Nov. 24, 1959 K. SOMMER 2,914,058

DRESSING DEVICES

Filed Aug. 21, 1958 2 Sheets-Sheet 1

FIG. 1

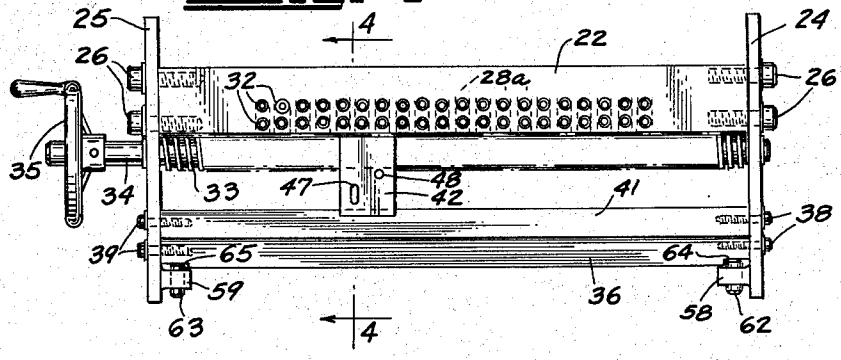


FIG. 2

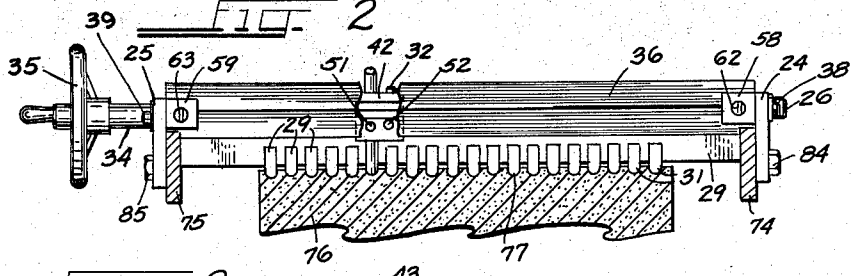


FIG. 3

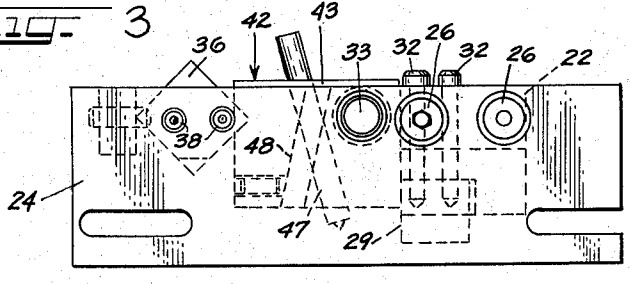


FIG. 4

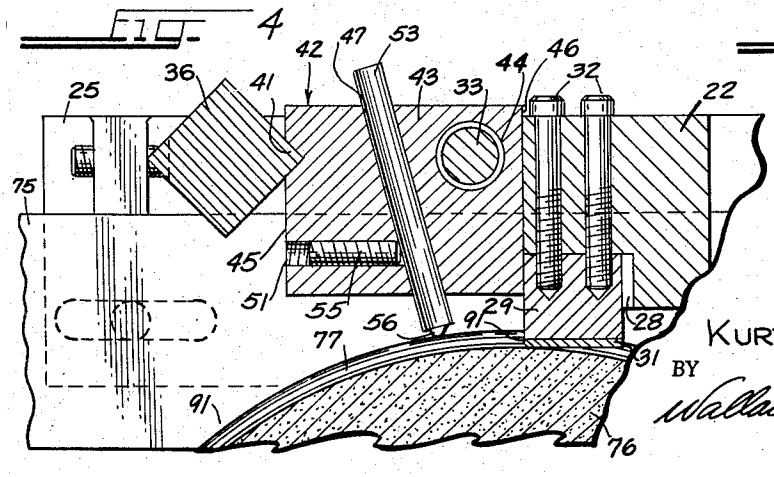
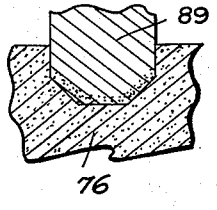


