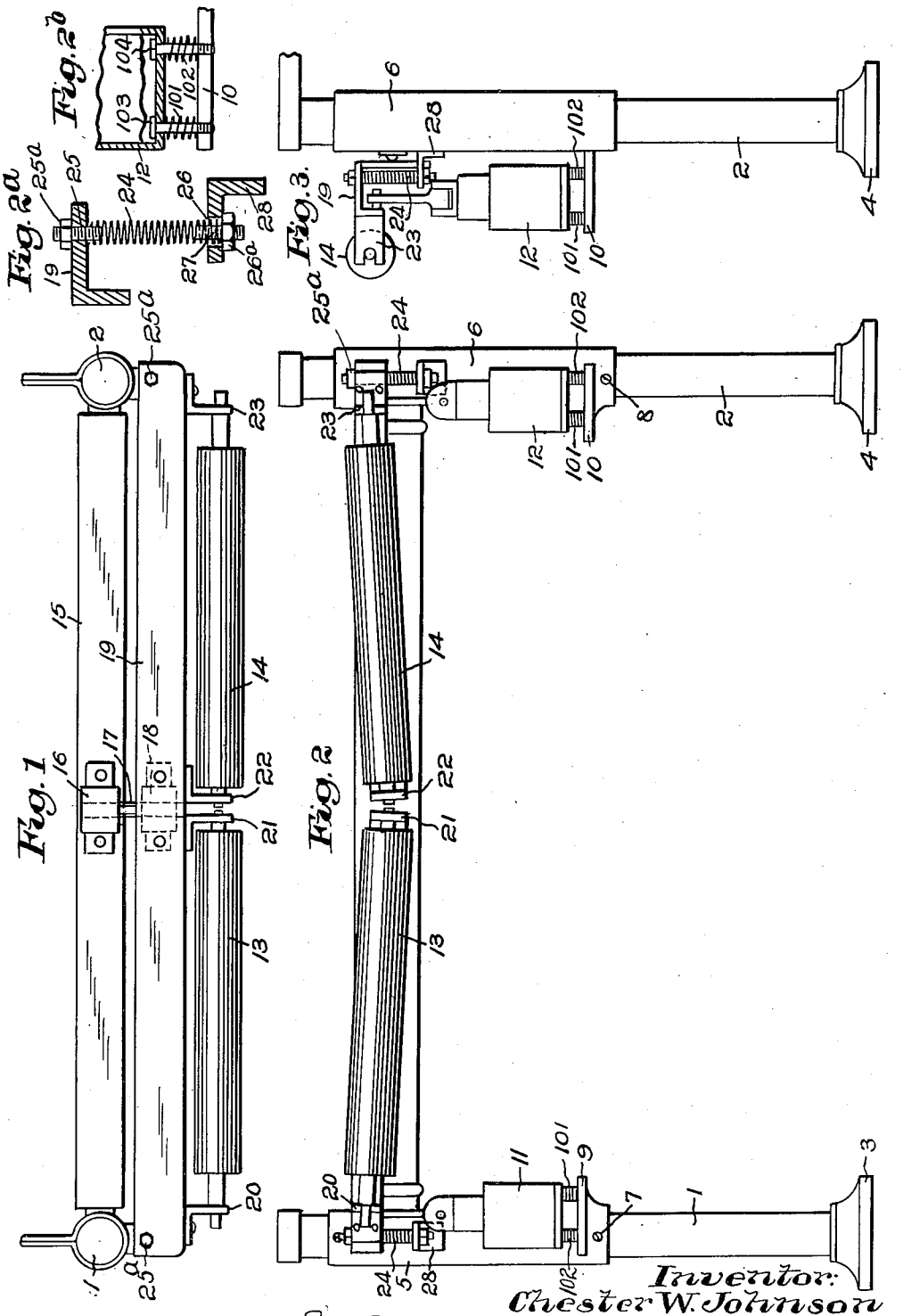
Dec. 4, 1951 C. W. JOHNSON 2,577,195

FABRIC GUIDING MECHANISM AND FEELER CONTROL THEREFOR

Filed April 1, 1946 4 Sheets-Sheet 1



Dec. 4, 1951 C. W. JOHNSON 2,577,195

FABRIC GUIDING MECHANISM AND FEELER CONTROL THEREFOR

Filed April 1, 1946 4 Sheets-Sheet 2

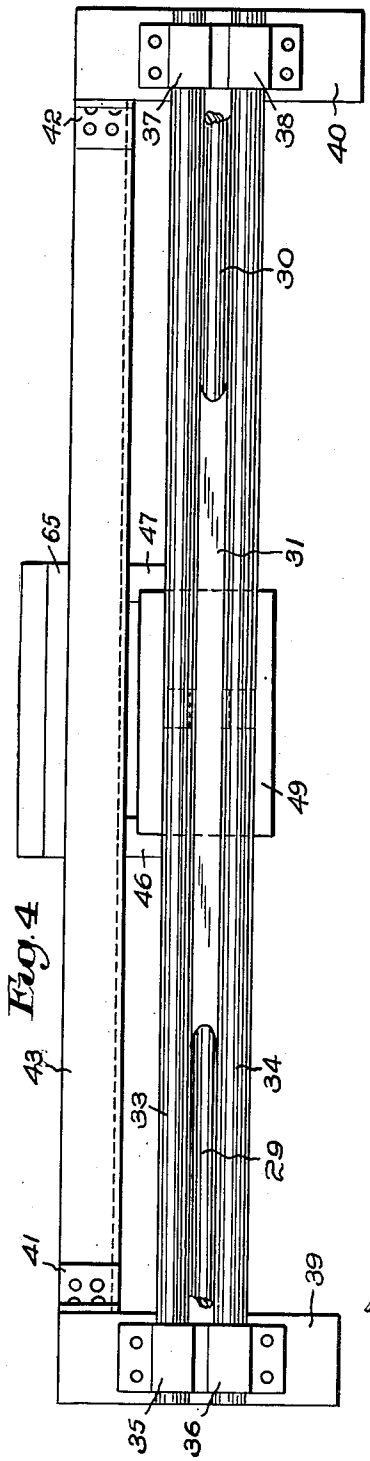


Fig. 4

