(No Model.) 3 Sheets—Sheet 1.

W. S. COGSWELL.

MACHINE FOR TRANSFERRING FIGURES UPON GLASS.

No. 282,168. Patented July 31, 1883.

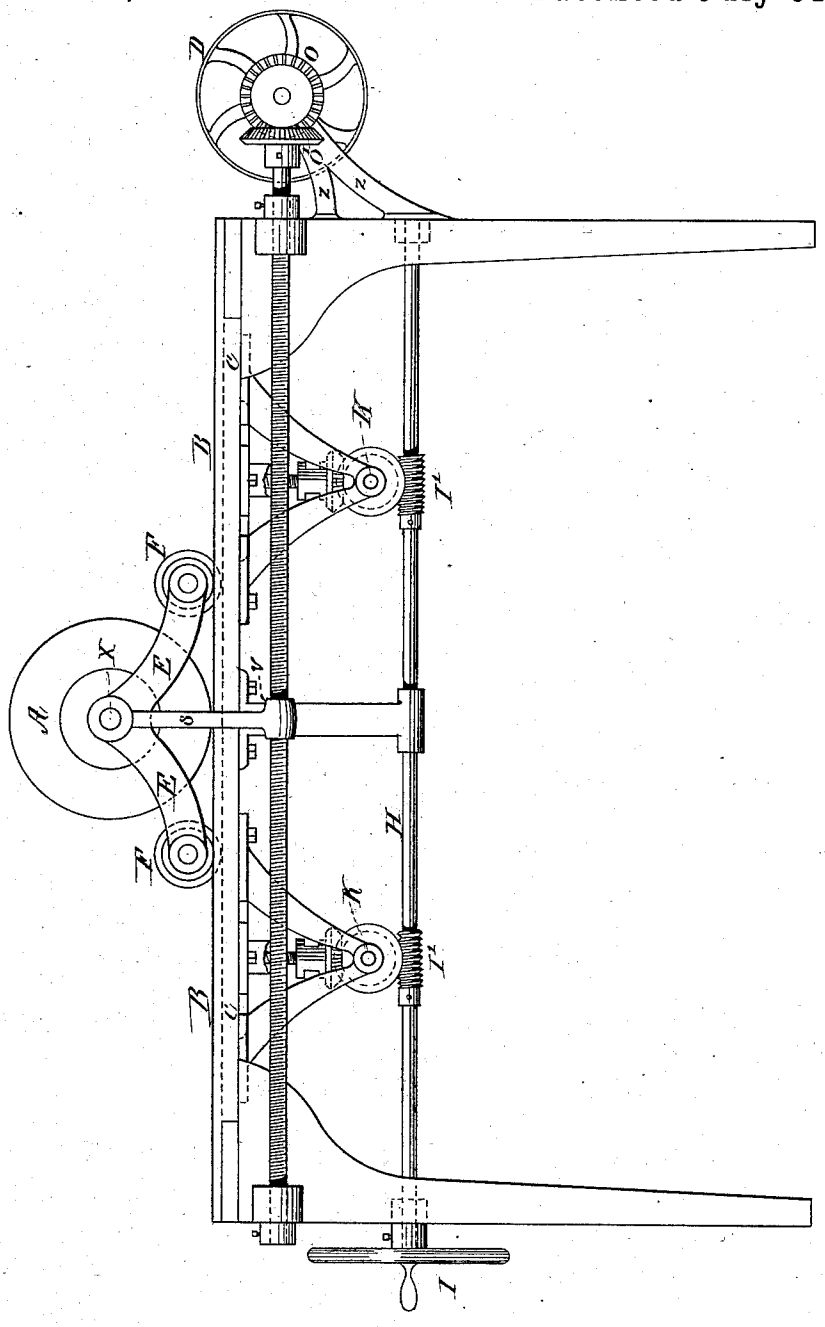


Fig. 1.

