

No. 632,732.

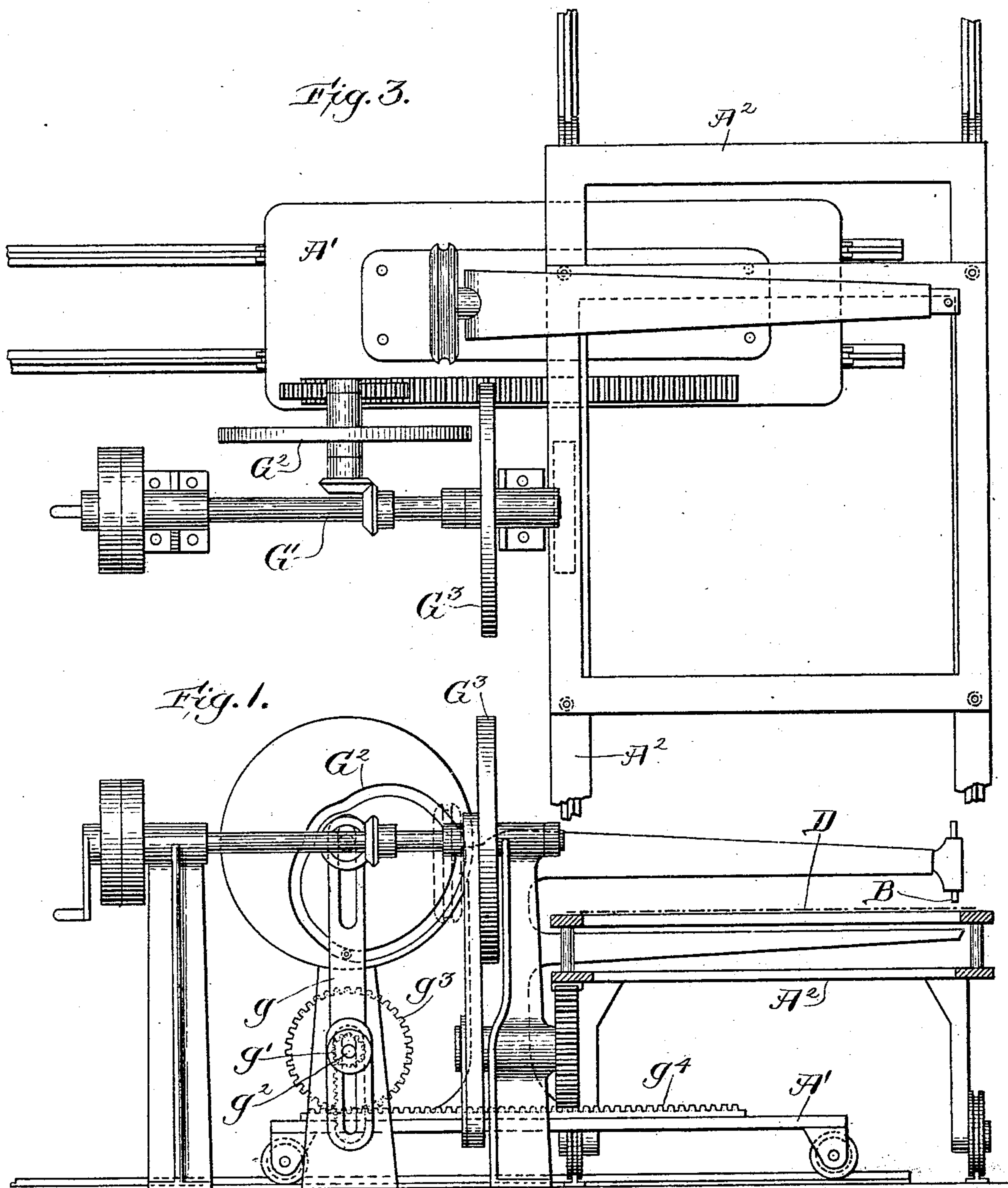
Patented Sept. 12, 1899.

