

Sept. 16, 1952

A. SPRUNG

2,610,582

DESIGN ROLLER

Filed Aug. 9, 1951

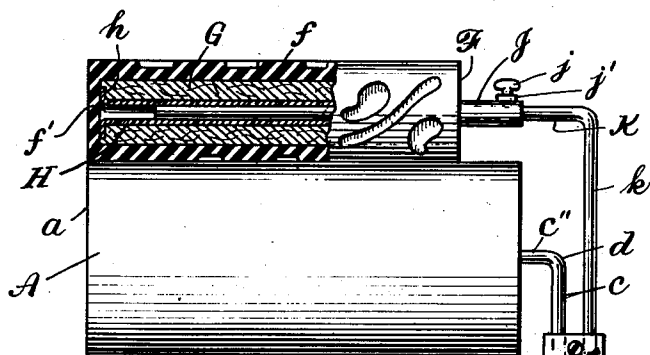


Fig. 1.

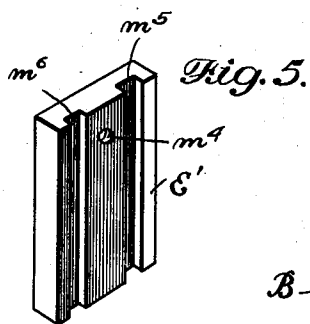


Fig. 5.

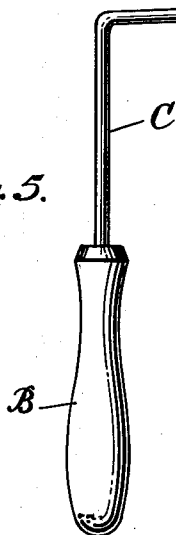
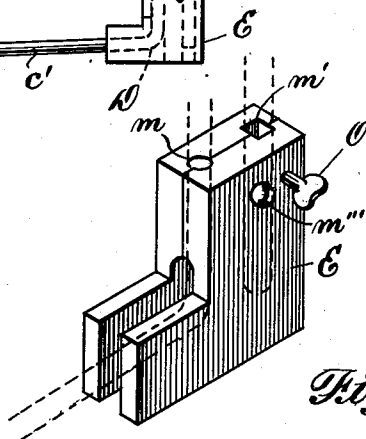
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Fig. 3.

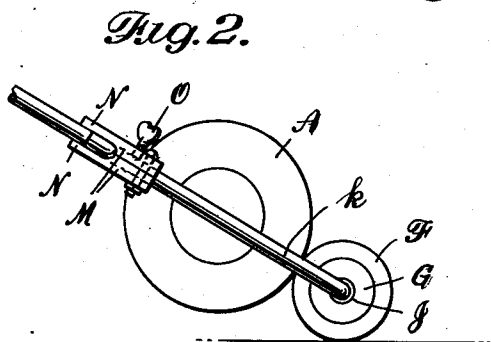


Fig. 2.

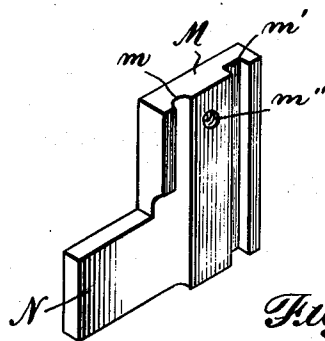


Fig. 4.

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2,610,582

DESIGN ROLLER

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Application August 9, 1951, Serial No. 241,004

5 Claims. (Cl. 101—329)

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This device relates to coating devices of the roller type which are particularly adapted for coating or printing continuous surfaces or applying designs, paint or ornaments on walls, ceilings, cloth, and other surfaces.

Heretofore, the conventional coating, printing or design roller has embodied a handle, a connecting shank, and a roll, these rollers being plain or ornamental for applying to a surface a predetermined design or color. It is the object of the present invention to provide an attachment for such a coating roller to permit the use of an applicator roll element to enable an operator to selectively prepare a surface in accordance with predetermined design and particularly so that portions of the surface can contain a solid color and other portions selectively have applied thereto suitable designs as may be desired.

