R. T. GILES.
BLUE PRINT MACHINE.
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1,188,266. Patented June 20, 1916.
2 SHEETS—SHEET 1.

Inventor

Witnesses
H. Woodard

R. T. Giles

By A. Williams & Co.

Attorneys
To all whom it may concern:

Be it known that I, Roy T. Giles, a citizen of the United States, residing at Charleston, in the county of Kanawha and State of West Virginia, have invented certain new and useful Improvements in Blue-Print Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in blue print machines and more particularly to those employing a contact surface, and a driven apron adjacent the same adapted to carry the work through the machine between itself and said surface. Heretofore, it has been the common practice to curve the contact surface in such a manner as to cause the apron to travel in close proximity thereto, thus retaining the blue print paper in close contact with the surface when prints are being made. The curved surfaces are usually constructed of glass and when broken cannot be replaced without a great deal of expense. For this reason the curved glass is undesirable.

Numerous attempts have been made to construct a printing machine having a flat glass, to overcome the difficulty above mentioned, but such attempts have so far been failures, since no practical and efficient means has been provided for yieldably forcing the traveling apron toward the glass.

It is therefore the object of my invention to provide means which will accomplish the required end in a simple and efficient manner, thus allowing a flat contact glass to be used.

To this end, the invention resides in certain novel features of construction and in unique combinations of parts to be hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawings wherein:

Figure 1 is a side elevation partly broken away of a blue print machine including the improvements; Fig. 2 is an enlarged vertical section; Fig. 3 is a horizontal section as seen on the plane indicated by the line 3—3 of Fig. 1; and Fig. 4 is a detail perspective view showing more clearly the arrangement of several of the pressing strips.

In these drawings which constitute a part of the application and in which like reference characters designate corresponding parts throughout the several views, the numeral 1 indicates a flat upright pane of glass which is held removably in a rectangular frame 2 carried by upright side standards 3. Disposed one adjacent the upper edge of the glass 1 and the other near the lower edge thereof, are rollers 4, the uppermost of which is driven by a belt 5 from any appropriate mechanism. The two rollers 4 and an additional roller 6 in rear thereof, constitute guides for an endless traveling apron 7, a portion of which is stretched between the two rollers 4 directly in rear of the glass 1. When the apron is driven, it is designed to carry the blue print paper and tracings through the machine directly in rear of the glass 1, whereby rays of light projected through said glass by any appropriate source (not shown), act upon the paper to reproduce thereon the characters appearing on the tracing.

During the movement of the paper and tracings through the machine, it is necessary to provide some means for forcing the apron 7 toward the glass 1 to retain the tracings in close contact with the glass and to also hold the paper and tracings in close contact. To this end, an upright wall 8 is secured in the frame 2 and is spaced rearwardly from the apron, said wall serving as means for anchoring a plurality of resilient horizontal pressing strips 9. The strips 9 are formed of thin metal and are secured by nails or the like 10 to the wall 8 at their upper edges, said strips being extended obliquely toward the apron 7 and having their lower edges 11 disposed in contact therewith, whereby the resiliency of the strips is exerted to force said apron toward the glass 1 for the purpose above defined.

The strips 9 are shown in the present embodiment of the invention as disposed in parallel relation and as positioned horizontally, but obviously they would operate to equal advantage were they disposed at a different angle with respect to the direction of travel of the apron 7, which direction, in the present embodiment of the invention, is downward. It is essential, however, that the strips extend obliquely from their anchored edges to the apron in the direction of travel of the latter, since by this means there is no possibility of puckering any of the strips.

A machine constructed as above defined
although being simple and comparatively inexpensive, will be highly efficient and durable and will successfully fulfill a long felt need in the printing art, since by the use of the strips the curved glass may be eliminated, yet the best results heretofore obtained only by such a glass, may be had.

In the drawings, certain specific details of construction have been shown for accomplishing probably the best results, and in the foregoing such details have been described, but obviously I need not be restricted thereto otherwise than to the extent to which the appended claims limit me.

I claim:

1. A blue print machine comprising a contact surface, a traveling apron parallel thereto and adapted to carry the work through the machine between itself and said surface, means for supporting said apron, a support in rear of said apron and a series of parallel pressing strips disposed at an angle to the direction of travel of the apron and bearing yieldably against the rear side of said apron, whereby to force the same toward the contact surface, said strips being secured to said support.

2. A blue print machine comprising a contact surface, a traveling apron parallel thereto and adapted to carry the work through the machine between itself and said surface, means for supporting said apron, a support in rear of said apron and a series of parallel resilient pressing strips disposed at an angle to the direction of travel of the apron, anchored to said support in rear of said apron and extending obliquely toward the same into contact therewith.

3. A blue print machine comprising a contact surface, a traveling apron parallel thereto and adapted to carry the work through the machine between itself and said surface, means for supporting said apron, a support in rear of said apron and a series of parallel resilient pressing strips disposed at an angle to the direction of travel of the apron, anchored along one edge to said support in rear of said apron, and extending obliquely from their anchored edge in the direction of travel of the apron and into contact with the latter.

4. A blue print machine comprising a contact surface, a traveling apron parallel thereto and adapted to carry the work through the machine between itself and said surface, a support for said apron, a wall spaced in rear of the apron, and a plurality of resilient pressing strips disposed at an angle to the direction of travel of said apron, secured at one edge to the wall, and extending obliquely therefrom into contact with the apron.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROY T. GILES.

Witnesses:

DUKE W. HILL,
CHAS. G. DAVIS.