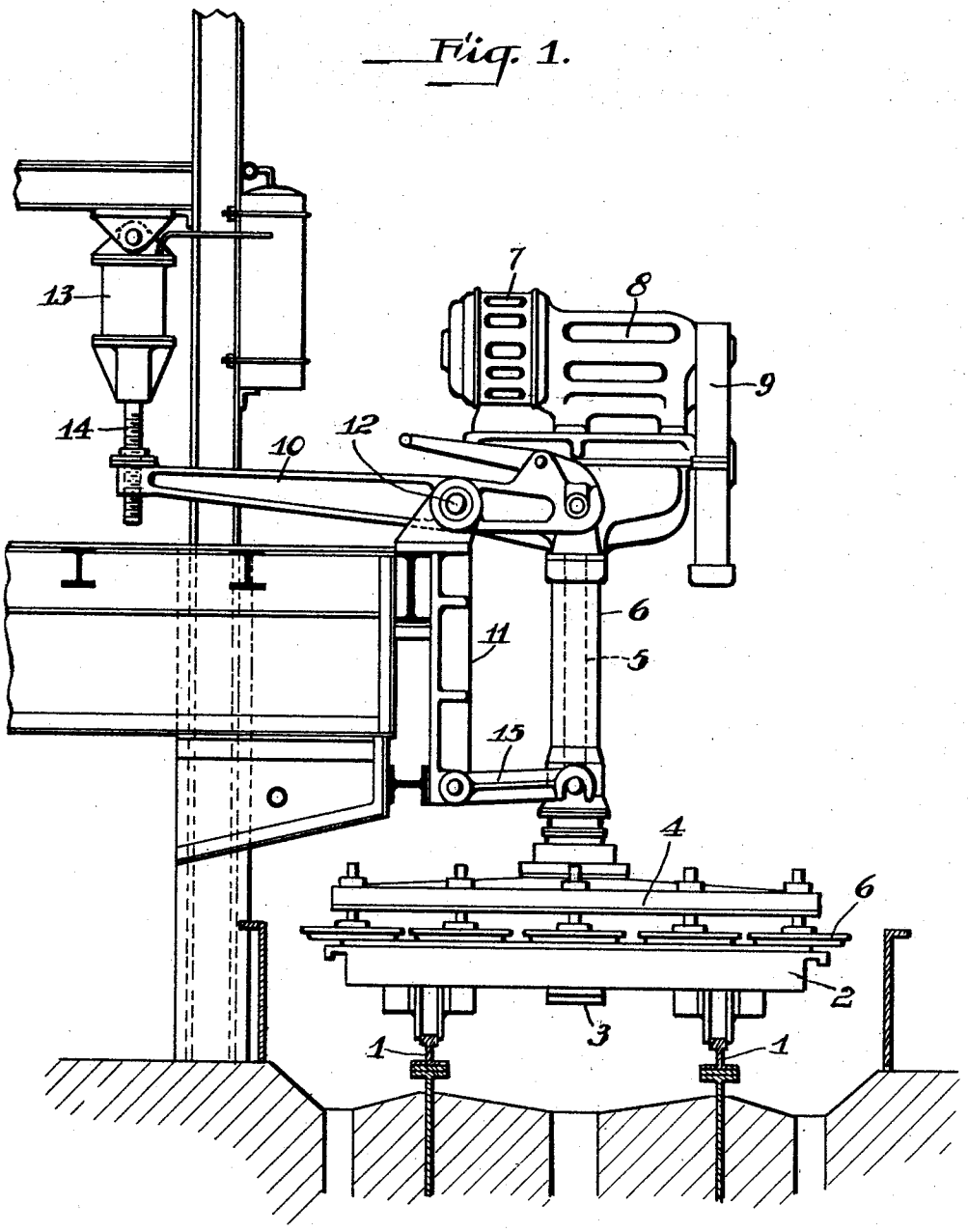
Nov. 15, 1932. H. K. HITCHCOCK 1,887,554

PLATE GLASS POLISHING APPARATUS

Filed Feb. 11, 1930 3 Sheets-Sheet 1

Fig. 1.



