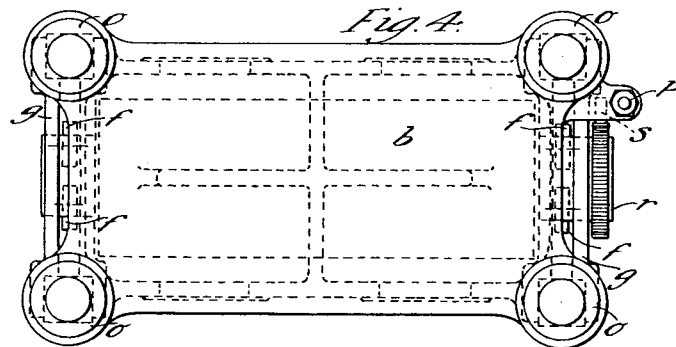
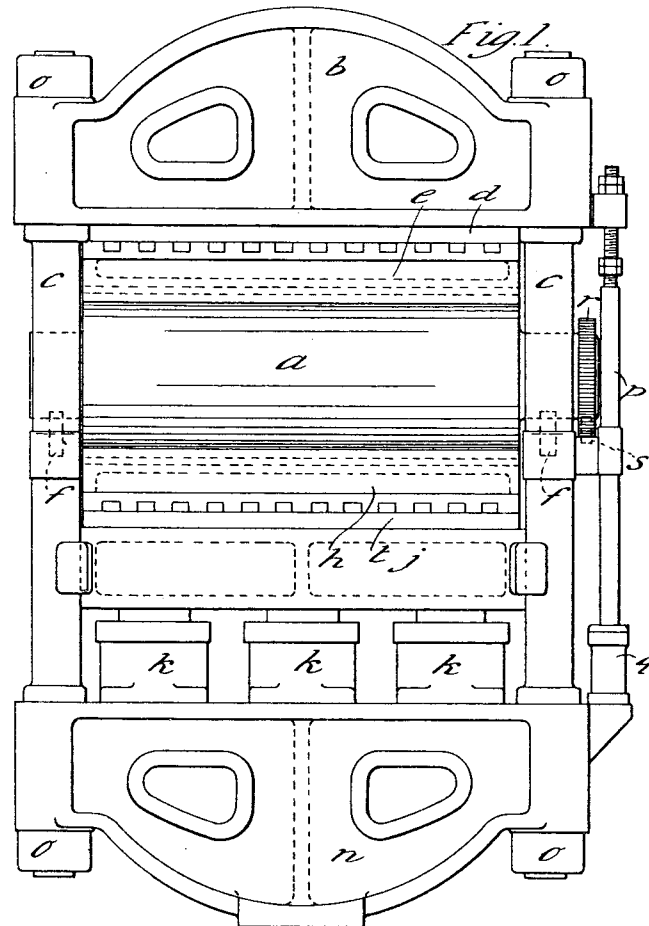


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 APPLICATION FILED SEPT. 14, 1914.

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Patented Mar. 21, 1916.

