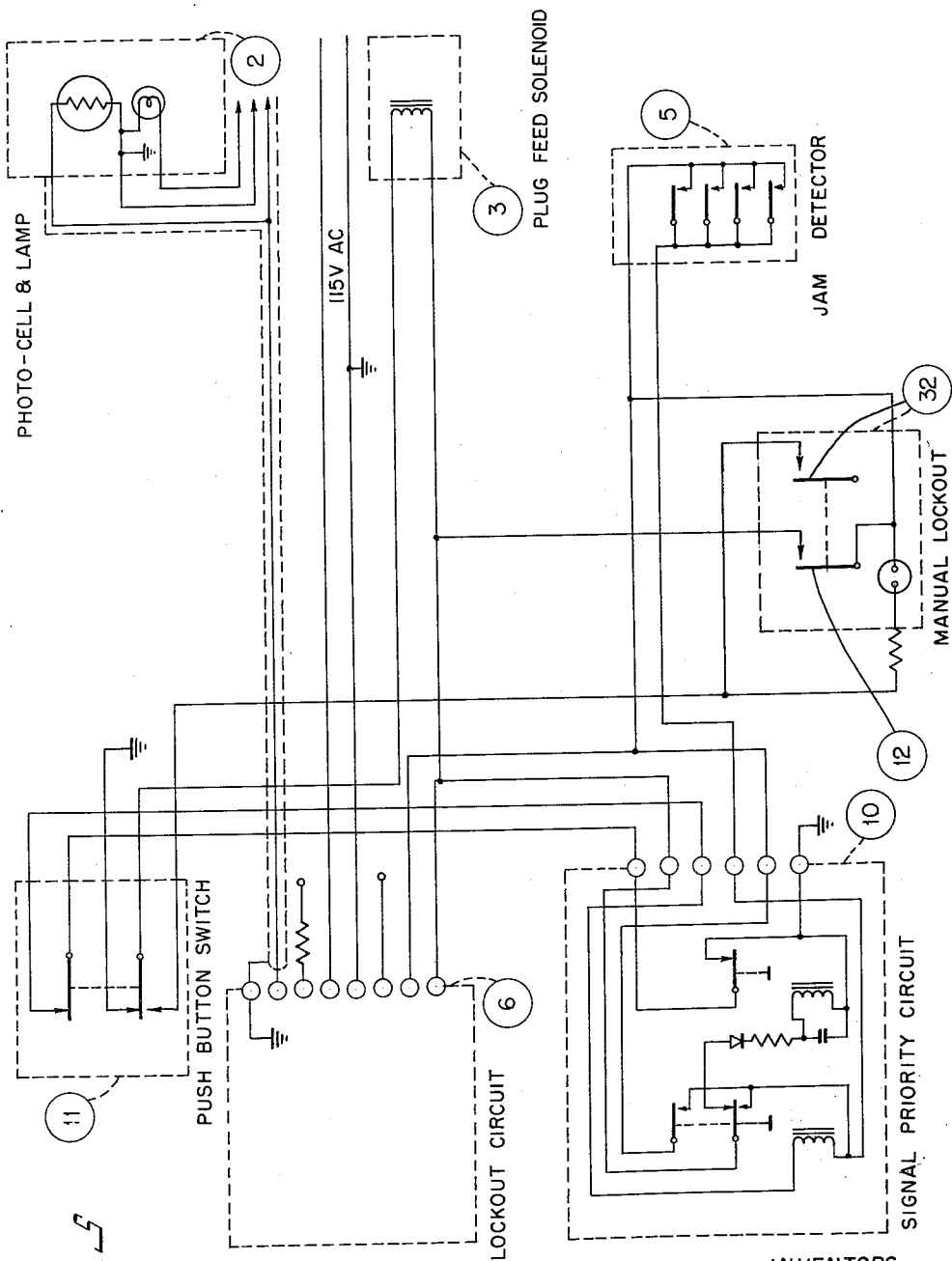
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CIGARETTE MAKING MACHINE FOR MOUTHPIECE CIGARETTES

