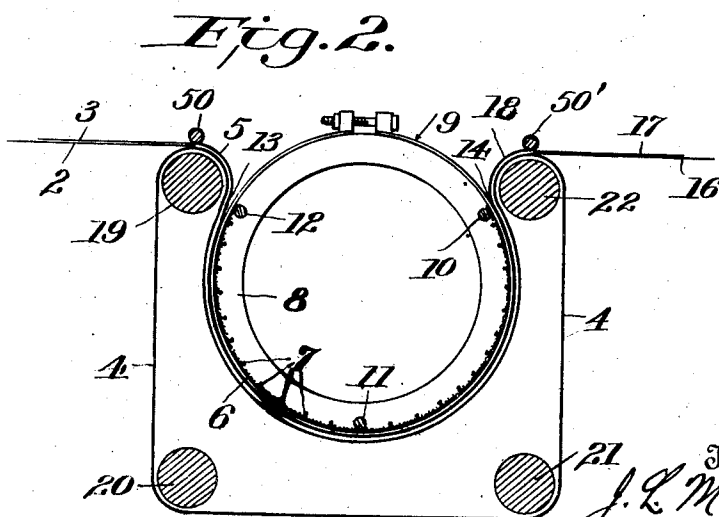


1,246,974.



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BLUE-PRINT MACHINE.

1,246,974.

Specification of Letters Patent.

Patented Nov. 20, 1917.

Application filed December 24, 1913. Serial No. 808,613.

To all whom it may concern:

Be it known that I, JOSEPH L. MARQUIS, a citizen of Switzerland, residing at Buffalo, county of Erie, State of New York, have invented certain new and useful Improvements in Blue-Print Machines, of which the following is a specification.

This invention relates to blue print machines.

10 One object resides in the provision of a fixed curved contact member with which co-operates a moving contact member and between which contact members the meeting faces of the work are maintained in close
15 contact to insure a perfect print.

Another object resides in the provision of a peculiarly formed or constructed fixed contact surface embodying such characteristics as will obviate some of the disadvantages experienced in the use of glass and
20 other contact surfaces.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts hereinafter
25 more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes may be made in the form, proportion, size and minor details without departing from the spirit or
30 sacrificing any of the advantages of the invention.

In the drawings:—

35 Figure 1 is a perspective view of the invention with parts broken away.

Fig. 2 is a fragmentary transverse sectional view.

Referring now more particularly to the accompanying drawing, the reference character A indicates a frame of any suitable form and material and preferably including
40 two tables 1 and 15.

At the forward end of the framework of the machine are brackets *a* upon which the
45 aforesaid table 1 is preferably mounted and adjacent the inner ends of which brackets are preferably arranged frame rings *b* and which are arranged preferably between the
50 tables 1 and 15.

Disposed between the tables 1 and 15 and preferably in horizontal alinement with the
aforesaid rings *b* is a fixed curved contact surface 6 which may be composed of fine
55 wire mesh through which the printing light is adapted to penetrate. This fixed contact surface is secured to rings 8 which are pref-

erably of a size substantially the same as the aforesaid frame rings *b*. The rings 8 are preferably connected in spaced relation by three rods 10, 11 and 12, upon which said
60 fine wire screen or other mesh material 6 is secured in any suitable manner. The surface 6 is preferably stretched tightly over the end rings 8 and clamped thereon by means of straps 9 and said rings may be
65 supported between the rings *b* in any suitable manner. The fine screen or other mesh material 6 may be stiffened and supported by the diamond shaped metal frame work 7 which may be clamped on the surface
70 6 by the straps 9 or in any other suitable manner. The fine wires of the screen or mesh material are preferably not parallel to the direction of movement of the material through the machine but they are preferably
75 disposed at an angle and in such a way that the part of the drawing covered by a wire becomes uncovered the next instant and so does not show on the resulting print.

