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E. J. BRASSEUR

STATIC DISCHARGE DEVICE FOR ROTARY STENCIL DUPLICATING MACHINES

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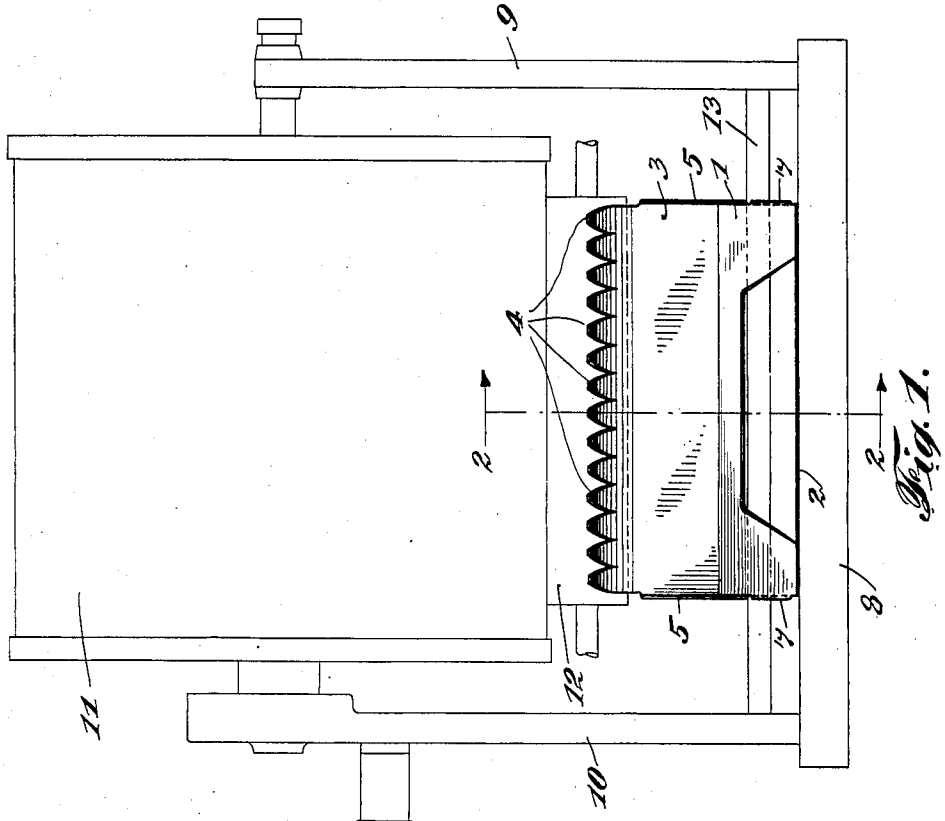


Fig. 1.

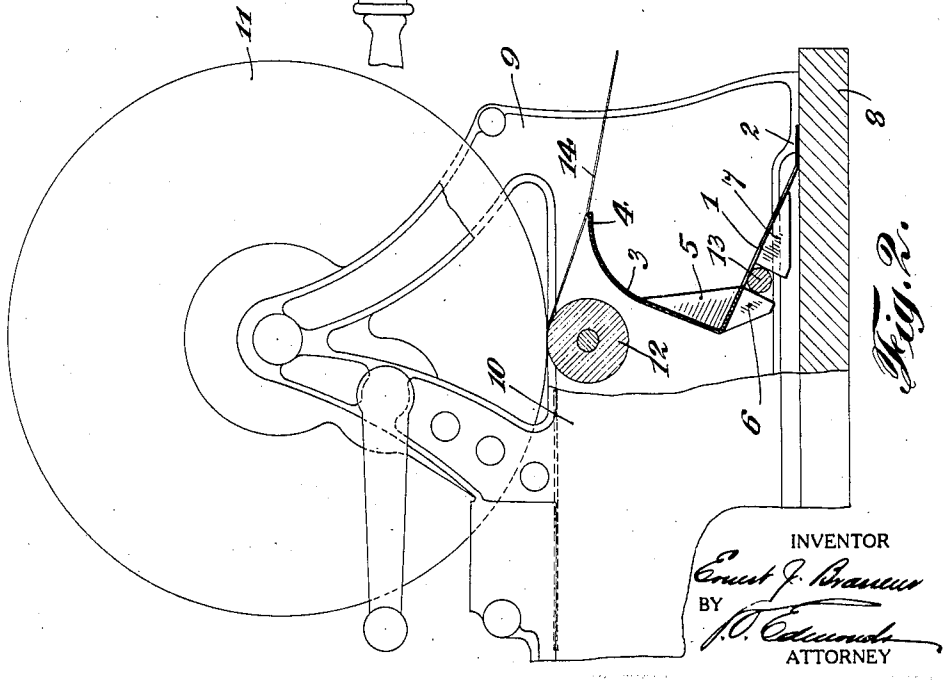


Fig. 2.