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FIG. 8

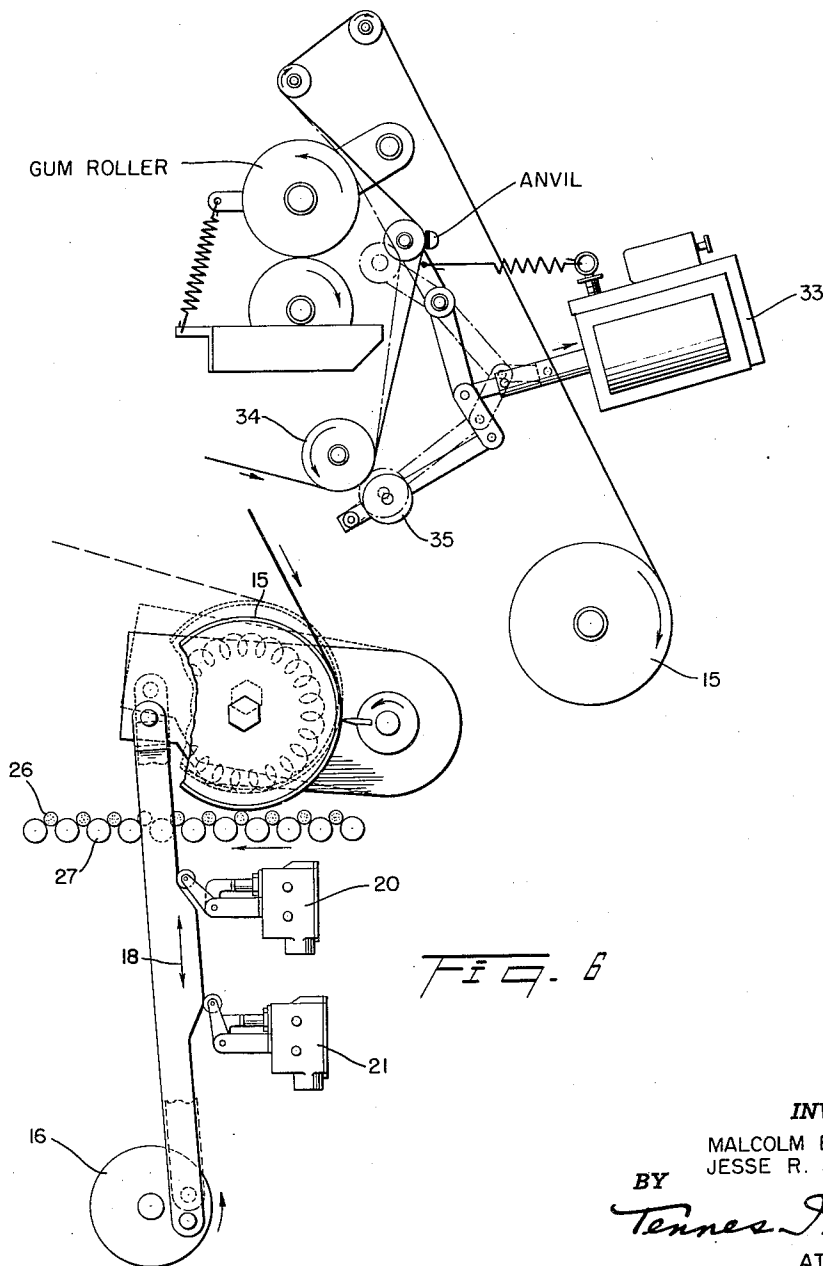


FIG. 6

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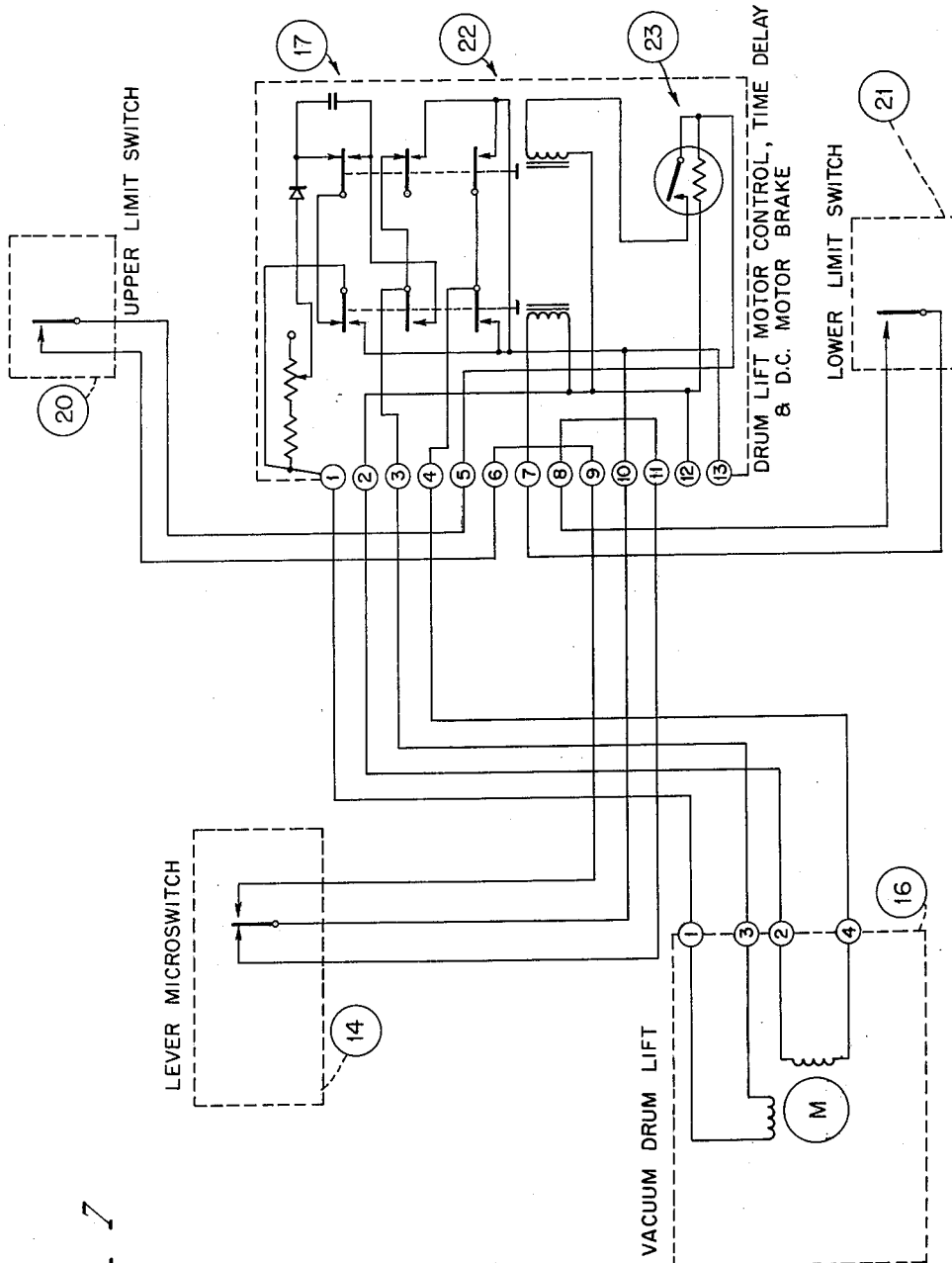
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CIGARETTE MAKING MACHINE FOR MOUTHPIECE CIGARETTES

