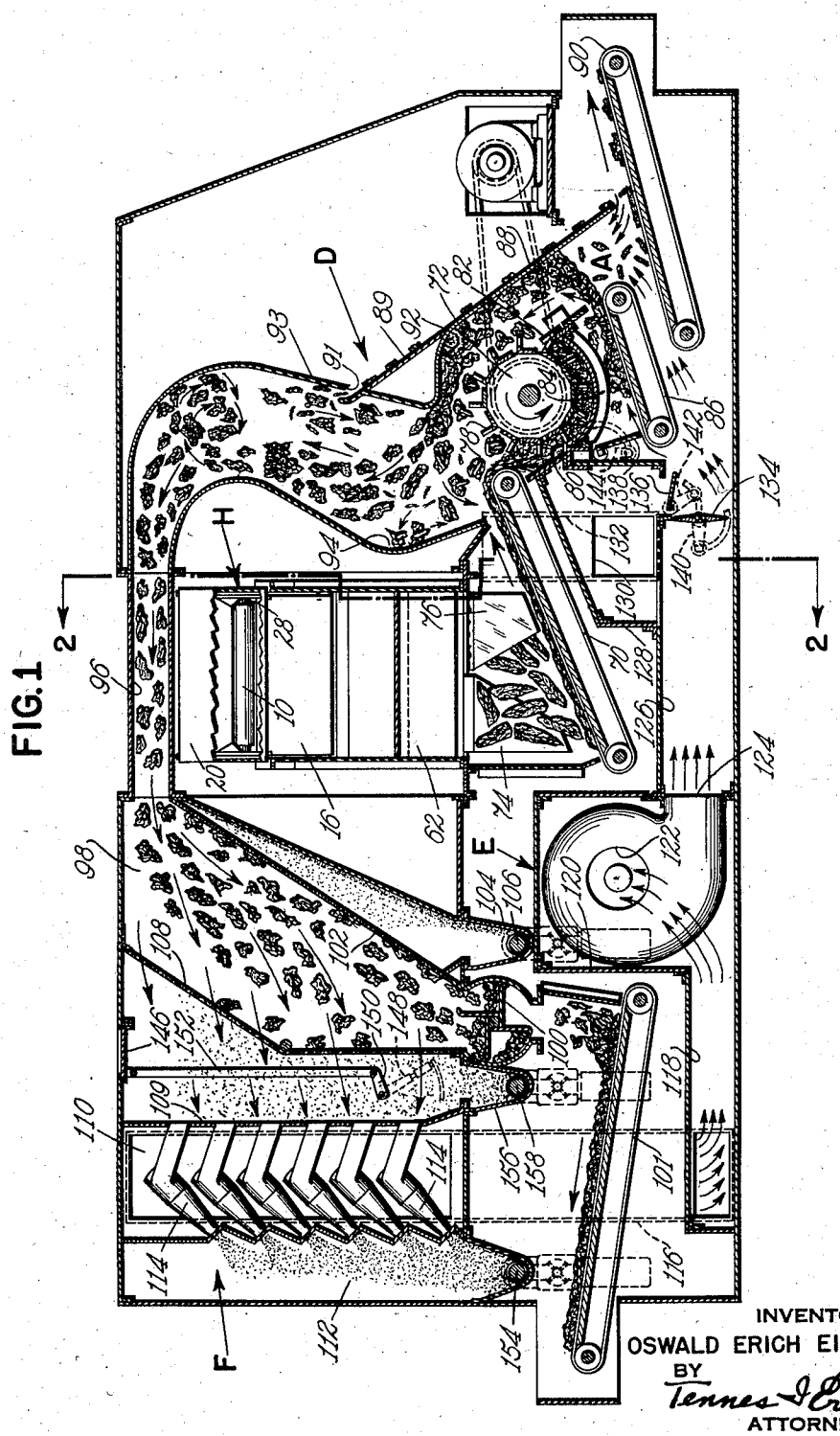
March 11, 1958 O. E. EISSMANN 2,826,205

TOBACCO RIPPING AND CLASSIFYING APPARATUS

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FIG. 1



INVENTOR
OSWALD ERICH EISSMANN
BY
Tennes I Erstad
ATTORNEY

