

No. 793,782.

PATENTED JULY 4, 1905.

A. A. GODFREY.
MANUFACTURE OF LINOLEUM.
APPLICATION FILED FEB. 13, 1905.

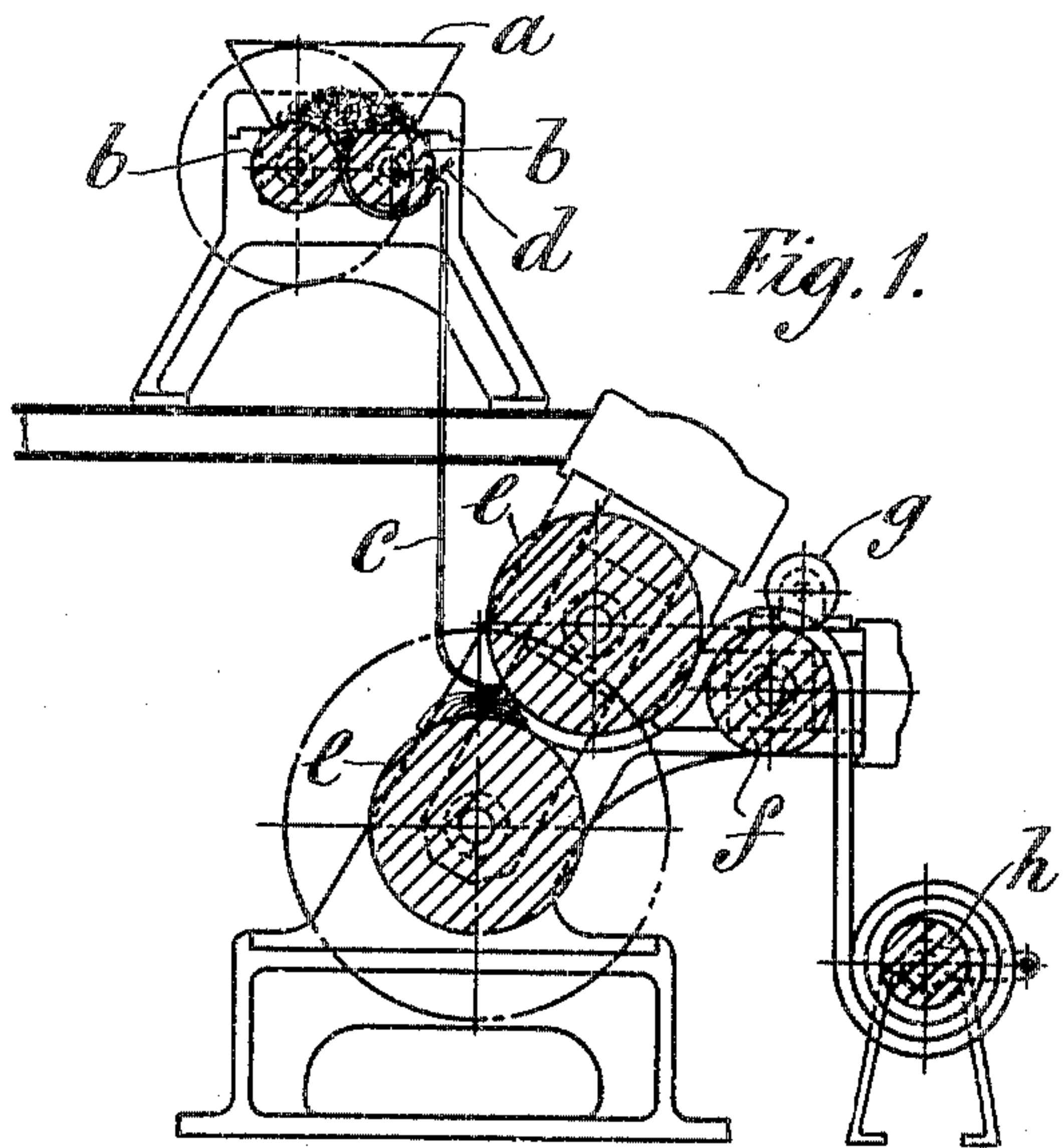


Fig. 1.

