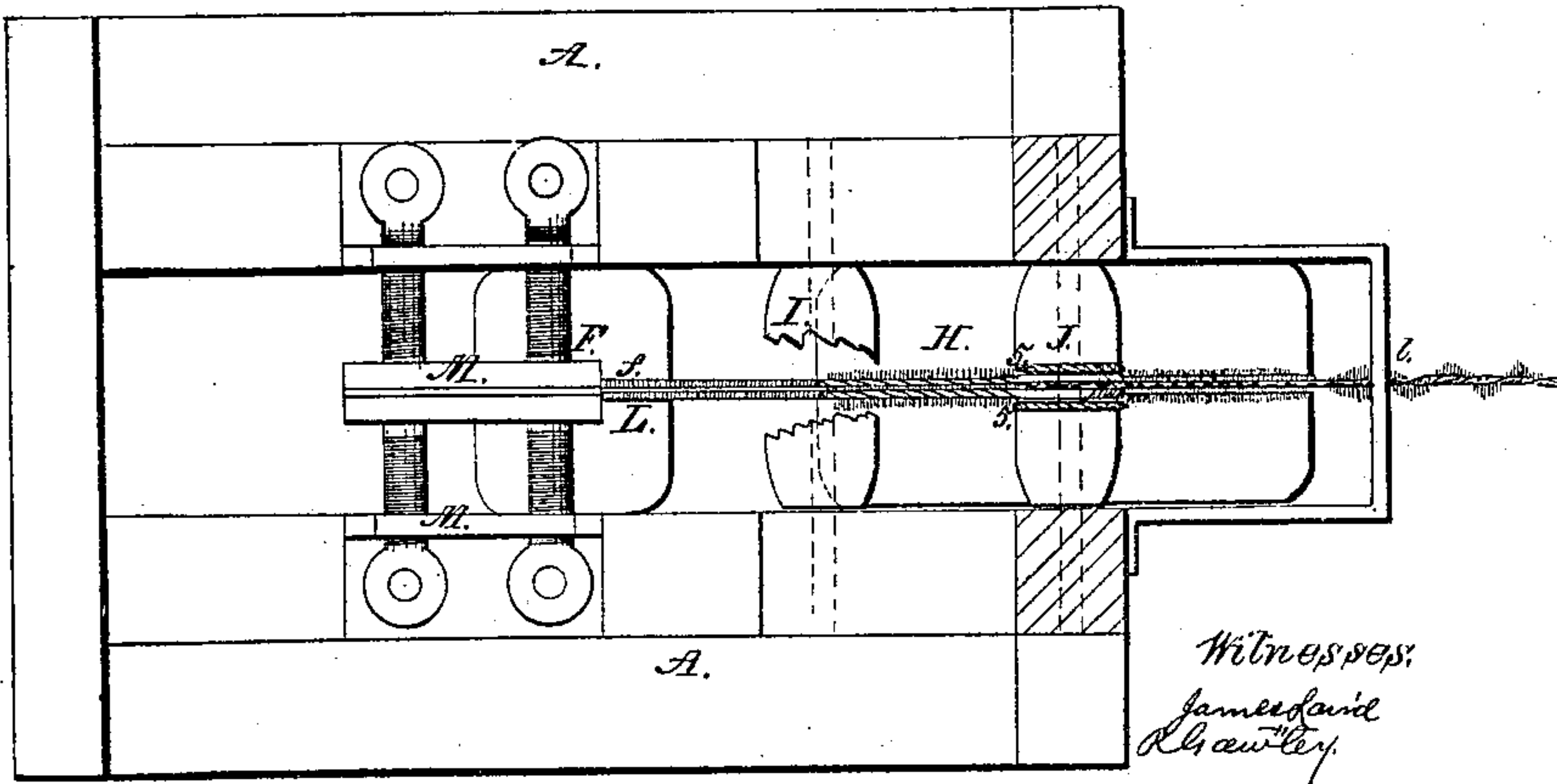
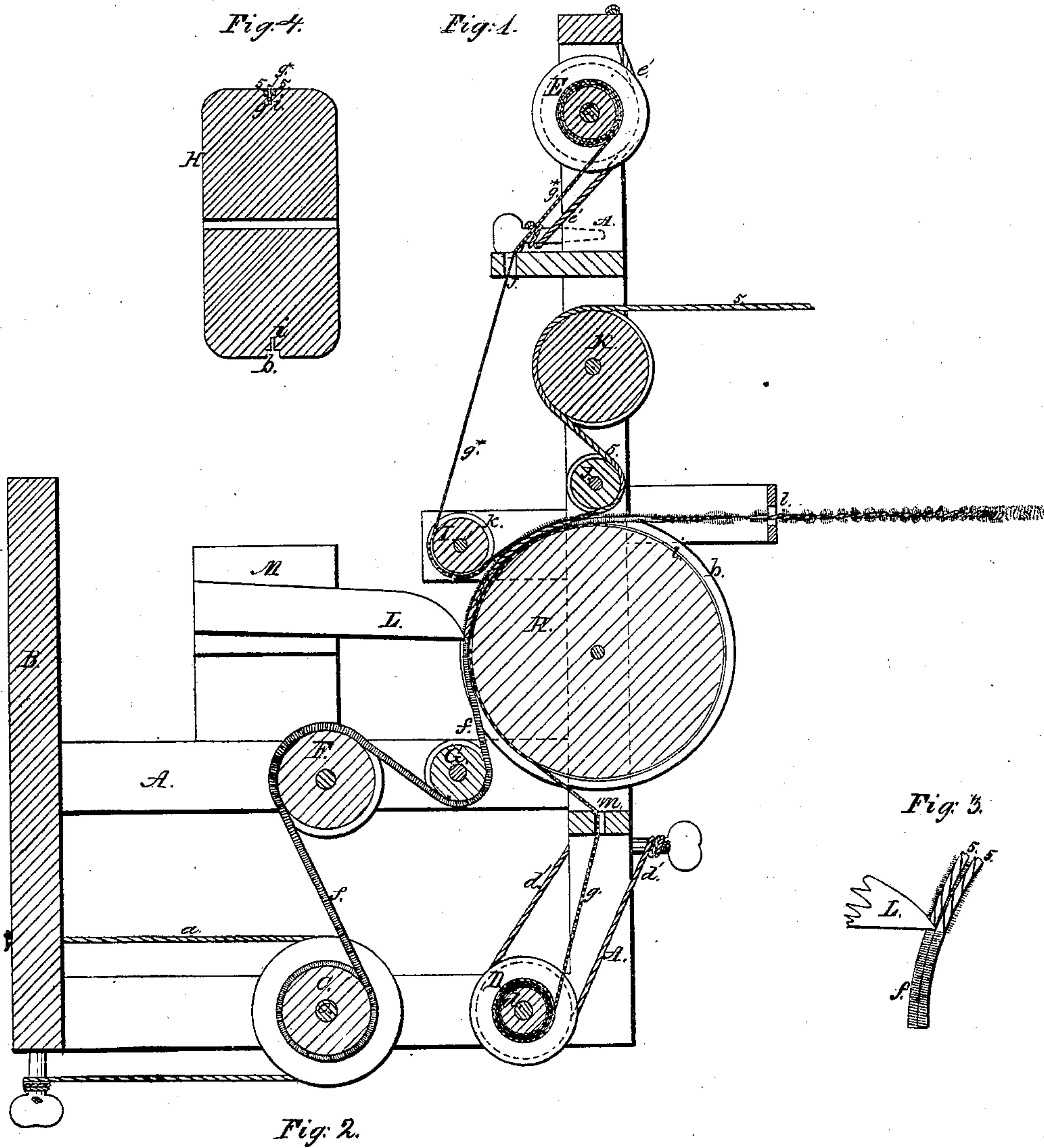


