

No. 885,565.

E. BATTEN.

PATENTED APR. 21, 1908.

PRESSING MACHINERY FOR USE IN THE MANUFACTURE OF INLAID  
LINOLEUM.

APPLICATION FILED NOV. 2, 1907.

2 SHEETS—SHEET 1.

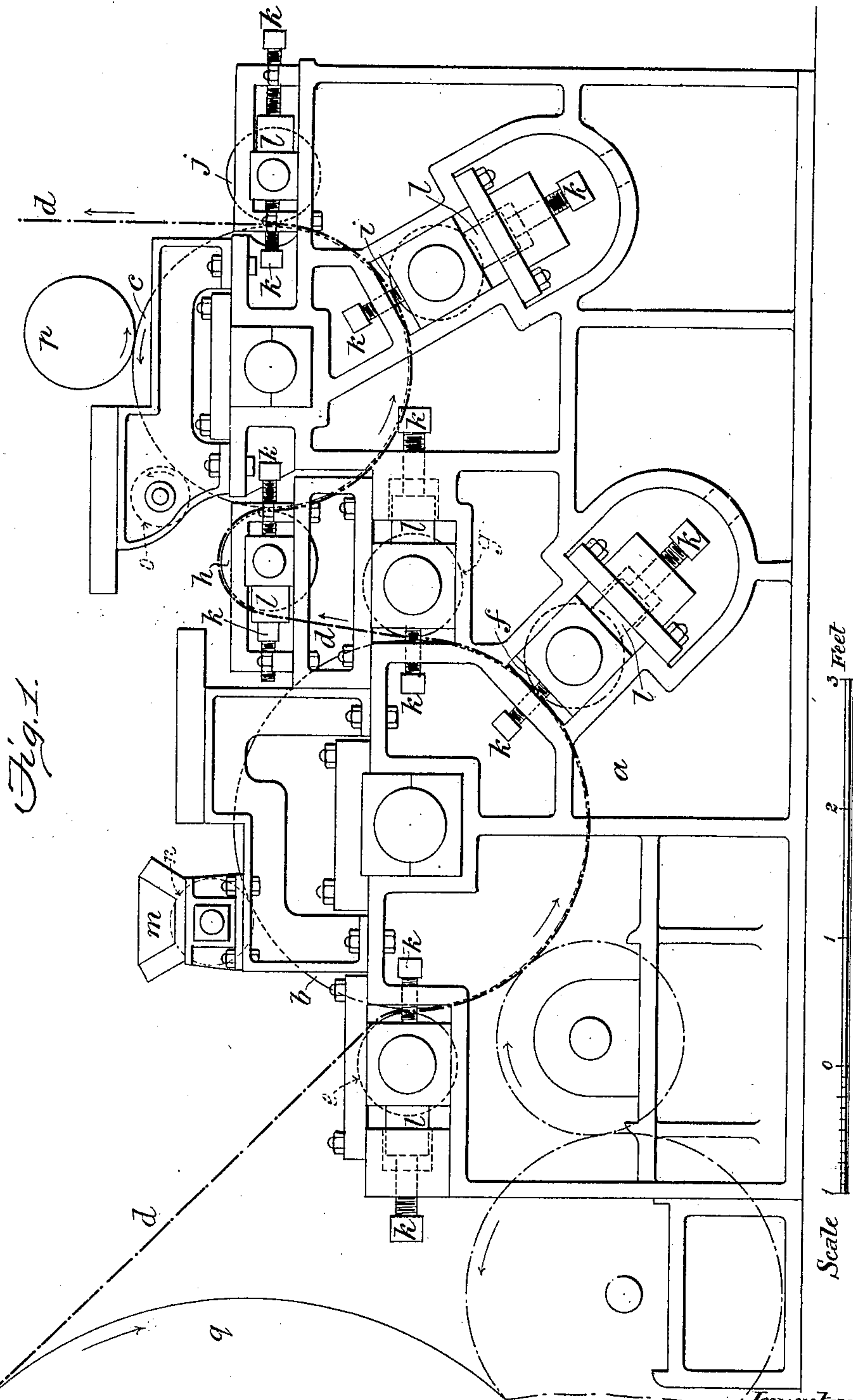


Fig. 1.