March 11, 1958 O. E. EISSMANN 2,826,205

TOBACCO RIPPING AND CLASSIFYING APPARATUS

Filed Dec. 29, 1951 3 Sheets-Sheet 2

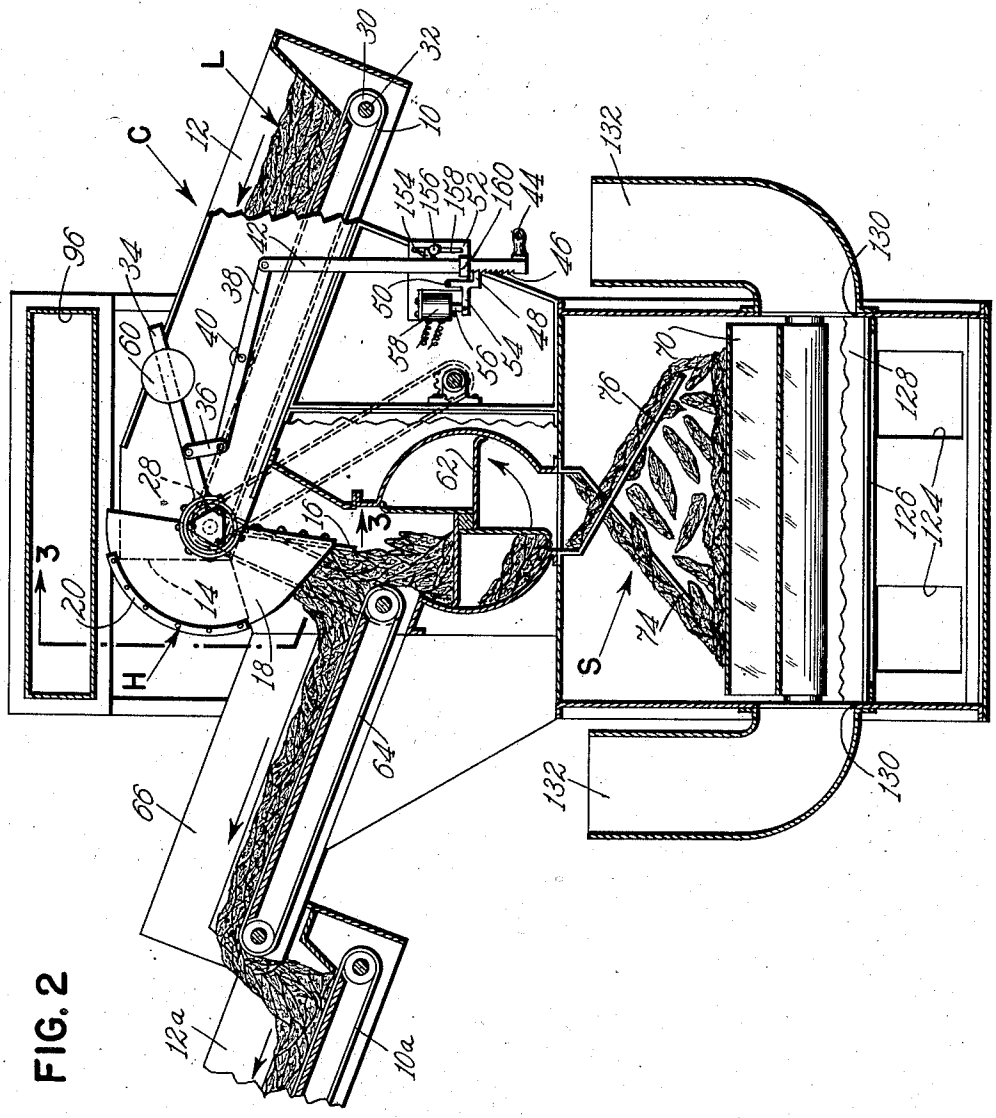


FIG. 2

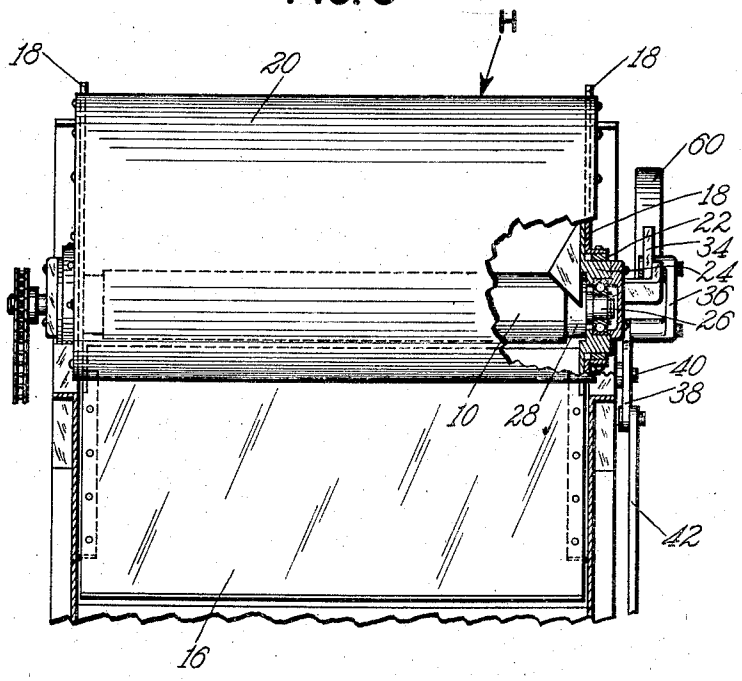
INVENTOR
OSWALD ERICH EISSMANN
BY
Tennes & Erickson
ATTORNEY

