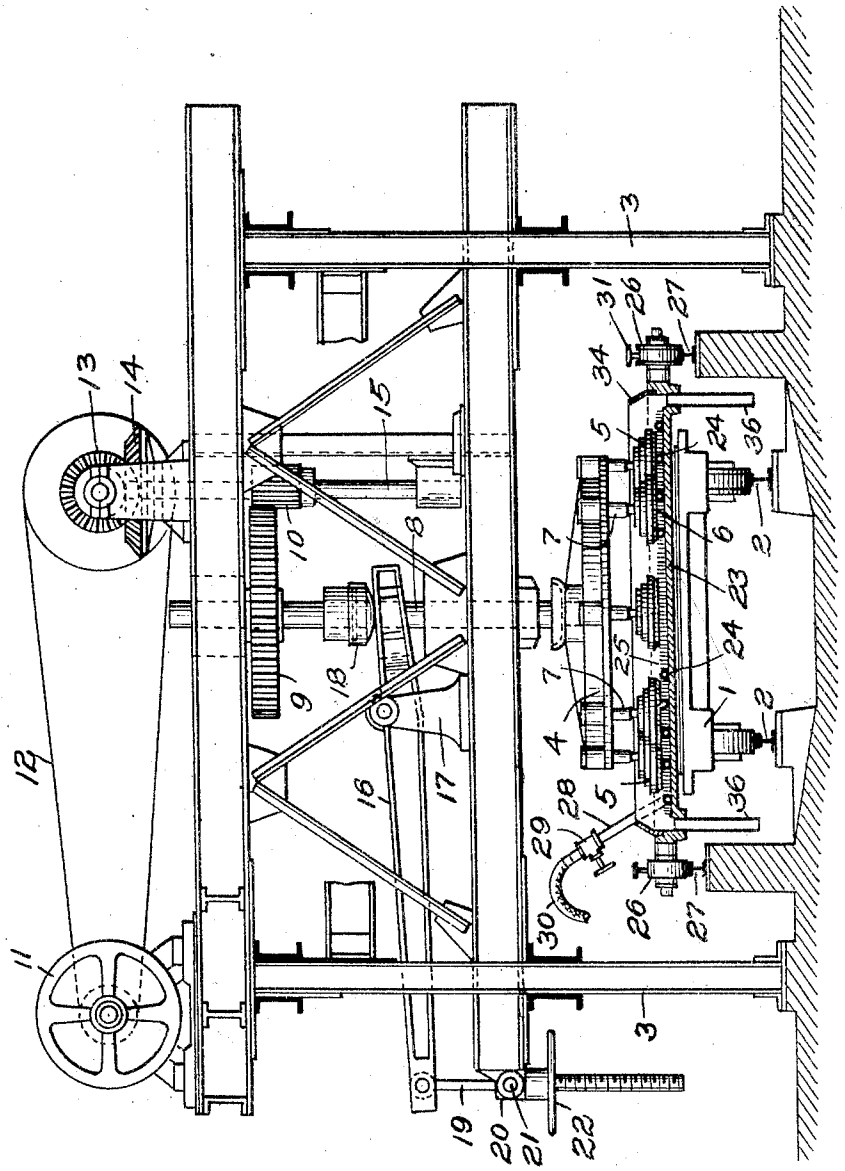
Oct. 19, 1926. 1,603,950

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APPARATUS FOR CLEANING PLATE GLASS POLISHING RUNNERS

Filed March 23, 1923 4 Sheets-Sheet 1

FIG. 1.