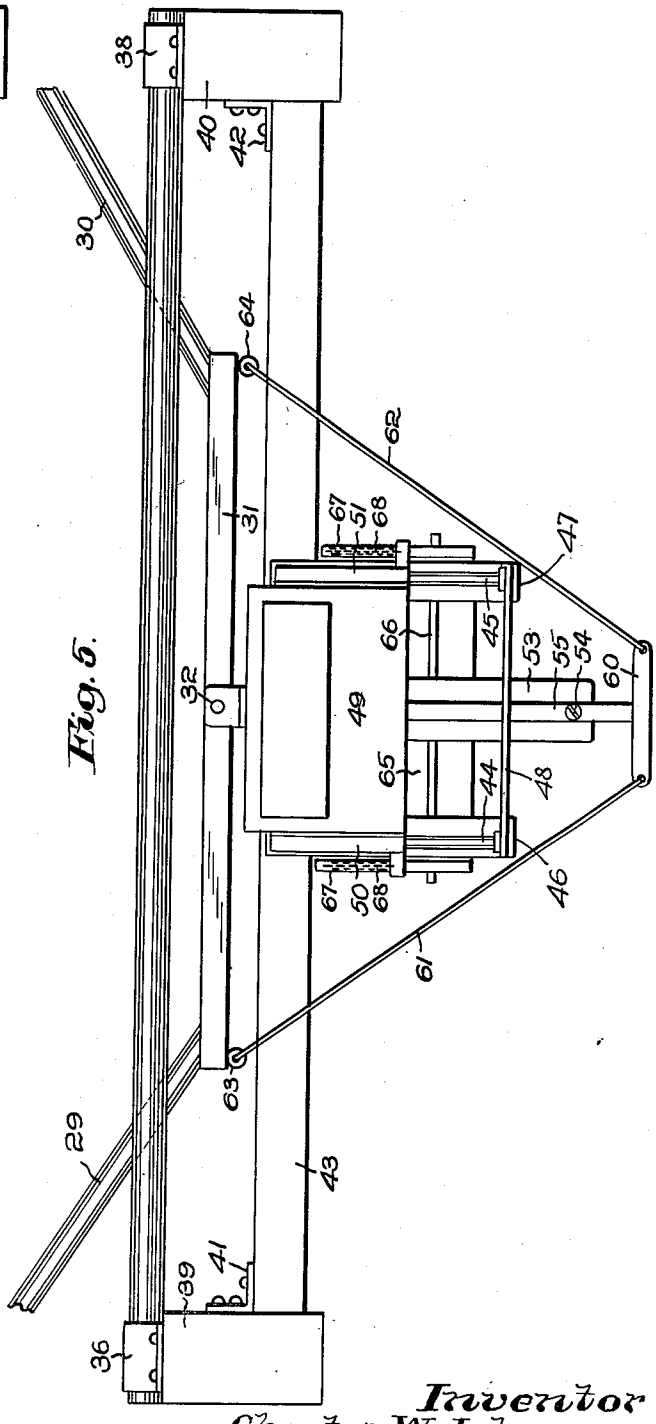


Fig. 5.

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FABRIC GUIDING MECHANISM AND FEELER CONTROL THEREFOR

Filed April 1, 1946 4 Sheets-Sheet 3

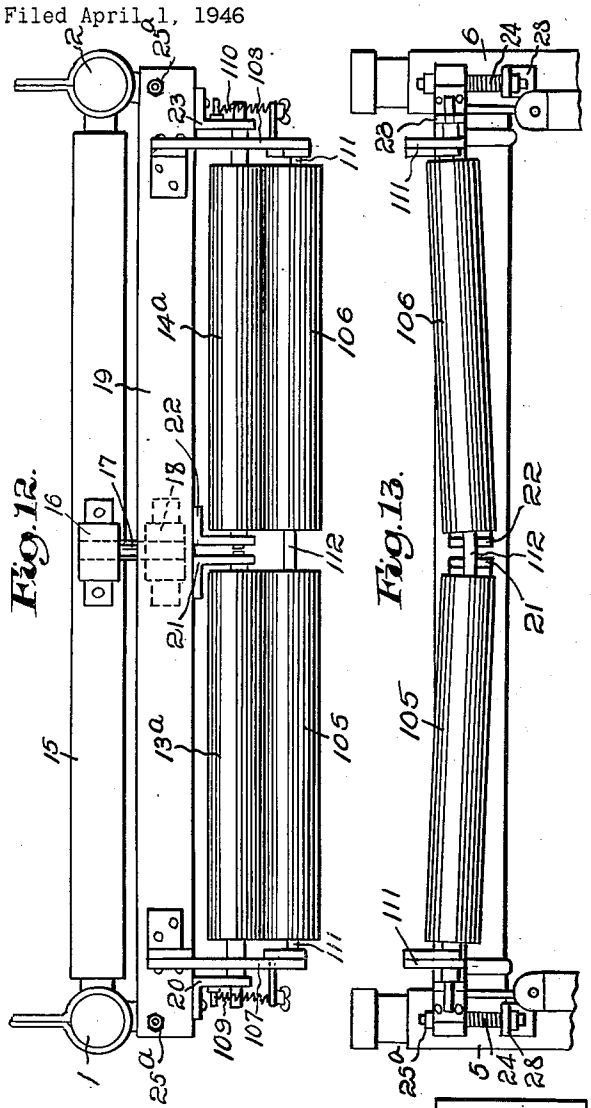


Fig. 12.

Fig. 13.

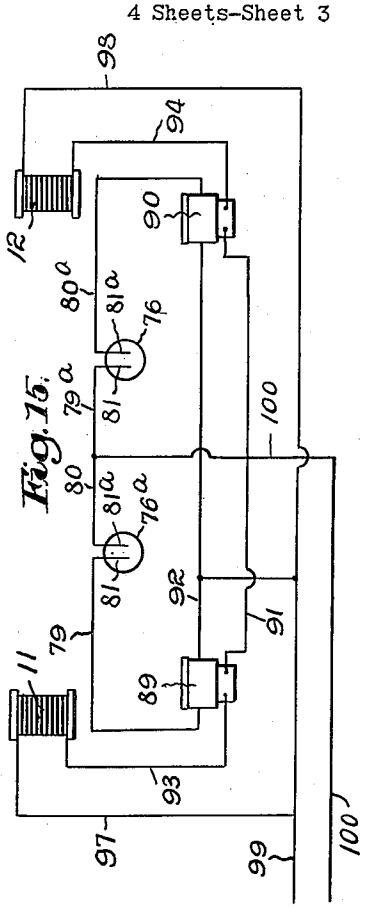


Fig. 15.

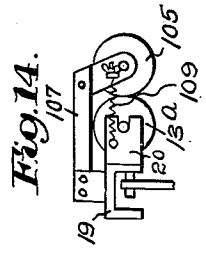


Fig. 14.