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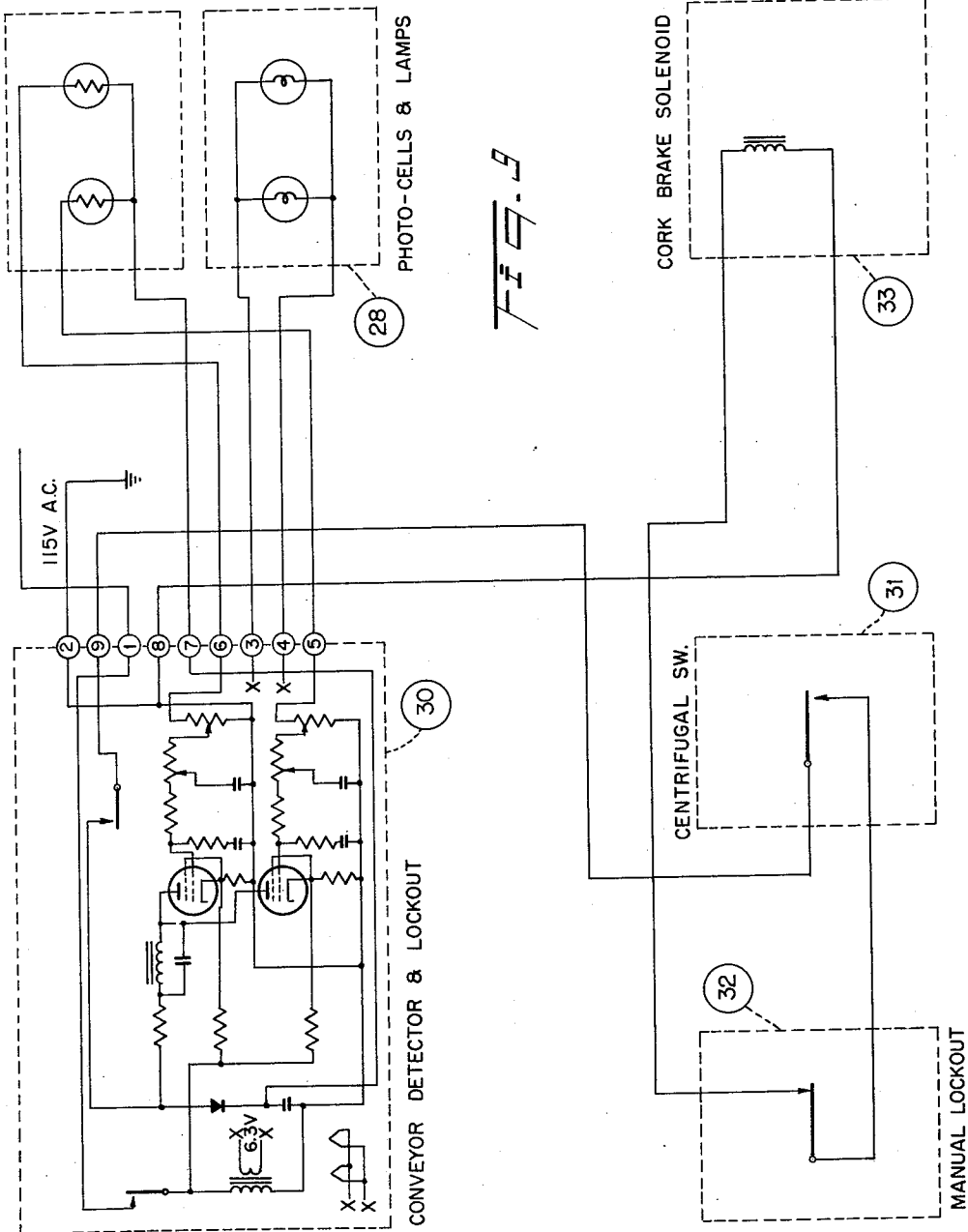
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CIGARETTE MAKING MACHINE FOR
MOUTHPIECE CIGARETTES

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Filed July 14, 1958, Ser. No. 748,224
11 Claims. (Cl. 131—21)

This invention relates to mouthpiece cigarette machines of the assembly type shown in U.S. patent application of George Dearsley, Serial No. 509,293, filed May 18, 1955, and more particularly to interlocking controls for such a machine.

