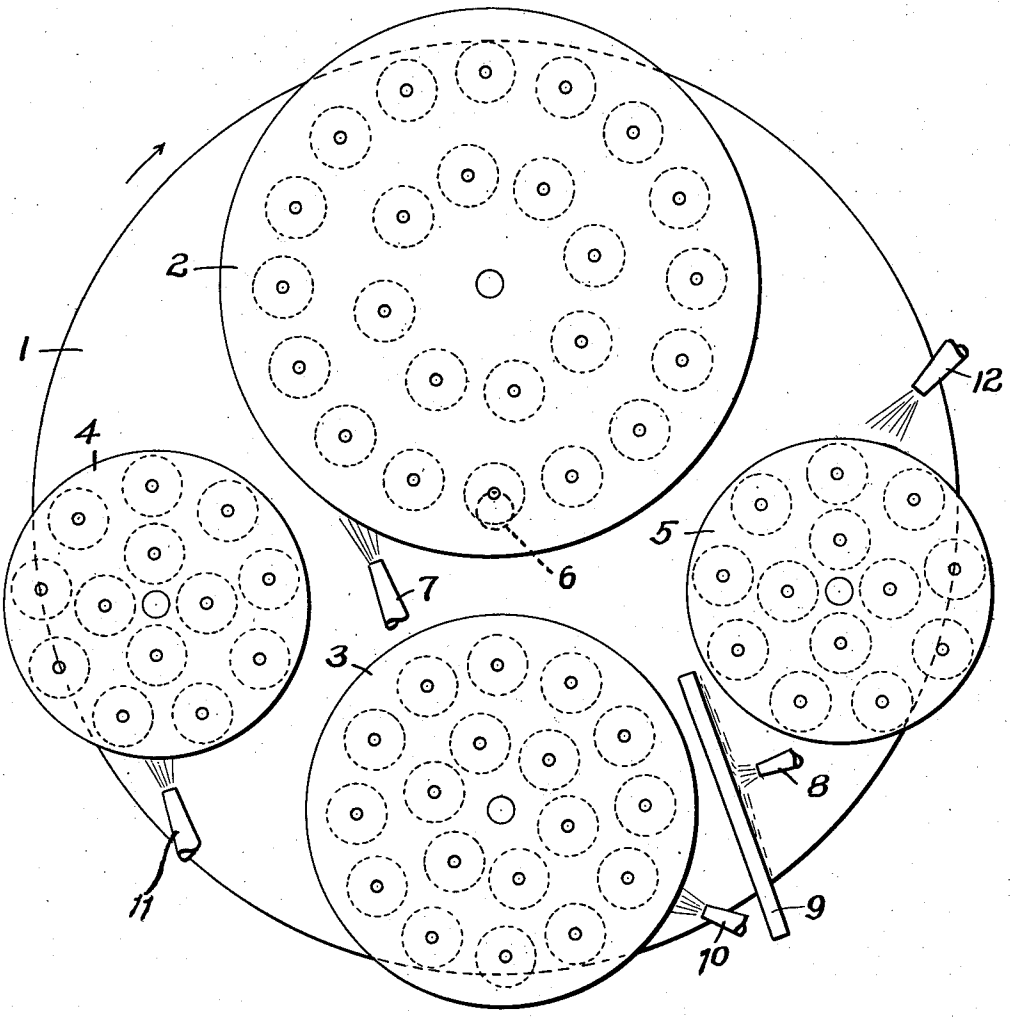
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P. J. HESS

METHOD OF POLISHING PLATE GLASS

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METHOD OF POLISHING PLATE GLASS.

Application filed October 30, 1919. Serial No. 334,611.

The invention relates to a method of polishing plate glass. It has for its principal objects the provision of an improved process of applying the rouge employed whereby the time required for polishing is materially reduced with a consequent saving in power and polishing felt.

This process has been developed in connection with the improved type of rouge also constituting my invention and set forth in my copending application, Serial No. 334,565, filed October 30th, 1919, and the best results are secured when this type of rouge is employed, but even where ordinary rouge is employed, the process has a substantial advantage over the method of applying rouge heretofore employed.

The common practice in polishing plate glass is as follows. After the glass has been ground or smoothed on a rotating grinding table, the table is moved over a track to a position beneath the polishing runners. These runners are circular and are each made up of a plurality of circular polishing blocks covered with felt. The runners are off center with respect to the table so that the rotation of the table causes the rotation of the runners. The number of runners may vary. In some cases there is one large runner and one smaller one, in other cases there is one large runner and three smaller ones; and in other cases there is one large runner and five smaller ones.

For the purpose of illustration the drawing herewith illustrates diagrammatically in plan, the type of polishing machine having four runners.

In this construction 1 is the grinding table on the upper surface of which the glass to be polished is secured, and 2, 3, 4 and 5 are the runners, 2 being the largest runner, 3 the one next in size, and 4 and 5 being still smaller and of the same size. The numeral 6 indicates the center of rotation of the table.