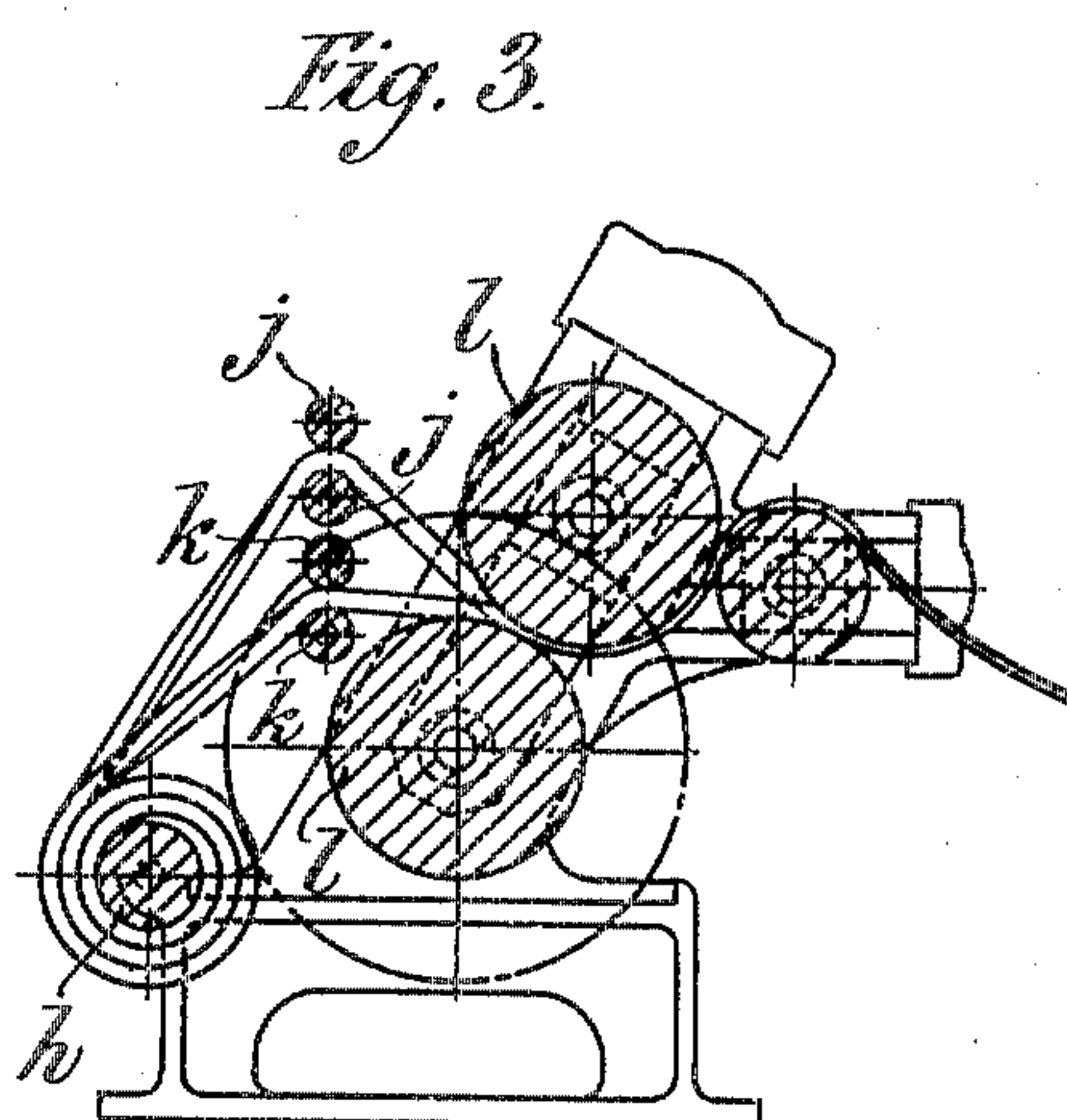


Fig. 3.