Filter tip attachments of the assembly type such as disclosed in patent application, Serial No. 509,293, are designed to produce filter-tipped cigarettes by making an assembly of prefabricated parts of cigarettes, such parts being fed from separate sources in succession until the whole cigarette is built up. In detail this entails feeding tobacco cigarettes, filters, uniting band material, and adhesive, and correctly manipulating them.

As such cigarettes are normally made at the rate of 1200 per minute or more, it will be readily understood that a failure in supply of any one of these components, caused perhaps by deficiencies in their quality or by malfunctioning of the relevant mechanism, will result in the manufacture of large quantities of unacceptable work unless the deficiency is detected at an early stage and suitable corrective steps are taken.

The purpose of this invention is to effect a general economy in the operation of the filter tip attachment by preventing the flow of the various component parts of the filter-tipped cigarette through the machine unless certain other parts are present to make complete cigarettes. For example, if cigarettes fail to arrive in the attachment due to some malfunctioning in the cigarette maker proper, the flow of filters and uniting band material is automatically arrested until the cigarette flow is re-established, when the flow of filters and uniting band material will be automatically re-commenced.

It will be understood that this also entails the automatic stoppage of the delivery of gummed uniting band patches unless filters are available to take them away. In practice, this results in considerable savings out of all proportion to the value of the materials saved, for hitherto the gummed uniting band patches have been allowed to flow even when, due perhaps to the malfunctioning of the filter feed, the filters are not present. Under these circumstances, the gummed patches adhere to various parts of the mechanism, entailing considerable time and effort to restore the mechanism to its clean, working condition. On the other hand, according to this invention, gummed uniting band patches are never fed unless filters are present around which to wrap them so that the machine parts never become contaminated.

Thus, in addition to economizing in materials, much cleaning time is avoided, making it possible to keep the machine in production for much longer periods, resulting in a higher efficiency.

It is therefore an object of this invention to provide an assembly type of mouthpiece cigarette machine which will be highly efficient and reliable in operation.

Other objects and features of the invention will appear as the description of the particular physical embodiment selected to illustrate the invention progresses. In the accompanying drawings, which form a part of this specification, like characters of references have been applied to corresponding parts throughout the several views which make up the drawings.

FIGURE 1 of the drawings shows a diagrammatic ar-

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range of the integrated components of an assembly type mouthpiece cigarette making machine.

FIGS. 2 to 9 illustrate various mechanical details and circuits of FIG. 1 as described in the following disclosure.

While the drawings of the co-pending patent application, Serial No. 509,293, shows the endless series of rolls on which the cigarette assembly is carried out to be mounted on the periphery of a drum, these rolls mounted between two endless bands as described in the said co-pending application, in order that the assembly operation may be carried out in the substantially horizontal plane of the top run of the belt of rollers, so providing improved accessibility.

It will be understood that this merely changes the general shape and arrangement of the completed machine, but makes no change in the general principles involved, for in both cases the cigarette assembly is rotatably mounted on an endless series of rollers, which support the assembly whilst the uniting band is rolled on.

With reference to the drawing, the heavy hatched paths represent mechanical connections between the elements involved and thin lines represent electrical connections. The arrow heads show the direction in which either the mechanical or electrical impulses are transmitted.

The endless stream of separated cigarettes 1 issuing from the standard cigarette-making machine are carried in the direction of the arrow 40 on a conventional endless conveyor tape (not shown) usually referred to as the speed-up tape because it "speeds up" the individual cigarettes, after they are severed from the continuous cigarette rod in order to provide a space between them to facilitate further manipulation.

A photo-electric pickup 2, suitably located to view this stream of cigarettes, will generate pulses of energy as long as there is an uninterrupted flow of separated cigarettes moving at this point. These pulses are amplified and if required may be fed simultaneously to two separate circuits. One of these is a lockout circuit which controls the operation of a cigarette machine.

The other circuit may be used to stop and start the mechanism supplying filters to the machine. to accomplish this, as illustrated in FIGS. 2a, 2b, 3a, 3b and 4; the filter feed drive may be fitted with a suitable dog clutch 60, 64 designed with a plurality of stations of possible engagement, see FIGS. 2a and 3a, the proportions being such that the feed is in time with the remainder of the mechanism at each possible engagement station. This clutch 7 may disconnect the plug feed 8 from its drive for two separate and distinct reasons.

Firstly, the clutch may be moved into the disconnect position illustrated in FIGS. 2b and 3b by means of the solenoid 3, illustrated by broken line position in FIG. 2b, which may be activated by any suitable electrical signal.

