G. FRENKEL.

PROCESS FOR MANUFACTURING BLOCKS OF LINOLEUM MATERIAL.

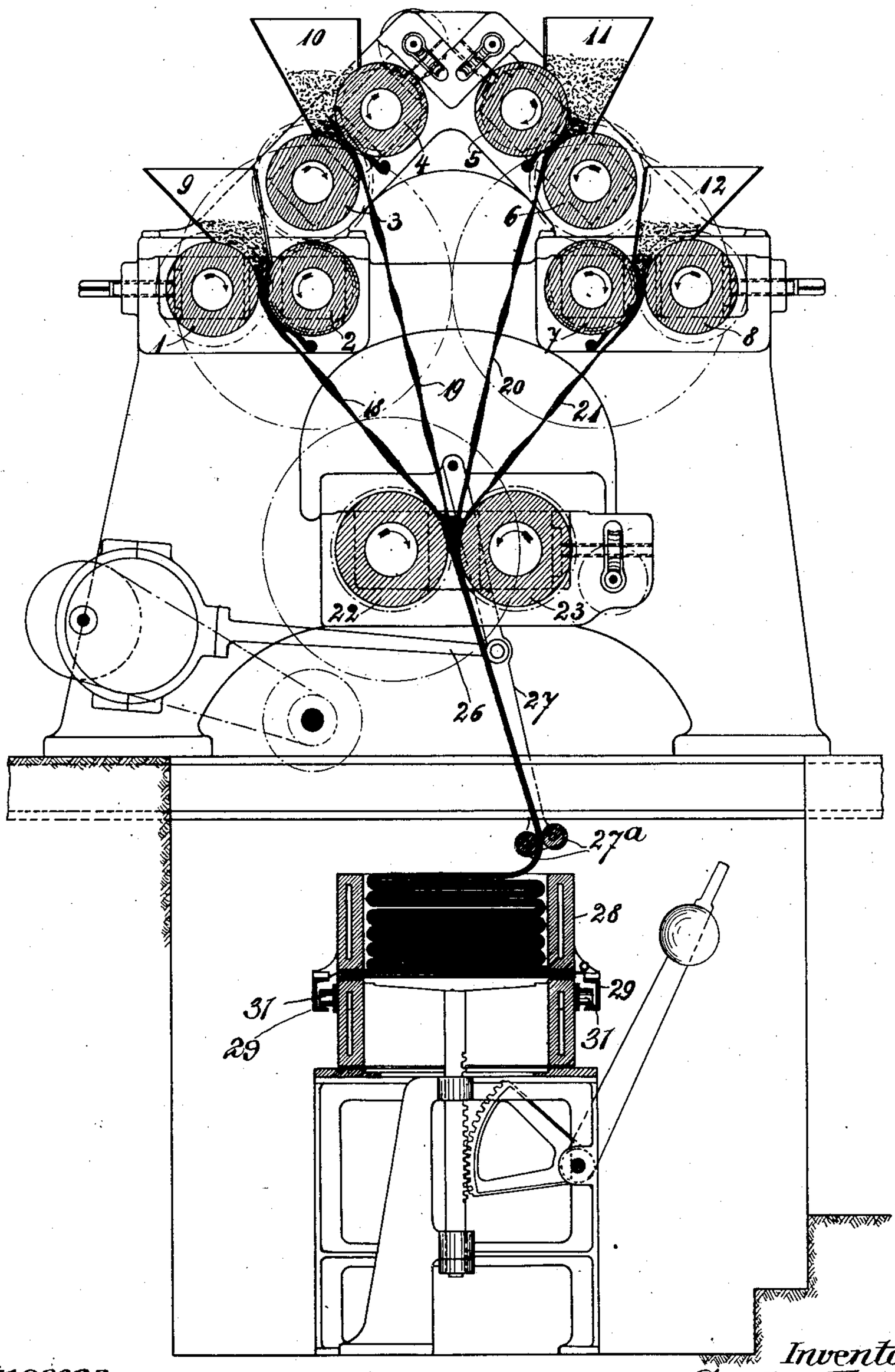
APPLICATION FILED JUNE 12, 1907.

919,341.