March 11, 1958 O. E. EISSMANN 2,826,205

TOBACCO RIPPING AND CLASSIFYING APPARATUS

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FIG. 3



INVENTOR
OSWALD ERICH EISSMANN
BY
Tennes J. Ostad
ATTORNEY

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2,826,205

TOBACCO RIPPING AND CLASSIFYING APPARATUS

Oswald Erich Eissmann, Richmond, Va., assignor to American Machine & Foundry Company, a corporation of New Jersey

Application December 29, 1951, Serial No. 264,200

14 Claims. (Cl. 131—146)

This invention relates to tobacco ripping and classifying apparatus.

Tobacco ripping and classifying machines in use today for ripping and classifying tobacco leaves are of such design that they occupy a considerable amount of valuable space. Also the machines now employed for ripping and classifying tobacco in the normal course of operation cause dust to be dispersed into the air which is objectionable not only for reasons of cleanliness but also of health. In addition, such units also employ long conveying belts which not only require space but also are costly in and of themselves to acquire and maintain. Classifying devices now in use are not readily adaptable for compact arrangement in a tobacco factory. In addition, there is and has been a need for a machine which has a larger capacity than existing machines without increasing but rather decreasing the amount of floor space occupied.

In view of the foregoing, it is an object of this invention to provide a tobacco ripping and classifying apparatus which will be of a design which will be compact and have a large capacity and still have a high classifying efficiency.

Another object of this invention is to provide a tobacco classifying apparatus of the type which separates dust from the tobacco leaves wherein the air is partially recirculated within the classifying machine.

A further object of this invention is to provide a machine which is adaptable for being positioned side by side with other similar tobacco classifying machines so that a tobacco stream can be carried through the machines discharging a portion of the stream into each of the machines through which it passes.

Another object of this invention is to subject torn tobacco leaves to a plurality of swirling actions to effect a separation of leaves from one another and to also thereby separate sand and dust from the leaves.

A further object is to provide an improved device for removing a predetermined uniform quantity of tobacco from a moving stream.

Another object of this invention is to provide an automatic tobacco classifier with a control which will remove a machine from operation when a jam occurs and automatically direct the tobacco being received to other ripping and classifying machines.

Another object is to provide an improved method for feeding tobacco in between a spiked drum and concave to obtain a more effective removal of leaf lamina from stems on one pass.

Another object is to provide an improved method for controlling the air flow in a tobacco separating apparatus.

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 reference have been applied to corresponding parts throughout the several views which make up the drawings.

Figure 1 is a sectional side elevation of the improved tobacco stemmer and separator in conjunction with an automatic tobacco cross-feed.

Figure 2 is a sectional end elevation of the machine taken on line 2—2 of Figure 1 illustrating the tobacco feeding mechanism.

Figure 3 is an end elevation of the tobacco feeding mechanism taken on line 3—3 of Figure 2.

With reference to the drawings, the tobacco leaves to be stemmed are deposited on an inclined endless conveyor belt 10 of an automatic cross-feed C designed to feed constantly into the machine a predetermined amount of tobacco leaves. The surplus tobacco not used in the machine is discharged into the cross-feed of the next machine where a predetermined amount of said tobacco is again removed and the remaining surplus is discharged into the cross-feed of the next succeeding machine.

The inclined feed belt 10 is constantly driven and surrounded by a suitable trough 12 which on the upper end is provided with an opening 14 which permits the tobacco leaves conveyed by said belt in the direction of the arrow (Fig. 2) to drop onto a guide plate 16 of deflector hood H. The deflector hood H consists of a pair of spaced semicircular side walls 18, the curved edges of which are connected by a curved cover plate 20. Each side wall 18 is supported by bearing rings or sleeves 22 which are fulcrumed on the periphery of a pair of bearing housings 24. Both of the bearing housings 24 form the bearing or support of a shaft 26 which carries and to which is secured a roller 28. The roller 28 supports the upper end of the conveyor belt 10.