Secondly, the clutch is designed so that if the plug feed should become jammed for any reason whatsoever, the resulting increase in driving torque would cause the dog clutch to slip, from the station as illustrated in FIGS. 3a and 3b and so move to the disconnect position.

Regardless of the prime cause of the filter plug feed clutch disengagement, the detector switch 5 is mechanically operated by the clutch movement as illustrated in FIGS. 2a, 2b, 3a, 3b and 4. From this it will be understood that when a signal is fed to solenoid 3 to release the plug feed clutch 7 to stop the flow of plugs, the movement of the clutch resulting from this signal operates the detector switch 5. Thus, the signal to the solenoid 3 must, in this case, precede the signal resulting from detector switch 5 which is only operated as a result of the first signal.

On the other hand, if the plug feed suffers a physical jam, the clutch is overloaded and mechanically disengages.

This movement of disengagement also operates the detector switch 5 which in turn is made to operate the solenoid 3 for the purpose of holding the clutch in the disengaged position until the physical jam is manually cleared. In this case, the signal from the detector switch 5 precedes that to the solenoid 3.

For reasons to be described below, it is necessary for the apparatus to be able to differentiate between the case where the plug feed is stopped via solenoid 3, in response to an external signal, and the case where it is stopped as the result of a signal generated within itself, i.e., a physical jam. The difference in the sequence of switching operation described above provides means for thus differentiating and apparatus for doing this is shown as a Priority circuit 10.

This apparatus functions as follows: When the photocell 2 senses an absence of cigarettes 1 being fed to the machine, a signal is sent via the Priority circuit 10 to the solenoid 3, as illustrated in the circuit diagram, FIG. 5, which disengages the plug feed clutch 7 to stop the flow of plugs. As soon as the photocell 2 senses the cigarettes 1 are again flowing, a signal is sent via the same path to immediately restart the plug feed.

If the plug feed clutch is disengaged as the result of a jam, the detector switch 5 signals via priority circuit 10 to the solenoid 3 which holds the clutch in the disengaged position indefinitely; i.e., the clutch is "latched out" as a result of malfunctioning of the plug feed and cannot be restarted until the re-set switch 11 is operated, as shown in FIG. 5. In practice, this means that the plug feed is disengaged immediately when a jam occurs, and remains disengaged until the machine operator, by suitable means, clears the jam, after which he must use the switch 11 to restore the mechanism to its normal working state. The purpose of this is to ensure that the jam is detected at the earliest possible moment and to stop the plug feed so as to reduce further consequences resulting from the jam as much as possible.

In addition, it may sometimes be desirable, for a variety of reasons, to run the machine without feeding plugs. To do this, the manual switch 12 is used to energize the solenoid 3 which de-clutches the plug feed. In this case, as is also the case when the solenoid 3 is energized as a result of a signal from photocell 2, the plug feed must be restored to working condition immediately upon receipt of an appropriate signal from either the photocell 2 or the switch 12, as illustrated in FIG. 5.

Thus, there are two cases where the plug feed clutch 7 must operate in both directions in response to a signal sent to solenoid 3 and one case where it must act in one direction only until reset. It is for this reason that the Priority circuit 10 is needed in order to differentiate between the cases.

Co-pending application, Serial No. 509,293, shows a cork vacuum drum to apply gummed uniting band patches to the cigarettes and filter assemblage, and a separate heater drum to subsequently apply heat to dry the adhesive.

The vacuum drum may also apply heat so that the functions of these two elements are combined as in co-pending application, Serial No. 744,788 filed June 26, 1958, now Patent No. 2,984,245, by M. E. Phillips. Thus, the vacuum drum 15 which supplies the gummed uniting band patches to the cigarette assemblage is heated by means of built in electrical resistances as shown in the said patent.

In order to prevent this drum 15 from drying or even scorching cigarette assemblies when the machine is stopped, it is necessary to lift the drum clear of the cigarettes and to return it to its working position upon re-starting the machine. This end is accomplished by using the main cigarette machine clutch lever for the activating device, the manual movement of which moves, among other things, the microswitch, 14, setting up one of two alternative signals depending on whether the lever

is moved from neutral to one of two running positions or whether it is moved from one of two running positions to neutral, illustrated in FIG. 1.

Upon movement of the lever, the signal from microswitch 14 passes through either limit switch 20 or limit switch 21 dependent upon the existing position of the vacuum drum 15 to activate the reversible motor 16 which will move the drum 15 to the opposite position, see FIGS. 6 and 7.

For example, with the clutch lever 13 in neutral and the machine as a whole stationary, the vacuum drum 15 will be in the raised position away from the cigarette roller belt 27, and the limit switch 20 will be closed by mechanical engagement of the linkage 18 between the motor 16 and the vacuum drum 15, as illustrated in FIG. 6.

Upon movement of the clutch lever to either the right or the left to engage either the high or low speed drives respectively, a signal is sent from microswitch 14 through the limit switch 20 and control 17 to start the motor 16 which will lower the drum 15, onto the cigarettes 25 carried on belt 26, by means of the mechanical linkage 18, as illustrated in circuit diagram, FIG. 7. When the linkage 18 reaches the lower position, it contacts the limit switch 21 which signals to the control 17 to stop the motor 16 which will leave the vacuum drum in the running position indefinitely, see FIGS. 6 and 7.