Patented Apr. 27, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

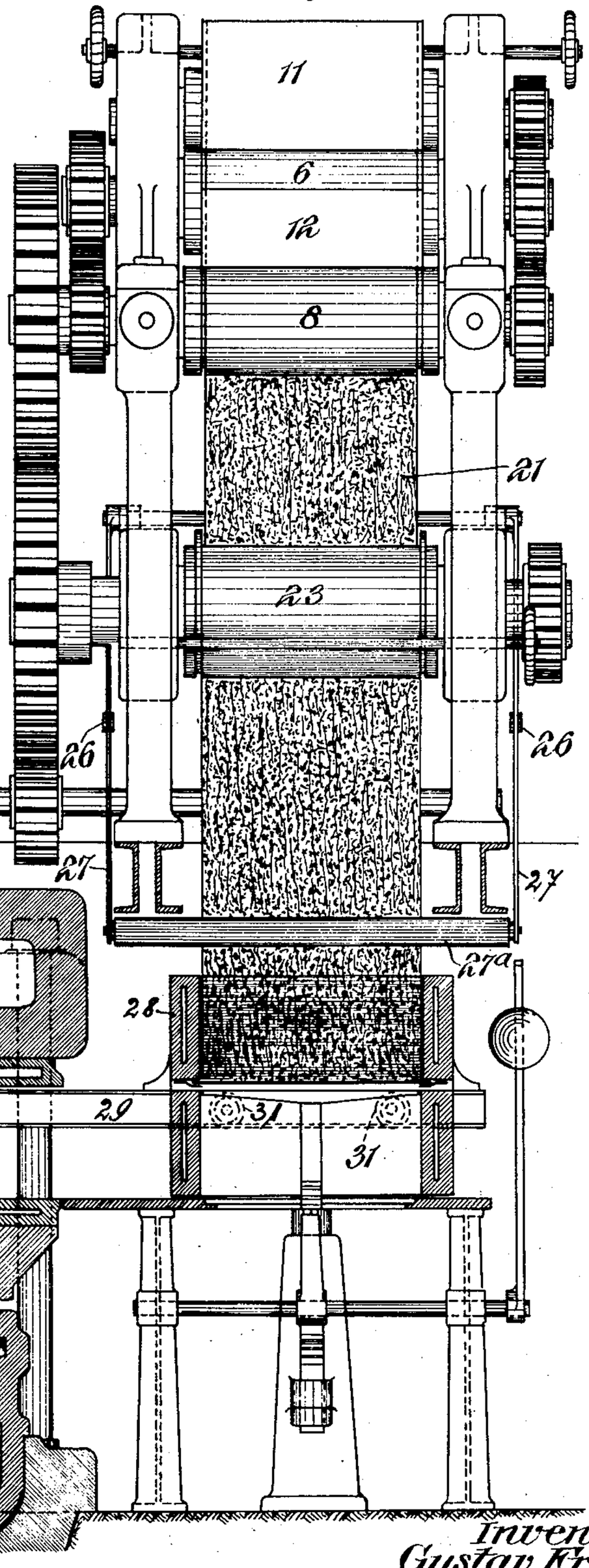


Fig. 3.

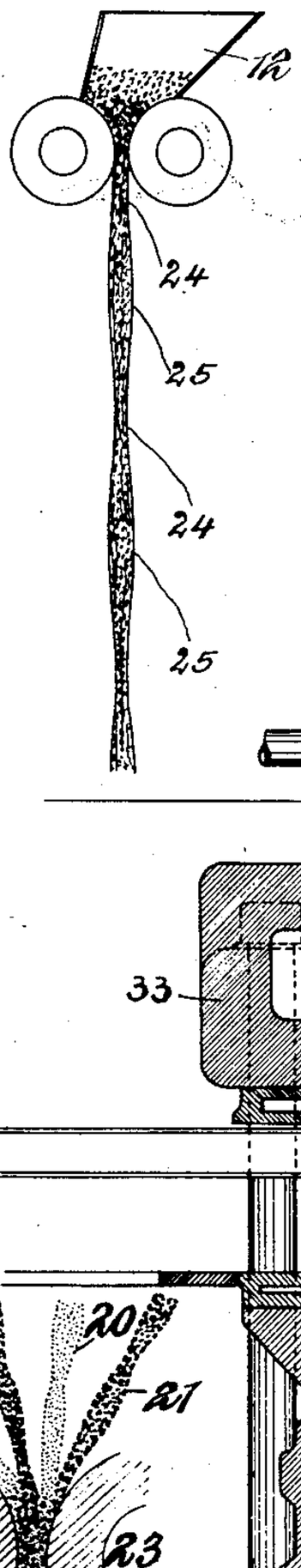
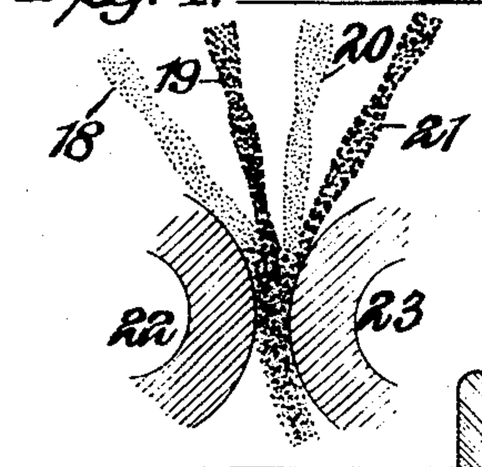


Fig. 4.



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UNITED STATES PATENT OFFICE.

GUSTAV FRENKEL, OF COLOGNE, GERMANY

PROCESS FOR MANUFACTURING BLOCKS OF LINOLEUM MATERIAL.

