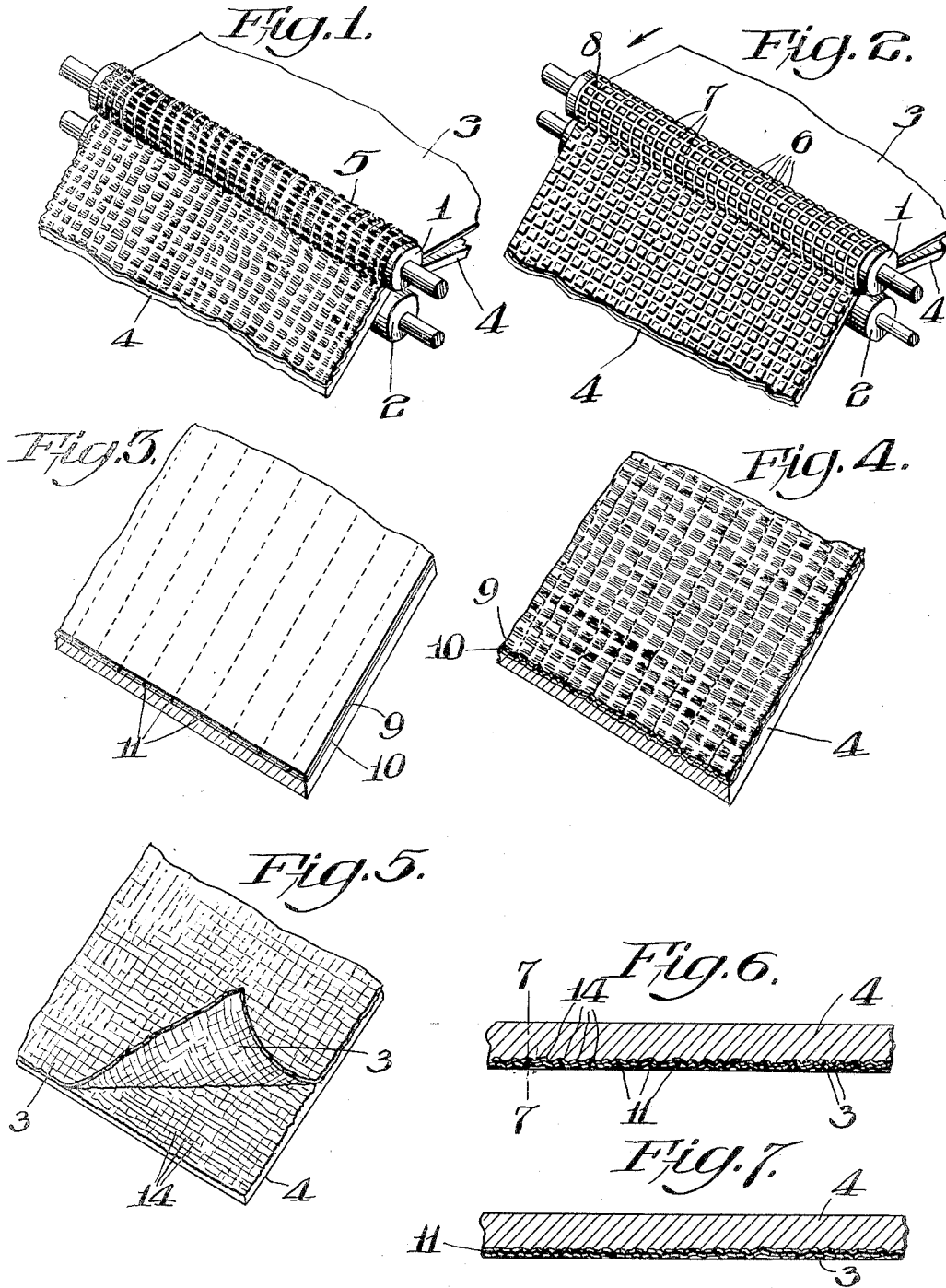


1,345,810.

Patented July 6, 1920.



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UNITED STATES PATENT OFFICE.

JOHN J. TOMEC, OF TRENTON, NEW JERSEY.

LINOLEUM.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN J. TOMEC, a citizen of the United States, and a resident of Trenton, in the county of Mercer and State of New Jersey, have invented an Improvement in Linoleums, of which the following is a specification.

My invention has for its object to provide a construction of linoleum in which the backing thereon shall consist of paper or similar fabric, having its surface which is in contact with the layer of linoleum or other equivalent or similar composition so interlocked and combined therewith that the layer of the linoleum composition or material and the layer of paper are closely fastened together so that they will not separate in the wear and tear of ordinary use.

Efforts heretofore have been made to produce a linoleum product having paper or a similar sheet as a backing, but thus far, as far as I am aware, such constructions have not proved satisfactory for the reason that the layer of paper and linoleum composition have separated too readily and easily. By my invention this objection has been overcome.

By the employment of my invention in which the sheet of paper is united closely with the sheet of linoleum composition and interlocked therewith by reason of the interlocking projections and indentations upon the two contacting surfaces of the two layers, I am enabled to satisfactorily secure the two sheets together without the employment of a separate adhesive. It will be understood, however, that if desired, a separate adhesive material may be employed intermediate the sheets in addition to the interlocking feature mentioned.

In the manufacture of linoleum embodying my invention, I place in contact with each other a sheet of paper and a sheet of linoleum composition, and press the same together by any suitable means, the cylinder or plate as the case may be which contacts with or presses against the paper sheet being provided with projections or roughnesses which effect indentations in the paper, forcing the indented portions into the adjacent, contacting surface of the linoleum composition, thereby interlocking and firmly combining together the two surfaces. The linoleum composition possesses a certain amount of adhesiveness or is char-

acterized by a certain adhesive quality, which, cooperating with the projecting indented portions of the paper, aids in firmly securing the two sheets together.