To stop the machine, the clutch lever 13 is moved from either the right or left hand positions to the central neutral position. This movement operates microswitch 14 which signals via limit switch 21 and control 17 to start the motor 16 in a rotational direction opposite to that employed during the previous movement. This moves the mechanical linkage 18 to lift the vacuum drum 15 and, at the end of the upwards movement of linkage 18 the limit switch 20 is contacted which stops the motor 16, restoring the mechanism to its original position.

In order better to control the two positions of the vacuum drum 15 and to prevent damage to the mechanism, the motor 16 is fitted with a braking device 22, electrically controlled by suitable devices in control box 17, as illustrated in FIG. 7, to arrest the movement of the motor immediately either limit switch 20 or 21 is contacted, thus preventing the motor from coasting past the desired stopping position.

Also the clutch lever 13, as described above, has three positions, the central one being neutral with the low and high speed positions on either side. This is advantageous from the point of view of operating convenience for the machine can be started directly in low or high speeds at will. However, conditions do exist which make it necessary or desirable to start the machine in low speed to enable adjustments to be made at low outputs, and then, when the product is satisfactory, to switch over directly to high speed. It will be appreciated that the change from low to high speed entails passing through the neutral position. According to the above description, this movement of the lever 13 would initiate the lifting of the drums 15 so that gummed uniting band patches would not be delivered to the cigarette assemblies until the drum 15 had returned to its operating position, thus permitting a number of incomplete cigarettes to pass through the machine. This would not occur if the clutch lever could be moved directly from low, through neutral to high speed without lifting the drum, but it would still be necessary to lift the drum when the lever is left in neutral.

To meet these requirements a delay device 23 is wired into the circuit, illustrated in FIG. 7, between the limit switch 21 and the motor control 17.

This has the effect of introducing a two second delay in commencing the lifting of the drum 15 so that providing the clutch handle 13 is moved through the neutral position faster than in two seconds, the drum 15 will remain in its working position but should the lever 13 be brought to rest in the neutral position, the drum 15 will commence to rise after a delay of two seconds. It will be seen that

these conditions obtain equally whether the lever 13 is moved from low through neutral to high or from high through neutral to low.

It will also be seen that the delay device 23 is not in the circuit controlled by the upper limit switch 20 and that there is accordingly never a delay in initiating a downward movement of the drum 15. Thus, the drum can be moved into the operating position immediately on demand but there will always be a delay of two seconds between the initiating signal and the commencement of any upwards movement. This arrangement avoids the possibility of workers inadvertently leaving a heated drum on the cigarettes where it might do damage, when a jam occurs and automatically avoids the unnecessary manufacture of defective cigarettes because all components of the machine are not ready to start working when the machine is started.

The uniting band feed employed here is similar to that used in the above-mentioned Phillips Patent No. 2,984,245. Band material 24 is drawn from a source of supply (not shown) by means of roller 34 and the co-acting resilient roll 35, as illustrated in solid line in FIGS. 1 and 8. When roll 35 is lifted the pressure between these two rolls is removed and the web is no longer drawn from the supply point, as illustrated in broken line FIG. 8. Further mechanism is connected with the roller 35 to ensure that the motion of lifting it also raises the uniting band web away from the gum roller, gripping it against a fixed anvil to prevent the drag of the vacuum drum 15 from pulling the web directly from the supply.

Where the uniting band feed is described below, the term is intended to include all those auxiliary functions.

To feed uniting band material through the machine the following controls must be satisfied.

(1) The machine must in motion as monitored by the centrifugal switch 31.

(2) Two cigarettes must be in the correct position ready to receive a uniting band patch as monitored by the photoelectric cell 28.

(3) A double length filter plug must be between these two cigarettes as monitored by a separate circuit of cell 28.

(4) The manually operated switch 32 must be in the operating position.

All of these controls are wired into the circuit operating the uniting band feed so that a signal from any one will immediately stop the feed, the control circuit is shown schematically and designated Coincidence Detector and Relay 30 in FIG. 1 and the arrangement of the circuit as described above is illustrated in FIG. 9.

Thus, if the machine is stopped, the centrifugal switch 31 will signal the uniting band feed even if all component parts are correctly positioned. This is necessary in spite of the fact that the band feed being driven from the machine will also stop with it, for this signal is employed to initiate the movement of the mechanism for lifting the web away from the gum roller. If this were not done, the web would be liable to stick to the roller and so not be in a fit condition for re-starting.

The photocell 28 will stop the uniting band feed if either of the necessary two cigarettes or the duplex filter is missing and the manually operated switch 32 makes it possible to stop the uniting band feed at any time to enable the machine to be run for adjusting purposes without feeding the gummed uniting band patches.

This uniting band switch 32 is mechanically coupled to the filter plug feed switch 12 so that one movement operates both switches simultaneously. This is done so that when setting up the cigarette maker proper to make the all tobacco portion of the assembly, all auxiliary materials may be held back from one single control point until correct production is obtained when the flow of the auxiliary parts may be re-commenced with equal facility.