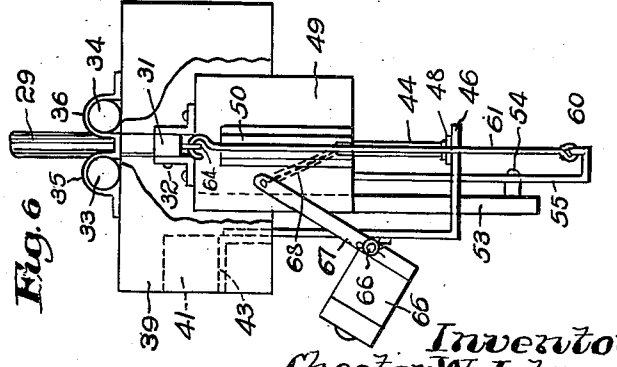


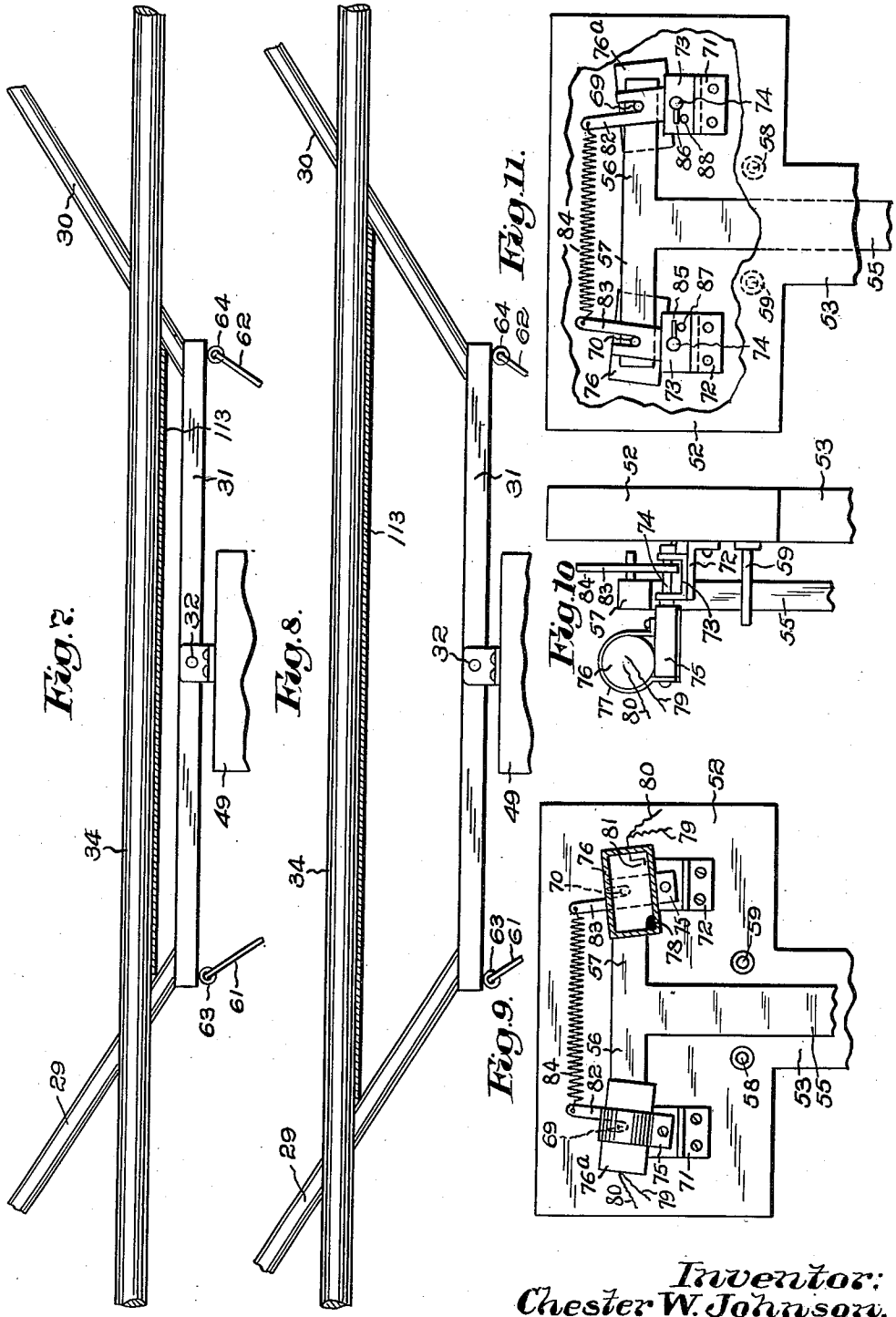
Fig. 6

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FABRIC GUIDING MECHANISM AND FEELER CONTROL THEREFOR

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UNITED STATES PATENT OFFICE

2,577,195

FABRIC GUIDING MECHANISM AND FEELER CONTROL THEREFOR

Chester W. Johnson, Bridgewater, Mass., assignor of one-half to Nuproducts Corporation, Cambridge, Mass., a corporation of Massachusetts

Application April 1, 1946, Serial No. 658,728

10 Claims. (Cl. 271—2.6)

1

This invention relates to fabric guiding mechanism and to feeler control means primarily used therefor, but which may also be used in other relations.

In order that the principle of the invention may be readily understood, I have disclosed a single embodiment thereof in the accompanying drawings, wherein—

Fig. 1 is a plan view of the cloth guiding mechanism of my invention;

Fig. 2 is a front elevation thereof, but not showing the feeler control means;

Fig. 2*a* is a detail of a part of the construction shown in Fig. 2;

Fig. 2*b* is another detail of a part of the construction shown in Fig. 1;

Fig. 3 is a side elevation of the cloth guiding mechanism shown in Figs. 1 and 2;

Fig. 4 is a plan view of the feeler control means and the immediately associated parts;

Fig. 5 is a front elevation thereof;

Fig. 6 is a side elevation thereof;

Fig. 7 is a front elevation of the upper part of the feeler control means in its position when a narrow fabric is being wound or processed;

Fig. 8 is a view similar to Fig. 7, but showing the position of the parts when a wide fabric is being wound or processed;

Fig. 9 is a detail in front elevation of a part of the feeler control means;

Fig. 10 is a side elevation of the construction shown in Fig. 9;

Fig. 11 is a rear elevation of the construction shown in Fig. 9;

Fig. 12 is a plan view similar to Fig. 1 but representing the use of two sets of guiding rolls in feeding the fabric;

Fig. 13 is a front elevation of the construction shown in Fig. 12;

Fig. 14 is a side elevation thereof; and

Fig. 15 is a wiring diagram.

