

(No Model.)

A. BROOKMAN.

APPARATUS FOR PRINTING ON GLASS, &c.

No. 526,557.

Patented Sept. 25, 1894.

Fig 1.

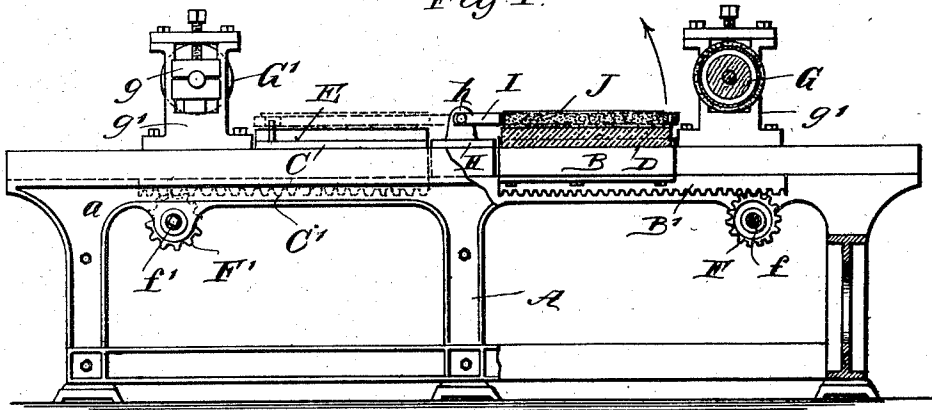


Fig 2.

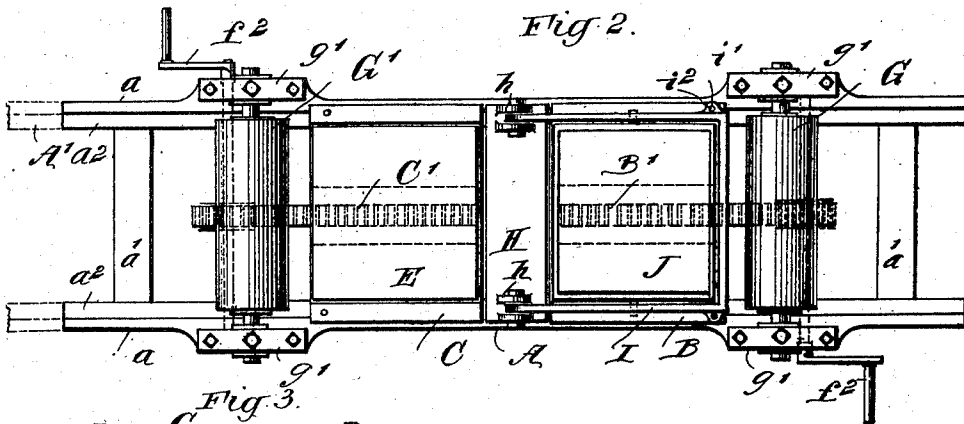


Fig 3.

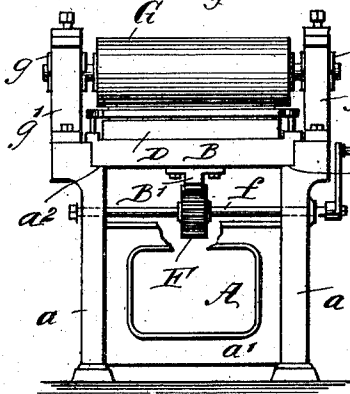


Fig 5.

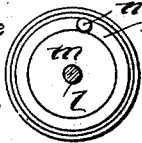


Fig 6.

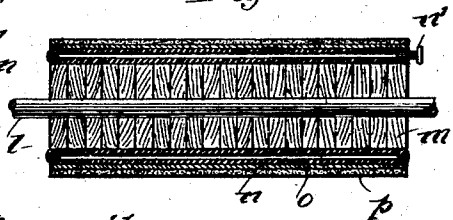
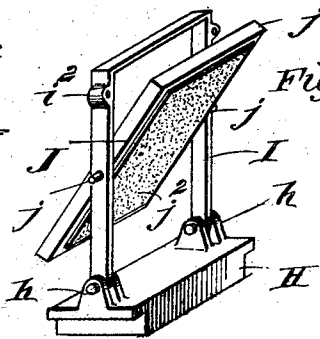


Fig 4.



WITNESSES:

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APPARATUS FOR PRINTING ON GLASS, &c.

SPECIFICATION forming part of Letters Patent No. 526,557, dated September 25, 1894.

Application filed April 28, 1894. Serial No. 509,361. (No model.)

To all whom it may concern:

Be it known that I, ALFRED BROOKMAN, a subject of the Queen of Great Britain, at present residing in New York city, in the county and State of New York, have invented an Improved Apparatus for Printing on Glass or other Surfaces, of which the following is a full, clear, and exact description.

