UNITED STATES PATENT OFFICE.

ROBERT FRITH SPROULE, OF LONDON, ENGLAND, ASSIGNOR TO FLEET-WING DIE PRESS, LIMITED, OF LONDON, ENGLAND.

RELIEF-COLOR-STAMPING PRESS.

Application filed March 31, 1902. Serial No. 100,884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT FRITH SPROULE, a citizen of England, residing at 209 Uxbridge road, London, England, have invented a certain new and useful improvement in Relief-Color-Stamping Presses, (for which I have applied for a patent in Great Britain, dated February 11, 1902, No. 3,489,) of which the following is a specification.

In my specification No. 540,041, December 26, 1899, I have described certain improvements in relief-color-stamping presses, one of these improvements relating to the means of working the color-brush by a special cam on a reciprocating shaft, the cam for this purpose and the means of driving it being represented in Figures 8, 9, and 10 of the drawings annexed to the said specification. My present invention relates to a construction and arrangement of the cam that is more simple and cheap in manufacture and more efficient in action, as I shall describe, referring to the accompanying drawings, of which—

Fig. 1 is an elevation, and Fig. 2 a part longitudinal section.

6 is the reciprocating shaft described in my former specification, so driven that it makes about one complete revolution forward, then backward. On it I fix an arm 40, and fit between collars the cam 38, free to turn on the shaft. This cam is of approximately disk form, having cut into one face of it a groove 1 in the form of a circular arc, which can be readily cut by fixing the cam in an eccentric position on the chuck of a lathe and turning the groove out by a suitable cutting-tool.

18 is the reciprocating rod, which, as described in my former specification, has rack-teeth arranged to work the gear which moves the brush to and fro over the die. This rod has a forked end engaging on a guide on the shaft 6 and has mounted on it a roller 2, which is engaged in the groove 1.

The cam has through it two holes 3 and 4, into either of which can be inserted a pin permitting itself in the path of the arm 40, which drives the cam in the one direction in opposition to a spring connected to an arm 7 of the cam, which spring effects the return stroke of the cam as far as permitted by a stop 5 meeting the rod. As the cam makes its to-and-fro stroke, driven in the one direction by the arm 40 and in the other by the spring, the sides of the groove 1, acting on the roller 2, cause the rod 18 to make two reciprocations, 55 twice forward and twice backward, and these movements are conveyed by the gearing to the color-brush, which is thus caused to move to and fro twice over the surface of the die. When the pin is in hole 3, the cam has its maximum stroke, and its stroke can be lessened by transferring the pin to the hole 4, the movement of the brush being thus adjusted to suit the length of the die.

Having thus described the nature of this invention and the best means I know of carrying the same into practical effect, I claim—

In a relief-color-stamping press, a cam for working the color-brush, consisting of a disk provided with an offset having in its face a groove in the form of a circular arc in which is engaged a roller mounted on the reciprocating rod which works the brush-gear, substantially as described.

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

ROBERT FRITH SPROULE.

Witnesses:

GERALD L. SMITH,
EDWARD GARDNER.