FIG. 9



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DRESSING DEVICES

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FIG. 5

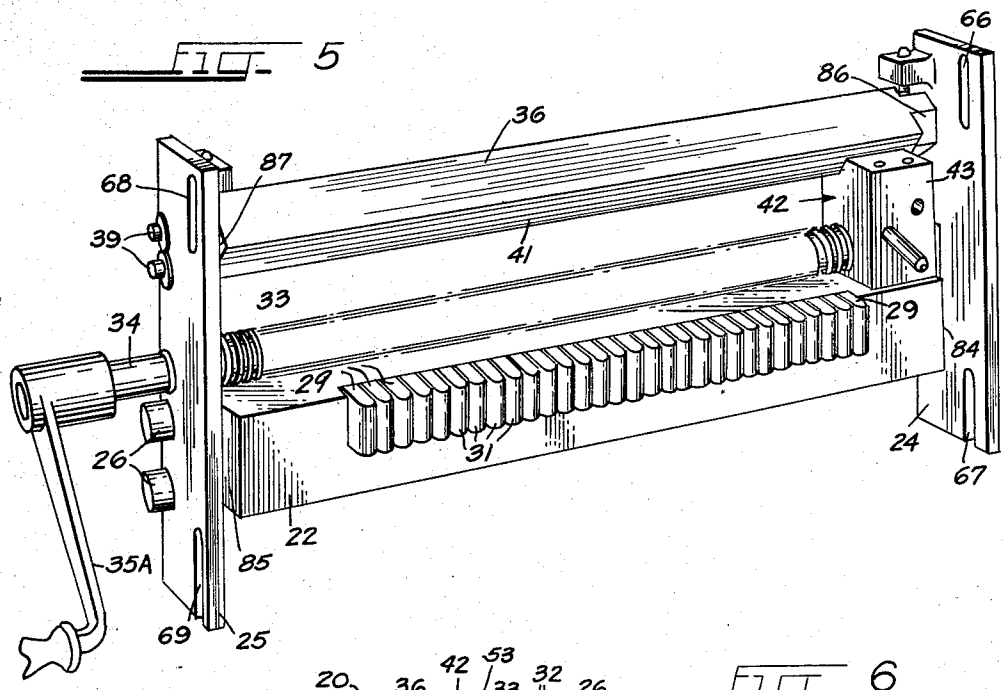


FIG. 6

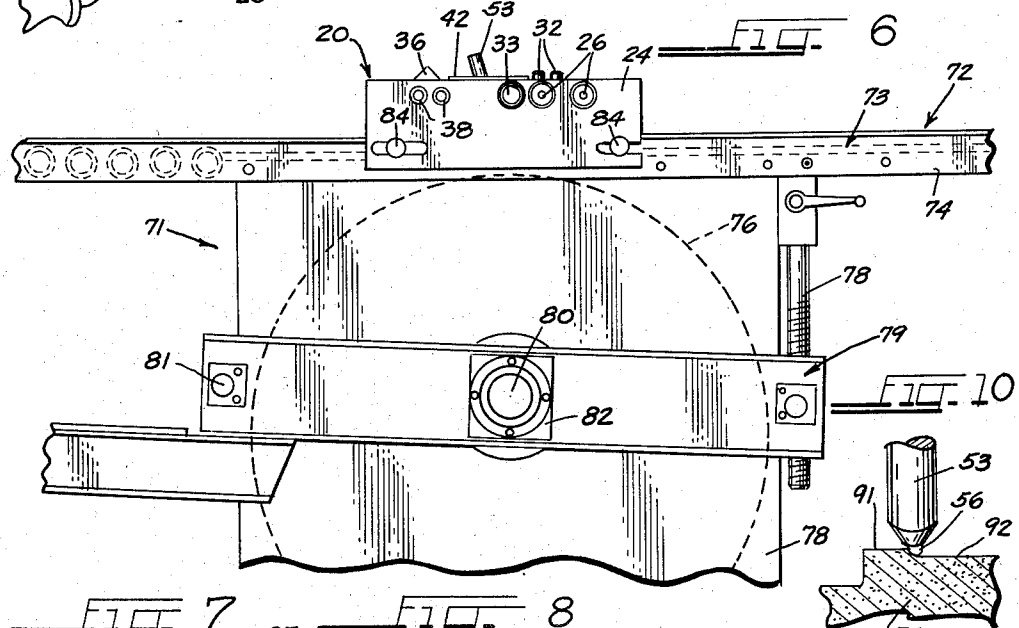


FIG. 10

FIG. 7

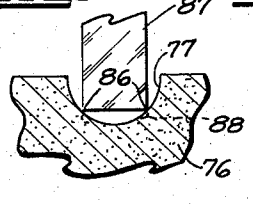
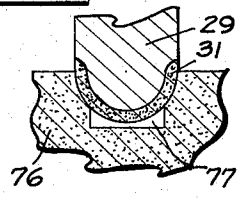


FIG. 8



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2,914,058

DRESSING DEVICES

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Application August 21, 1958, Serial No. 756,410

5 Claims. (Cl. 125—11)

This invention relates to dressing devices and, more particularly, to devices for dressing multiple-groove abrading wheels of the kind utilized in glass manufacturing and in other industries. This application is a continuation in part of application Serial No. 607,064, filed August 30, 1956, now abandoned.