The lower end of the conveyor belt 10 is supported by a roller 30 mounted on a shaft 32 supported in suitable bearings held by the side walls of trough 12. To the hub of one of the side walls 18 of the hood H is suitably attached an arm 34 (Fig. 2) which by means of a link 36 is connected to one end of a double lever 38. In the center portion of lever 38 is pivoted a stud 40 held by one of the side walls of hood H. The other end of double lever 38 is connected to one end of a vertical operating lever 42. The lower free end of lever 42 carries a handle 44.

One of the side edges of operating lever 42 is provided with a plurality of teeth 46, one of which, depending on the desired setting, engages with a pawl 48 pivotally held by a stud 50. The stud 50 is held by a bracket 52 secured to the main frame of the machine. Integral with and projecting from pawl 48 is a trip lever 54, the free end of which is connected to an extension 56 of the armature of a solenoid 58 secured to the upper portion of bracket 52. A balance weight 60 projects from the hub of the hood H on the free end of arm 34. This weight 60 causes the guide plate 16, attached to the lower portion of hood H, to automatically swing upward whenever the pawl 48 is disengaged with one of the teeth 46 of lever 42. The latter condition would occur whenever the solenoid 58 was energized due to a malfunctioning of the machine such as might happen if a foreign object was inadvertently delivered to the tobacco ripping mechanism.

Located below the lower edge of the guide plate 16 is a horizontal continuously rotating gate valve 62 into which the tobacco leaves L conveyed by belt 10 are deposited. Adjacent to the upper opening of said valve is mounted another inclined continuously drive conveyor belt 64 provided with a pair of side walls 66 which more or less form a continuation of the side walls of the trough 12 surrounding the upper conveyor belt 10.

As will be readily seen from the illustration in Figure 2, the hood H can be set in such a way that the angle of position of guide plate 16 which is controlled by the setting of the hood, permits only a portion of the tobacco leaves from the under side of the tobacco stream which is

discharged into hood H over the discharge end of conveyor belt 10 to drop into the opening of the gate valve 62. The rest of the leaves in the tobacco stream fall onto the lower receiving end of the conveyor belt 64 and are carried away by the same. These surplus leaves are then deposited into the feed trough 12*a* of the next machine which is equipped with a conveyor belt 10*a* and a tobacco feed mechanism of similar construction to that described above.

The gate valve 62 deposits the tobacco leaves through its lower opening onto a spreading device S which is employed for the purpose of changing the flow of the conveyed tobacco leaves 90 degrees and spreading the same uniformly across a wider inclined conveyor belt 70 which travels at right angles to conveyor belt 10 and which conveys said leaves into the revolving thresher 72. The spreading device S consists of two wings or plates 74 and 76 having one side tapered so as to form a triangular shape. This type of spreading is disclosed in the Davidson Patent No. 2,785,683.

These plates 74 and 76 have their tapered edges diametrically opposite to each other and the tapered edges descend in opposite directions across the lower opening of gate valve 62. This double vane type spreader has the decided advantage that it requires less height and provides a shorter conveying distance for the material than is the case with a single vane type.

The rotating ripper or thresher 72 into which the tobacco leaves are deposited by the conveyor belt 70 is similar to that shown in my Patent No. 2,755,930, and works in conjunction with suitably placed and shaped combs and rakes 78, 80, and 82. The combs and rakes 78, 80 and 82 cause the lamina to be torn from the stem portions of the leaves in the manner described in said co-pending application.

The torn leaf and stem portions drop through the spaces between serrated bars 84 surrounding said leaf ripper and fall onto a continuously moving conveyor belt 86. I have found that by feeding tobacco at a fast enough rate in sufficient volume to maintain the space between the stemming cylinder 72 and the concave 84 filled with tobacco leaves, I get a much better stemming action than was obtained by using prior practices. I find this method of feeding tobacco to be so effective that most leaves have the lamina and stems completely separated from each other after making only one pass around the cylinder 72. Heretofore it was necesary to rely a great deal upon reprocessing to completely remove all lamina from the stems.

Due to the method just described of feeding larger quantities of tobacco to the tobacco ripping apparatus there is less tobacco returned for retearing. If there is too much air flowing through the machine, I now rectify this by merely feeding more tobacco. This method of feeding tobacco leaf results in cutting down the amount of air and also results in more complete stemming in one pass. Belt 86 hurls the leaf and stem pieces towards a wall 88 of housing D and into an air stream entering the separating housing at point A. The air stream is created by the suction and blower system E and designed to carry the torn tobacco through the separator housing.