Witnesses:

*[Signature]*  
*[Signature]*

By

*Edward Batten*  
*James L. Norris* atty.

Inventor

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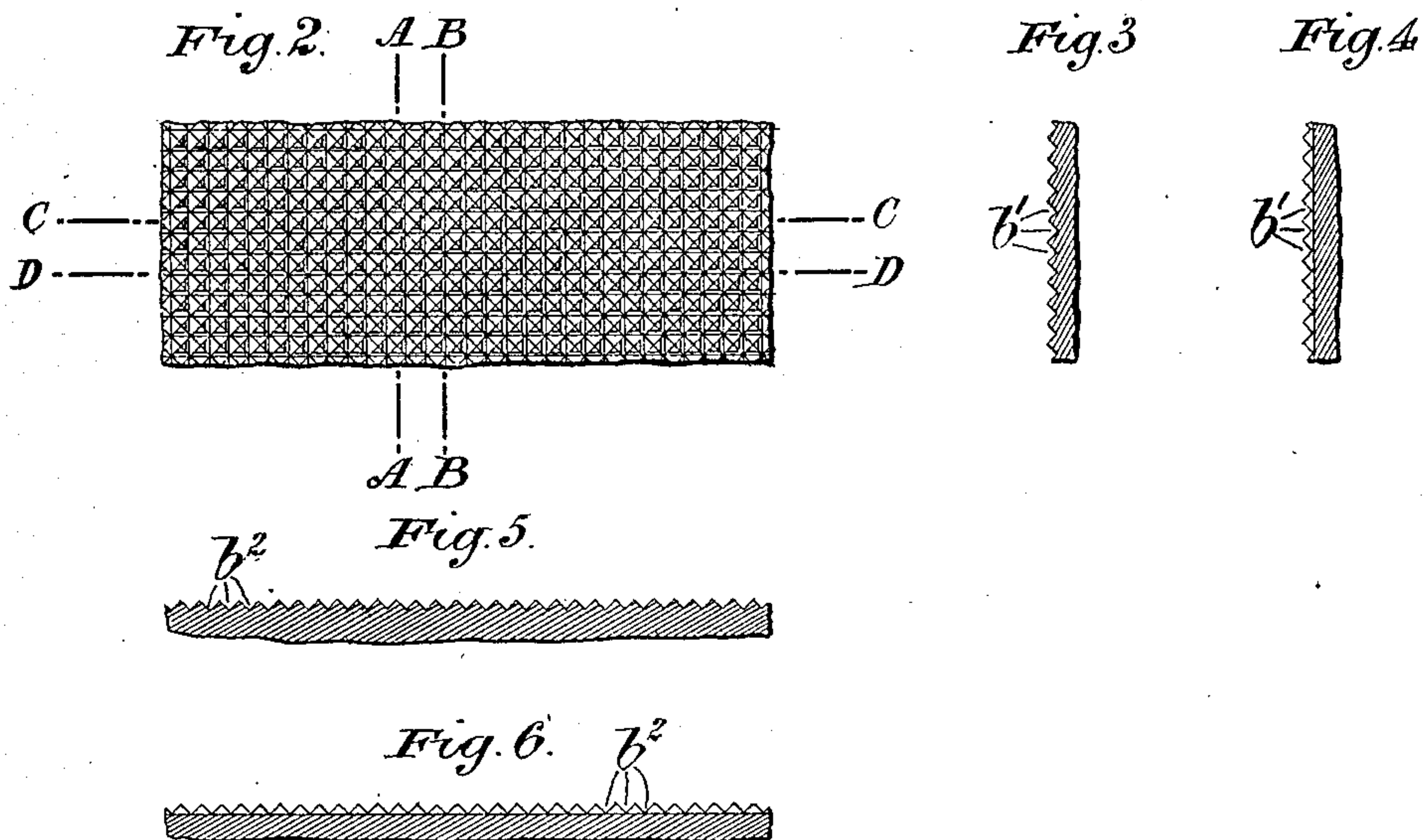
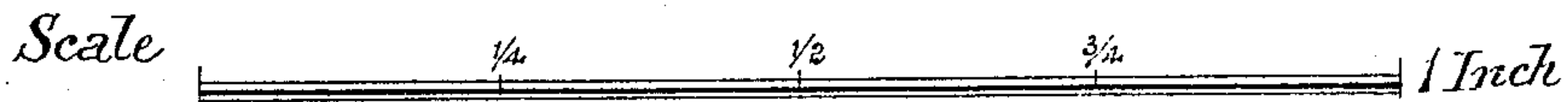