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PLATE GLASS POLISHING APPARATUS

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Fig. 4.

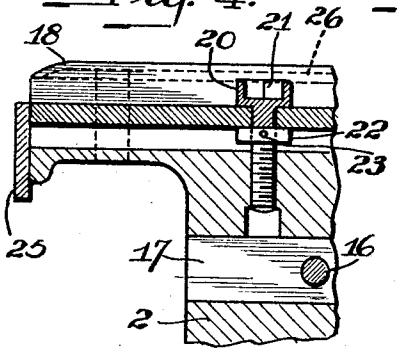


Fig. 3.

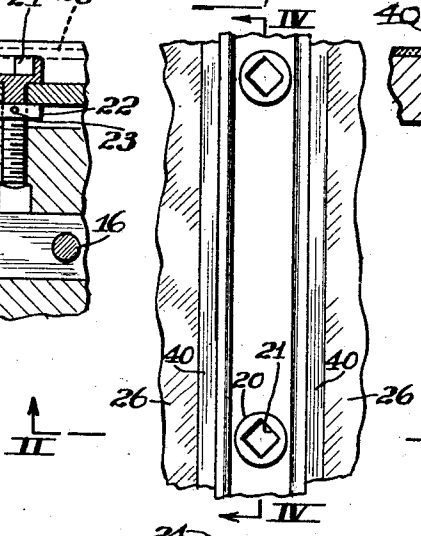


Fig. 9.

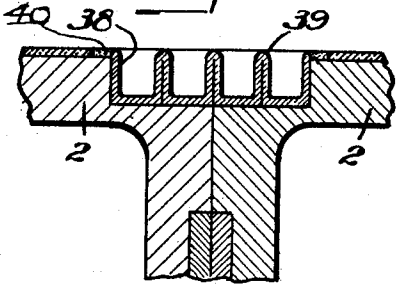
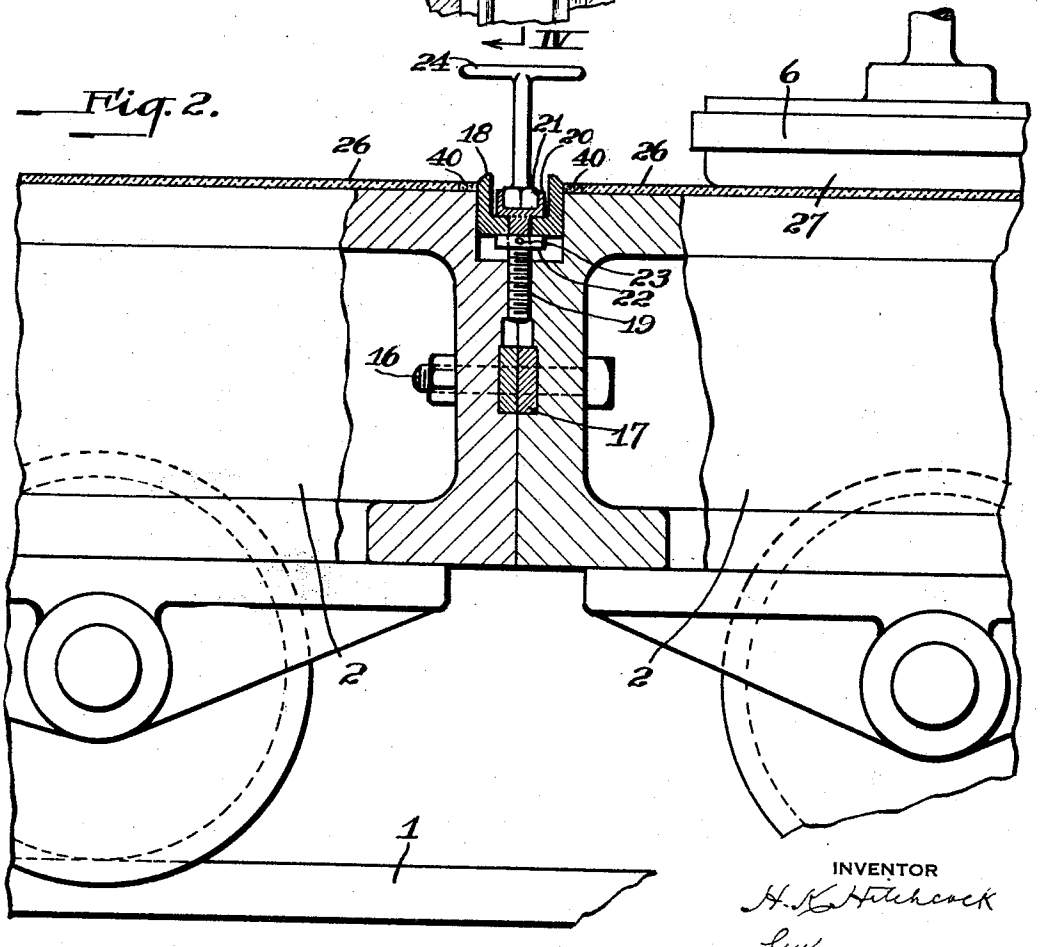