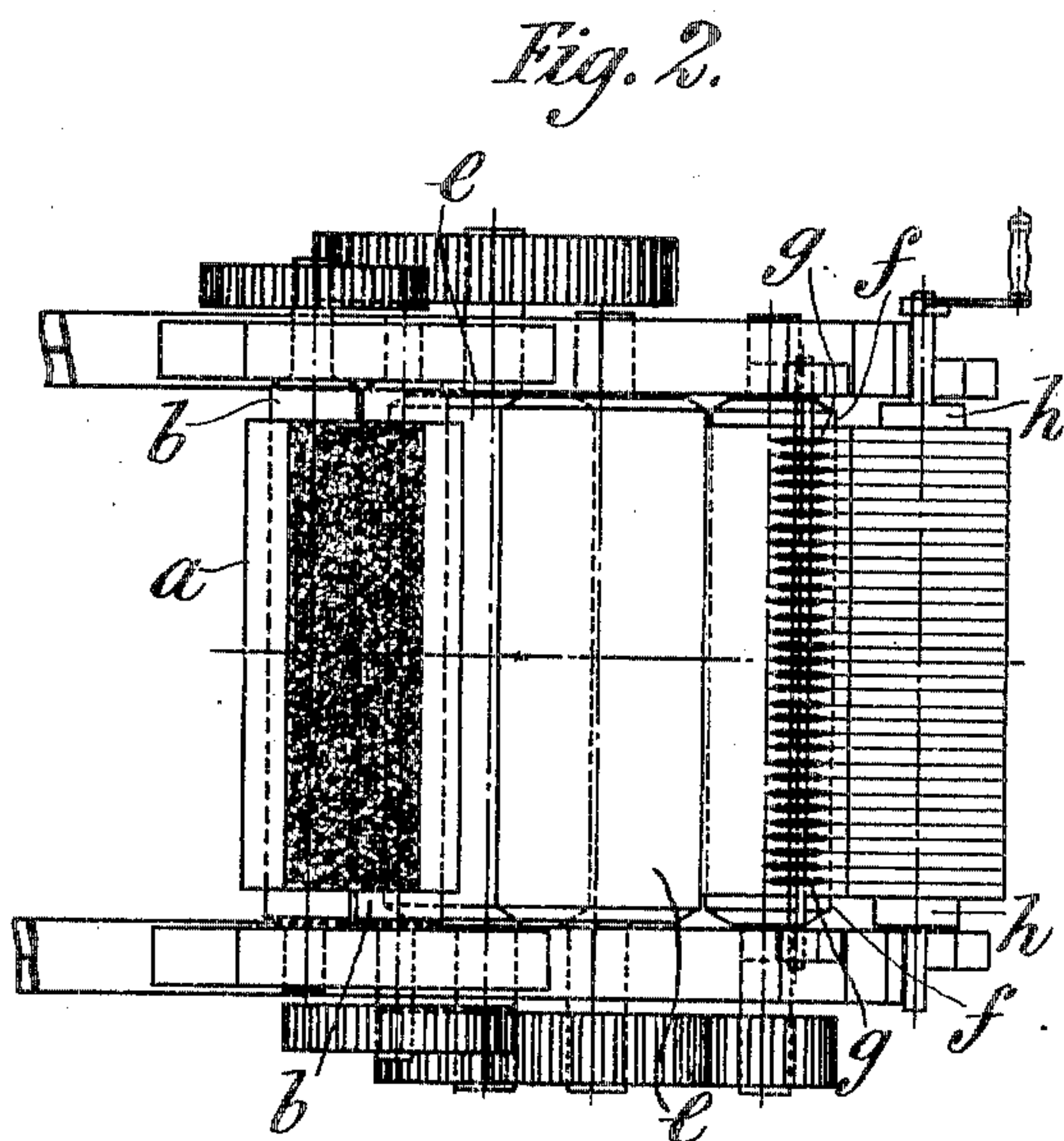


Fig. 2.