It will be noted that this arrangement operates quite automatically. For instance, if, due to malfunctioning of the cigarette maker proper, the all tobacco portions

of the cigarettes fail to arrive on the roller band 27, the photocell 2 will stop the delivery of filters and the photocell 28 will stop the delivery of uniting band patches. If, as frequently happens in such cases, the operator can correct the fault and restore the flow of cigarettes without stopping the machine, the flow of filter plugs and uniting band patches will automatically be restored as soon as the respective photocells sense the presence of the necessary components.

In this way no auxiliary materials are fed unless they can be incorporated into finished cigarettes and completed cigarettes are made immediately all necessary components are present.

Hitherto, filters have been allowed to feed at all times, apart from a manual disconnect employed for setting purposes, and the operator has had to decide when to start the uniting band feed. Under these circumstances many otherwise good cigarettes were lost pending the operator's decision to start the uniting band feed and sometimes the machine would become fouled with gummed uniting band patches if other components should temporarily cease to arrive at the assembly point.

In practice the photocells are so positioned and the parts are so designed to ensure that cigarettes, filters, and uniting band patches arrive simultaneously at the assembly point i.e., the commencement of the feed of each is timed in relation to the distance from the final assembly point to ensure that no single component arrives at that point without the remaining components, thus none is wasted.

The invention hereinabove described may therefore be varied in construction within the scope of the claims, for the particular device selected to illustrate the invention is but one of many possible embodiments of the same. The invention, therefore, is not to be restricted to the precise details of the structure shown and described.

What is claimed is:

1. A control apparatus for a cigarette and mouthpiece assembling machine comprising an endless mouthpiece and cigarette assembly conveyor having assembly pockets for receiving assemblies of two spaced all-tobacco cigarette lengths with a double length mouthpiece between in each pocket, means for feeding double length mouthpieces to said assembly conveyor means for feeding spaced all-tobacco cigarette lengths to said assembly conveyor, means for feeding gummed uniting band pieces to the assemblies of double length mouthpieces and tobacco cigarettes in the pockets on the assembly conveyor, one means for detecting the presence of tobacco cigarettes on their way to the assembly conveyor, a second means for detecting the presence of at least one of the two tobacco cigarettes forming part of each of the assemblies on the assembly conveyor, a third means for detecting the presence of the double length mouthpieces forming part of each of the assemblies on the assembly conveyor, one de-activating means to prevent the delivery of mouthpieces into the assembly conveyor when the one detector means monitoring the tobacco cigarettes on their way to the assembly conveyor detects the absence of said tobacco cigarettes, and a second de-activating means to prevent the delivery of gummed uniting band pieces to the assemblies carried by the assembly conveyor when one of the second and third detector means monitoring the tobacco cigarettes on the assembly conveyor and monitoring the mouthpieces on the assembly conveyor detect absences of their respective components of the assemblies.

2. A control device for an assembly type cigarette making machine comprising an endless mouthpiece and cigarette assembly conveyor, means for feeding all tobacco cigarette lengths to said conveyor, means for detecting the presence and absence of the tobacco cigarettes whilst they are being fed to said conveyor, a multi-station cigarette mouthpiece feeding device furnishing mouth-

pieces to the assembly conveyor, a dog clutch in the drive

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of the mouthpiece feeding device, solenoid means for disengaging said clutch when the detector means detects the absence of cigarettes, and means for re-engaging the clutch when said detector detects the presence of cigarettes, said clutch being also adapted to mechanically disengage when a jam in the mouthpiece feeding device causes increased torque, a second detector switch means for detecting said mechanical disengagement and adapted to actuate said solenoid means to hold the clutch out of engagement, said clutch having multiple engagement positions matching the multiple stations of the feeding device to ensure that the mouthpiece feeding device remains in time with the assembly conveyor at all possible points of clutch engagement.

3. An automatic control device for a mouthpiece cigarette making machine comprising, means for feeding cut cigarette lengths, an assembly conveyor having pockets for receiving spaced cut lengths of cigarette rods from said source, a mouthpiece feeding device for delivering mouthpieces in between the cut lengths of cigarette rod conveyed on said conveyor in a location where they will be located in between the cut lengths of cigarette rod, a uniting band applier for applying uniting bands to said assemblies, a detector for sensing the presence of cut lengths of cigarette rods being fed to said conveyor, a mouthpiece detector means for detecting a malfunctioning of said mouthpiece feeding device, assembly detectors for detecting the presence of complete assemblies in each successive pocket of said conveyor, deactivating means for stopping the mouthpiece feed when the detector for sensing the presence of cigarette rods being fed to the conveyor senses an absence of cigarettes, the mouthpiece feed being automatically re-started when said detector senses the presence of cigarettes, means disconnecting the mouthpiece feed drive when the mouthpiece detector detects a jam in the mouthpiece feed and means for stopping the uniting band applier when the assembly detectors detect the absence of at least one length of cigarette rod or the mouthpiece between the cut lengths of cigarette rod, said uniting band applier being adapted to automatically restart when the assembly detectors detect the presence of a complete assembly.