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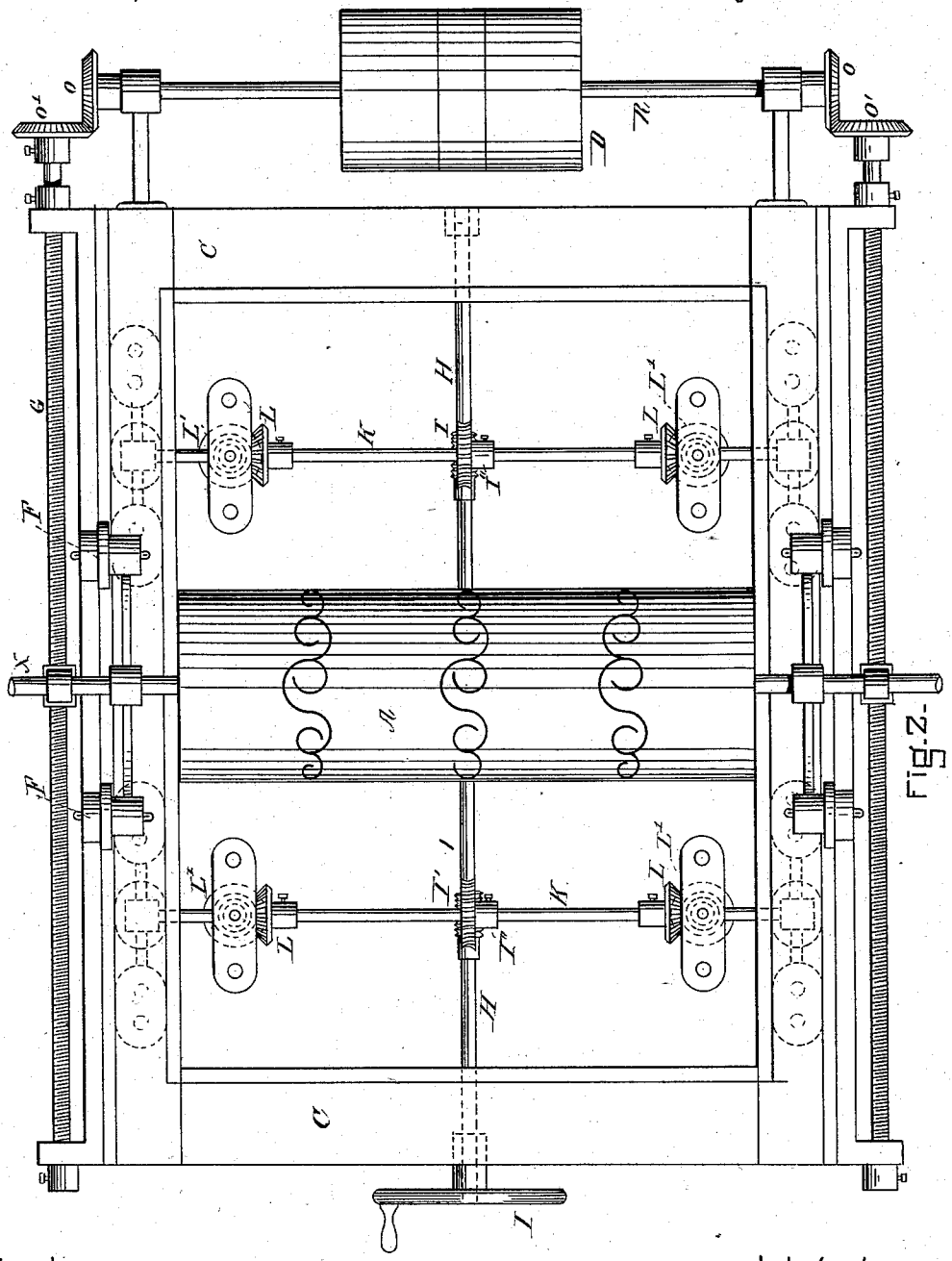


Fig. 2.