The stem portions which have been stripped clean of leaf laminae, of course, are heavier than the laminae and therefore offer resistance to the lifting action of the incoming air stream. As a result, the stems drop through the opening at point A and onto the stem receiving belt 90 which carries said stems out of the machine. A slit 91 is provided in the wall 93 through which clean stems fall onto the plate 89 down wall 88 on top of the stems already discharged on the collecting belt 90. Air entering through slit 91 keeps it free from tobacco leaf lamina. The pieces of stemless lamina and the lamina still having stems adhering thereto are thrown off the belt 86 and are intercepted by the incoming air stream and are carried upward so that they are deflected by the horizontal portion 92 of housing D.

If the tobacco pieces are very heavy as is the case where a piece of lamina carries a fairly large piece of stem portion, such tobacco piece is deflected back again into the revolving thresher 72 to be reprocessed.

The lighter tobacco pieces, due to the horizontal position of portion 92, are carried by the air stream towards an indented area 94 of housing D. Any piece of lamina which still has some piece of stem adhering thereto will, due to the decreased velocity of the air in this portion of the housing, fall down towards the belt 70 which causes it to be directed back into the range of action of the revolving ripper 72. The remaining pieces of lamina which are mostly all free of stems are carried upward where they undergo a second swirling action.

This second swirling action causes the tobacco to not only lose adhering dust and sand, but the pieces are further separated so that if any of the lamina so separated has any stems, they can settle down and be re-ripped a second time. The balance of the tobacco leaves are carried upwardly through duct 96 into the resettling chamber 98 of the separator housing. The lowermost portion of the settling chamber 98 is provided with a rotary gate valve 100 which discharges the clean lamina onto a conveyor belt 101 which carries the same out of the machine.

The rear chamber 98 is also provided with an inclined perforated plate 102 which permits any sand or heavy dust particles to drop through the perforations into a chute 104 leading to a screw conveyor 106 which carries said sand out of the machine into a suitable receptacle. The rear portion of said chamber is also provided with a screen 108 through which the dust laden air is exhausted. This screen 108 separates lint, string and feathers from the air stream in this area.

The rear wall of the tobacco separator housing is formed by a dust separating unit F which consists of a clean air suction shaft 110 and a dust collecting chamber 112. Within the suction shaft 110 are mounted a plurality of cyclone type dust separators 114 such as shown and described in Patent No. 2,755,930, referred to above.

Each side of such shaft 110 is connected by a wing-like duct 116 to a horizontal passage 118 on the bottom portion of the machine which leads to the suction housing 120 in which are mounted a pair of suction fans 122 which provide suction for the entire machine. The exhaust ends 124 of both suction fans 122 are connected to an exhaust duct 126 which extends over the entire width on the bottom portion of the machine.

The exhaust duct 126 leads to an exhaust chamber 128 which on each side of the machine is provided with an opening 130 each of which is provided with a vertical stack 132. The stack 132 permits the greater portion of the clean air to escape back into the room from which it was taken. However the end of exhaust duct 126, as well as the exhaust chamber, are provided with adjustable valve plates 134 and 136, respectively, by means of which part of the clean exhaust air is recirculated into the machine thereby cutting down on the amount of air taken from outside the machine which enables the machine to operate on a smaller amount of horsepower.

With proper setting of one or both of said valve plates, the air stream is directed between the lower portion of conveyor 86 and the upper portion of conveyor 90 and re-enters the machine at point A where said exhaust air stream is met by the air stream coming from the outside of the machine.

In order to avoid a certain turbulence at the forward portion of conveyor 86, another adjustable gate plate 138 is provided at the rear of conveyor 86. This plate 138 can be set in such a manner to allow just enough of the exhaust air stream to pass over the top of conveyor 86 to overcome the turbulence at the forward edge of said conveyor. Gate plates 134, 136, and 138 are provided with suitable handles 140, 142 and 144, respectively, which are located on the outer wall of the machine

and which may be set by the operator to the desired opening.

In order to provide the dust filter tubes **114** with an adequate volume of air to maintain their efficiency, the top side of the separator housing is provided with a hinged gate plate **146** to permit additional air to enter at this point. The amount of air permitted to enter may be controlled by a suitable handle **148** which, through a lever **150** and a rod **152**, is connected to said gate plate **146**.

The bottom portion of the dust collecting chamber **112** is provided with a suitable screw conveyor **154** which carries the dust from this chamber to the outside and deposits the same in a suitable receptacle. A trough **156** and screw conveyor **158** is provided for removing any dust particles which pass through the screen **108** and do not reach the separation **114** but settle downwardly along wall **109**.