4. An automatic control device of claim 3 and having detector switch means whereby the mouthpiece feeding device is disconnected and remains disconnected from its drive whenever the mouthpiece detector detects a jam in the mouthpiece feeding device, until the jam is cleared.

5. A mouthpiece cigarette making machine comprising, an endless assembly conveyor having pockets for carrying assemblies of cigarettes and mouthpieces, a mouthpiece feed drum for delivering double length mouthpieces to successive pockets of said conveyor, a cigarette length feed for delivering spaced cigarette lengths to successive pockets of said assembly roller conveyor and a uniting band applying drum for applying uniting bands to successive assemblies carried on said assembly conveyor, a cigarette length detector for detecting the presence of cigarette lengths being fed to said assembly conveyor, assembly detectors for detecting the presence of at least one cigarette of the assembly and for detecting the double length mouthpiece of the assembly on said assembly conveyor, a heater for applying heat to the uniting band applied to said assembly to dry the adhesive thereof, means for moving said heater into and out of heat applying position relative to said assembly conveyor, a de-activating device for stopping the operation of said mouthpiece feed when the detector monitoring the cigarette lengths being fed to the assembly conveyor detects an absence of cigarettes, said device being adapted to automatically restart the mouthpiece feed when said detector detects the presence of cigarettes, a de-activating device for stopping the uniting band feed whenever one of said assembly detectors detects the absence of one of the required components of an assembly, said device being adapted to re-start the uniting band feed as soon as the assembly

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detector signals that no components are absent, and means for moving the uniting band heater to contact with the cigarette assemblies on the assembly conveyor when the machine is running and for moving it away from the cigarette assemblies when the machine is stopped.

6. A mouthpiece cigarette making machine defined in claim 5 wherein there is provided a mouthpiece feed, a disconnect clutch in the drive for said mouthpiece feed, a jam detector for detecting a jam in said mouthpiece feed, and means interconnecting said jam detector with the clutch in the drive for the mouthpiece feed to disconnect the mouthpiece feed from its drive when the detector detects a jam, means for holding the clutch in the dis-connect position and manually controlled re-set means to re-connect the clutch after the jam is cleared.

7. A mouthpiece cigarette making machine having the features provided for in claim 5 wherein there is provided a mouthpiece feed, a dis-connect torque limiting dog clutch in the drive for said mouthpiece feed which is adapted to be dis-connected and re-connected in response to the cigarette length detector for detecting the presence of cigarette lengths being fed to the assembly conveyor, and which is also adapted to dis-connect itself when the transmitted torque exceeds a predetermined amount, a detector to detect when the clutch disconnects itself and means for inter-connecting said detector with the clutch to hold the clutch in the dis-connect position after it has dis-connected itself and manually controlled means to re-connect the clutch after the reason for the transmitted torque exceeding a predetermined amount has been ascertained and appropriate corrective steps have been taken.

8. A control device for an assembly type cigarette making machine comprising an endless mouthpiece and cigarette assembly conveyor, means for feeding all tobacco cigarette lengths to said conveyor, means for detecting the presence and absence of the tobacco cigarettes whilst they are being fed to said conveyor, a multi-station cigarette mouthpiece feeding device furnishing mouthpieces to the assembly conveyor, a dog clutch in the drive of the mouthpiece feeding device, solenoid means for disengaging said clutch when the detector means detects the absence of cigarettes, and means for re-engaging the clutch when said detector detects the presence of cigarettes.

9. A control device for an assembly type cigarette making machine comprising an endless mouthpiece and cigarette assembly conveyor, means for feeding all tobacco cigarette lengths to said conveyor, a multi-station cigarette feeding device furnishing mouthpieces to said conveyor, a clutch in the drive of said mouthpiece feeding device, and torque responsive clutch disengaging means, said clutch disengaging means automatically disengaging said clutch when a jam in said mouthpiece feeding device causes increased torque.

10. A mouthpiece cigarette making machine comprising an endless assembly conveyor having pockets for carrying assemblies of cigarettes and mouthpieces, a mouthpiece feed drum for delivering double length mouthpieces to successive pockets of said conveyor, a cigarette length feed for delivering spaced cigarette lengths to successive pockets of said assembly conveyor, a combined uniting band applying and adhesive drying drum for applying uniting bands to successive assemblies carried on said assembly conveyor and for applying heat to the uniting band as said uniting band is applied to said assembly to dry the adhesive thereof, and means for moving said combined uniting band applying and adhesive drying drum into contact with the cigarette assemblies on said assembly conveyor when the machine is running and for moving it out of contact with the cigarette assemblies when the machine is stopped.

11. A machine as claimed in claim 10 additionally including control means to operate the machine on at least two different speeds and a neutral position to stop the

machine and move the combined uniting band applying and adhesive drying drum out of contact with the cigarette assemblies on said assembly conveyor, and a time delay device connected to said control means so that said control means may remain in the neutral position for a predetermined length of time without moving said combined uniting band applying and adhesive drying drum out of contact with the cigarette assemblies on said assembly conveyor.

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