In the manufacture of panes of glass, and in other similar applications, it is frequently necessary to perform a finishing operation upon the edges of the panes in order to afford a completely finished product. Multiple-groove abrading or polishing wheels are frequently used for this purpose, particularly where relatively high output volume is required. The abrading wheels may be employed to provide edges of rounded, substantially semi-circular cross sectional configuration; in other instances, they may be used to finish the panes with flat edges bevelled at the corners to avoid sharp projections. The shape of the finished pane edges, in either instance, is determined by the cross-sectional contour of the grooves in the abrading wheel.

Ordinarily, in finishing the edges of panes of glass or the like, the panes are fed on edge through a plurality of grinding and abrading or polishing stations. At each station, the edges of the panes are engaged in the grooves of an abrading wheel. The abrading wheels are customarily rotated in a direction such that the wheel surface engaged by the pane moves in opposition to the direction of movement of the pane.

In order to achieve the desired edge configuration in the finished product, it is essential to maintain the abrading wheel grooves within relatively close tolerances as regards cross-sectional configuration. Consequently, it is necessary to dress the grooves at relatively frequent intervals to retain the desired configuration, particularly in the finishing of glass and other hard materials. Dressing the grooves of the polishing wheels has heretofore most frequently been performed by hand, a workman using a hand tool to dress each groove individually. This hand dressing technique is, at best, a slow and tedious procedure which requires an inordinate amount of time, especially when carried out on multiple-groove wheels having relatively large numbers of grooves, as are common in industry today. Moreover, it is difficult to achieve the desired uniformity of grooves in a hand dressing operation, since the groove contour is dependent to at least some extent upon the skill of the workman.

Different devices and apparatus have been proposed in the past for performing the necessary dressing operations upon multiple-groove abrading wheels. For example, one such previously known device comprises an array of pencil-like dressing tools mounted in alignment with the grooves of an abrading wheel in conjunction with the abrading station at which the wheel is mounted. The dressing tools, as they become worn through use, are rotated and advanced toward the abrading wheel in order to preserve an evenly rounded configuration in the portion of each tool that contacts the abrading wheel. Because only a small contact surface is afforded by each tool, it is

not possible to use a device of this nature for dressing grooves of other than rounded configuration. Moreover, the effective contour of the tools may change, with use, if the tools are not rotated evenly as they are advanced, or if the side portions of the tools become worn, as may occur in the case of relatively deep grooves.

Other previously known dressing arrangements have provided for the simultaneous dressing of multiple grooved wheels where the grooves are of other than consistent rounded contour. These devices, however, have constituted complete independent dressing machines and have required that the abrading wheel being dressed be removed from its normal operating station and installed in the dressing machine. This is a relatively costly and time-consuming procedure, particularly with the large and heavy abrading wheels commonly employed in the finishing of panes of glass. Moreover, even such independent dressing machines have frequently failed to afford adequate provisions to prevent changes in effective contour of the dressing tools with continued use.

Another costly and difficult problem encountered in this field relates to the face portion, rather than the grooves, of the abrading wheel. As continued dressing operations are carried out with respect to the grooves of a wheel, the grooves become deeper. Eventually, the grooves are so deep that they contact a substantial portion of the flat surfaces of the panes. As a result, undesirable ridges may be formed in the peripheral portions of those surfaces; in other instances, misalignment of the glass with respect to the abrading wheel may cause breakage of the glass. It is thus necessary to dress the face portion of the wheel, periodically, to maintain the depth of the grooves within practical working limits. This face dressing operation has been, in many respects, even more difficult and costly than the groove dressing procedure. No effective apparatus has been available, however, for performing the face dressing operation while the wheel is mounted in its abrading station, on other than a hand-work basis.

A primary object of the invention, therefore, is to eliminate individual hand dressing of a multiple groove abrading wheel and to provide a new and improved dressing device effective to carry out a complete dressing operation while the abrading wheel remains mounted in its usual abrading station.