My invention, a preferred embodiment of which is herein shown, is primarily intended for guiding and rectifying the path of travel of woven fabrics such as cotton, woolen, rayon, felt, coated fabrics, celanese, etc. While my invention is not necessarily limited to guiding and rectifying the course of travel of fabrics, and while certain features thereof may be employed in connection with means for guiding webs other than of a woven character or other than of textile material, my invention is primarily directed to the provision of means for rectifying the course of travel of woven fabric while being wound or processed in any way.

2

The mechanism of my invention is adapted for use with fabrics of different widths. Preferably I provide several sizes of mechanism, intended to be used for guiding or rectifying the path of travel of the fabric, and for that purpose I may provide one size of mechanism for guiding material ranging from substantially thirty to fifty inches in width, another size for guiding fabric ranging from substantially fifty to seventy inches in width, and another size of mechanism for guiding fabric ranging from substantially seventy to one hundred inches in width. These figures are illustrative merely and are not specified as a limitation upon the scope of the invention.

The mechanism of my invention is adapted to work automatically to rectify the path of travel of the fabric regardless of the speed of travel of the fabric which might be as low as one yard per minute or as high as one hundred eighty yards per minute or more.

Attempts have heretofore been made to rectify the course of travel of webs of material while being wound or processed but so far as I am aware without entire success. My mechanism is completely automatic and, having been installed in proper position, it requires no further attention.

Certain features of the mechanism of my invention are supported between the edges of the fabric adjacent one of the faces thereof, and is herein shown as supported beneath the path of travel of the fabric upon the framing of the cloth handling machine, and in such position require a vertical space of not exceeding two feet up from the floor for the installation thereof. I herein provide two feeler fingers which in the preferred construction extend upwardly in opposite outwardly inclined directions so as to engage the two edges of the fabric. Such inclination of the fingers permits them to engage the opposite edges of the fabric whatever the width thereof, within certain limits such as above suggested. Such feeler fingers are mounted upon supporting means at the under side of the traveling fabric for automatic up and down movement of the fingers and their supporting means, according to the width of the fabric, and means are provided and caused to operate by deflective lateral movement of the fabric from its correct path against either of the said fingers, thereby to rectify the course of travel of the fabric by changing the angle of the axis or axes of one or more rolls about which the cloth passes, and desirably of one pair of oppositely inclined rolls, or of two pairs of such rolls, between which the cloth is "threaded" or introduced.

In the preferred embodiment of the mechanism herein disclosed I mount or secure in suitable relation to the framing of the cloth winding or processing machine a suitable guiding frame or structure, and therein I mount, for up and down sliding automatic movement, the supporting means for the fingers, such supporting means being herein shown as a substantially box-like structure upon the upper portion whereof is pivotally mounted a transversely extending feeler control arm from which rigidly extend upward the two inclined feeler fingers to engage the two lateral edges of the fabric. Pivotally mounted upon the said supporting means is a member herein shown as of general T-shape, and associated with the opposite ends of its T-head are suitably supported electrical switches of a novel character per se, which constitute an important feature of my invention, and which may be used not only as a part of the fabric guiding mechanism but in certain other relations.

According as the T-member is, by the movements of the feeler fingers, caused to rock in either direction, a contact is made at one of the switches, and through the electrical circuit one or the other of two solenoids is energized, preferably through the interposition of relays in the circuit between the contact closing devices and the solenoids.

The said solenoids suitably supported are connected to the opposite ends of a transversely extending pivoted support for a pair of preferably slightly inclined rolls, about which the fabric passes, and accordingly by the change of inclination of the said rolls, brought about by the described movements of the feeler fingers, the path of travel of the fabric is rectified, or two pairs of such rolls may be similarly mounted and the fabric be passed or guided between them.

I may employ one set of guiding rolls over or about which the fabric is guided and the position whereof is changed through the action of the feeler control means to rectify the course of travel of the fabric, or I may employ two sets of such rolls and feed the fabric between such two sets. Preferably only a single set of such rolls is used if there has been a coating applied to the fabric of such character or thickness that it has not completely dried when it reaches the said rolls. With fabric in such condition it is important that no rolls contact with the coated surface thereof. The use of one pair of rolls and the use of two pairs of rolls present alternative constructions both within the scope of my invention. The construction providing only one pair of rolls is particularly shown in Figs. 1 and 2, and the construction providing two sets of rolls is particularly shown in Figs. 12, 13 and 14.

Referring more particularly to the drawings, the cloth winding or cloth processing machines with which my invention is adapted to be used may be of varying character, and I have not in the drawings illustrated any of the structures of such machines, as my invention is in no wise dependent upon the precise character thereof. The mechanism of my invention, which may be varied to accommodate different processing machinery, is preferably positioned in operation beneath or in suitable relation to the framing of the winding or processing machine and may be, if desired, attached directly to some part of the framing of such winding or processing machine, or it may be separately mounted in suitable relation to the winding or processing machine with

which it is associated to rectify the path of travel of the cloth therethrough.

The mechanism of my invention comprises or includes suitable means such as guiding rolls about or between which the cloth is passed and from which it is fed in suitable relation to the feeler control means and past which latter the cloth travels to the usual parts of the cloth winding or processing machine. My invention is not limited to the means herein shown, which constitutes the preferred embodiment of the mechanism of my invention. I will first refer to the means for supporting cloth guiding rolls which receive the cloth from any suitable source, and for that purpose I will refer to Figs. 1, 2 and 3.

Therein are shown, suitably connected, opposite posts or uprights 1, 2, the bases 3, 4 whereof stand upon or are secured to the flooring of the mill where the cloth is to be wound or processed. Upon each of the posts 1 and 2 is mounted for vertical adjustment a substantially cylindrical member 5, 6, the position of which may be vertically adjusted as by loosening the screws 7, 8, then manually moving upward or downward the members 5, 6 as desired on the posts 1, 2, and then tightening the said screws 7, 8, thus securing the members 5, 6 in their new position. Upon the cylindrical members 5, 6 are secured brackets 9, 10 upon which are supported solenoids 11, 12, which will be described in detail at a subsequent point. Cloth guiding means are suitably secured to the cylindrical members 5, 6 which are suitably connected, being spaced apart a suitable distance according to the width of the cloth winding or processing machine with which my invention is used.