In case of any choking action within the machine or if any foreign object such as wood, nails or a screw driver has inadvertently reached the interior of the machine, there is provided according to this invention an automatic control means for stopping the flow of tobacco leaves L fed into the machine by means of feed conveyor **10**. The solenoid **58**, which controls the engagement of pawl **48** with teeth **46** of operating lever **42** and consequently the position of guide plate **16** of hood **14** is connected to the motor control box (not shown) in such a manner that if one of the motors driving the various components of the machine is overloaded, it will shut down all other motors and simultaneously engage the solenoid **58**.

When this occurs, the solenoid **58** causes a disengagement of pawl **48** from teeth **46** of the operating lever **42**. The action of the balance weight **60** upon hood H causes the latter to swing upward and thereby bring plate **16** in such a position as to prevent any of the leaves from dropping into the rotating gate valve **62** of the machine. This results in the entire stream of tobacco being directed onto the conveyor belt **64** which, since the entire cross-feed unit C is independently driven, will continue to supply the adjacent machine or machines with tobacco leaves.

To facilitate proper resetting of the hood and plate **16** after the obstruction in the machine has been cleared, one side edge of the operating lever **42** is provided with stop lug **154** which, when engaging with a stop knob **156**, will prevent further downward movement of lever **42** and consequently of hood H and plate **16**. The knob **156** is adjustably mounted in a vertical slot **158** of bracket **52** and thus limits the lowermost position of hood H. The upward movements of rod **42** and hood H is limited by the handle **44** striking the bearing lug **160**. At this position the hood H is tilted upward to an extent that all tobacco received from the conveyor belt **10** is delivered to conveyor belt **64** thus preventing any tobacco from dropping into the gate valve **62**.

The invention hereinbefore described may 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. In a tobacco classifying machine, an infeed delivery belt delivering tobacco to be classified into the middle portion of the machine, inclined tobacco spreader slides for spreading said tobacco transversely across the width of the tobacco classifier, a rotating pronged tobacco ripper positioned on one side of said infeed conveyor for ripping the lamina from the stems of said tobacco leaves, a tobacco settling chamber positioned on the other side of said infeed conveyor, a separating chamber formed adjacent said tobacco ripper, a duct interconnecting said separating chamber and said settling chamber, and a source of suction for drawing a stream of air past said ripper through said separating chamber, duct and settling

chamber to effect a classification of torn tobacco leaves.

2. A tobacco ripping and classifying apparatus comprising, a tobacco tearing drum mounted at one end of the apparatus, a settling chamber formed in the other end of said apparatus, an infeed belt for delivering tobacco to be torn at right angles to an area in said apparatus between the tobacco tearing drum and said settling chamber, inclined spreader surfaces positioned under said infeed belt to spread the tobacco so received across the width of the apparatus prior to the delivery of said tobacco to said ripping drum, a preliminary separating device associated with said tobacco ripping drum to separate clean stems from stemless lamina, a connecting duct interconnecting the upper end of said preliminary separating device with the upper end of said settling chamber, an exhaust fan for pneumatically moving lamina from said preliminary separating device into said settling chamber, and a source of suction for removing air from said settling chamber and conveying it back under the machine to the air intake side of the tobacco classifying apparatus.

3. A feed for a tobacco ripping and classifying machine comprising, an infeed conveyor belt for carrying tobacco thereon to the discharge end of said belt, a second outfeed conveyor belt having the receiving end of said second belt positioned at a lower elevation than the discharge end of said first named conveyor belt to receive tobacco therefrom, a swingably mounted chute for receiving tobacco from the discharge end of said first named conveyor belt and directing the tobacco so received towards the receiving end of said second outfeed belt, and means for setting the angle of said chute to regulate the amount of tobacco falling from the first named conveyor belt onto the second named conveyor belt to allow a predetermined quantity of tobacco to fall past said second named conveyor belt into the tobacco ripping and classifying machine.

4. The method of feeding tobacco into a tobacco ripping and classifying machine comprising, feeding a stream of tobacco in excess of that required by a machine, employing a deflecting device for trimming off a uniform sheet of tobacco from the underside of said stream and discharging the tobacco so removed into the tobacco ripping and classifying machine, and discharging the balance of said tobacco stream onto the infeed conveyor of an adjoining tobacco ripping and classifying machine.