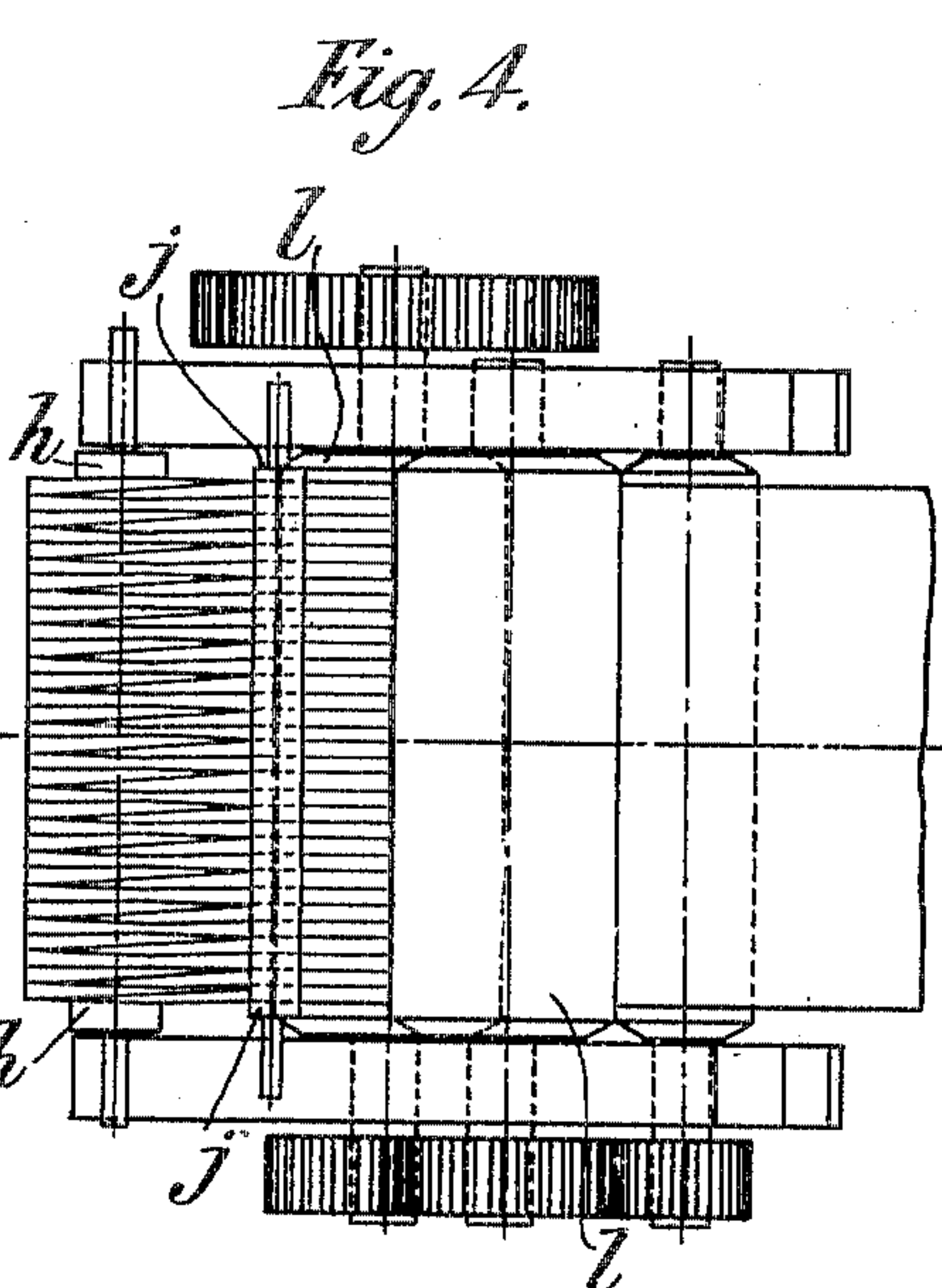


Fig. 4.



Fig. 5.

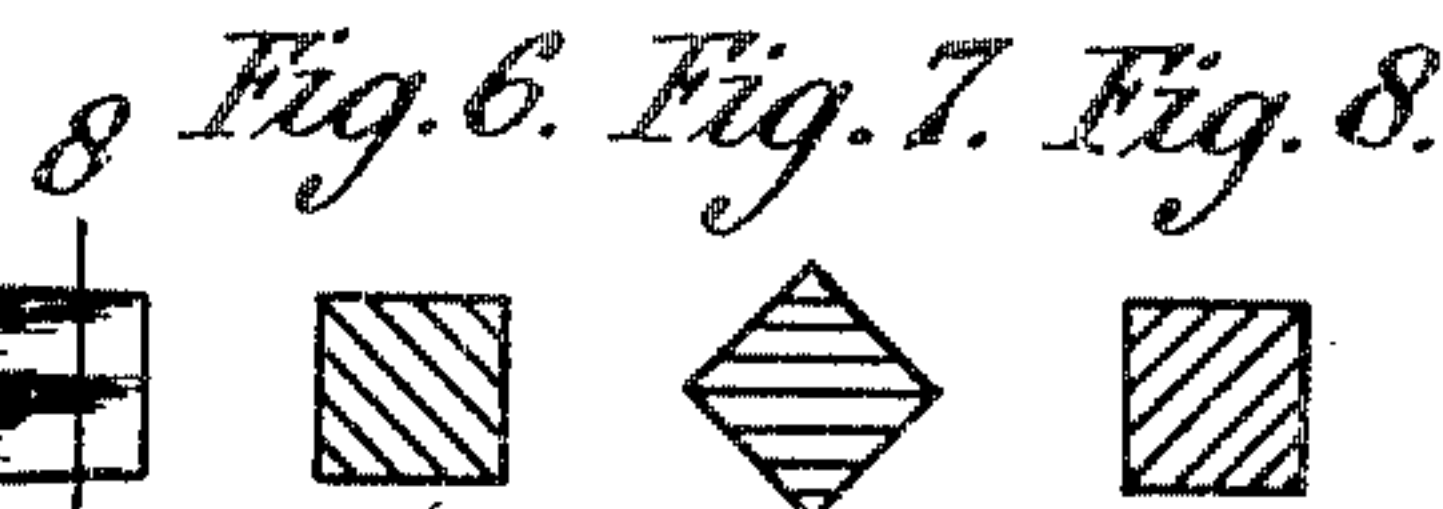


Fig. 6. Fig. 7. Fig. 8.