The printing light is preferably of the
80 electric arc variety and may be suspended from the hooks *d* on the beam D supported by the uprights E. The lights are preferably let down into the fixed contact surface through the open upper side thereof.
85

Coöperating with the fixed contact surface thus formed is a feeding belt or moving contact surface 4 which is arranged to travel in close contact with said fixed contact surface 6. This moving contact surface is preferably in the form of an endless belt which
90 works over four rollers 19, 20, 21 and 22 and it may be driven in any suitable manner. The rollers 19, 20, 21, and 22 are preferably mounted in suitable brackets 30'
95 secured in any suitable manner to the framework A of the machine.

Secured in eye-bolts 51 preferably directly over the roller 19 is a rod 50. On this rod 50 I mount a guide 5 which is preferably
100 composed of a thin sheet of brass, one end of which is fastened around the rod 50 with its other end let in loosely between the moving surface 4 and the fixed printing surface 6 (see Fig. 2).
105

On the table 1 will be seen the sensitized paper 2 and the original drawing 3. The sensitized paper and drawing are placed together as shown and are fed together into the machine between the moving contact
110 surface 4 and the guide 5, which grips them and shades them from the light and leads

them on to the exposed or fixed contact surface between the openings of which fixed contact surface the printing light penetrates.

The sensitized paper 2 and drawing 3 are carried by the moving contact surface 4 in close contact with the fixed surface 6 and are eventually guided out from between the fixed and moving contact surfaces on to the table 15 as indicated at 16 and 17, there being a guide or shield 18, similar to the aforesaid guide 5, and which is mounted on the rod 55, facilitating the discharge of the drawing and sensitized paper on to the table 15.

15 The fixed contact surface having its body formed of fine screen or mesh material has properties and advantages over glass. It may be made more transparent than glass. It will not crack or break because of heat.

20 One of the most important features of this particular character of contact surface is that tracings will not slip as they frequently do on glass surfaces. This slipping is caused apparently by the electrification of the glass.

25 What is claimed is:—

1. A blue print machine comprising a fixed member composed of fine wire mesh and affording a curved contact surface and a moving member having a contact surface for carrying the work through the machine in engagement with the fixed curved contact surface, the wires of the mesh being inclined to the direction of the movement of the material through the machine.

35 2. A blue print machine comprising a fixed member composed of fine wire mesh and affording a curved contact surface and a moving member having a contact surface for carrying the work through the machine in engagement with the fixed contact surface and in a direction substantially at right angles to the longitudinal axis of the fixed contact surface, the fine wires of the wire mesh being inclined to the direction of movement of the material through the machine.

40 3. A blue print machine comprising a fixed member composed of fine wire mesh and affording a curved contact surface, a moving member having a contact surface for carrying the work through the machine in engagement with the fixed contact surface and in a direction substantially at right

55 angles to the longitudinal axis of the fixed contact surface, the fine wires of the wire mesh being inclined to the direction of movement of the material through the machine, and a metal frame work composed of wire mesh stretched tightly over the aforesaid wire mesh and whose wires are inclined to the direction of movement of the material through the machine.

4. A blue print machine comprising a fixed contact member which is provided with a longitudinal opening in its top and which is provided with a curved contact member composed of fine wire mesh material, a moving contact member for carrying the work through the machine in engagement with the surface of the fixed member and in a direction substantially at right angles to the longitudinal axis of the fixed contact surface, the fine wires of the wire mesh being inclined to the direction of movement of the material through the machine, a lamp support, and a lamp suspended from said support to throw rays of light into said fixed member through said opening in the top thereof.

5. A blue print machine comprising a fixed member composed of fine wire mesh affording a contact surface, a moving member having a contact surface to carry the work through the machine in engagement with the fixed contact surface, the fine wires of the fixed member being inclined to the direction of movement of the material through the machine, and a strengthening member for said fine wire mesh fixed contact member composed of wires inclined to the line of movement of the material through the machine.

6. A blue print machine comprising a fixed member composed of fine wire mesh and affording a contact surface, and a moving member having a contact surface for carrying the work through the machine in engagement with said fixed member, the wires of the mesh being inclined to the direction of the movement of the material through the machine.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH L. MARQUIS.

Witnesses:

LEON J. MARQUIS,
VICTOR HABER.