Another object of the invention is to provide a new and improved dressing device capable of dressing both the grooves and the face of a multiple-groove abrading or polishing wheel more quickly, efficiently, and economically than is possible with hand methods or previously known devices.

A further object of the invention is the provision of a new and improved dressing device for a multiple-groove abrading wheel which rapidly and simultaneously dresses all of the wheel grooves to a uniform depth and configuration without requriing stopping of the wheel and without requiring individual guaging of the grooves.

An additional object of the invention is to provide a new and improved dressing device for a multiple-groove polishing or abrading wheel which may be used in conjunction with any desired groove contour and in which the groove contour may be conveniently and effectively changed for one or more of the grooves without requiring replacement of the dressing tools for other grooves.

A specific object of the invention is to afford a new and improved multiple-groove dressing device which may be used for a protracted series of dressing operations with respect to both the grooves and face of an abrading wheel without requiring more than minor adjustment.

Another object of the invention is the provision of a new and improved dressing device for a multiple-groove abrading or polishing wheel which includes no complex

tool advancing or actuating apparatus yet which effectively and conveniently compensates for wear of the dressing tools.

Other and further objects of the present invention will be apparent from the following description and claims and are illustrated in the accompanying drawings which, by way of illustration, show a preferred embodiment of the present invention and the principles thereof and what is now considered to be the best mode for applying those principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention.

In the drawings:

Fig. 1 is a plan view of a dressing device constructed in accordance with a preferred embodiment of the invention, and shows a fragmentary portion of a glass working machine in which the dressing device may be employed;

Fig. 2 is a front elevation view of the dressing device of Fig. 1, a portion of the device being cut away to illustrate certain structural details;

Fig. 3 is a side elevation view of the dressing device of Fig. 1, drawn to a larger scale;

Fig. 4 is a detail sectional view, taken approximately along line 4—4 in Fig. 1;

Fig. 5 is a perspective view, taken from the bottom, of the dressing device of Fig. 1;

Fig. 6 is a side elevation view of the dressing device showing the device mounted in operative position on an abrading or polishing machine;

Fig. 7 is a detail sectional view of a pane of glass engaging an abrading wheel;

Fig. 8 is a detail sectional view of a groove dressing tool usable in the device of Fig. 1;

Fig. 9 is a detail sectional view of another groove dressing tool usable in the device of Fig. 1; and

Fig. 10 is a detail view, partly in cross section, of the face dressing tool of the device.

The dressing device **20** illustrated in Figs. 1 through 6, which comprises a preferred embodiment of the invention, includes a cross bar **22** mounted between two brackets **24** and **25**. The cross bar **22** is preferably rectangular in cross sectional configuration, as indicated in Figs. 4 and 5, and may be affixed to the two brackets by any suitable means such as the two sets of bolts **26** and **27** which extend through the brackets **24** and **25**, respectively, and are threaded into opposite ends of the cross bar.

The cross bar **22** is provided with a plurality of elongated spaced slots or openings **28** which are located at the lower left hand edge of the bar as seen in Fig. 4. The closed ends of the slots **28** need not be square, but may be rounded as indicated by reference numeral **28A** in Fig. 1. Within the slots **28** there are mounted a corresponding plurality of dressing tools **29**. Each of the tools **29** is a substantially rectangular block, preferably mild steel, having a relatively long lower edge **31** which constitutes the working edge of the tool. Any suitable abrasive material may be used in the grinding edges **31** of the tools **29**; a highly satisfactory tool may be formed by using a mild steel block impregnated to a depth of one-eighth inch with diamond dust, preferably of the order of 40 grit in size. The contour of the cutting edge **31**, of each tool may be of rounded configuration, as indicated in Figs. 2 and 5; substantially different tool contours may be used, however, as explained in detail hereinafter. Each of the tools **29** is preferably provided with a pair of threaded openings in the upper edge portion thereof. As best shown in Fig. 4, a pair of screws **32** extend through corresponding apertures in the cross bar **22** and are threaded into the tool openings to afford a convenient and effective means for mountnig the tools in fixed positions within the recesses **28** in the cross bar.

A lead screw **33** is journalled in the two brackets **24** and **25** and extends between the brackets in substantially parallel spaced relation to the cross bar **22**. One end **34** of the lead screw extends beyond the bracket **25** and carries a hand wheel **35** (Figs. 1 and 2) which is utilized in operating the lead screw, as described more fully hereinafter. If desired, a simple handle **35A** may be substituted for the hand wheel **35** (see Fig. 5).