The present invention has for its object to provide an improved apparatus, especially adapted for printing designs of any kind on glass and analogous surfaces, although not restricted to printing on such surfaces, and whereby the printing of designs will be greatly cheapened, breakage of the articles being printed will be prevented, and clean and distinct impressions be obtained.

The invention consists of certain features of construction and combinations of parts, that will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a machine constructed in accordance with my invention, parts being broken out and others shown in section. Fig. 2 is a plan view. Fig. 3 is an end elevation, the frame of the machine being partly broken away. Fig. 4 is a perspective view of the novel transfer pad with its frame and slide. Fig. 5 is an end view of one of the rollers; and Fig. 6 is a longitudinal sectional view of such roller.

In constructing a machine in accordance with my invention, the frame A thereof preferably comprises the longitudinally ranging sides *a*, a suitably braced by transverse connecting bars *a'*, and at their upper edges at the inside the sides *a* are formed with runs *a²*, on which are seated the beds B, C of which the bed B is adapted to receive any suitable block or plate D on which the design to be printed is produced, and the bed C is adapted to receive the glass or other article E on which the design is to be printed. On the under side each bed B and C is provided with a rack B', C', with which mesh gear wheels F, F' a separate gear wheel for each rack, said gear wheels being mounted on shafts *f*, *f'* having suitable handles *f²* for imparting rotary mo-

tion thereto. Near each end of the frame a roller G, G' is mounted, being journaled in suitable adjustable boxes *g* in the standards *g'* that rise from the top of the frame, the standards being spaced apart sufficiently to permit movement of the bed B or C under the adjacent roller.

Between the beds B, C, there is mounted on the frame a slide H, to lugs *h* on which is pivoted a frame I, and in such frame is pivoted a pad J, the pad having pivots *j* at its center which rest in the frame I, the pad J, having a suitable rigid frame *j'* on which the pivots *j* are provided, and a filling *j²* of printers' composition. The arrangement of parts is such that the frame I carrying the pad J may be rocked on its pivots to either the right or left, to cause the pad J to bear down on either the block or plate D or on the glass or other article E, and the pad J may be turned in the frame I so that its composition surface *j²* will be presented to either the plate or block, or the article to be printed on.

In operation, the design is first produced on the block or plate D and the same is suitably inked, after which the pad J is brought down thereon, the frame I of the pad preferably being locked to the bed B, by passing a pin *i* through lugs *i²* on such frame and into the said bed. The shaft *f* is now rotated in the proper direction to propel the bed B with its block or plate and the pad J beneath the adjacent roller G, which will cause the pad to pick up the design. The motion of the shaft *f* is then reversed, to run the bed and pad back to their original position, the pad J is raised and turned round, and brought down on the glass or other article E to be printed, and the bed C and pad run beneath the roller G' and returned by proper movement imparted to the shaft *f'*. The printed article is then removed and replaced by another to be printed, and after again inking the plate or block D, the method previously described is repeated. In this manner I greatly reduce the cost of printing on glass and analogous surfaces, the glass articles are preserved from breakage and a clean and distinct impression is obtained. The rollers may be adapted for printing, in connection with the movable beds, if desired, in which case the pad is not employed, but the

rollers are each formed as shown in Figs. 5 and 6, as follows:

On the shaft *l* a core *m* is provided, preferably by building it up of disks as shown in Fig. 6, and on such core an air cushion *n* is wrapped and provided with any suitable device *n'* for charging it with air. Surrounding the air cushion *n* is a layer of canvas *o* or any equivalent material, on which is a covering *p* of printers' roller composition. The composition may be given a better surface when thus formed in a thin layer, and it is given the desired yielding support by the air cushion *n*. When the roller thus formed is employed for printing, the frame *A* has an extension *A'*, and the beds *B*, *C*, carrying the inked plate or block and the articles to be printed, are successively run under the roller constructed as described.

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

1. In a machine for printing on glass and other surfaces, the combination, of a suitable frame, rollers mounted thereon near each end, sliding beds between the rollers, and a trans-

fer pad carried by a frame mounted between such beds, substantially as described.

2. In a machine for printing on glass and other surfaces, the combination, with two beds having independent sliding movement, and means for separately actuating the said beds, of a transfer pad arranged between the said beds and adapted to be locked to either of them to slide therewith, substantially as described.

3. In a machine for printing on glass and other surfaces, the combination, with two beds having independent sliding movement, and means for separately actuating the said beds, of a transfer pad pivotally mounted on a slide arranged between the said beds, and adapted to be locked to either of them to slide therewith, and rollers journaled in stationary bearings and adapted for contact with the transfer pad during the sliding movement thereof, substantially as described.

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Witnesses:

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