3 SHEETS—SHEET 1.



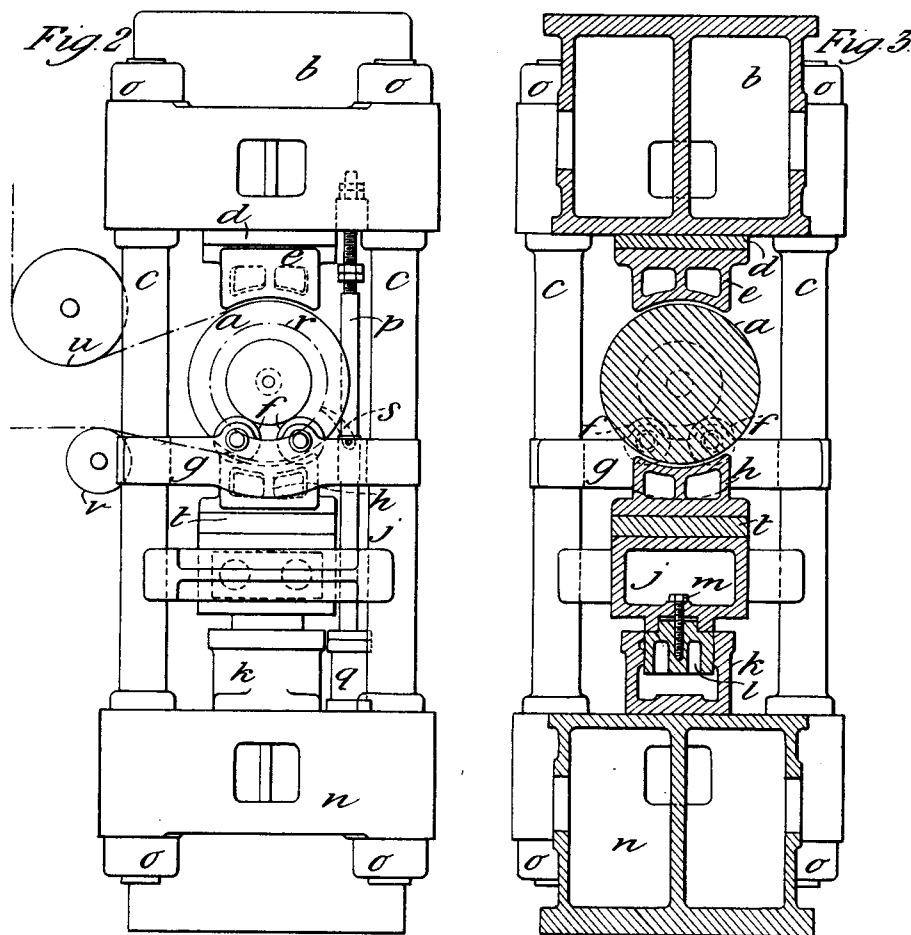
Witnesses;
 M. E. Mc Dade.
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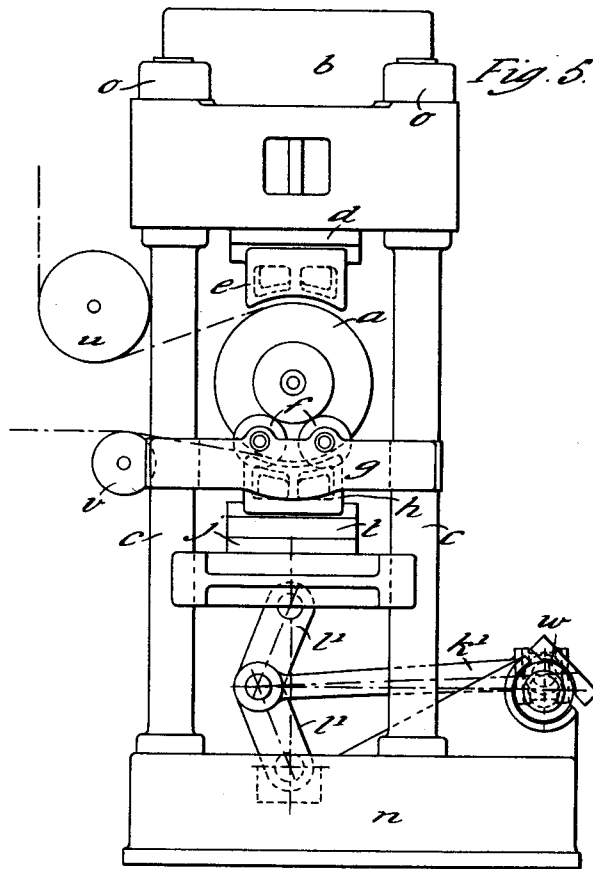
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UNITED STATES PATENT OFFICE.

CHARLES HERBERT SCOTT, OF GLOUCESTER, ENGLAND.

APPARATUS FOR PRESSING OR FINISHING LINOLEUM AND SIMILAR MATERIALS.

1,176,609.

Specification of Letters Patent.

Patented Mar. 21, 1916.

Application filed September 14, 1914. Serial No. 861,660.

To all whom it may concern:

Be it known that I, CHARLES HERBERT SCOTT, a subject of the King of Great Britain, residing in Gloucester, England, have invented certain new and useful Improvements in Apparatus for Pressing or Finishing Linoleum and Similar Materials, of which the following is a specification.

This invention relates primarily to apparatus for the finishing of inlaid linoleum such as described in the specification of my prior Patent No. 697,550, dated April 15, 1902, and consists of an improved construction of press for applying the finishing pressure to such material after the pattern has been built up. The press, however, may be applied in the manufacture of linoleum other than inlaid linoleum or of similar materials.

In the improved construction of apparatus the pressure is applied to the material by means of an intermittently rotating roll around which the linoleum or the like is lapped and a pair of oppositely disposed curved pressure plates embracing the roll and the linoleum, and the pressure is applied in such manner that the roll is not subjected to any bending or sheering stress but only to direct crushing stress.