A guide bar **36** is also mounted between the two brackets **24** and **25** and is disposed in substantially parallel spaced relation to the lead screw **33**, being located on the opposite side of the lead screw from the cross bar **22**. The guide bar **36** may be secured to the brackets by any suitable means such as the screws **38** and **39** which extend through the brackets **24** and **25**, respectively, and are threaded into suitable openings in the opposite ends of the guide bar. The guide bar, which preferably comprises a rectangular steel bar, preferably is not mounted with any of its sides facing the lead screw. Rather, one corner or edge portion **41** of the guide bar is located in facing relation to the lead screw to afford a convenient and effective horizontal guide for a face dressing toolholder **42**.

The toolholder **42**, in the illustrated embodiment of the invention, comprises a substantially rectangular steel block **43** having a threaded opening through which the lead screw **33** extends. One face **45** of the toolholder block **43** is provided with a substantially V-shaped slot which receives the edge portion **41** of the guide bar **36**. The opposite face **46** of the block **43** engages one face of the cross bar **22**. Thus, the toolholder block **43** is maintained in accurate alignment with the cross bar **22** by means of its engagement with the cross bar and with the guide bar **36**. This is particularly important because the toolholder **42** is moved transversely of the dressing device **20** in the course of a face dressing operation, as described in detail here and after.

The toolholder block **43** is provided with a pair of apertures **47** and **48**, which extend downwardly through the toolholder block. Each of the two apertures is inclined at a small angle from the vertical, the direction of inclination being opposite for the two apertures. The toolholder block is also provided with a pair of horizontal apertures **51** and **52** which are aligned with and intersect the apertures **47** and **48** respectively. As best indicated in Fig. 4, a face dressing tool **53** may be mounted in one of the toolholder apertures, in this instance the aperture **47**, and is retained in fixed position therein by means of a set screw **55** which is threaded into the horizontal opening **51**. In the illustrated apparatus the dressing tool **53** is of substantially pencil-like configuration and is provided with a diamond tip **56** at the lower extremity thereof.

It may be desirable to afford additional means for positively preventing rotation of the guide bar **36**. In the dressing device **20** this additional means comprises a pair of bosses **58** and **59** which are rigidly mounted upon and extend inwardly of the two brackets **24** and **25**, respectively. A pair of set screws **62** and **63** are threaded into suitable openings in the bosses **58** and **59** respectively. The set screw **62** engages a flat **64** at the end of the guide bar **36** adjacent the bracket **24**. Similarly, the set screw **63** is engaged in a second depression or flat **65** at the opposite end of the guide bar. The two set screws **62** and **63** afford an effective and positive means for preventing any rotational movement of the guide bar **36** and thus assure accurate alignment of the guide bar with the cross bar **22**.

As best indicated in Figs. 3 and 5, the bracket **24** is provided with a first elongated mounting aperture **66** at the end of the bracket adjacent the guide bar **36**. The bracket **24** is also provided with a second elongated mounting slot **67** in the end thereof adjacent the cross bar **22**. In the illustrated arrangement, the slot **66** is shown as closed at both ends, whereas one end of the slot **67** is open; this construction is not critical, however, and it is possible to use a pair of open ended slots or a pair of closed slots if desired. Similarly, the bracket **25** is provided with an elongated closed slot **68** adjacent the guide bar **36** and an

open ended slot 69 at the end of the bracket nearest the cross bar 22.

The dressing device 20 is particularly advantageous in dressing the grooves of abrading or polishing wheels of the kind employed in finishing the edges of panes of glass, or the like, as pointed out hereinabove. Moreover, the device is effective to carry out a dressing operation without removing an abrading wheel from its normal operating position. The dressing device 20 may, for example, be employed in an abrading machine of the kind described in United States Patent Number 2,796,707 to Meter, issued June 25, 1957. The mounting of the dressing device 20 on an abrading machine of this kind is illustrated in Fig. 6.

Only one abrading station of the machine 71 is shown. As shown in Fig. 6, the abrading machine 71 may include an elongated conveyor 72 and a table 73. A plurality of glass plates are moved along the table 73 by pushers which are connected by chains that move along the upper edge portion of oppositely disposed guide rails such as the guide rails 74 and 75, Figs. 2, 4 and 6. The conveyor arrangement is disclosed in substantial detail in the aforementioned patent to Meter. The abrading machine, in accordance with conventional practice, may have a plurality of grooved abrading or polishing wheels made of suitable material, such as aluminum oxide, the wheel being suitably mounted closely adjacent the conveyor. As the panes of glass move along the conveyor, the edge of each pane moves successively through one groove of each of the abrading wheels. In this manner, after the panes of glass have traveled the full length of the conveyor, the edge portion of each pane is ground and polished as the result of a series of abrading and polishing steps.