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APPARATUS FOR CLEANING PLATE GLASS POLISHING RUNNERS

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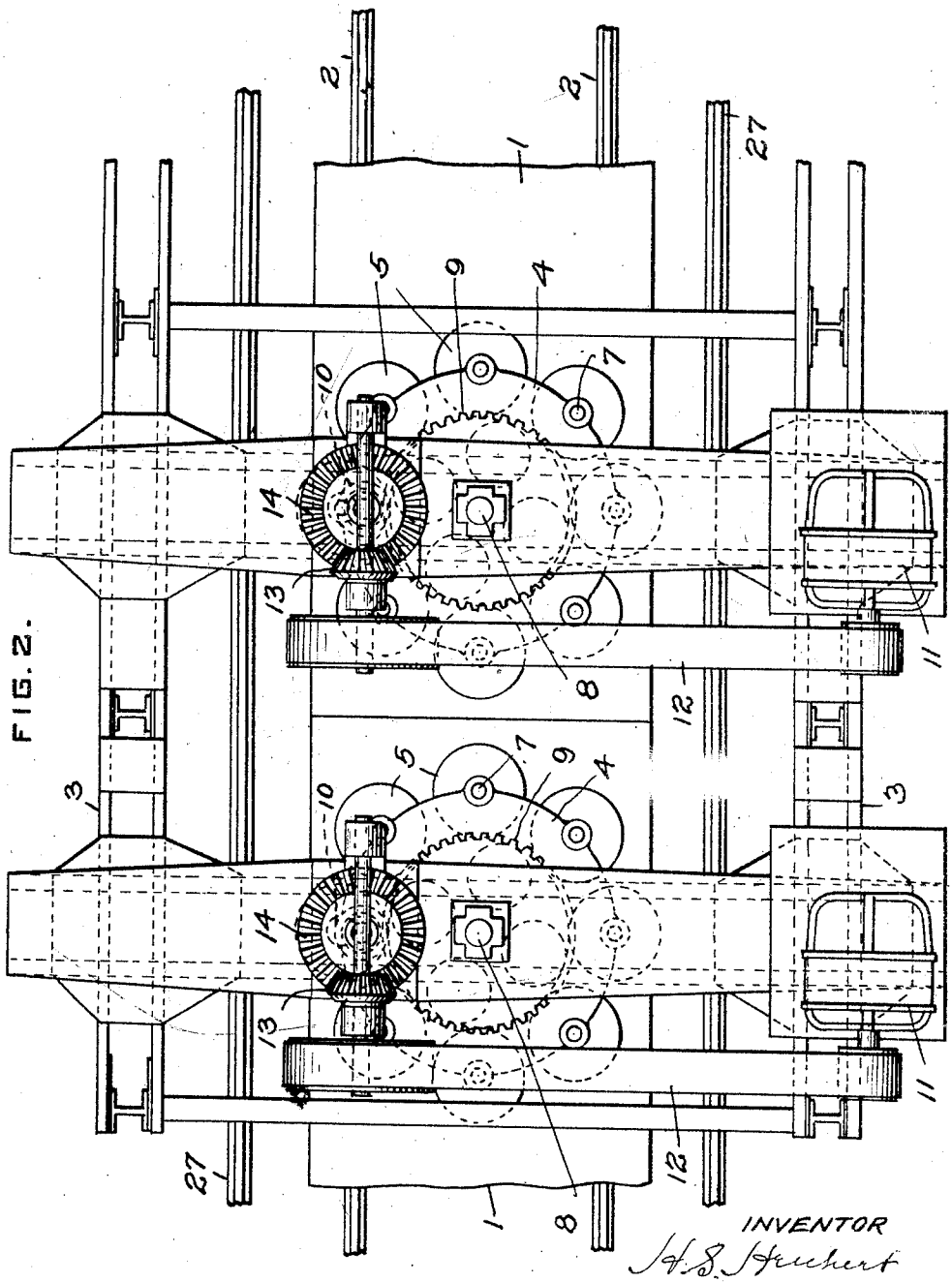


FIG. 2.

