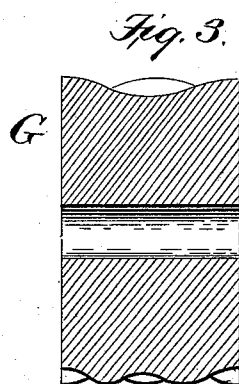
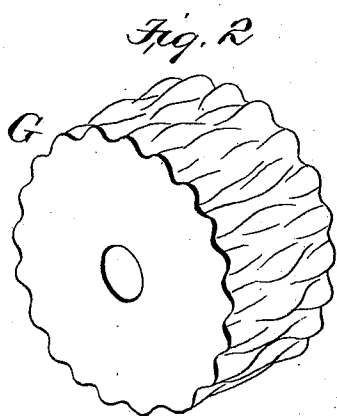
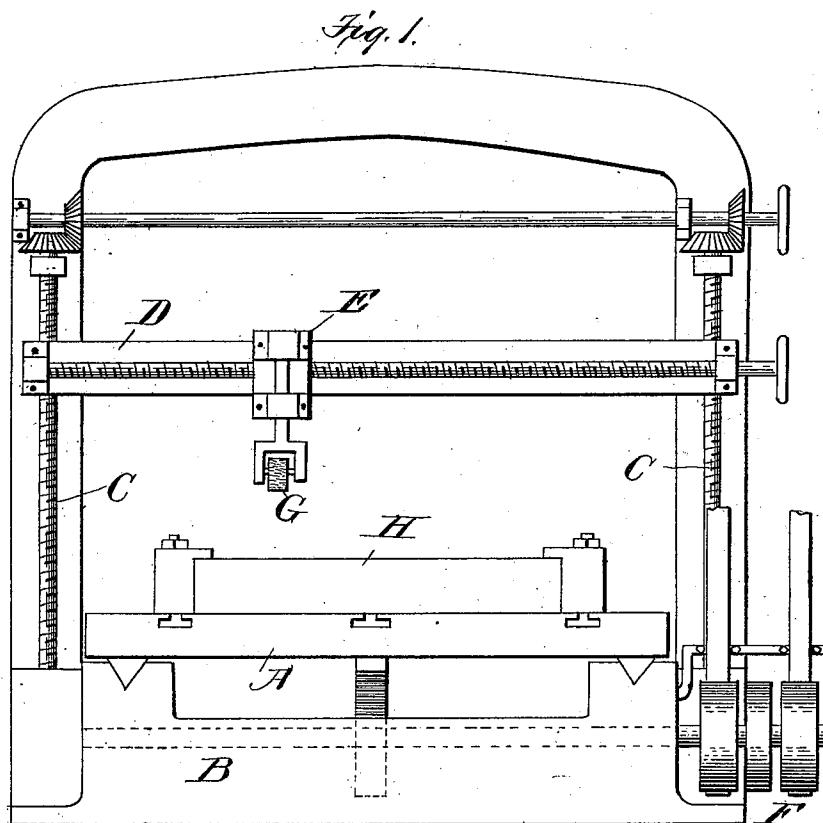


(No Model.)

2 Sheets—Sheet I.

E. WALSH, Jr.
MACHINE FOR ORNAMENTING BED PLATES FOR CASTING SHEET GLASS.
No. 507,572. Patented Oct. 31, 1893.



Witnesses
J. H. Cornwall
A. Ramel

Inventor
Edward Walsh, Jr.
By Paul Bakewell
att'y

(No Model.)

2 Sheets—Sheet 2.

E. WALSH, JR.

MACHINE FOR ORNAMENTING BED PLATES FOR CASTING SHEET GLASS.

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Fig. 4.

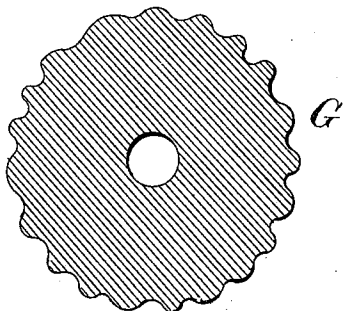


Fig. 5.