Weaving Chenille

N^o 37,385.

Patented Jan. 13, 1863.



Invenlorp.

Witnesses:
James David
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UNITED STATES PATENT OFFICE.

GEORGE COMINGS AND LOUIS MENSING, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR MANUFACTURING CHENILLE.

Specification forming part of Letters Patent No. 37,385, dated January 13, 1863.

To all whom it may concern:

Be it known that we, GEORGE COMINGS and LOUIS MENSING, both of No. 50 White street, in the city, county, and State of New York, have invented certain new and useful Improvements in Manufacturing Chenille; and we do hereby declare that the following is a full, clear, and exact description the same, reference being had to the accompanying drawings, forming part of this specification.

The ordinary process of making chenille is by first weaving a web with the warp-threads separated at intervals, next dividing the said web into strips by cutting the weft-threads in the intervals of the warp, and then twisting the said strips. This process is necessarily very slow, owing to the unavoidable slowness of the weaving. A more recent European method consists in taking what is called "gimp," made by winding round two or more wires, placed side by side, the silk or other fibrous substance which is to form the weft or filling of the chenille, passing the said gimp between the threads which are to form the warp or central core of the chenille, cutting the covering of the gimp in such manner as to divide every coil, drawing out the wires of the gimp, and twisting the warp or core-threads together. This method is attended with the serious objection that the chenille thus made is necessarily produced in short pieces or lengths, as the wires must be kept perfectly parallel, which involves the employment of short wires. Long wires cannot be employed owing to the impossibility of bending and coiling them repeatedly upon small rollers, and yet stretching them at the proper moment into a perfectly parallel position. Unless this parallel position can be perfectly maintained the knife will fail to cut the gimp, and bad work, with waste of material, will ensue. The result is that short wires are always employed, and the chenille produced is consequently made in short pieces about four and a half feet in length.