If desired the surface of the cylinder or plate, whichever may be used, with which the paper sheet contacts may be covered with a sheet of burlap, so that in the finished product the paper sheet will have the appearance of a burlap backing which may be desired in view of the fact that burlap is the material most generally used for backing in the manufacture of linoleum.

One object of my invention wherein and whereby means is provided which enables the employment of paper fabric as a backing, is to effect economy in the cost of manufacturing linoleum. Paper which may be employed as a backing as compared with burlap is quite cheap and inexpensive. Therefore the commercial importance of any means which will enable the use of a relatively cheap paper fabric as a backing for linoleum is quite apparent and marked.

Other objects and advantages of my invention will be referred to in the detailed description thereof which follows herein or will be apparent from such description.

In order that my invention may be more easily and readily understood and its practical advantages fully appreciated, reference may be had to the accompanying drawing in which I have illustrated linoleum constructed in accordance with my invention and have also indicated the manner in which the same is constructed.

In the drawing:

Figure 1 is a perspective view of a couple of rollers related to each other so as to compress together a layer of linoleum composition and a relatively thin sheet of paper fabric, portions of the said layers being shown before and after compression, and one of said rollers being provided with a covering of burlap;

Fig. 2 is a view similar to that shown in Fig. 1 except that the top roller is provided with transversely and longitudinally extending grooves, dividing the surface thereof into a series of projections separated from each other by the said grooves;

Fig. 3 shows a portion of the sheets in contact with each other prior to their compression to cause them to permanently adhere together;

Fig. 4 is a view in perspective of a sec-

tion of linoleum after the sheet of linoleum composition and the sheet of relatively thin paper fabric have been compressed together in the manner above indicated;

5 Fig. 5 is a view similar to that shown in Fig. 4 but with a corner portion of the paper fabric separated from the sheet of linoleum composition and turned upwardly to show its under side;

10 Fig. 6 is a transverse sectional view of a section of linoleum after the sheet of linoleum composition and paper fabric have been compressed together; and

15 Fig. 7 is a similar sectional view taken on the line 7—7 of Fig. 6.

Referring to the drawing, 1 and 2 designate top and bottom rollers between which the layers of relatively thin paper material 3 and the sheet of linoleum composition 4 are passed for the purpose of compressing the same together by the compressive action of the said rollers. In Fig. 1 the roller 1 is covered by a covering of burlap 5, while in Fig. 2 the roller 1 is shown as provided with a series of projections 6 formed by a series of longitudinally extending grooves 7 and transversely extending grooves 8, the latter extending around the said roller 1 at right angles to the grooves 6.

30 In the construction shown, the sheet of paper fabric consists of two thin sheets 9 and 10 of known construction secured together and having at intervals therein, extending longitudinally thereof, fine threads 11 of wire or threads of other strong material. If desired, threads may also be provided which extend transversely of the length of the sheet of paper fabric. It will be understood, however, that the presence of these threads is not at all essential to my invention. Any suitable paper fabric may be employed but the surface of the same preferably should be uncalendered and relatively rough.

45 It will be observed upon reference to Figs. 6 and 7 of the drawing that by passing the layers of paper 3 and linoleum composition 4 between the rollers, or by pressing them together by any suitable form of press in which one of the compression members is provided with a surface having roughnesses or projections thereon, indentations or projecting portions 14 will be formed upon and forced into the opposing contacting surfaces of the linoleum composition 4. By reference to Figs. 6 and 7 it will be seen that these projections or indentations are quite numerous, and it will be understood that the dimensions of the said indentations may be varied by varying the frequency or the number of projections upon the compression member which operates against the paper sheet. It will, of course, be understood

that the contacting opposing surface of the linoleum composition is a counterpart of the contacting opposing surface of the paper sheet, so that each is provided with indentations and projections which interlock with each other, which interlocking relationship effects what may be described as a permanent connection between the two sheets. By permanent is meant that the sheets are secured together so that they will not separate as a result of the normal wear and tear to which the linoleum is subjected in ordinary use. If desired, however, the sheets may be separated by actually pulling or tearing them apart if such separation should be desired.

When burlap is employed as a covering for one of the compression members as in Fig. 2 of the drawing, the outer surface of the paper sheet against which it contacts and is compressed becomes a counterpart of the surface of the burlap upon said compression member. This feature is intended to be illustrated in Fig. 5 of the drawing.

The illustration of the compression members by means of which the paper fabric sheet and the sheet of linoleum composition are caused to adhere together and a description of the same herein are for the purpose of enabling a clearer understanding of my invention and not as in any way affecting or limiting my invention relating to the product which is clearly shown in Figs. 4 to 7 inclusive.

I claim:

1. A new article of manufacture including a sheet of linoleum composition and a sheet of relatively thin fibrous material, the opposing, contacting surfaces of each of which are provided with projections and depressions, the projections of one fitting into the depressions of the other, substantially as described.

2. A new article of manufacture including a sheet of linoleum composition and a sheet of paper, the contacting surfaces of said sheets each being provided with projections and depressions, the projections of one fitting into the depressions of the other.

3. A new article of manufacture including a sheet of linoleum composition and a sheet of paper having an uncalendered and relatively rough surface, the said sheets having two opposing surfaces in contact with each other and the said surfaces respectively including projections which are combined and interlock to assist in binding and securing the said sheets together.

In testimony that I claim the foregoing as my invention I have hereunto set my hand this 13th day of September, A. D. 1918.

JOHN J. TOMEK.