One such grooved abrading wheel 76 is shown in the drawings. The wheel 76 is provided with a plurality of grooves 77 on the periphery thereof. The wheel 76 is mounted (see Fig. 6) in a housing 78 on the conveyor 72. The wheel is disposed immediately below an opening in the table 73 of the conveyor; the mounting should be such that the wheel 76 may be raised from the lower or inactive position shown in Fig. 6 into an upper operating position. A portion of the abrading wheel extends through the table opening to engage the panes of glass moving along the table 73. If it is assumed that the glass moves from left to right along the conveyor 72, the wheel 76 is rotated in a counter clockwise direction as viewed in Fig. 6.

It will be appreciated by those skilled in art that any suitable means for adjusting the vertical position of the wheel 76 may be used. For example, the mounting mechanism shown and described in the aforementioned Meter patent may be employed. In Fig. 6, the illustrated adjusting mechanism comprises a feed screw 78 which is utilized to raise and lower one end of an adjusting frame 79 in relation to the main frames 74 and 75 of the conveyor. The pivot point for the frame 79 is indicated by the reference numeral 81. The shaft 80 of the abrading wheel 76 is journalled in a suitable bearing, such as the bearing 82, on the frame 79.

In order to afford a convenient and effective means for mounting the dressing device 20 upon the conveyor 72 of the glass finishing machine, a pair of slots 84 and 85 are formed in the opposite ends of the cross bar 22 immediately adjacent the brackets 24 and 25, respectively. A similar pair of slots 86 and 87 are formed in the opposite ends of the guide bar 36. Preferably the upper surface of each of the slots 84—87 is aligned with the lower surfaces of the two bosses 52 and 59. It is thus seen that the slots and the bosses, together with the brackets 24 and 25, effectively afford a pair of elongated receptacles for receiving the two rails 74 and 75, as perhaps best shown in Fig. 2.

For reasons pointed out more fully hereinafter, it is highly desirable that the dressing device 20 be easily and conveniently mounted upon or removed from the rails 74 and 75, as the case may be. Moreover, it is equally important that convenient and effective means be provided for making minor adjustments in the position of the dressing device along the rails 74 and 75. Consequently, the brackets 24 and 25 are not permanently affixed to the rails. Rather, the brackets are secured to the rails 74 and 75 by suitable bolts 84 and 85 which extend through the slots in the two brackets and are threaded into suitable tapped openings in the rails 74 and 75 respectively. Thus, as best illustrated in Fig. 6, the bracket 24 may be adjusted longitudinally of the rail 74 simply by loosening the two bolts 84, permitting the bracket to slide relative to the bolts. A similar arrangement is employed on the opposite side of the abrading machine 71. Moreover, it is a simple matter to remove the four bolts 84, 85, thereby permitting convenient and effective removal of the entire dressing device 20 from the abrading machine. When the dressing device is in use, of course, the bolts 84 and 85 are tightened to hold the dressing device in fixed position upon the rails 74 and 75.

When the abrading machine 71 is placed in operation, the grooves 77 of the abrading wheel 76 each engage the edge portion 86 of a pane of glass 87 in the manner illustrated in Fig. 7. As the glass pane 87 engages the abrading wheel, the corners 86 are worn away; after passing through a number of abrading stations, a smooth rounded edge contour is developed along the entire length of the glass pane. With successive operations, however, the glass tends to wear away the abrading wheel 76 and to change the contour of the grooves 77 as indicated by dash lines 88. This progressive wearing action on the abrading wheel, of course, reduces the effectiveness of the abrading station and eventually making dressing of the abrading wheel essential.

To carry out a dressing operation; the conveyor chains (not shown) are lifted and the dressing device 20 is mounted upon the rails 74 and 75 of the abrading machine 71 in the manner illustrated in Fig. 6. Before this is accomplished, it is first desirable to lower the wheel 76 so that it does not interfere with the mounting of the dressing device. Thereafter, the dressing wheel is elevated to bring its grooves 77 into engagement with the individual groove dressing tools 29 of the dressing device, as illustrated in Fig. 8. The abrading wheel 76 is rotated, and as it rotates the grooves 77 are dressed and are again brought into conformity with the desired cross-sectional configuration. Of course, in those instances where a different groove is desired, somewhat different dressing tools such as the dressing tool 89 shown in Fig. 9 may be employed, the contour of the dressed groove being determined by the contour of the dressing tool.