In the construction shown in Figs. 1 and 2, there are provided a single pair of cloth guiding rolls, indicated at 13, 14, but if desired additional cloth guiding rolls co-acting therewith may be employed, and they are shown in a modification to be subsequently described herein. Referring, however, to the construction shown in Figs. 1, 2 and 3, there is provided a cross beam or supporting member 15 directly secured in any suitable manner to the cylindrical members 5, 6. Centrally upon the upper side of the cross beam or supporting member 15 is provided a bearing 16 in which is pivotally mounted an axle or other pivoting means 17 extending into a suitable bearing 18 upon a transversely extending, pivoted, supporting member 19 which rocks up anr down upon the axle 17 in response to deflective, lateral movements of the cloth, in order to rectify the course of travel of the cloth.

Upon the transversely extending, rocking, supporting member 19 are secured two sets of brackets 20, 21, 22 and 23, in the first two of which is mounted the cloth guiding roll 13 and in the other two of which is mounted the cloth guiding roll 14, so as to be readily rotated by the traveling cloth, as shown in Fig. 2. The said cloth guiding rolls 13, 14 are desirably slightly inclined toward each other at a suitable angle, as, for example, about three degrees, for the purpose of removing wrinkles from the cloth. The cloth coming from any suitable supply passes, from the cloth winding or processing machine above the fabric guiding mechanism of my invention, as hereinbefore stated, thence downwardly in contact with the rolls 13, 14, shown in Figs. 1, 2 and 3 and thence to the feeler control means of my invention, which I will presently describe. Instead of providing merely the one pair of cloth guiding rolls 13, 14, which contact with only one face of the

fabric, I may, as already stated, employ two sets of such rolls (to be subsequently described in connection with Figs. 12, 13 and 14) and pass the fabric between them, the latter construction being used in certain cases in which the fabric is not coated, or the coating of which dries very quickly.

In order to cushion the rocking or tilting movements of the transversely extending, supporting member 19, I provide any suitable means at each end thereof. In Fig. 2a I have represented a detail in cross section wherein is shown a coiled spring 24, the ends whereof are received upon by their encirclement of the ends of threaded bolts 25, 26 having nuts 25a, 26a upon their outer ends. The bolt 25 is threaded through the end of the rocking or tilting supporting member 19, therein shown as of an angle iron construction. The bolt 26 and the spring 24 pass freely through an opening 27 of substantially larger diameter in a stationary bracket 28, shown also in Figs. 2 and 3. When either end of the rocking or tilting supporting member 19 is moved downwardly, the coiled spring 24 with the threaded bolt 26 and the nut 26a are forced freely down or yield in accordance with the rocking or tilting movement of the supporting member 19, and when said supporting member 19 returns to its normal position, the spring 24 returns to the position shown in Fig. 2a with the nut 26a engaging the under surface of the support 28. The nut 26a may be adjusted as desired to provide for the correct functioning of the spring 24. Such construction is employed at each end of the pivoted supporting member 19.

I will next refer to the feeler control means and for that purpose I will refer to Figs. 4 to 11 inclusive.

I provide a pair of feeler fingers 29, 30 which are rigidly mounted upon a feeler control arm 31, itself pivotally mounted at 32 upon a support to be referred to in detail at a subsequent point herein. The said feeler fingers 29, 30 extend upwardly at an outward inclination which may be whatever is suitable for the purpose of my invention. They are spaced apart far enough to receive between them the traveling cloth and, as already stated, I preferably provide different widths or sizes of control means to accommodate among them all widths of cloth. For example, the feeler fingers 29, 30 may receive between them cloth ranging from thirty to fifty inches in width or fifty to seventy inches, or seventy to a hundred inches, and said feeler fingers 29, 30 engage the opposite lateral edges of the cloth, and, as will be described, they respond to deflective, lateral movements of the cloth, and by so responding they correct or rectify the path of travel of the cloth through the cloth winding or processing machine. While the objects of my invention may be attained by differently constructed mechanisms, I will, without limiting myself thereto, describe the preferred embodiment of means for supporting the feeler fingers 29, 30 and for causing the deflective lateral movements of the cloth so to act upon the support for said feeler fingers as to rectify the path of travel of the fabric through the cloth winding or processing machine.

The feeler fingers 29, 30 extend upwardly between suitably spaced, transversely extending, stationary rods 33, 34 with which only an uncoated surface of the cloth contacts, and which are of a length depending upon the greatest width of the cloth in connection with which my control mechanism is provided. As shown in Figs. 4 and 5, the rods 33, 34 are received in suitable bearing supports 35, 36, 37, 38 upon suitable blocks or uprights 39, 40, and which are either suitably supported at the proper height or extend to the floor of the mill. They are so supported or constructed as to afford unimpaired movement of the parts next to be described, and they are secured by angle irons 41, 42 to a transversely extending beam or structure 43.

At suitable distances at each side of the transverse median line of the transversely extending beam 43 depend two guiding members 44, 45 which at their lower ends are received upon and are supported by two brackets 46, 47 which themselves, as best shown in Fig. 6, are secured at their upper ends to the transversely extending beam 43, and which are connected at their lower ends by a transversely extending member 48, thus providing a rigid guiding structure.

I provide feeler finger and feeler control arm carrying means which is guidingly mounted for up-and-down movement in the guiding support just described, and upon which carrying means the feeler control arm 31 is pivoted for up-and-down rocking movement on its own pivot. For this purpose I preferably provide a box-like structure 49 of a form best shown in Fig. 6. Said box-like structure 49 is provided with opposite wing-like extensions 50, 51 which will slide up and down on the vertical guides 44, 45 if the width of the cloth diminishes or increases. In the said box-like structure, there is provided, so as to move therewith but not independently thereof, an upright plate-like structure, best shown in Fig. 10, and upon the upper end of the box-like structure 49, as shown in Figs. 5, 7 and 8, the feeler control arm 31 is pivotally mounted at 32.

The plate-like member 52, as shown in Figs. 9 and 11, has a downwardly extending part 53 upon the lower end whereof is pivoted at 54 a T-head member 55 which, as shown best in Figs. 9 and 11, has at the upper end thereof laterally extending arms 56, 57 rigid therewith and constituting the T-head. Upon the plate 52 are provided two stop pins 58, 59 to limit the swinging movement of the T-head member 55.

As best shown in Fig. 5, the T-head member 55 extends downwardly below its pivot, and rigid with the lower end thereof is a cross piece 60, from the ends of which upwardly extend at an opposite outward inclination the two wires 61, 62, which at their upper ends are connected to suitable eyes 63, 64 fast in the outer ends of the feeler control arm 31.