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APPARATUS FOR CLEANING PLATE GLASS POLISHING RUNNERS

Filed March 23, 1923 4 Sheets-Sheet 3

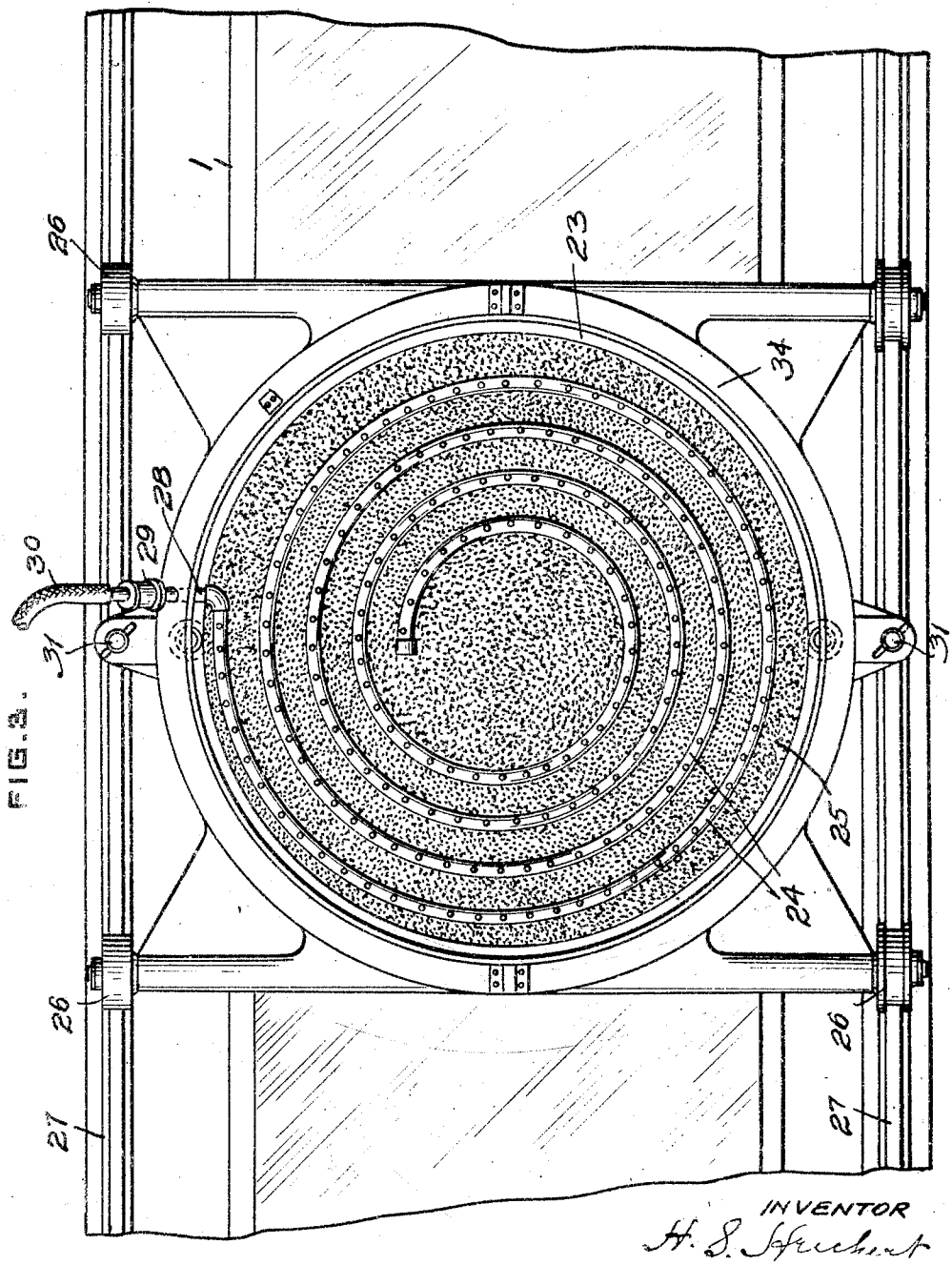


FIG. 3.

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Filed March 23, 1923 4 Sheets-Sheet 4

FIG.5.