6 Witnesses.
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UNITED STATES PATENT OFFICE.

ALFRED ARTHUR GODFREY, OF STAINES, ENGLAND.

MANUFACTURE OF LINOLEUM.

SPECIFICATION forming part of Letters Patent No. 793,782, dated July 4, 1905.

Application filed February 13, 1905. Serial No. 245,516.

To all whom it may concern:

Be it known that I, ALFRED ARTHUR GODFREY, engineer, a subject of the King of Great Britain, residing at the Linoleum Works, Staines, in the county of Middlesex, England, have invented certain new and useful Improvements in the Manufacture of Linoleum, of which the following is a specification.

According to this invention I make linoleum of a wood-like appearance as follows: The granulated material—say of two colors, a dark and a light shade—is fed to a pair of rolls, by which it is rolled out into a thin sheet, which is allowed to accumulate in folds at the nip of a second pair of rolls, by which the folds are rolled together into a thick sheet, which as it issues from the rolls is cut into narrow strips. These strips are all turned through a right angle and fed side by side to another pair of rolls, by which they are consolidated together into a sheet of the desired thickness. Such a sheet has a grained appearance closely resembling that of wood, or in place of feeding to the second pair of rolls mentioned above several folds of a sheet made of more than one color I may feed to it several thin sheets, each sheet being made of material of one color only. By so arranging sheets of a dark shade alternately with sheets of a light shade a very good effect of coarse grain is obtained.

Figure 1 is a sectional elevation, and Fig. 2 a plan, of the machine for performing the first part of the process. Figs. 3 and 4 are similar views of the machine for turning and consolidating the strips. Fig. 5 is a view, to a larger scale, of a single strip of linoleum. Figs. 6, 7, and 8 are sections on the lines 6 6, 7 7, and 8 8, respectively, these figures showing the turning through a right angle.

a is the hopper containing the mixed granulated material. This material issues between the rolls *b* in the form of a sheet *c*, adhering to one of the rolls, from which it is removed by the blade *d* in the usual manner. The sheet *c* hangs down and passes to the nip of a pair of rolls *e*; but as these revolve much slower than the rolls *b* the sheet *c* swings backward and forward, and the slack folds itself upon the lower roll *e*, so that several

thicknesses pass through the nip together. The thick sheet delivered by the rolls *e* passes to the roll *f* beneath a series of disk cutters *g*, by which it is severed into narrow strips of approximately square section, which are wound side by side on the roll *h*. This roll is then taken to the second machine, which is shown in sectional elevation and plan at Figs. 3 and 4. In this machine every other strip from the roll *h* is led between rolls *j*, *j*, while the other or adjacent strips are led between rolls *k*, *k*. Each strip is twisted through a right angle in the space between the rolls *h* and *j* or *k*, as the case may be, and the strips are then led side by side between the rollers *l*, which consolidate them into a sheet. Owing to this twisting the cut surfaces which were side by side on the roll *h* now form the upper and lower surfaces of the sheet which issues from the nip of the rolls *l*. The object of having two sets of rolls *j* and *k* is to give space for the twisting of the strips, as the strips when twisted through forty-five degrees occupy a greater width than before twisting or after twisting through ninety degrees.

What I claim is—

1. The process of manufacturing linoleum, which consists in cutting strips from a sheet, turning each strip axially through a right angle, and consolidating the strips together side by side, substantially as described.

2. The process of manufacturing linoleum, which consists in forming a sheet from a plurality of thicknesses, cutting this sheet into strips, turning each strip axially through a right angle, and consolidating the strips together side by side, substantially as described.

3. The process of manufacturing linoleum, which consists in cutting strips from a sheet, winding the strips onto bobbins, turning each strip through a right angle, and consolidating the strips together side by side, substantially as described.

4. The process of manufacturing linoleum, which consists in consolidating a plurality of folds of a sheet into a thicker sheet, substantially as described.

5. The process of manufacturing linoleum, which consists in consolidating a plurality of folds of a sheet into a thicker sheet, cutting

this sheet into strips, turning each strip through a right angle, and consolidating the strips together side by side, substantially as described.

- 5 6. A sheet of linoleum composed of a number of strips consolidated together, such strips being formed by parallel cuts, and being so

arranged that the longitudinally-cut faces of the strips form the surfaces of the sheet.

ALFRED ARTHUR GODFREY.

Witnesses:

R. B. RANSFORD,

ARTHUR CARPWAEL, Junr.