Fig. 2.



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PLATE GLASS POLISHING APPARATUS

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Fig. 5.

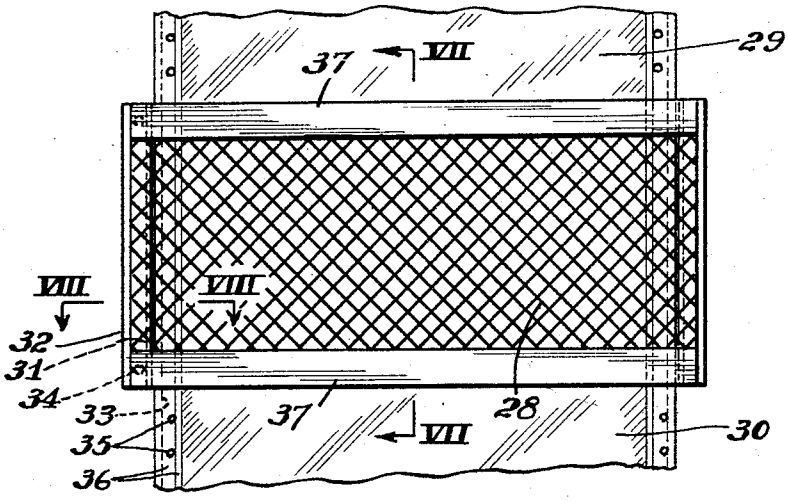


Fig. 6.

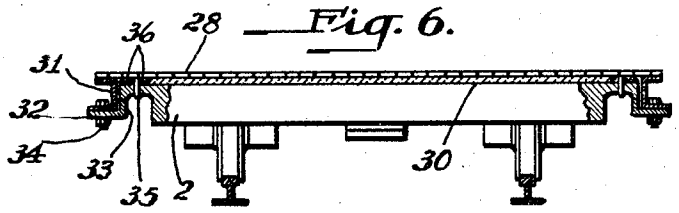


Fig. 7.