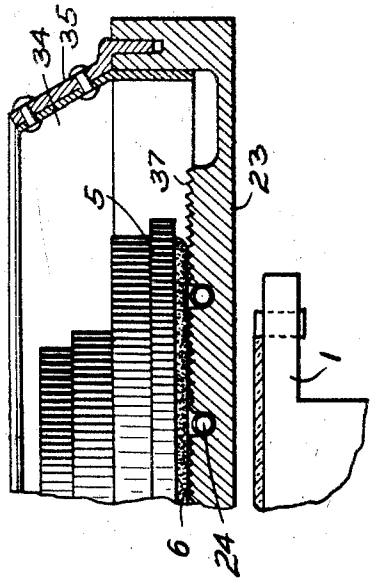
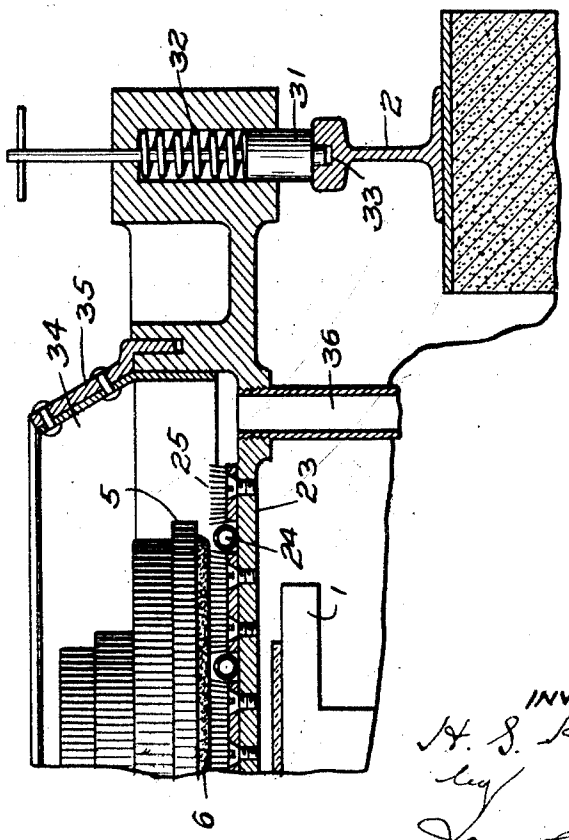


FIG.4.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR CLEANING PLATE-GLASS POLISHING RUNNERS.

Application filed March 23, 1923. Serial No. 627,084.

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 or other carrier apparatus. After a certain period of use, the felts of the runners become caked with the rouge or other polishing material and their efficiency is reduced. The principal object of the present invention is to provide a simple, convenient arrangement for washing the felts of the various machines at intervals without interfering with the continuous operation of the apparatus.

In its preferred form the apparatus comprises a pan mounted for movement longitudinally of the series of polishing machines and adapted to be moved beneath each set of runners carried by each machine, the runners being first raised to permit the positioning of the pan so as to receive them. The cleaning may be accomplished by rotating the runners in a cleaning liquid in the pan or by applying jets of water upward from the bottom of the pan against the lower faces of the runners. In either case, mechanical means such as brushes may be employed to assist in loosening the rouge from the felts. Certain embodiments of the invention are illustrated in the accompanying drawings wherein:

Figure 1 is a transverse section through the apparatus showing the washing devices in position for use. Fig. 2 is a plan view of a part of the apparatus with the washing device removed. Fig. 3 is a plan view of the washing device by itself. Fig. 4 is an enlarged transverse section through a part of one side of the apparatus, and Fig. 5 is an enlarged transverse section through a modified form of construction.

Referring to Figs. 1 and 2, 1—1 are a series of tables or trucks mounted upon the track 2 and carrying a series of sheets of glass placed end to end which are to be polished. Arranged in series above the tables or trucks are a series of polishing machines, two of which are illustrated in Fig. 2. These polishing machines comprise a supporting framework 3 made up of commercial sections, as illustrated, and carrying the rotating frames 4—4 upon which the polishing runners 5 are carried. The runners carry the polishing felts 6 upon their lower sides and are mounted upon spindles 7 slidable vertically through the frames 4 so that the weight of the runners is imposed upon the glass when the supporting frames are lowered. The frames 4 are rotated by means of the spindles 8 provided with the spur gears 9 and driven from the pinions 10. Each machine preferably has its own operating motor 11 mounted upon the top of the framework and arranged to drive the spindle 8 through the belt 12 and gears 13 and 14, the latter of which is keyed to the shaft 15 which carries the pinion 10. The method of driving the spindles 8 is immaterial in so far as the present invention is concerned.

Provision is made for raising and lowering the runner frames 4 by means of the levers 16 pivoted upon the brackets 17 and engaging the thrust bearing member 18, the upper half of which is secured to the shaft 8. The outer end of the lever is provided with the threaded rod 19 which is moved up and down through the nut 20 carried upon the bracket 21 by means of the hand wheel 22. This part of the apparatus is employed in raising and lowering the runners to permit of the washing operation, as hereinafter described. Any other desired means might be employed for securing this vertical movement of the runners.