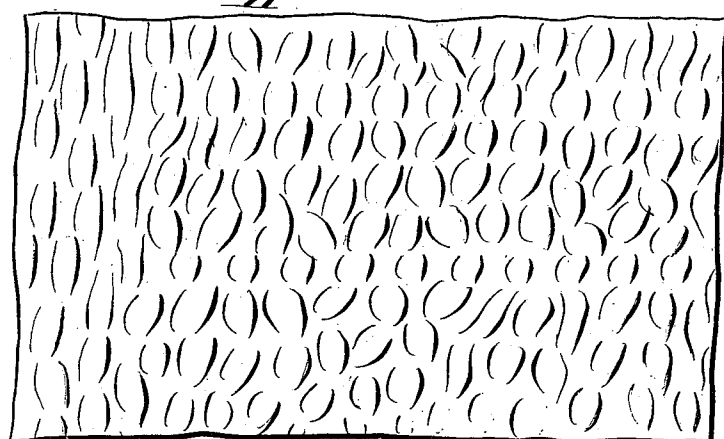
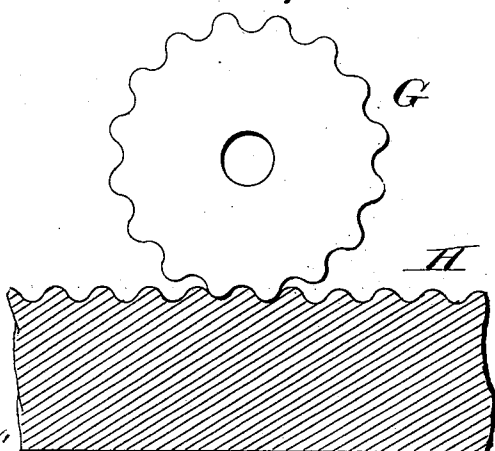


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWARD WALSH, JR., OF ST. LOUIS, MISSOURI.

MACHINE FOR ORNAMENTING BED-PLATES FOR CASTING SHEET-GLASS.

SPECIFICATION forming part of Letters Patent No. 507,572, dated October 31, 1893.

Application filed March 7, 1893. Serial No. 464,952. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WALSH, Jr., a citizen of the United States, residing in the city of St. Louis, State of Missouri, have invented a certain new and useful Machine for Ornamenting Bed-Plates for Casting Sheet-Glass, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, wherein like symbols refer to like parts wherever they occur, and in which—

Figure 1 is a front elevational view of my improved machine. Fig. 2 is a perspective view of a preferred form of knurling wheel to be used in connection with my machine. Fig. 3 is a diametrical longitudinal section of the knurl wheel. Fig. 4 is a cross section of the same. Fig. 5 is a plan view of a portion of the finished bed plate. Fig. 6 is a detail view, showing in section, a portion of the bed plate and the knurl wheel in operative contact therewith.

My invention relates to a new and useful improvement in machines for ornamenting bed plates for casting sheet glass, and consists, generally stated, in an apparatus of the kind described, in which a knurl wheel is mounted so as to contact with the surface of the bed plate, and in the means for giving to the knurl wheel, a longitudinal and lateral movement relative to the bed plate. This I accomplish by the construction shown in the accompanying drawings, in which, A represents a longitudinally movable bed plate of a bed planer of any approved construction, in which the back, or return movement of the bed, is preferably effected at the same speed as the forward movement.

B represents the body of the frame work of the planer, in which are formed guide ways for the longitudinally movable bed plate A. Extending upwardly from each side of this body portion B, are standards C which support a vertically movable cross piece D. Slidingly mounted on this cross piece D, is a head stock E which carries, in a suitable manner, a knurl wheel G.

F represents suitable driving mechanism for the bed plate A, through the medium of which its reciprocating movement is effected.

H represents the bed plate of the casting table which is to be operated upon by the knurl wheel, which casting table is secured by suitable clamps to the reciprocating planer bed plate.

The operation of the apparatus in configuring the casting table H, may be described as follows: Suitable power being applied through the pulleys F, the bed plate A will be given a reciprocating longitudinal movement, and carry with it the casting table H. The cross piece D is then lowered until the knurl wheel carried by the head stock E will contact with the surface of the casting table. At first, this contact will be very slight, until the knurl wheel has made a distinct path upon the surface of the casting table, when the cross piece will be gradually lowered until the desired depth has been formed in the table, which is being continually carried back and forth under the action of the wheel. After a path of sufficient depth has been formed, the cross piece is raised to take the knurl wheel out of contact with the table, and the head stock E is adjusted laterally, so that this second path of the knurl wheel will slightly overlap that previously formed. The knurl wheel is again lowered to form this second path, which is preferably of a depth corresponding with the one first formed. This cycle of operations is continued until the desired area of surface on the casting table is configured with the converse of the design on the knurl wheel.

In the drawings, I have illustrated a peculiar form of design for a knurl wheel which is especially adapted for machines such as herein shown and described, which knurl wheel is formed with symmetrically duplicated circumferential edges, and an irregular design in the middle portion of the periphery. By such a design I am enabled to start a new path at any point on the periphery of the wheel, care only being required to correctly set the wheel so that the raised and reduced portions of the adjacent paths shall register. In this manner, the design may be such that it is not repeated transversely of the casting table, which is of special advantage in the manufacture of glass from a table so configured, from the fact that glass of such ornamentation has special commercial worth.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

5 In an apparatus for ornamenting glass casting tables, the combination with a knurl wheel, of a support for the casting table, and means for forcing the knurl wheel into contact with the surface of the casting table, and giving to the knurl wheel a longitudinal and lateral

movement relative to the casting table, substantially as described.

In testimony whereof I hereunto affix my signature, in presence of two witnesses, this 23d day of February, 1893.

EDWARD WALSH, JR.

Witnesses:

A. RAMEL,
HUGH K. WAGNER.