Our improvement consists in certain new and useful devices for manufacturing the article in connection with flexible cords, so that chenille of the best quality unlimited in length may be rapidly and cheaply produced.

Figure 1 in the accompanying drawings is a vertical section of the machine employed in carrying out our process. Fig. 2 is a plan of

the same, partly in section. Fig. 3 is a perspective view, exhibiting the action of the knife which cuts the weft. Fig. 4 is a central section of the roll upon which the cutting of the weft is performed.

Similar letters of reference indicate corresponding parts in the several figures.

A B is the framing of the machine, intended when in operation to be suspended round the neck of the operator and held with the board or end B against his breast.

C is a spool or drum, for carrying the gimp from whose covering of silk or other material the weft or filling of the chenille is to be made, fitted to turn on a fixed spindle, *c*, near the bottom of the frame, under the control of friction-bands *a*, applied to its heads.

D and E are spools, for supplying the two threads of silk or other material which are to compose the warp or central core of the chenille, arranged one at the bottom and the other at the top of the machine, parallel with the spool C, on fixed spindles *d* and *e*, on which they are fitted to turn under the control of friction-bands *d* and *e*, applied to their heads.

f is the gimp, which should preferably be made with two cords arranged side by side parallel or without being twisted together. Gimp with less than two cords cannot be used.

g is the thread supplied from the spool D, and *g** is the thread supplied from the spool E. The gimp is conducted from the spool C over a roll, F, and under a second roll, G, to a larger roll, H, all of which are parallel with the spools C D E, the said rolls either being arranged to turn on fixed spindles or made with journals to turn in fixed bearings in the framing. The rolls F and G have square-bottomed grooves for the reception of the gimp, which rests flatwise in or upon the bottoms of the said grooves. The roll H has a flat-bottomed groove, *b*, in which the gimp lies flatwise, and a second and very narrow groove, *i*, in the center of the bottom of *b* for the reception of the warp-thread *g*, which passes from the spool D through a guide, *m*, secured to the framing, and enters the said groove *i* below where the gimp enters the groove *b*. The gimp and the thread *g* pass upward over the roller H, and the gimp meets the fixed knife L, which is held in a clamp, M, secured to the framing, and in passing the point of this knife its covering is cut in every coil on

the outer side of the gimp, leaving it intact on the side next the roll and leaving its two internal cords, 5 5, exposed. The thread g^* from the spool E is conducted through a guide, j , secured to the framing and round a roll, I, which has a narrow groove, k , for its reception, said roll being situated a short distance above the knife and nearly close to the roll H, and guiding the thread g^* into the open space formed between the exposed cords 5 5. The covering of the gimp now being cut into short pieces of a length equal to the circumference of the gimp, is now seized at the middle of the length of such pieces between the two threads $g g^*$, which pass from the roller H, through a guide, l , to a rotating spindle or some other twisting device, while the cords 5 5 pass upward away from the roll H, through grooves in separate rolls J and K, working on spindles secured in the framing.

To produce the above-described operation, the gimp and the threads $g g^*$ are first conducted round the several rolls and through the guides, as described, and represented in Fig. 1, and the ends of the cords 5 5 of the gimp are made fast to some fixed point, and the ends of the threads $g g^*$ fastened to a spindle or other article having a rotary motion, but so arranged as not to wind the said threads upon it. The operator, who may be a child, then holds the machine with the board or end B of the frame against the front of his body, its weight being supported by a strap passing

round the back of the neck, and walks backward, thereby causing the gimp and threads to be drawn from their respective spools. The twist given during this operation to the warp-threads $g g^*$ is merely sufficient to hold the filling or weft, and the chenille is finished by a subsequent twisting operation, which may be performed by the same means adopted for giving the twist in the old mode of manufacture. In some cases it might be desirable to use more than two warp-threads, and in such case we would use an equal number on each side of the filling.

We do not claim broadly, the cutting of the covering-threads of gimp and transferring it between threads in order to form chenille; but

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of a cylinder, H, and knife L, with devices for conveying the gimp and thread, substantially as herein shown and described.

2. Having the gimp arranged and carried upon cords f , as herein set forth, so that chenille in pieces of any desirable length may be produced, as set forth.

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Witnesses:

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