Another object of the invention is to provide such a design roller attachment which can readily be applied to any conventional paint roller applicator, the attaching structure being inexpensive, quickly applied, and readily attachable, interchangeable and adjustable to suit circumstances and designs in accordance with the desires of the operator.

Another object of the invention lies in the easy and inexpensive conversion, whenever desired, of a conventional paint applicator roller to a paint feed roller, used for feeding paint to a design applicator roller attachment.

Another object of the invention is to provide a novel form of clamping element of a form suitable to permit adjustment of design roller to contact surface of convertor roller and also to apply desired pressure between the feed roller and the design applicator roll and to maintain these parts in proper adjusted position.

Other features of the invention will more clearly hereinafter appear by reference to the accompanying drawings forming a part of the specification in which like characters of reference designate corresponding parts throughout the several views, in which:

Fig. 1 is a top plan view of the invention, attached to a conventional paint roller.

Fig. 2 is a fragmentary side elevation.

Fig. 3 is a perspective view of one form of the clamping element.

Fig. 4 is a perspective view of one of the elements of the clamp, and

Fig. 5 is a perspective view of a modified form of clamp element.

In the present disclosure the conventional applicator roll is indicated by the reference charac-

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ter A, having a suitable handle B, connected to the applicator roll A by a shank which includes a shank portion C and the offset portion c. The offset portion c is connected to the shank C by the lower laterally extending horizontal portion c' and the upper inwardly extending horizontal portion c'' projects into and support the bearing for the main roll A permitting its free rotation. The provision of the offset portion c is essentially formed by elbows indicated as D and d, both elbows being formed by adjacent right angle portions of the shank and the elbow D connecting the horizontal shank portion c' and offset portion c providing the area of application of a clamp indicated at E and shown in perspective in Fig. 3. While the device is shown attached to the elbow D, it might likewise be applied at the elbow d by inverting the connecting clamp as will be obvious to one skilled in the art. Furthermore, offset portion c may have a rectangular cross section in which case connecting clamp E, is not required to be attached to either elbows d or D but directly on the vertical offset portion c only.

The purpose of the present attachment is to adjust the position of design applicator roll F so that it can contact the surface of feed roll A which may be any diameter and at the same time can be secured and maintained in close contact relation at a pressure suitable for uniform contact throughout its longitudinal surface with the main roll A and must likewise be held in alignment with the outer end portion a of the roll A, as indicated more clearly in Fig. 1.

The roll structure F, as shown in Fig. 1, includes an elastic rubber or composition surface structure f which is preferably in relief or otherwise provided with an ornamental surface to apply a suitable design to the area being treated, transferring the coating material from the main feed roll A and applying it to the surface being treated. The elastic covering f is in hollow cylindrical form having a closed end f' for limiting the positioning of the core G, which latter may be made of wood, plastic or any suitable material. The core G is formed with the internal metal tube or thimble H, the inner end of which is indicated at h and is flanged outwardly and imbedded in the end of the core G to provide a flush surface which abuts against the inner face of end wall f' of the printing cylinder. The outer end of the tube or thimble H projects beyond the body of the core G to a distance approximating alignment with the end of the main roll A as shown at J and a thumb screw j is provided in a threaded boss j' for locking the horizontal shank portion

K of the attaching roller support in adjusted position to provide for the alignment of the end f' of the printing member f with the end a of the main feed roller A. The support K for the applicator roller F is of L-form and is constructed with the shank extension k , the end of which may be round or square to suit a recess in the connecting clamp E of Fig. 3. In the present instance the shank k should be substantially square in cross section to properly fit its socket.

Referring to the connecting clamp E, it will be seen that this clamp is embodied into two parts, one of which is shown in perspective in Fig. 4. Each of the clamp sections or plates is of angle shape and preferably of L-form with the upper arm of the L relatively thick, as shown at M, Fig. 4, with respect to the other arm of the L indicated at N. The thickened arm of the clamp section is provided with vertical slots or recesses m and m' the latter shown in the present illustration as being of rectangular form. Formed medially of each of the clamp sections are the threaded registering openings m'' for receiving a screw shown in Fig. 3 at m''' to clamp the sections together. The thin walls N of the other portion of the clamp sections are of such thickness as to provide therebetween a space of substantially the same measurement as the diameter of the vertical slots formed by the registering recesses m and m' so that the elbow D of the handle can be received and held firmly therebetween in clamped relationship. The opening formed by registering the slots m' is of the general square form to receive the similarly shaped extremity of the shank K for the support for the outer auxiliary roller F. A thumb screw O extends through one of the wall sections M of the clamp to engage and secure the shank of the support k in adjusted position so that the design roller F can be suitably held in contact with the main feed roll A.