5. A tobacco leaf ripping and classifying machine comprising, a tobacco ripping and stem removing device mounted in one end of the machine, a settling chamber mounted in the other end of the machine for removing tobacco leaf lamina from an air stream, an air passageway interconnecting said ripping device with said air settling chamber, a discharge device forming a part of said settling chamber for removing tobacco leaf lamina therefrom, an infeed conveyor for delivering tobacco leaves to be ripped into the side of the machine in the area located between said tobacco leaf ripper and said settling chamber across the width of said machine, a conveying device for directing tobacco leaves received from said infeed conveyor into the range of action of said tobacco ripping device, and means for moving a stream of air past said ripping device through said air passageway and said settling chamber.

6. A tobacco ripping and classifying apparatus comprising, a tobacco ripper, a separating chamber positioned adjacent to the tobacco ripper for removing stems from the torn leaf received from said ripper, said separating chamber having a slit slightly wider than the thickness of tobacco stems extending across the width of said chamber above said ripper, and upwardly extending lip positioned a short distance inside of said separating chamber under and along said slit for removing any stems falling downwardly along a wall of said separating chamber, a settling chamber for removing lamina from said

air stream, a duct interconnecting said separating chamber with said settling chamber, a source of suction for moving a stream of air past said ripper and through said separating and settling chambers, an infeed belt delivering tobacco into the side of said separating apparatus into the area located between said tobacco ripper and said settling chamber, and a tobacco spreading device for depositing said tobacco evenly across the width of said apparatus prior to its delivery to said ripper.

7. A machine for separating tobacco leaf lamina from stems and classifying the same after separation comprising, an elongated housing, a tobacco leaf ripper located at one end of said housing, a settling chamber located at the other end of said housing to remove tobacco leaf lamina from an air stream, a separating chamber connected with said tobacco leaf ripper for separating stems from torn tobacco leaf lamina, an air passageway interconnecting said separating chamber with said settling chamber, a device for causing a stream of air to move past said tobacco leaf ripper and through said separating chamber and air passageway to deliver separated lamina into said settling chamber, an infeed conveyor for delivering tobacco leaves to be torn transversely to the side of said housing in the area between said tobacco ripper and said settling chamber, and a conveying device for carrying said tobacco so delivered into the range of action of said tobacco ripper.

8. A tobacco ripping and separating device comprising, a spiked ripping roller, a concave spaced from and surrounding the lower portion of said spiked roller, an infeed conveyor belt for delivering a continuous stream of tobacco from the center of said device to one side of said concave into the space between said concave and said spiked roller, a separating shaftway arranged on the other side of said roller and concave, means for moving a stream of air upwardly in said shaftway to elevate lamina as well as lamina having stems attached thereto while allowing clean stems to separate out of the air stream, a deflecting wall positioned across the upper end of said shaftway and extending partially over the ripping roller to deflect lamina having stems attached thereto back into the range of action of the ripping roller, and a second shaftway connecting with the first shaftway, said second shaftway having the wall positioned most distant from the deflecting wall formed with an indented pocket toward which the tobacco laden stream is deflected by said deflecting wall, said pocket being arranged to render the individual leaves having stems adhering thereto in said air stream momentarily immobile so that any lamina still having stems attached thereto are given an opportunity to fall downwardly to be mixed with the incoming stream of tobacco for re-ripping.

9. A tobacco ripping and separating device comprising, a spiked ripping roller, a concave spaced from and surrounding the lower portion of said spiked roller, an infeed conveyor belt for delivering a continuous stream of tobacco from the center of said device to one side of said concave into the space between said concave and said spiked roller, a separating shaftway arranged on the other side of said roller and concave, means for moving a stream of air upwardly in said shaftway to elevate lamina as well as lamina having stems attached thereto while allowing clean stems to separate out of the air stream, a deflecting wall positioned across the upper end of said shaftway and extending partially over the ripping roller to deflect lamina having stems attached thereto back into the range of action of the ripping roller, a second shaftway connecting with the first shaftway, said second shaftway having the wall positioned most distant from the deflecting wall formed with an indented pocket toward which the tobacco laden stream is deflected by said deflecting wall, said pocket being arranged to render leaves in said air stream still having stems attached to the lamina momentarily immobile so that they are given an opportunity to fall downwardly to be mixed with the incoming stream of tobacco for re-ripping, and a second

separating chamber positioned above the wall having the indented pocket to cause a further separation to be effected so as to separate entangled leaves to allow any lamina still having stems to settle downwardly into the range of action of said spiked roller for reprocessing.