In the accompanying drawings Figure 1 is a side elevation of a press embodying the present invention; Fig. 2 is an end elevation of the same; Fig. 3 a central transverse section; Fig. 4 a plan view; and Fig. 5 a view similar to Fig. 2 showing a modified pressure transmitting device.

As shown in these drawings the top *b* of the press and the base *n* are connected by means of columns *c* secured by nuts *o*, and between the base and the top is placed a roll *a* preferably of chilled iron and hollow so that it may be heated by circulating hot gas or liquid, or by other suitable means.

The roll *a* is mounted on anti-friction rollers *f* carried by brackets *g* which are secured to the columns *c*. Above the roll is fixed a pressure plate *e* curved to the diameter of the roll and preferably made hollow, as shown, so that it can be heated for example by means of steam, this pressure plate being secured to the under side of the top member *b* of the press and preferably with an interposed liner or plate *d*. A similarly curved pressure plate *h* disposed diametrically opposite to the pressure plate *e* is mounted upon a platen *j* which is guided for

vertical movement by means of the columns *c*, a liner or plate *t* being preferably interposed between the pressure plate *h* and the platen. The platen *j*, in the construction of Figs. 1-3, is supported by the rams *l* of a plurality of hydraulic cylinders *k*, being detachably secured thereto as by means of screws *m* so as to enable the leathers in the cylinders *k* to be easily replaced. The roll *a* is intermittently operated, as by means of a ratchet *r* formed or secured on its neck and a pawl *s* actuated by the piston or ram *p* of a hydraulic cylinder *q*.

In the modified construction of Fig. 5 the platen *j* is actuated by one or more pairs of toggle arms *l', l'* operated by a connecting rod or rods *k'* from a driving shaft *w*. In this alternative construction the pawl and ratchet which intermittently rotate the roll *a* are preferably actuated by means of a cam on the shaft *w*. When, however, the apparatus is used directly in conjunction with a machine for making inlaid linoleum, the platen *j* and the roll *a* are actuated by devices so as to give the appropriate synchronism between the movements of the platen and roll and those of the linoleum forming apparatus. The linoleum or the like is passed over a guide roller *v* fitted in the front of the press, thence between the pressure plate *h* and the roll *a* and around the latter and between it and the pressure plate *e*, thence passing around the leading roll *u*.

When the parts of the apparatus are in the positions shown in the drawings the platen *j* is raised by means of one or more of the hydraulic rams or pairs of toggle arms to press the linoleum or the like between the pressure plate *h* and the under side of the roll *a* which is then, during the remainder of the stroke, lifted a certain distance and in turn presses the linoleum between its upper side and the upper pressure plate *e*. When the hydraulic pressure is taken off or the rotation of the shaft *w* continued, the platen *j* and roll *a* drop to their initial positions and the pawl *s* actuated so as to cause the roll to rotate through a small angle, thus drawing in fresh material. This action is repeated and the linoleum or other material which is being operated upon is intermittently drawn through the press and subjected, between the intervals of feeding, to a double pressure between the upper and lower pressure plates respectively.

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

1. Apparatus for pressing or finishing linoleum and similar materials comprising oppositely disposed pressure plates; a roll between said plates; means for intermittently rotating said roll; and means for pressing said pressure plates and the roll against each other when the roll is stationary.

2. Apparatus for pressing or finishing linoleum and similar materials comprising a fixed pressure plate; a movable pressure plate; a roll between said plates, and means for operating said movable plate to simultaneously press it against said roll and said roll against the fixed plate.

3. Apparatus for pressing or finishing linoleum comprising a fixed pressure plate; a roll adjustably mounted adjacent to said pressure plate; a movable pressure plate adjacent to said roll and oppositely placed to said fixed plate and means operative upon said movable plate to press the roll between said pressure plates.

4. Apparatus for pressing or finishing linoleum comprising a fixed pressure plate; a roll adjustably mounted below said fixed plate; a movable pressure plate below said roll and means for raising said movable plate against said roll and causing it to lift and press said roll against the fixed plate, substantially as hereinbefore described.

5. Apparatus for pressing or finishing linoleum comprising a fixed pressure plate; a roll adjustably mounted adjacent to said pressure plate; a movable pressure plate opposite of said roll to the fixed plate and means operative upon said movable plate to press said roll with an approximately equal pressure throughout its length between said pressure plates, substantially as herein before described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES HERBERT SCOTT.

Witnesses:—

H. P. FITCH,

JOHN W. PATCHING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."