J. E. MAYNADIER.
TOOL FEED MECHANISM.

(Application filed May 15, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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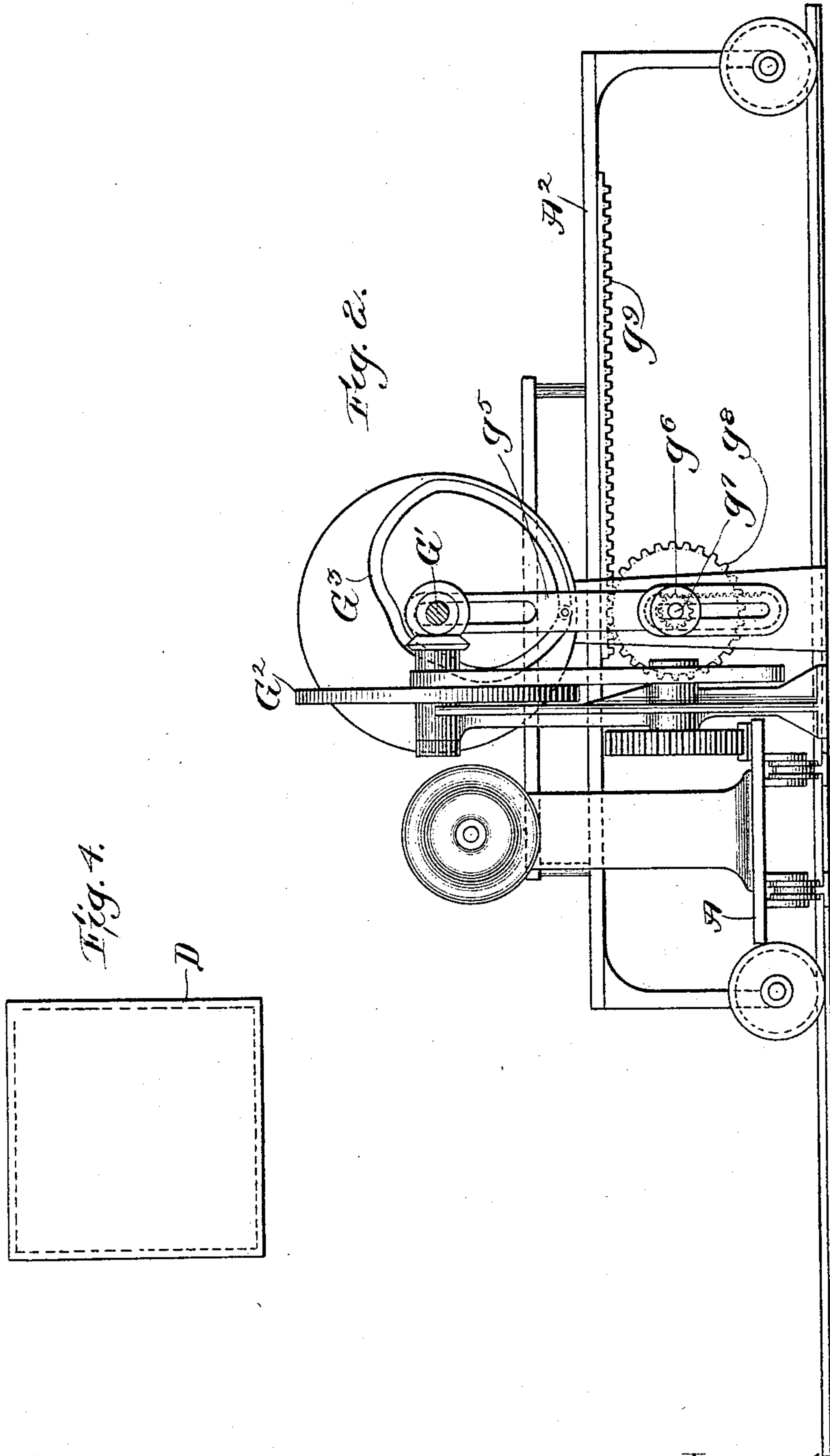
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2 Sheets—Sheet 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES E. MAYNADIER, OF TAUNTON, MASSACHUSETTS, ASSIGNOR TO THE
UNION CARPET LINING COMPANY, OF PORTLAND, MAINE.

TOOL-FEED MECHANISM.

SPECIFICATION forming part of Letters Patent No. 632,732, dated September 12, 1899.

Application filed May 15, 1899. Serial No. 716,864. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. MAYNADIER, of Taunton, in the county of Bristol and State of Massachusetts, have invented an Improved Pattern-Producing Machine, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figures 1 and 2 are elevations, and Fig. 3 a plan, of a pattern-producing machine embodying my invention. Fig. 4 shows the pattern which will be produced by the cams shown in Figs. 1 and 2.

My invention is an improved machine for producing a pattern; and it consists in the combination of a machine and its work-holder by means of two cams, one of which moves the machine so as to cause its tool to move to and fro in one line, and the other moves the work-holder so as to cause the article held in the work-holder to move to and fro in a line crosswise of the first line, the combined movements of the machine and its work-holder being so controlled each by its own cam as to cause the tool of the machine to produce a pattern on the article carried by the work-holder. I have shown the tool as a needle and the article as a fabric and my improved machine as a sewing-machine; but it is obvious that the tool may be a cutter and the machine a routing or a carving machine and the article a slab of wood or stone. Moreover, my invention is as well adapted for tufting quilts as for ordinary sewing, the tool in that case being a needle, the machine a tufting-machine, and the article a quilt or the like to be tufted.

Cams G^2 and G^3 revolve in unison, each deriving motion from shaft G' , which is driven

by power applied by means of the pulleys or the winch shown at the left of Figs. 1 and 3. The rotation of cam G^2 reciprocates rack g , and thus oscillates pinion g' and its shaft g^2 , causing pinion g^3 , which is fast to shaft g^2 and in mesh with rack g^4 , to give the desired to and fro movements to support A' for the machine and its tool B. In like manner cam G^3 , acting through rack g^5 , pinion g^6 , shaft g^7 , pinion g^8 , and rack g^9 , gives the desired to and fro movements to support A^2 for the work-holder and the article D, carried by it.

Uniform action of the tool is readily attained by laying out the cams properly, and either or both motions can be arrested by dwells in one or both cams, and in some cases it is important—as, for instance, in tufting or like machines, in which the tool and article may be relatively stationary when the machine operates—to have simultaneous dwells in both cams; but all this is a mere matter of laying out cams familiar to all constructors.

What I claim as my invention is—

The improved pattern-producing machine above described made up of a machine; a work-holder; a cam for moving the machine to cause its pattern-producing tool to move to and fro in one line; a second cam for moving the work-holder to cause the article carried by it to move to and fro in a line crosswise of the line of motion of the tool; and connections between the cams and the machine and the work-holder; all combined substantially as and for the purpose specified.

JAMES E. MAYNADIER.

Witnesses:

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