10. A tobacco classifying and ripping apparatus comprising, a separating duct having a vertical cross-section which forms substantially an S in cross-sectional shape, a spiked roller mounted in the bottom portion of the S shaped curve, an infeed conveyor for delivering tobacco from the center portion of said apparatus to the S shaped curved wall so as to deliver the tobacco into the range of action of said spiked roller, means for rotating said spiked roller so as to discharge said ripped tobacco into the lower end of said S shaped curve so as to effect a separation of clean stems from the balance of the ripped tobacco, the upper curved protion of the S shaped path of travel having a contour which causes incompletely stemmed tobacco leaves to be deflected back into the range of action of the ripping roller, means for pulling a stream of air upwardly through the channel where stems are separated from the tobacco leaf lamina so as to drive all of the tobacco so separated from along one side of said S shaped curve to the opposite side of said S shaped curve so as to slow down the momentum of the leaves traveling in the air stream at a point formed in the bend of said S-shaped curve above the intake side of the tobacco ripper to permit incompletely torn leaves to drop into the range of action of said tobacco ripper, and a source of suction for moving said tobacco laden air stream to the upper bend of said S shaped curve to effect a further separation of lamina having stems adhering thereto to allow said lamina to fall downwardly for reprocessing by the tobacco ripper.

11. In a tobacco separating and classifying machine, an elongated housing, a tobacco ripping device mounted across one end of said housing, a settling chamber positioned across the other end of said housing, a separating chamber arranged above said tobacco ripping device for separating torn tobacco leaf lamina from lamina free stems, a passagewy interconnecting the upper ends of said separating and settling chambers, a source of power for moving an air stream past said tobacco ripper and through said separating chamber and interconnecting air passageway into said settling chamber, and an infeed conveyor for delivering tobacco transversely to the side of said housing at an area located in between said separating chamber across the width of said machine and said settling chamber.

12. In a tobacco separating and classifying machine, an elongated housing, a tobacco ripping device mounted across one end of said housing, a settling chamber positioned across the other end of said housing, a separating chamber arranged above said tobacco ripping device for separating torn tobacco leaf lamina from lamina free stems, a passageway interconnecting the upper ends of said separating and settling chambers, a source of power for moving an air stream past said tobacco ripper and through said separating chamber and interconnecting air passageway into said settling chamber, an infeed conveyor for delivering tobacco at right angles to the side of said housing into the area located between said separating and settling chambers, an outfeed conveyor for receiving surplus tobacco from said infeed conveyor and removing it out of said machine at an angle transverse to the length of said housing, and means for continuously removing a portion of the tobacco from said infeed conveyor as the tobacco passes from one conveyor to the other and delivering the tobacco so removed to said tobacco ripping device.

13. A tobacco ripping and classifying machine comprising, a tobacco ripper extending transversely across one end of said housing, a tobacco leaf lamina settling chamber extending across the other end of said housing, a separating chamber associated with and extending above said tobacco leaf ripper to separate tobacco leaf lamina

from lamina free stems, an air passageway interconnecting the upper end of said separating chamber with said settling chamber, an infeed conveyor for delivering tobacco leaves at right angles to said housing in the area located between said settling and separating chambers, an outfeed conveyor extending transversely from the opposite side of said housing for removing untorn tobacco leaf from said housing into the next adjoining tobacco ripping and classifying machine, a tobacco guide positioned under the discharge end of said infeed conveyor for receiving tobacco delivered into the center portion of said tobacco ripping and classifying machine from said infeed conveyor to control the proportion of tobacco delivered to said infeed belt and said outfeed belt, and a direction turning device and spreading device for spreading tobacco delivered from said infeed belt into said machine across the width thereof.

14. A tobacco leaf ripping and classifying machine comprising, an elongated housing, a tobacco leaf ripping member mounted near the bottom of one end of said housing, an air shaftway positioned adjacent and above said ripping device for separating stems from lamina by allowing stems to fall downwardly, a settling chamber positioned at the other end of said housing for removing tobacco leaf lamina from an air stream, a duct interconnecting the upper end of said shaftway with the upper end of said settling chamber through which tobacco leaf lamina is conducted, an infeed belt for delivering tobacco to be torn at right angles to the machine in the area located between said settling chamber and said separating shaftway, an outfeed belt for receiving excess untorn tobacco from said infeed belt to remove said excess untorn tobacco from said separating machine, means for removing part of the amount of tobacco delivered from said infeed belt into the ripping and classifying machine and for directing the balance of the untorn tobacco received from the infeed belt of one machine to the outfeed belt which comprises the infeed belt of an adjoining machine, and a safety device for actuating said means to deliver all tobacco received from the infeed belt to the outfeed belt whenever the safety device detects a malfunctioning of the machine.

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