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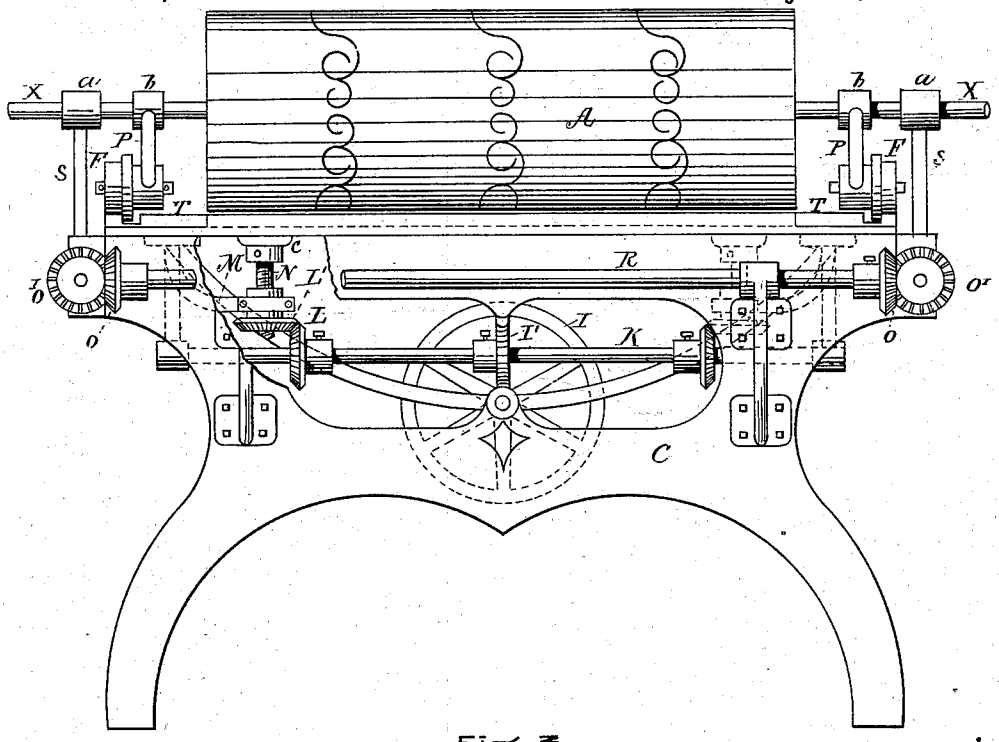


Fig. 3.

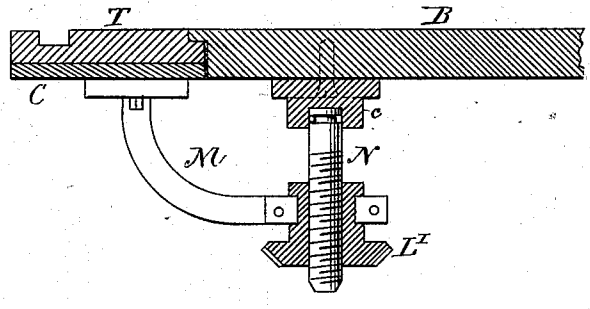


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM S. COGSWELL, OF HYDE PARK, MASSACHUSETTS.

MACHINE FOR TRANSFERRING FIGURES UPON GLASS.

SPECIFICATION forming part of Letters Patent No. 282,168, dated July 31, 1883.

Application filed November 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. COGSWELL, a citizen of the United States, residing at Hyde Park, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Machines for Transferring Figures upon Glass, or for Frescoing, Buffing, or Grinding Glass, of which the following is a specification.

The invention relates to machines used for transferring impressions of figures and characters upon glass, or frescoing, buffing, or grinding glass; and the improvement has for its object the means of such transferring.

The invention consists in the means by which a roller prepared for the purpose is made to pass over the surface of any suitable material having figures thereon, or characters, of which the desired impressions are to be taken, and then transferring such impressions from the roller to the glass prepared for the purpose by passing the roller over the glass, whereby the exact imitation of the impressions taken from the material is transferred to the glass.

In order that others skilled in the art may better understand the nature and use of my invention, reference is hereby made to the accompanying drawings and the letters of reference thereon, which are made a part of this specification.

Figure 1 is a side elevation of the machine. Fig. 2 is a plan of the same. Fig. 3 is an end view of the machine, and Fig. 4 is an enlarged view of one of the screws used for elevating and lowering the table.

The letter A represents the impression-roller.

The letter B represents the table on which the glass is laid, which table can be raised or lowered.

The letter C represents the frame of the machine.

The letter D represents the pulley to which power is applied to operate the machine.

E represents the arms or supports of the roller A.

F represents rollers or wheels moving on said tracks.

G represents screws by which the roller A is moved.

H represents a shaft carrying worms connected with gears to elevate and lower the table.

I represents a hand-wheel operating the shaft H, by moving which the table is elevated or lowered.

J represents supports to the frame of the machine C.

K represents shafts carrying bevel-gears and worms which move the table.

L represents bevel-gears on shafts K.

L′ represents nut-screws attached to brackets M, and meshing into bevel-gears L.