The construction is such that when the cloth in its travel becomes deflected for any reason either to the right or to the left, viewing Fig. 5, the feeler finger 30 or the feeler finger 29 will rock downwardly upon the pivot 32 of the feeler control arm 31 as a pivot (the other feeler finger rocking upwardly), and at the same time the T-head member 55 rocks upon its own pivot 54, the entire described structure shown in Fig. 5 rocking either clockwise or contraclockwise, viewing Fig. 5, according as the feeler finger 30 or the feeler finger 29 may be depressed or swung downward by the deflective movement of the cloth.

The cloth may at times vary in width at different parts of its length, in addition to having a deflective lateral movement to the right or the left. The mechanism shonw in Fig. 5, including the feeler fingers 29, 30 and their supporting means, adapts its position to any changes in the

width of the fabric, moving upward if the fabric becomes narrower, and thus occupying a position such as indicated in Fig. 7 or moving downward if the fabric becomes wider, as is indicated in Fig. 8.

In order to cause the feeler fingers 29, 30 and their supporting structure to follow or respond to changes in the width of the fabric and accordingly to move up or down, I yieldingly mount the box-like member or structure 49 in the said guiding means 44, 45. For this purpose I provide a counterweight which is shown in Fig. 6. Therein is shown a weight 65 which is pivotally mounted upon a long, transversely extending rod 66, Fig. 5, which is itself supported upon the supporting brackets 46, 47, and I provide two arms 67, shown in Fig. 5, as extending from the pivotal rod 66 and both flexibly connected as by chains 68 to the box-like structure 49, as shown in Fig. 5, to the lower ends of the wing-like extensions 50, 51.

In this manner or by any other suitable means I cause the box-like member 49 to move yieldingly up or down in response to or in accordance with the varying widths of the fabric, thereby to keep the feeler fingers 29, 30 in proper feeling engagement with the lateral edges of the fabric.

The T-head member 55 has associated therewith electrical means including switches by which a circuit is closed when said T-member 55 is moved in either direction upon its pivot. When the circuit is closed, relays are energized which act upon suitably mounted solenoids to rock the transversely extending member 19 of Fig. 1 upon its pivot so as to change the axial positions of the rolls 13, 14, Figs. 1 and 2, and thereby rectify the course or path of travel of the fabric. While for this purpose different mechanisms may be provided, I have, in Figs. 9 to 11 and 15 and in part in Figs. 2, 2b and 3, shown means for the purpose, but to which my invention is not limited.

Referring first to Figs. 9, 10 and 11, the T-head member 55 having, as described, the outwardly extending arms 56, 57, has laterally extending from one face of said arms two pins 69, 70, as best shown in Figs. 9 and 11. Upon the plate-like carrying member 52 in the box-like structure 49, there are mounted, in suitable relation to the ends of the arms 56, 57 of the T-member 55, brackets 71, 72 rigid with which are generally U-shaped supporting members 73, in each of which is pivotally mounted a pin 74 extending outwardly beyond the U-shaped member, shown in Fig. 10, and having fast therewith a block or part 75 to which is secured a mercury cup or receptacle 76, 76a by an encircling band 77. Within each mercury cup or receptacle 76, 76a is a small quantity of mercury or like material 78 and extending into the cups or receptacles 76, 76a are two wires 79, 80 having terminals within the receptacles 76, 76a, one terminal being shown at 81, Fig. 9. Said terminals are positioned in sufficient proximity to each other so that when the mercury 78 in the tilting movement of the receptacles 76, 76a contacts with the terminals, the circuit is closed. The said mercury receptacles 76, 76a are provided with covers (not shown) by which access may be afforded to the interior thereof, if necessary.

Upon each pin 74, by which the mercury receptacles are respectively supported, there are respectively secured yokes 82, 83, between the arms of which are respectively received the pins 69, 70, as best shown in Figs. 9 and 11. The upper ends of the yokes 82, 83 are connected by a coil spring 84 to return the receptacles to non-functioning position. Upon the inner ends of the pins 74, as shown in Fig. 11, are laterally extending ams 85, 86 to engage stop pins 87, 88, and thereby to prevent over movement of the mercury receptacles 76, 76a.

The construction is such that in the tilting movement of the T-member 55 through the movement of the feeler fingers 29, 30, one or the other of the T-head arms 56, 57, according to the direction of the tilting movement of the T-member 55, causes the mercury receptacle 76 or 76a to rock upon its pin 74 through the agency of the yoke 82 or 83, so as to cause the mercury 78 of the functioning receptacle to close the contact at the terminals of the wires 79, 80.

I have in Fig. 15 represented a wiring diagram wherein are diagrammatically indicated mercury receptacles 76 and 76a. Therein are indicated the terminals 81, 81a of the wires 79, 80 and 79a, 80a respectively. The said wires 79 and 80a extend to and are suitably connected to relays 89, 90. Said relays are suitably connected by wire 91 and wire 92, and from said relays extend the wires 93, 94 which themselves extend to the solenoids 11, 12 that are connected by wires 97, 98 to the wire 99, and from the wires 79a and 80 extends the wire 100, the wires 99, 100 extending to any suitable source of electrical current such as an A. C. or D. C. source of 110 or 120 volts.

The solenoids 11, 12 have been described as supported upon brackets 9, 10 of the cylindrical supports 5, 6. Desirably and as shown in Fig. 2b, I provide coiled springs 101, 102 surrounding screws 103, 104 tapped into the brackets 9, 10 and the heads whereof extend into the outer member or casing of the solenoids so that when either solenoid is energized and the core thereof is moved down, the outer member or casing of the solenoid may yield downwardly and the jar is absorbed by the coil springs 101, 102.

I have stated that I may provide as a part of the cloth guiding mechanism either a single pair of rolls as indicated in Fig. 1 at 13, 14, or two pairs of rolls. The latter construction is shown in Figs. 12, 13 and 14, wherein I have indicated at 13a, 14a two rolls which correspond with the rolls 13, 14 of Figures 1 and 2. In addition to said rolls 13a, 14a I provide two similar rolls 105, 106 mounted in suitable bracket bearings 107, 108 carried by the transversely extending, pivoted member 19 and held in suitable relation with the rolls 13a, 14a by suitably supported coiled springs 109, 110. The said rolls 105, 106, as shown in Fig. 13, are inclined similarly to the inclination of the rolls 13a, 14a; that is, similarly to the inclination of the rolls 13, 14. While the said rolls 105, 106 may be so mounted in any suitable manner I have, in Fig. 13, represented a shaft 111 which is bent slightly between the rolls at 112, as best shown in Fig. 13, so that the two rolls 105, 106 are supported at the inclination shown. The fabric in such construction passes between the two pairs of rolls 13a, 105 and 14a, 106 instead of about the single pair 13, 14 only as shown in Figs. 1, 2 and 3. The fabric is shown at 113 in Figs. 7 and 8.