Referring now to the Fig. 5 a section of the modified form of clamp is illustrated, it being understood that two such sections comprise the unit as in the main disclosure. In this modified form a substantially square element is indicated by reference character E', this element being in plate form and of sufficient thickness to permit the formation of vertical slots, the side walls of which are approximately one half the slot width so that when two such plates are assembled, with the slots registering they provide passages of square form for the reception of elements c and k of the assembly. The slots or channels in the plates E' are indicated by reference numerals m^6 and m^5 , the former being slightly smaller in section to permit a clamping of the element c and a sliding adjustment of the element k . It is to be understood that the form of the invention in Fig. 5 is for use only when the associated shanks are formed with flat sides, and preferably square in cross section.

From the foregoing it will be apparent to one skilled in the art that an attachment has been provided for the conventional coating applicator which will permit the use of attachable design roller elements, allowing modification of such design at any stage in a coating operation. Likewise by the present invention a multiplicity of designs may be permissible at extremely low cost. It will also be seen that border designs may be varied as to width by selecting an attachment of suitable length and that the border designs may be modified during the application of the basic coloring by the main roller. Also the supple-

mental roller may be used to apply coating to the main surface where the bordering of a panel is not within the scope of the operation.

I claim:

1. In combination, a coating device including an applicator roll, a handle, and a connecting shank structure, said shank structure including an offset portion defined by right angle bends, said offset portion lying laterally of the roll, an auxiliary coating roll including an outer tubular applying member, a core removably positioned in said tubular member and formed with an axial bore and a bracket assembly connecting said auxiliary roll and one of the angular portions defining the offset of said shank, said bracket assembly including a pair of angular plates having registering grooves for embracing an angle portion of said offset, additional registering grooves in said plates forming a vertical slot therein, and an L-shaped arm having one leg adjustably secured in said vertical slot in said bracket plates and the other leg extending into the bore formed in the core of said auxiliary coating roll.

2. The structure of claim 1 characterized in that the auxiliary roll is axially adjustable on its supporting arm.

3. The structure of claim 1 characterized in that the coating roll which includes an outer tubular impression structure formed with a closed end and a core formed with an axial bore is further provided within the axial bore with a metal tube having one end flared and seated in a recess in the end of the core and the other end projecting beyond the core.

4. The structure of claim 1 characterized in that the bracket plates have adjacent portions of their inner faces cut away to form a spaced clamping area for the reception of said shank.

5. In combination, a coating device including an applicator roll, a handle, and a connecting shank structure, said shank structure including an offset portion lying laterally of said roll, a coating roll including an outer tubular applying member, a core removably positioned in said tubular member and formed with an axial bore, and a bracket for supporting the coating roll for adjustment axially of the applicator roll, said bracket including an arm adjustably clamped to said shank for varying the pressure contact between the coating roll and applicator roll.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
476,906	Thompson	June 14, 1892
481,969	Pickup et al.	Sept. 6, 1892
1,107,630	Smith	Aug. 18, 1914
1,404,417	Wolfe	Jan. 24, 1922
1,914,035	Moeschlin	June 13, 1933
2,004,576	Kirsch	June 11, 1935
2,035,127	Hinton	Mar. 24, 1936
2,118,719	Wraal	May 24, 1938
2,145,320	Shaw	Jan. 31, 1939
2,308,107	Robbins et al.	Jan. 12, 1943
2,375,362	Hirsch	May 8, 1945
2,488,655	Bennett	Nov. 22, 1949

FOREIGN PATENTS

Number	Country	Date
575,653	Germany	Mar. 2, 1933