The first time the dressing device 20 is employed to carry out a dressing operation, the device may be aligned with the wheel 76 as shown in Fig. 4, with the leading edges 91 of the dressing tools 29 in contact with the wheel and engaging the base portions grooves 77. With continued use of the dressing device, however, the dressing tool 29 may become worn. As this occurs, the dressing device is moved more and more to the left, as seen in Fig. 4, in order that successive portions of the tool edges 31 may be utilized in subsequent dressing operations. In this manner, a relatively large number of groove dressing operations may be carried out with a single set of tools 29 without requiring replacement of the dressing tools. Furthermore, by this progressive adjusting technique the effective contour of each dressing tool is maintained constant through a large number of dressing operations. Of course, this can only be accomplished when the dressing tools 29 are provided with relatively long tool edges 31.

With continued use of the abrading wheel 76 the grooves 77 become deeper and deeper. The grooves are worn away by the glass panes, such as the panes 87 and are of course further deepened by the dressing operations carried out by means of the device 20. Eventually, the

grooves become undesirably deep and a dressing operation on the face of the abrading wheel is required.

Face dressing of the abrading wheel **76** is effected by the dressing device **20** in extremely simple and convenient manner and may be carried out simultaneously with a groove dressing operation. For face dressing of the wheel **76**, the tool **53** is adjusted, in its position within the block **43**, until it is in contact with the surface **91** of the abrading wheel. In fact, the tool **53** is adjusted to take a relatively small cutting bite from the abrading wheel. The tool is then locked in position by means of the set screw **55**. After adjustment of the tool **53**, the face dressing operation is accomplished simply by rotating the operating handle **35**, or **35A** as the case may be, to advance the toolholder **42** across the gap between the two brackets **24** and **25**. In this manner, the dressing tool 53, and particularly the cutting portion **56** thereof, is effective to grind the face of the abrading wheel to a new surface level as indicated by reference numeral **92** in Fig. 10. Usually, it is preferable to traverse the toolholder **42** across the wheel **76** at least twice in the course of a face dressing operation. Moreover, if a relatively large reduction in the diameter of the wheel **76** is required, it may be necessary to readjust the dressing tool **53** for a second dressing traverse in order to complete the operation.

In some abrading machines, it may be necessary to reorient the dressing device to overcome minor difficulties which may be presented in the arrangement illustrated in the drawings. For example, if excess to the abrading machine cannot be obtained from one side, or if the direction of rotation of the abrading wheel is opposite that of the wheel **76**, it may be desirable to reverse the relative locations left to right, of the dressing tools **29** and the face dressing tool **53** with regard to the abrading wheel **76**. On the other hand, in some instances it may be desirable to orient the dressing tool **53** at a different angle with respect to the abrading wheel, as by mounting the face dressing tool in the aperture **48** of the block **43** rather than in the aperture **47** as shown. Of course, in a given application it may be desirable to use either the rounded dressing tools **29**, or angled faced tools such as the tool **89**, or some other desired configuration. Moreover, the tools mounted in the device **20** at any given time may differ among themselves if differently contoured grooves are required in a single abrading wheel.

The dressing device **20** completely eliminates hand dressing of the multiple grooved abrading wheel **76**, yet provides for a complete dressing operation without removing the abrading wheel from its normal operating position. Consequently, substantial savings in time, in labor and in loss of machine operation are effected. The wheel may be dressed completely without requiring braking of the wheel; moreover, individual guaging of the grooves is completely unnecessary. The elongated dressing tools **29** provide for a protracted series of dressing operations without requiring any adjustment other than minor movement of the dressing device longitudinally of the rails **74** and **75**. In this regard, it should be noted that no complex tool advancing or adjusting apparatus is required, yet the dressing device **20** effectively compensates for wear of the dressing tools. Moreover, the construction of the dressing device **20** is such that the face dressing tool **53** and its toolholder **42** are always maintained in accurate alignment with the dressing tools **29** and the abrading wheel **76**.

Hence, while the preferred embodiment of the invention has been illustrated and described, it is to be understood that this is capable of variation and modification.