INVENTOR
Ernest J. Brasseur
BY
J. O. Edmonds
ATTORNEY

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ERNEST J. BRASSEUR, OF CHICAGO, ILLINOIS, ASSIGNOR TO A. B. DICK COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

STATIC-DISCHARGE DEVICE FOR ROTARY STENCIL DUPLICATING MACHINES.

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This invention relates to method of and means for aiding the ejection of work from rotary stencil duplicating machines, and more particularly relates to method of and means for avoiding interference with the proper discharge of work from the machine due to static electricity.

Rotary stencil duplicating machines print upon sheets of material passing between a printing couple, which may consist of an impression roller and a printing cylinder, and in this operation there is liable to be created static electricity which tends to cause objectionable adherence of the work to the cylinder or roller, with the result that the work does not leave the machine in the manner desired, nor is deposited in the desired place.

The principal object of this invention is to provide a method of and means for getting rid of this objectionable effect of static electricity, so that there will be no interference to the discharge of the paper from this cause. A further object of my invention is to provide a simple and inexpensive device whereby the above object may be carried out effectively, and a device which may be applied to a rotary stencil duplicating machine of any standard construction, without requiring alteration or readjustment of the machine, and without requiring screws, nails, or, in fact, any separate attachment means. Other objects of my invention will be in part obvious and in part pointed out hereinafter.

In accordance with my invention, the method consists in coincidently printing of the work and removing therefrom whatever static electricity may be present. To this end I cause the work as it emerges from between the printing couple of the machine to contact with an electrical conductor which serves to dissipate or to neutralize any static electricity that may be present, the result being that the work is discharged from the machine without interference due to static electricity and without tending to adhere objectionably to either member of the printing couple.

In order that a clearer understanding of my invention may be had, attention is hereby directed to the accompanying drawings, forming a part of this application and illustrating one possible embodiment of my invention. Referring to the drawings, Fig. 1 is a front view of a static absorbing device, embodying my invention, shown associated with a rotary stencil duplicating machine, the machine being illustrated in a diagrammatic manner, and Fig. 2 is a sectional view of the same, and is taken on the line 2—2 of Fig. 1. Similar reference characters refer to similar parts throughout both views of the drawings.

Referring to the drawings, the static eliminator in the form shown (for purposes of illustration only) comprises a single piece of sheet metal having a base portion 1, a foot portion 2, an upright portion 3, with a comb-like upper edge providing curved fingers or contact points 4, side reenforcing and stiffening webs 5, and having a pair of spaced downwardly extending flanges 6 and 7 at each side. A device of this formation may be readily placed in proper association with a rotary duplicating machine of standard construction without the use of screws, nails or any separate attachment means. A machine of a certain standard construction, as illustrated, includes a base 8, side supports 9 and 10, printing cylinder 11, impression roller 12, and a tie-rod 13. The static absorber when placed on the tie-rod 13 with the flanges 6 and 7 straddling the same maintains itself in the desired position, with its foot portion 2 resting on the base 8 and its conducting prongs 4 positioned slightly in advance of the roller 12, and in such position that a sheet of paper or other work 14 being printed and emerging from between the roller and cylinder will slide over the prongs 4. This contact between the prongs 4 and the sheet 14 removes and dissipates from the sheet 14 any static electricity that may be carried thereby, and thus prevents the work from adhering objectionably to the cylinder or roller, as stated heretofore. The static absorber, as shown, is substantially as wide as the work.

Obviously the static absorber device may take other forms, and may be made of any suitable conducting material, as desired, without departing from the scope of my invention, and as many other changes and many different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description

or illustrated in the accompanying drawings be interpreted as illustrative and not in a limiting sense.

What I claim is:—

1. A static eliminator of the character described, comprising a base portion, a foot portion, and an upright portion having a comb-like upper edge providing curved fingers or contact points and consisting of conducting material, said eliminator being adapted to be associated with a rotary stencil duplicating machine in such position that work being delivered from the machine passes over the curved fingers in contact therewith and the eliminator contacts a metallic frame element of the machine to form a ground connection.

2. A static eliminator of the character described, comprising a base portion, a foot portion, and an upright portion having a comb-like upper edge providing curved fingers or contact points and consisting of conducting material, said eliminator being adapted to be associated with a rotary stencil duplicating machine in such position that work being delivered from the machine passes over the curved fingers in contact therewith and the eliminator contacts a metallic frame element of the machine to form a ground connection, said eliminator having side reenforcing and stiffening webs.

3. A static eliminator of the character described, comprising a base portion, a foot portion, and an upright portion having a comb-like upper edge providing curved fingers or contact points and consisting of conducting material, said eliminator being adapted to be associated with a rotary stencil duplicating machine in such position that work being delivered from the machine passes over the curved fingers in contact therewith and the eliminator contacts a metallic frame element of the machine to form a ground connection, said eliminator having a pair of downwardly extending flanges at each side adapted to embrace a tie-rod of the duplicating machine.

This specification signed this 4th day of May, 1925.

ERNEST J. BRASSEUR.