M represents brackets attached to frame C.

N represents screws passing through nut-screws L′ into sockets attached to the table B, and upon which the table rests.

I′ represents worm-gears meshing into gears I″ on shafts K.

I″ represents said gears on shafts K.

O represents bevel-gears on the ends of the shaft R.

O′ represents bevel-gears on the ends of shafts G, and meshing into the bevel-gears O.

P represents supports of shaft X, connected with wheels P.

R represents the shaft upon which is the drum D.

S represents supports of shaft X, connecting said bearings holding shaft to the frame C.

T represents the tracks on which run the wheels P.

V represents worm-gears running upon shafts G and attached to the supports S.

Z represents brackets supporting the shaft R, which carries the drum, which brackets are attached to the frame C.

a represents bearings on shaft X, attached to supports S.

b represents bearings on shaft X, attached to supports E.

c represents sockets under table B, into which screws N enter.

Having thus described the figures and designated the letters which represent different parts of the machine, I will now proceed to explain the operation of the same.

The frame C of the machine, it will be observed by examining the drawings, is similar to a skeleton table having four legs and sides, upon which the operating parts of the machine rest. The table B rests upon or sets into the

frame C (see Figs. 1 and 2) in such manner that by the described devices it can be raised up under the roller A or lowered from it, as occasion may require, while the roller A remains stationary, supported by the frame. For example, I wish to move the table up or down. By reference to Fig. 4 of the drawings, which is an enlarged view of a portion of Fig. 3 above it, a part of the table B, track T, frame C, bracket M, screw N, and nut L′ are seen. There are four like brackets, screws, and nuts—one at or near each corner of the table. The brackets are firmly attached to the frame, and the screw-nuts L′ are securely fastened to the brackets M. The screws N, resting at their upper end in the sockets *c*, pass down through the nuts L′. By turning the hand-wheel I from right to left, which wheel is attached to the shaft H, the worm-gears I′ on said shaft H mesh into the gears I″ on the shaft K, causing the shafts K to turn, revolving the bevel-gears L, which engage the gears L′, through which the screws N pass, and said screws N, being set in sockets *c* under the table, lift the same up under the roller A. By reversing the hand-wheel I the table is moved in the contrary direction, and thus the table becomes adjustable to the roller A, and can be set to the thickness of the material between the table and the roller. When the table is adjusted to the roller and the material, and the material between it and the roller, to move the roller over the table to take impressions from the material, or to transfer impressions so taken upon glass in the place of the material, I apply power to the pulley or drum D, attached to the shaft X, upon the ends of which are bevel-gears O. These gears mesh into the bevel-gears O′ upon the ends of the screws G, and thus moving the screws G the worms V begin to move along the same, carrying the roller A, which is supported by the supports S′ through the bearings *a* and by the worms V, and the wheels P moving on the tracks T, and so the roller A may pass the length of the table. By reversing the direction of the power the roller A is returned to its starting-place.

The transferring-roller may be similar in construction and composition to a printer's roller, and then in operation it is made to pass over the surface of the material to be imitated, thus taking up the impressions thereon, and then the material is removed by raising the adjustable table, and glass is put in the place thereof, the glass, if necessary, having been prepared to receive impressions; or the impressions, figures, or characters may be inscribed or made on the roller and then transferred to the glass, the same having been first prepared to receive such impressions in any of the well-known ways of embellishing glass for ceilings or panels, tiles, and like purposes.

Machines for transferring impressions taken from different kinds of materials on which are figures and characters which can be imitated are not new; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the hand-wheel I, the shaft H, the worm-gears I′ and the gears I″, the shafts K, the bevel-gears L, the nut-gears L′, the screws N, set in sockets *c*, the brace M, the table B, and frame C, whereby the table B is raised and lowered under the roller A, substantially as shown and described.

2. The combination of the drum D, the shaft R, the bevel-gears O and O′, screws G, worms V, supports S, bearings *a*, the supports P, and bearings *b*, the shaft X, carrying the roller A, the wheels P, and supports E, and tracks T, supported upon a frame, C, whereby the roller A is made to move, by power applied to drum D, back and forth over the adjustable table B, resting upon the frame C, substantially in the manner and for the purpose shown and described.

WILLIAM S. COGSWELL.

Witnesses:
J. L. NEWTON,
GEORGE KNOX.