In the polishing operation as heretofore carried out, the first step in the polishing operation was the washing out of the felts the rouge which had accumulated in the polishing of the preceding sheets of glass, such rouge being regarded as so worn and useless as to interfere with the next polishing operation. This washing was accomplished by rotating the table just as in the polishing operation and during such rotation applying water rather freely to the table and runners with a hose. The washing continued for about twenty minutes. After the washing a mixture of rouge and water was applied for about thirty to forty minutes, the mixture being fed onto the table near its center through the passage 7, as indicated in the drawing, so as to be carried under the runner 2 and then under the other runner or runners. At the end of the thirty or forty minute period, the felts become so charged with rouge that the addition of more rouge was found to hinder rather than assist in the polishing, so that it was the practice to add water only through the passage 7 till the conclusion of the operation. This application of water alone continued for from fifty to sixty minutes, so that the total time of polishing was on an average in the neighborhood of one hour and fifty minutes.

My method of washing and of applying the rouge and water is radically different from that just described and results in cutting down the time of polishing from about one hour and fifty minutes to an average of about one hour and five or ten minutes with a great saving in power and felt.

In carrying out my process I preferably limit the washing with water preliminary to applying the rouge to a period of from three to ten minutes, the water being applied through a hose pipe 8 behind a vertically movable scraper or baffle 9, having its lower edge preferably of rubber and in contact with the glass at this stage of the operation. The scraper in connection with the water cleans the table and washes some of the rouge out of the felts, but most of the water is directed off of the table by the inclined scraper, and any water soaking of the felts is avoided. The scraper is then raised and rouge is applied through the passage 7 in a full stream as in the old process, such application continuing about thirty to forty minutes. The flow of rouge is then cut down to about one half the previous flow and this supply continued substantially through the remainder of the operation, a period of about thirty minutes. At the time the quantity of rouge is cut down a flow of water is started through pipes 10, 11 and 12, which discharge is in such position that the water is discharged beneath the runners 3, 4 and 5. This flow of water is continued substantially throughout the remainder of the operation. Just before the completion

of the operation the flow of water and rouge is cut off for about one minute to wipe the table.

The improved method as just described involves a great saving of time, power and felt. A part of the saving in felt is due to the relatively short period of washing at the beginning of the operation. During the application of the rouge there is little wear upon the felt as the rouge is interposed as a protecting coating between the felt and the surface of the glass. During the washing operation this protection coating is removed and the felt is worn rapidly away. This period of washing with my process never exceeds ten minutes and is often as low as three minutes as opposed to the twenty minute period of the old process.

What I claim is:

1. A process of polishing plate glass upon a table provided with relatively movable runners, which consists in feeding a full supply of rouge mixture consisting of rouge and water to the surface of the glass on the table during the initial period of polishing and then cutting down the supply of rouge mixture and continuing the polishing operation and simultaneously supplying an additional quantity of water to the table.

2. A process of polishing plate glass upon a table provided with relatively movable runners, which consists in feeding a full supply of a rouge mixture consisting of rouge and water to the surface of the glass on the table during approximately one-half of the polishing period, and then cutting down the supply of rouge mixture about one half and continuing such reduced supply until the completion of the operation, an additional quantity of water being supplied to the table during the period of the reduced supply of rouge mixture.

3. A process of polishing plate glass upon a table provided with relatively movable runners, which consists in feeding a full supply of a rouge mixture consisting of rouge and water to the surface of the glass on the table and beneath one of the runners during a predetermined period of polishing, then cutting down the supply of rouge mixture and continuing the operation, and simultaneously supplying an additional quantity of water beneath another runner, the said reduced supply of rouge mixture and additional supply of water being continued throughout substantially the remaining period of polishing.

4. A process of polishing plate glass upon a table provided with relatively movable runners, which consists in first washing the table and runners with water for about three to ten minutes, then feeding a full supply of rouge mixture consisting of rouge and water to the table for about thirty to forty minutes, and then reducing the supply of rouge mixture about one half and supplying it to the table for about thirty minutes more.

5. A process of polishing plate glass upon a table provided with relatively movable runners, which consists in first washing the table and runners with water for about three to ten minutes, then feeding a full supply of rouge mixture consisting of rouge and water to the table for about thirty to forty minutes, and then reducing the supply of rouge mixture about one half and supplying it to the table for about thirty minutes more, and simultaneously supplying an additional quantity of water to the table.

6. A process of polishing plate glass upon a rotatable table having runners mounted for rotation thereabove, which consists in first applying water to the surface of the glass, scraping the surface of the glass in advance of such application, to remove the major portion of such water from the glass, raising the scraper from the surface of the glass, and applying a rouge mixture consisting of rouge and water to the glass.

In testimony whereof, I have hereunto subscribed my name this 23rd day of October, 1919.

PHILIP J. HESS.