I have in the preceding portion of the specification referred to the use, as alternative constructions, either of one pair of guiding rolls or of two pairs of guiding rolls, and at one point I have referred to the use of two pairs of guiding rolls as a modification. Actually, however, two sets of guiding rolls are preferably used, excepting in those cases where one surface of the fabric has

been coated, and particularly in cases where the coating is of such character, or the time element is such, that the coating has not entirely dried. Furthermore, I may employ a single guiding roll only, supporting the same at a slight inclination, the single roll being of such length as to receive or accommodate the entire width of the fabric. In such latter construction I preferably provide two solenoids capable of a longer movement when energized, one solenoid beneath each end of the single roll or the bearings therefor, and I yieldingly support the single roll, as by coiled springs extending downward from some suitable point to the bearings of the said roll. The single roll in such case may be supported with its axis slightly inclined or even horizontal, and the action of the solenoids beneath the respective ends will be such as to depress or change the angle of the axis of the roll at one end or the other, according to the necessary rectification of the path of travel of the cloth. In such case the spring at the end of the roll where the solenoid is not energized, will tend to pull that end of the roll upward, the solenoid at the other end of the roll drawing that other end downward. This is not a preferred construction but is within the scope of my invention.

I have stated at an early point in the specification that the entire structure is supported adjacent one face of the fabric, and I have shown the same beneath the lower face thereof as the preferred construction. Within the scope of my invention the disclosed structure may be reversed or inverted so as to be above but adjacent to the upper surface of the fabric, in which case the guiding fingers **29, 30** would extend downward at an outward inclination. Such construction is within the scope of my invention.

I have referred to the feeler fingers **29, 30** as rigidly mounted. By this I mean that they are not substantially flexible, but firmly keep their position against the edges of the fabric. They may, if desired, be mounted as inclined spindles upon the feeler arm **31** so as to rotate upon their own axes by reason of the travel of the cloth.

I have referred to the two rods **33, 34** as stationary. By this I mean that they are not positively rotated. They may, however, be free to turn upon their axes within the bearings **35, 36, 37, 38.**

I have used alternatively the terms "cup" and "receptacle" in describing the structures **76, 76*a*** in which the mercury **78** is received. Such structures are also properly termed "containers" or "enclosures." The several terms are all used alternatively and any suitable structure for receiving the mercury is within the scope of my invention. Such structure desirably should be closed so as to prevent any loss or deterioration of the mercury. I also employ the term "switching means" both in the specification and in certain of the claims, inasmuch as by such more generic definition and description of my invention, it is intended to be set forth that any suitable switching means may be employed within the scope of my invention. Preferably, however, I use the mercury-containing receptacles.

Having thus described one illustrative embodiment of the invention, it is to be understood that although specific terms are employed, they are used in a generic and descriptive sense and not for purposes of limitation, the scope of the invention being set forth in the following claims.

I claim:

1. Textile sheet mechanism for sheets of different widths or of varying width, constituting an attachment particularly adapted for and coacting with textile sheet handling and processing mechanisms, said attachment having at least one transversely - extending, transversely - inclined guiding roll about which the textile sheet passes, which guiding roll is mounted upon an axis the angle of transverse inclination of which may be changed by the guiding mechanism attachment, thereby to rectify the course of travel of the textile sheet, said sheet guiding mechanism attachment including also a pair of oppositely extending, upwardly and outwardly inclined feeler fingers to engage the opposite edges of the textile sheet irrespective of the width thereof, and past and between which the textile sheet travels in contact with such transversely inclined guiding roll, a feeler control arm constituting the sole and common support for said pair of feeler fingers located closely adjacent to one face of the textile sheet and extending transversely of and across the said textile sheet and mounted for movement upon movement of either of said feeler fingers due to lateral movement of the textile sheet away from its true path, and means operatively connected to said feeler control arm and also operatively connected to said textile guiding roll for causing a shifting of the axis of said guiding roll and thereby rectifying the path of travel of said textile sheet.

2. Textile sheet mechanism for sheets of different widths or of varying width, constituting an attachment particularly adapted for and coacting with textile sheet handling and processing mechanisms, said attachment having at least one transversely-extending, transversely-inclined guiding roll about which the textile sheet passes, which guiding roll is mounted upon an axis the angle of transverse inclination of which may be changed by the guiding mechanism attachment, thereby to rectify the course of travel of the textile sheet, said sheet guiding mechanism attachment including also a pair of oppositely extending, upwardly and outwardly inclined feeler fingers to engage the opposite edges of the textile sheet irrespective of the width thereof, and past and between which the textile sheet travels in contact with such transversely inclined guiding roll, a feeler control arm constituting the sole and common support for said pair of feeler fingers located closely adjacent to one face of the textile sheet and extending transversely of and across the said textile sheet and mounted for movement upon movement of either of said feeler fingers due to lateral movement of the textile sheet away from its true path, said feeler fingers being both held yieldingly by said transversely extending control arm against the opposite edges of the traveling textile sheet, an electrical circuit, and means operatively connected to and moved by rectifying movement of the said feeler control arm and said feeler fingers, to cause a change in said electric circuit, and operative connections between said electric circuit and said textile guiding roll to cause a shifting of the axis of said guiding roll and thereby rectifying the path of travel of said textile sheet.

3. Cloth guiding mechanism constituting an attachment particularly adapted for and coacting with cloth handling and cloth processing machines having at least one transversely-extending transversely-inclined roll about which the cloth passes, which roll is mounted upon an axis, the angle of transverse inclination of which may be changed by the guiding mechanism, thereby to

rectify the course of travel of the cloth, and which cloth handling and cloth processing machine is operable with cloths of different widths and also with cloths of varying widths, said cloth guiding mechanism comprising for such purpose, two feeler fingers upwardly and outwardly inclined from their support at the under face of the cloth so as to engage respectively the opposite edges of the cloth irrespective of the width thereof, a feeler control member extending transversely of the cloth at the under side thereof and centrally pivotally mounted, said two feeler fingers extending rigidly upward and outward from opposite ends of said control member, a box-like support structure mounted below said feeler control member and upon which the latter has its said central pivot, said box-like support structure having guiding means upon which said box-like support structure is movable up and down according as the width of the cloth diminishes or increases, an upright plate-like member connected with and movable with said box-like support structure, and having a downwardly extending part, a T-head member pivoted at its lower part upon the lower part of said plate-like member, inclined connections from the lower end of said T-head member to the opposite ends of said feeler control member to rock the same vertically upon its pivot, a pivotally mounted counterweight connected to said movable box-like support structure thereby to move it yieldingly up or down in accordance with the varying widths of the cloth, thereby to keep said two feeler fingers constantly in proper feeling engagement with the lateral edges of the cloth, mercury receptacles mounted respectively upon the opposite outwardly extending arms of said T-head member, and having terminals whereat a circuit may be closed upon tilting movement of said T-head member, and an electric circuit including said terminals.