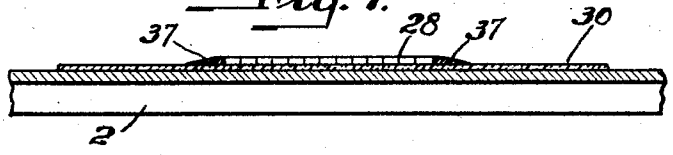
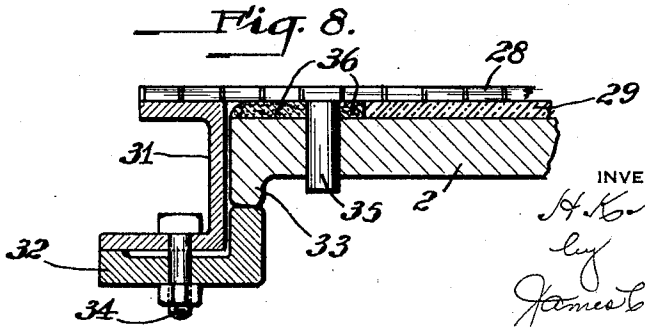


Fig. 8.



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UNITED STATES PATENT OFFICE

HALBERT K. HITCHCOCK, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO PITTSBURGH PLATE GLASS COMPANY, A CORPORATION OF PENNSYLVANIA

PLATE GLASS POLISHING APPARATUS

Application filed February 11, 1930. Serial No. 427,584.

The invention relates to apparatus for polishing plate glass, and particularly to that form of apparatus in which the glass to be polished is carried beneath a series of polishers on cars, tables, or other carrier apparatus. After a certain period of use, the felts of the runners or blocks become caked with rouge or other polishing material and their efficiency is reduced. The object of the present invention is to provide a simple, convenient arrangement for cleaning the felts without interfering with the continuous operation of the apparatus. A further object is the provision of means of the kind specified which is readily applicable to existing apparatus with only a slight modification thereof. Certain embodiments of the invention are illustrated in the accompanying drawings, wherein:

Figure 1 is a side elevation of one of the series of polishing machines employed in the system. Fig. 2 is an enlarged section through two of the tables or cars, such section being taken on the line II—II of Fig. 3. Fig. 3 is a plan view of part of the structure shown in Fig. 2. Fig. 4 is a section taken on the line IV—IV of Fig. 3. Fig. 5 is a plan view of a modification. Fig. 6 is an end view partly in section of the structure of Fig. 5. Fig. 7 is a section on the line VII—VII of Fig. 5. Fig. 8 is a section on the line VIII—VIII of Fig. 5. And Fig. 9 is a detail section similar to that of Fig. 2 of a modification.

Referring to Figs. 1 to 4, 1 is a track upon which a series of tables or cars 2, 2, etc. are mounted, such tables being provided on their lower sides with a series of rack bars 3 by means of which the tables are moved continuously beneath the grinding and polishing machines. 4 is one of a series of polishing spiders carried by a spindle 5 and provided with a plurality of polishing blocks 6, such blocks being faced with felt in the usual way. The spindle 5 is mounted for rotation in a tubular casing 6 which carries at its upper end a motor 7, such motor being arranged to drive the spindle 5 through suitable reduction gearing in the casings 8 and 9, this being a construction well known in the art. The tubular casing 6 is supported upon the arm 10 attached to the framework 11 at the point 12 and the unit is raised and lowered by means of the air cylinder 13 whose piston 14 is pivoted to the end of the lever 10. A second arm 15 pivoted to the frame 11 and to the lower end of the casing 6 guides the lower end of the casing in its up and down movements.