Fig. 7.



Witnesses:-

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# UNITED STATES PATENT OFFICE.

EDWARD BATTEN, OF KIRKCALDY, SCOTLAND.

PRESSING MACHINERY FOR USE IN THE MANUFACTURE OF INLAID LINOLEUM.

No. 885,565.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed November 2, 1907. Serial No. 400,426.

To all whom it may concern:

Be it known that I, EDWARD BATTEN, a subject of the King of Great Britain, residing at Kirkcaldy, Scotland, have invented new and useful Improvements in Pressing Machinery for Use in the Manufacture of Inlaid Linoleum, of which the following is a specification.

This invention relates to pressing machinery for use in the manufacture of inlaid linoleum for consolidating the parts of which the fabric is composed by producing cohesion of the said parts and adhesion thereof to the backing and the said invention consists in the improvements hereinafter described in such machinery by means of which improvements as compared with the results obtained by means of the pressing machinery heretofore used a more thorough consolidation of the linoleum is produced and a more uniform surface is imparted thereto and a greater speed of the machine is rendered practicable without lateral displacement of the linoleum composition and consequent distortion of the outlines of the pattern produced by the inlaying. According to one of the said improvements the consolidation is provided for by means of a roll or rolls arranged to act on the face of the fabric and the surface or surfaces of which roll or rolls is or are so scored or engraved or otherwise roughened that without lateral displacement of the linoleum composition and consequent distortion of the pattern a much greater pressure on the fabric and a higher speed of the machine with more perfect consolidation thereof can be obtained than is possible with the plain or smooth rolls heretofore used. According to another of the said improvements a roll or rolls the surface or surfaces of which is or are plain or smooth is provided for smoothing the face of the linoleum after action thereon of the aforesaid scored or engraved or otherwise roughened roll or rolls which are hereinafter referred to as the roughened roll or roughened rolls.

The said invention is hereinafter further described with reference to the accompanying drawings wherein

Figure 1 illustrates in side elevation a linoleum pressing machine embodying the aforesaid improvements and containing one roughened roll and one smooth roll. Fig. 2 is a face view of a portion of the roughened roll drawn to a much larger scale than Fig. 1; and Figs. 3, 4, 5 and 6 represent sections of

the said roll taken respectively on the lines A—A, B—B, C—C, and D—D Fig. 2. Fig. 7 represents a scale indicating the degree of fineness of the roughened surface.

In the following description of the said drawing the parts thereof are referred to by the letters marked thereon.

*a* is the framing of the machine.

*b* is the roughened roll and *c* is the smooth roll both of which are preferably hollow and provided with connections (not illustrated) admitting of introduction of steam or hot water or other convenient heating medium.

The linoleum which is indicated by the line *d* is pressed against the said roll *b* by rolls *e f g* and against the roll *c* by rolls *h i j* which rolls *e f g h i j* are mounted in housings adjustable by means of screws *k k* in order to admit of variation of the degree of pressure on the linoleum according to requirements.