No. 919,341. Specification of Letters Patent. Patented April 27, 1909.

Application filed June 12, 1907. Serial No. 378,656.

To all whom it may concern:

Be it known that I, GUSTAV FRENKEL, engineer, a subject of the German Emperor, residing at Cologne-on-the-Rhine, Rhenish Prussia, Empire of Germany, have invented a new and useful Process for Manufacturing Blocks of Linoleum Material, of which the following is a specification.

The present invention relates to an improved process for manufacturing blocks of linoleum material or the like, resembling in appearance when finished, the natural grain of wood.

The process consists in forming several strips or bands from linoleum material of various colors, then uniting said strips to form a single strip, then folding said strip over upon itself in layers, and then pressing said layers to form a block, which is afterward cut by a suitable means.

In the accompanying drawings, which show the mechanism employed in my process:—Figure 1 is a longitudinal sectional view of the mechanism preferably employed in carrying out the process. Fig. 2 is a side elevation of the same. Fig. 3 is a detail view showing one hopper with its corresponding rolls. Fig. 4 is a detail view showing the several different colored strips and a single multicolored strip formed of the several single strips.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

The mechanism preferably employed in forming the blocks comprises a suitable framework having arranged near the top a plurality of pairs of rolls 1—2, 3—4, 5—6, 7—8 respectively, and above each pair of rolls is located a corresponding hopper 9—10—11—12 respectively. While only four pair of rolls are shown in the drawing, I do not wish to limit myself to this number, as more or less may be used without departing from the spirit of my invention. Located below the rolls and arranged substantially in the center of the frame is a single pair of rolls 22—23, the diameter thereof being preferably larger than the other rolls. The plurality of pairs of rolls are preferably mounted eccentrically, although they may be mounted concentrically if the rollers are made of certain shape. All of the rollers are provided with suitable operating gearing, which, through intermediate gearing, meshes with the gear of the drive shaft.

Light and dark material is alternately placed within the hoppers 9—10—11—12 respectively, *i. e.* hopper 9 may contain light material, hopper 10 dark material, hopper 11 light material, hopper 12 dark material and so on, depending upon the number of hoppers employed. This material is fed from each hopper through its respective pair of rolls, and because of the fact that the rolls are eccentrically mounted, strips 18—19—20—21 of this material are formed, having alternate thin and thick portions 24 and 25 respectively, thus producing a correct grain effect. These strips, which are adapted to pass together, through the single pair of rolls 22—23, which are mounted concentrically, are thus united to form a single strip of material having alternate layers of light and dark material. Just previous to entering between these rolls, the strips lie irregularly upon one another, and during the passage through the rolls, a mixing and equalizing action takes place, *i. e.* particles of the material of the irregular strips are displaced as the excess linoleum material which is forced from the thicker places moves toward the thinner places. The single strip thus produced, is folded in layers in a heated receptacle 28, which is preferably heated by steam. To fold this strip, in layers, an oscillating arm 27 is employed, which is provided at its lower end with two rollers 27[a], through which the strip is adapted to pass. This arm is oscillated by means of a pitman 26 or other suitable device. When the receptacle is filled, the strip is cut and the said receptacle which is provided with wheels 31 is moved upon the track 29 to a press 33 preferably a hydraulic press, although another style may be used if so desired. This press which is heated, finishes the block without requiring a binding substance as the material, on account of always remaining in contact with heated objects, is soft and flexible and binds together readily under the pressure to which it is subjected. By adjusting the rollers, the strips can be regulated in every respect.

Should it be desired to produce linoleum blocks having a uniform pattern, in colors, the rolls are not arranged eccentrically, but concentrically, which will produce strips of uniform thickness, and when these strips are subjected to the treatment as hereinbefore described, a linoleum block having a uniform pattern will be produced.

From the foregoing, it is thought that the

construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. A process for manufacturing blocks of linoleum material or the like, consisting in making a plurality of strips from linoleum material of various colors, then uniting said strips to form a single strip, then folding said strip on itself in layers, and finally pressing the said layers to form a block.

2. A process for manufacturing blocks of linoleum material or the like consisting in dividing the said material into portions of different color, then rolling said portions into strips of corresponding color, then uniting said strips to form a single strip made up of different colors, then folding said strip into layers, and finally pressing said layers to form a block.

3. A process for manufacturing blocks of linoleum material or the like, consisting in dividing the said material into portions of different color, then rolling said portions into strips of corresponding color, then uniting said strips to form a single strip made up of different colors, then folding said strip into layers, in a heated receptacle, and finally pressing in a heated press said layers to form a block.

4. A process for manufacturing blocks of linoleum material or the like consisting in making a plurality of strips from linoleum material, then uniting said strips to form a single strip, then folding said strip into layers in a heated receptacle, and finally pressing in a heated press said layers to form a block.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GUSTAV FRENKEL.

Witnesses:

JACOB PLANTE,

LOUIS VANDORN.