4. Cloth guiding mechanism in accordance with claim 3, wherein the electric circuit includes a pair of solenoids, and wherein there is a second roll oppositely transversely inclined to said first roll, and about which two rolls the cloth passes, and each of said two rolls extending half-way across the cloth from opposite edges thereof, and operative connections from said solenoids to said rolls respectively, whereby said rolls are moved in respectively opposite directions upon their transversely extending axes upon the energization of said solenoids respectively.

5. Cloth guiding mechanism constituting an attachment particularly adapted for and coacting with cloth handling and cloth processing machines having at least one transversely-extending transversely-inclined roll about which the cloth passes, which roll is mounted upon an axis, the angle of transverse inclination of which may be changed by the guiding mechanism, thereby to rectify the course of travel of the cloth, and which cloth handling and cloth processing machine is operable with cloths of different widths and also with cloths of varying widths, said cloth guiding mechanism comprising for such purpose, two feeler fingers upwardly and outwardly inclined from their support at the under face of the cloth so as to engage respectively the opposite edges of the cloth irrespective of the width thereof, a feeler control member extending transversely of the cloth at the under side thereof and centrally pivotally mounted, said two feeler fingers extending rigidly upward and outward from opposite ends of said control member, a box-like support structure mounted below said feeler control member and upon which the latter has its said central pivot, said box-like support structure having guiding means upon which said box-like support structure is movable up and down according as the width of the cloth diminishes or increases, an upright plate-like member connected with and movable with said box-like support structure, and having a downwardly extending part, a T-head member pivoted at its lower part upon the lower part of said plate-like member, inclined connections from the lower end of said T-head member to the opposite ends of said feeler control member to rock the same vertically upon its pivot, a pivotally mounted counterweight connected to said movable box-like support structure thereby to move it yieldingly up or down in accordance with the varying widths of the cloth, thereby to keep said two feeler fingers constantly in proper feeling engagement with the lateral edges of the cloth, said T-head member having associated therewith electrical circuit means including two pairs of contacts respectively closed by opposite movements of said feeler fingers in accordance with the lateral displacement of the traveling cloth to the right or to the left of the correct path of travel thereof.

6. Cloth guiding mechanism in accordance with claim 5, wherein there is a second roll oppositely transversely inclined to said first roll, and about which two rolls the cloth passes, and each of said two rolls extending half-way across the cloth, and wherein the electrical circuit includes a pair of solenoids, and wherein there are operative connections from said solenoids respectively, whereby said rolls are moved in respectively opposite directions upon energization of said solenoids respectively to change the angles of their transverse inclination.

7. Cloth guiding mechanism constituting an attachment particularly adapted for and coacting with cloth handling and cloth processing machines having at least one transversely-extending transversely-inclined roll about which the cloth passes, which roll is mounted upon an axis, the angle of transverse inclination of which may be changed by the guiding mechanism, thereby to rectify the course of travel of the cloth, and which cloth handling the cloth processing machine is operable with cloths of different widths and also with cloths of varying widths, said cloth guiding mechanism comprising for such purpose, two feeler fingers upwardly and outwardly inclined from their support at the under face of the cloth so as to engage respectively the opposite edge of the cloth irrespective of the width thereof, a feeler control member extending transversely of the cloth at the under side thereof and centrally pivotally mounted, said two feeler fingers extending rigidly upward and outward from opposite ends of said control member, a box-like support structure mounted below said feeler control member and upon which the latter has its said central pivot, said box-like support structure having guiding means upon which said box-like support structure is movable up and down according as the width of the cloth diminishes or increases, an upright plate-like member connected with and movable with said box-like support structure, and having a downwardly extending part, a second member movably mounted upon said plate-like member, inclined connections therefrom to the opposite ends of said feeler control member to rock it, and a counterweighting member connected to said movable

box-like support structure thereby to move it yieldingly up and down in accordance with the varying widths of the cloth, thereby to keep said two feeler fingers constantly in proper feeling engagement with the lateral edges of the cloth.

8. Cloth guiding mechanism in accordance with claim 7, wherein two pairs of contacts are carried by said second member and are respectively closed by opposite movements of said feeler fingers in accordance with the lateral displacement of the traveling cloth to the right or to the left of its correct path of travel.

9. Cloth guiding mechanism in accordance with claim 3, wherein the mercury receptacles are pivotally mounted adjacent the ends of the arms respectively of the said T-shaped member for rocking movement thereof.

10. Cloth guiding mechanism constituting an attachment particularly adapted for and coacting with cloth handling and cloth processing machines having at least one transversely-extending transversely-inclined roll about which the cloth passes, which roll is mounted upon an axis, the angle of transverse inclination of which may be changed by the guiding mechanism, thereby to rectify the course of travel of the cloth, and which cloth handling and cloth processing machine is operable with cloths of different widths and also with cloths of varying widths, said cloth guiding mechanism comprising for such purpose, two feeler fingers upwardly and outwardly inclined from their support at the under face of the cloth so as to engage respectively the opposite edge of the cloth irrespective of the width thereof, a feeler control member extending transversely of the cloth at the under side thereof and centrally pivotally mounted, said two feeler fingers extending rigidly upward and outward from opposite ends of said control member, a box-like support structure mounted below said feeler control member and upon which the latter has its said central pivot, said box-like support structure having guiding means upon which said box-like support structure is movable up and down according as the width of the cloth diminishes or increases, an upright plate-like member connected with and movable with said box-like support structure, and having a downwardly extending part, a T-head member pivoted at its lower part upon the lower part of said plate-like member, inclined connections from the lower end of said T-head member to the opposite ends of said feeler control member to rock the same vertically upon its pivot, a pivotally mounted counterweight connected to said movable box-like support structure thereby to move it yieldingly up or down in accordance with the varying widths of the cloth, thereby to keep said two feeler fingers constantly in proper feeling engagement with the lateral edges of the cloth, said T-head member having associated therewith electrical circuit means including two pairs of contacts respectively closed by opposite movements of said feeler fingers in accordance with the lateral displacement of the traveling cloth to the right or to the left of the correct path of travel thereof, the said two feeler fingers extending upwardly and outwardly between two slightly spaced stationary rods that extend transversely across the entire width of the cloth at one face thereof.

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