*l l* are springs or cushions of india rubber the effect of which is to give a slight degree of resilience to the pressure on the linoleum in contact with the rolls *b* and *c*.

*m* is a hopper for containing finely powdered French chalk china clay or other matter suitable for preventing adhesion of the linoleum to the roll *b* and *n* is a roller preferably faced with india rubber for receiving from the said hopper a coating of such matter and transferring it to the roll *b*.

*o p* are rolls for cleaning and waxing the roll *c* which rolls *o p* are in contact with the said roll *c* and when the machine is in action are served with paraffin wax or other suitable wax and caused to rotate so that the portions of their surfaces which are in contact with the said roll *c* move in a direction the reverse of that of the surface of the said roll *c*. The object of the waxing is to provide for imparting a high polish to the face of the inlaid linoleum and to prevent adhesion thereof to the surface of the said roll *c*.

The direction of motion of the linoleum *d* through the machine and the direction of rotation of the several rolls illustrated are indicated by the arrows on the drawing.

The circumference of the roll *b* is preferably an even and exact multiple of the repeat of the pattern of the linoleum to be dealt with in the machine as this insures that in each revolution of the said roll the same portion of its surface comes in contact only with the same color thus avoiding discoloration of the fabric.

When the machine is to be used for press-



ing inlaid or mosaic linoleum made up of pieces of sheet linoleum of diverse colors it is advantageous for the roll *b* to be roughened by scorings both parallel to its axis and at right angles thereto all about one fiftieth of an inch apart and about one hundredth of an inch deep which scorings may be so produced that each of them has in transverse section the form of a sharp V groove, as illustrated in Figs. 2, 3, 4, 5 and 6 of the accompanying drawing in all of which figures, except Fig. 2, the scorings parallel to the axis of the roller are marked *b' b'*, and those at right angles thereto are marked *b<sup>2</sup> b<sup>2</sup>*. It is however not essential for the particular directions and spacing and depth of the scorings here stated to be strictly observed.

For pressing inlaid linoleum consisting of granulated linoleum composition on a canvas backing it is advantageous to use two roughened rolls in succession for the pressing the roughening of the roll for the first pressing consisting of deeper and more widely spaced incisions than those of the roll for the subsequent pressing. The advantage of this is that by the first pressing with the coarsely roughened roll the granulated linoleum composition is so acted on as to favor the action of the second roll which is less coarsely roughened and the action of which is followed by pressure against a roll having a smooth and highly polished surface. More than two of the roughened rolls may be used the roughening of each being of a different degree of coarseness and the several rolls being arranged in the machine so that the coarsest acts first on the linoleum and the others in order of the degree of roughening.

By means of the aforesaid pressing machine the whole of the operations necessary

for the welding and consolidation of inlaid linoleum may be executed. The said machine may, however, be advantageously worked in tandem with an ordinary inlaying and pressing machine the relative positions of the said machines being in that case such that the linoleum passes to the former from the latter as illustrated in the accompanying drawing in which a portion of the last roller of an inlaying machine is illustrated at *q*.

I claim:—

1. In pressing machinery for use in consolidating inlaid linoleum fabric a roll having a roughened surface for acting on the face of the said fabric substantially as described.

2. In pressing machinery for use in consolidating inlaid linoleum fabric two or more rolls having roughened surfaces and arranged to act in succession on the face of the said fabric in order of the degree of coarseness of the roughening the most coarsely roughened acting first.

3. In pressing machinery for use in consolidating inlaid linoleum fabric the combination of a roll having a roughened surface for acting on the face of the said fabric and a roll having a smooth surface arranged for subsequently acting thereon.

4. In pressing machinery for use in consolidating inlaid linoleum fabric the combination with two or more rolls having roughened surfaces and arranged to act in succession on the face of the said fabric of a smooth roll or smooth rolls for acting on the face of the said fabric after action of the aforesaid rolls.

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Witnesses:

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