The washing device consists of the pan 23, preferably in the form of a casting carrying upon its bottom the perforated spiral pipe 24 and the brushes 25. The pan is mounted upon four wheels or rollers 26 and these rollers are carried upon a track 27 extending longitudinally of the apparatus. Water is supplied to the spiral pipe from the pipe 28 having the controlling valve 29 and connected to the flexible pipe 30. In order to position or index the pan in proper position, it is provided at its side edges with a pair of plungers 31 normally pressed down by the springs 32 and adapted to engage recesses 33 suitably located in the rails 27. In order to prevent splashing from the machine during the washing operation, the shield 34 is preferably employed, such shield being made in two or more sections and applied to the pan after it is in position for use. The shield is inclined as indicated in Fig. 4 and is held in position by means of brackets 35 whose lower ends engage a groove extending around the periphery of the pan. The shield 34 is preferably made in two or more sections, which are removed

by lifting them vertically, thus withdrawing the lower ends of the brackets 35 (Fig. 4) from the groove in the edge of the pan. The pan is provided with a suitable drain pipe 36 for removing the mixture of water and rouge which collects therein.

In carrying out the washing operation, the pan is moved successively under the series of runner frames, the washing occurring at intervals such as are found necessary in order to keep the felts in proper working condition. In order to position the pan between the runner frame 4 and the glass carried on the tables therebeneath, this runner frame is raised by means of its lever 16 to a height such as to permit the pan to be run between the glass and the runners, after which the shield 34 is placed in position and the valve 29 leading to the spiral pipe opened so that the water from this pipe is directed upwardly against the lower faces of the felts. At this time the runners are lowered so as to bring their faces into contact with the brushes 25, thus loosening the rouge upon the felt and speeding up the cleaning operation. The spindle carrying the runner frame and runners continues to revolve so that the felts are carried across the brushes and past the sprays of water from the pipe 24. If desired, the outlet from the drain pipe 36 may be closed so as to provide a bath of liquid in the pan in which the felts rotate. After the felts are sufficiently cleaned, the runner frame is raised, the shield 34 removed and the washing pan moved on to the next machine where the cleaning cycle, as above described, is repeated. It will be seen that the cleaning of the successive runners of the series may be carried on without discontinuing the polishing operation of the series as a whole, only one runner being out of commission at any one time.

Fig. 5 illustrates a modification in which the brushes 25 of Fig. 4 are removed and in place thereof the metal at the bottom of the pan is roughened, as indicated at 37, for engaging the lower faces of the felts in order to loosen the rouge. Various other means might be employed for securing the application of liquid to the bottom of the runners and for mechanically engaging the felts to loosen the rouge.

What I claim is:

1. Apparatus for use in cleaning a set of the vertically movable runners of a series of plate glass polishing machines mounted above means for carrying the glass therebeneath, comprising a washing pan adapted to receive a set of said runners and mounted for movement longitudinally of the series of polishing machines intermediate the means for carrying the glass and the runners when the runners are raised.

2. Apparatus for use in cleaning a set of the vertically movable runners of a series of plate glass polishing machines mounted above means for carrying the glass therebeneath, comprising a washing pan adapted to receive a set of said runners and mounted for movement longitudinally of the series of polishing machines intermediate the means for carrying the glass and the runners when the runners are raised, and means for delivering a cleaning fluid from the pan upwardly against the runners.

3. Apparatus for use in cleaning a set of the vertically movable runners of a series of plate glass polishing machines mounted above means for carrying the glass therebeneath, comprising a washing pan adapted to receive a set of said runners and mounted for movement longitudinally of the series of polishing machines intermediate the means for carrying the glass and the runners when the runners are raised, and means on the bottom of the pan for engaging the faces of the runners for loosening the polishing material thereon.

4. Apparatus for use in cleaning a set of the vertically movable runners of a series of plate glass polishing machines mounted above means for carrying the glass therebeneath, comprising a washing pan adapted to receive a set of said runners and mounted for movement longitudinally of the series of polishing machines intermediate the means for carrying the glass and the runners when the runners are raised, and a removable shield mounted at the periphery of the pan and extending upwardly therefrom.

In testimony whereof, I have hereunto subscribed my name this 16th day of March, 1923.

H. S. HEICHERT.