I claim:

1. In an abrading machine of the kind embodying a rotatable grooved abrading wheel supported in a frame including parallel side rails disposed on opposite sides of the machine, a dressing device comprising: an elongated substantial linear support bar having a plurality of tool-receiving recesses of given configuration in one face thereof, said recesses extending transversely of the bar in parallel spaced relation to each other; a plurality of dressing tools each having a mounting portion complementary to the configuration of said recesses and an elongated linear abrading portion complementary in cross sectional configuration to the cross sectional configuration of said abrading wheel grooves; means for removably mounting said dressing tools in fixed positions within said support bar recesses with the abrading portions of said tools projecting from said bar in parallel spaced alignment wtih each other; mounting means on said support bar for engaging said side rails to mount said bar on said abrading machine within a predetermined range of operating positions along said side rails and with the elongated abrading portions of said tools disposed in tangential engagement with respective ones of said abrading wheel grooves; and adjustable retaining means for maintaining said support bar at any of a multiplicity of different positions within said range to vary the points of contact between said dressing tools and said abrading wheel grooves and thereby compensate for wear on said dressing tools at incremental points therealong.

2. In an abrading machine of the kind embodying a rotatable grooved abrading wheel supported in a frame including parallel side rails disposed on opposite sides of the machine, a dressing device comprising: an elongated substantial linear support bar having a plurality of substantially rectangular tool-receiving recesses in one face thereof, said recesses extending transversely of the bar in parallel spaced relation to each other; a plurality of dressing tools each having a substantially rectangular mounting portion and an elongated linear abrading portion complementary in cross sectional configuration to the cross sectional configuration of said abrading wheel grooves; means for removably mounting said dressing tools in fixed positions within said support bar recesses with the abrading portions of said tools projecting from said bar in parallel spaced alignment with each other; mounting means on said support bar for engaging said side rails to mount said bar on said abrading machine within a predetermined range of operating positions along said side rails and with the elongated abrading portions of said tools disposed in tangential engagement with respective ones of said abrading wheel grooves; and adjustable retaining means for maintaining said support bar at any of a multiplicity of different positions within said range to vary the points of contact between said dressing tools and said abrading wheel grooves and thereby compensate for wear on said dressing tools at incremental points therealong.

3. In an abrading machine of the kind embodying a rotatable grooved abrading wheel supported in a frame including parallel side rails disposed on opposite sides of the machine, a dressing device comprising: an elongated substantial linear support bar having a plurality of tool-receiving recesses of given configuration in one face thereof, said recesses extending transversely of the bar in parallel spaced relation to each other; a plurality of dressing tools each having a mounting portion complementary to the configuration of said recesses and an elongated linear abrading portion complementary in cross sectional configuration to the cross sectional configuration of said abrading wheel grooves; means for removably mounting said dressing tools in fixed positions within said support bar recesses with the abrading portions of said tools projecting from said bar in parallel spaced alignment with each other; mounting means on said support bar for engaging said side rails to mount said bar on said abrading machine within a predetermined range of operating positions along said side rails and with the elongated abrading portions of said tools disposed in tangential engagement with respective ones of said abrading wheel grooves, said means comprising a pair of shoulder elements projecting from the opposite ends of said bar and a pair of mounting brackets affixed to said shoulder

elements to define two mounting recesses for receiving said abrading machine side rails; and adjustable retaining means for maintaining said support bar at any of a multiplicity of different positions within said range to vary the points of contact between said dressing tools and said abrading wheel grooves and thereby compensate for wear on said dressing tools at incremental points therealong.

4. A dressing device as set forth in claim 1 and further comprising a guide bar disposed in parallel spaced relation to said support bar; a dressing tool holder mounted in engagement with said support bar and said guide bar and movable therealong transversely of said abrading wheel; and a face dressing tool, mounted in said tool holder in adjustable fixed position with respect to said abrading wheel, said face dressing tool having a grinding portion for dressing the face of said abrading wheel as said tool holder is moved transversely thereof.

5. A dressing device as set forth in claim 1 and further

comprising a guide bar disposed in parallel spaced relation to said support bar; a dressing tool holder having a guide notch in one face thereof; means for mounting said tool holder on said support bar and guide bar with said guide bar engaged in said notch and with another face of said tool holder engaging said support bar; means comprising a lead screw for moving said dressing tool holder longitudinally of said guide and support bars; and a face dressing tool, mounted in said tool holder in adjustable fixed position with respect to said abrading wheel, said face dressing tool having a grinding portion for engaging and dressing the face of said abrading wheel as said tool holder is moved transversely thereof.

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