The tables 2, 2, etc. may be secured together to form a continuous train in any desired manner, the bolts 16 being shown for accomplishing this function in Fig. 2. Keys 17 lying in recesses between the abutting ends of the tables serve to hold the upper surfaces of the table at the same level. The scraping device shown in Figs. 2, 3 and 4 comprises a transverse channel 18 mounted for vertical movement in a recess at the ends of the tables, such recess lying partly in one table and partly in the other. The channel 18 is carried by a series of bolts 19 whose upper ends are swivelled in the channel. The heads 20 of the bolts are provided with square recesses 21. The washers 22 are secured against longitudinal movement on the bolts by means of the pins 23. The bolts may be conveniently rotated to adjust the position of the channel by means of the wrench 24 shown in Fig. 2. The ends of the channel are provided with shields or guards 25 (Fig. 4) which project down past the side edges of the tables. The channel is shown in operative or scraping position in Fig. 2, at which time its edges project above the level of the glass sheets 26, 26. As the channel passes beneath the polisher blocks 6, its edges scrape over the lower surfaces of the felts 27 loosening the rouge. When the scraping channel 18 is not in service, it is moved down by means of the bolts 19 so that its edges lie below the level of the glass sheets and the space above the channel is filled with plaster of Paris, which material extends up to the level of the upper surfaces of the glass sheets. Only a part of the tables are provided with the recesses carrying the channels 18 and these scraping devices are only adjusted to operative position when the felts of the polisher blocks become caked with rouge so that a cleaning operation is neces-

sary. This cleaning operation is required only at relatively long intervals.

Figs. 5 to 8 illustrate a modification in which a scraping member 28 is substituted for the member 18 of the Figs. 1 to 4 construction. The member 28 is in the form of a screen which is detachably secured to the tops of the tables intermediate two sheets of glass 29 and 30. The member 28 is secured at its ends to a pair of channel bars 31, 31 by means of which the scraper is secured detachably to the top of the table. The attachment is accomplished by means of a pair of clamps 32, 32 lying beneath the channels, as indicated in Fig. 1 with one leg of the angle beneath the edge 33 of the table. Bolts 34 extending through the channels and clamps serve to secure the clamps in position. The pegs 35 in connection with the plaster 36 hold the side edges of the glass sheets, this being a well-known expedient in the art. At the front and rear edges of the scraper 28, felt strips 37 are preferably employed, such strips being secured at their ends to the channel bars 31, 31. These strips are in the form of inclines, as indicated in Fig. 7 to relieve the felts of the polishers from too direct impact against the scraper which might otherwise tend to injure such felts.

Fig. 9 illustrates another modification of the invention in which a different form of scraper is employed in the transverse recess 38 between the two tables. This scraper member is made of sheet metal bent so as to provide the series of upwardly projecting ribs 39, the tops of such ribs coming at approximately the level of the glass sheets. When it is not desired to use this device as a scraper, the space 38 may be filled up to the level of the tops of the glass sheets with plaster. The device may then be brought into service as a scraper when desired by merely scraping out the plaster and exposing the tops of the bars. In this construction and that shown in Fig. 2, the spaces between the ends of the glass sheets and the scraper are filled with plaster which is indicated by the reference numeral 40.

What I claim is:

1. In combination in apparatus for polishing plate glass, a series of polishing machines each having a rotatable frame provided with a set of polishing runners, tables forming a continuous train mounted for movement beneath the runners and adapted to carry on their upper faces the sheets of glass to be polished, two of such tables having at their abutting ends a transverse recess, and a scraping device seated in such recess.

2. In combination in apparatus for polishing plate glass, a series of polishing machines each having a rotatable frame provided with a set of polishing runners, tables forming a continuous train mounted for movement beneath the runners and adapted to carry on their upper faces the sheets of glass to be polished, two of such tables having at their abutting ends a transverse recess, a scraping device seated in such recess, and means whereby said device may be prevented at will from performing its cleaning and scraping function on the polisher runners while still remaining in said recess.

3. In combination in apparatus for polishing plate glass, a series of polishing machines each having a rotatable frame provided with a set of polishing runners, tables forming a continuous train mounted for movement beneath the runners and adapted to carry on their upper faces the sheets of glass to be polished, two of such tables having at their abutting ends a transverse recess, a scraping device seated in such recess, and means whereby the scraping device may be adjusted vertically so that in its upper position it engages the lower surfaces of the polisher runners and cleans them, and so that in another position it lies below the level of the upper surface of the glass sheets on the tables.

In testimony whereof, I have hereunto subscribed my name this 29th day of Jan., 1930.

H. K. HITCHCOCK.