

No. 809,118.

PATENTED JAN. 2, 1906.

L. LEMIEUX.  
METHOD OF WEAVING.  
APPLICATION FILED MAY 31, 1905.

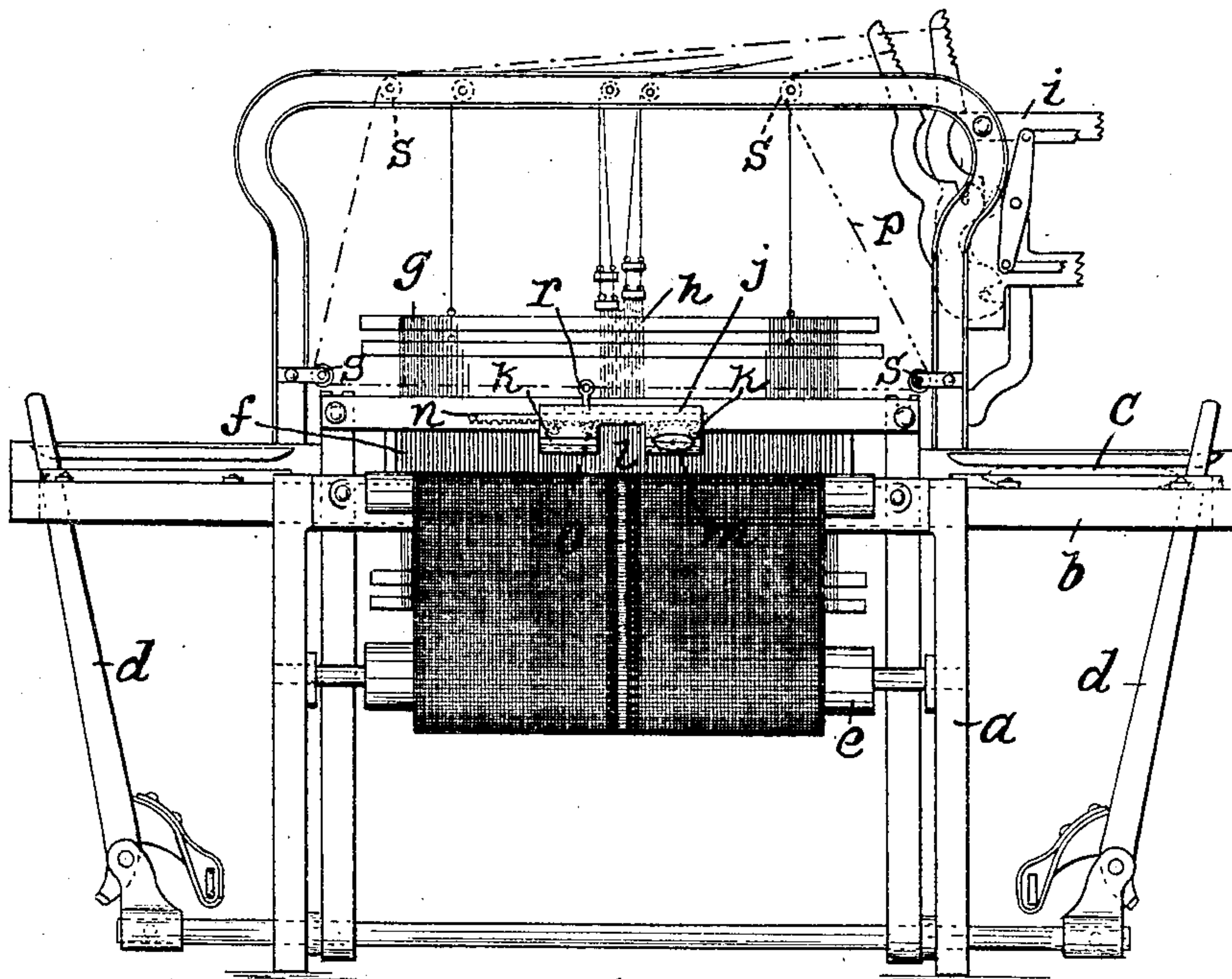


Fig. 1.

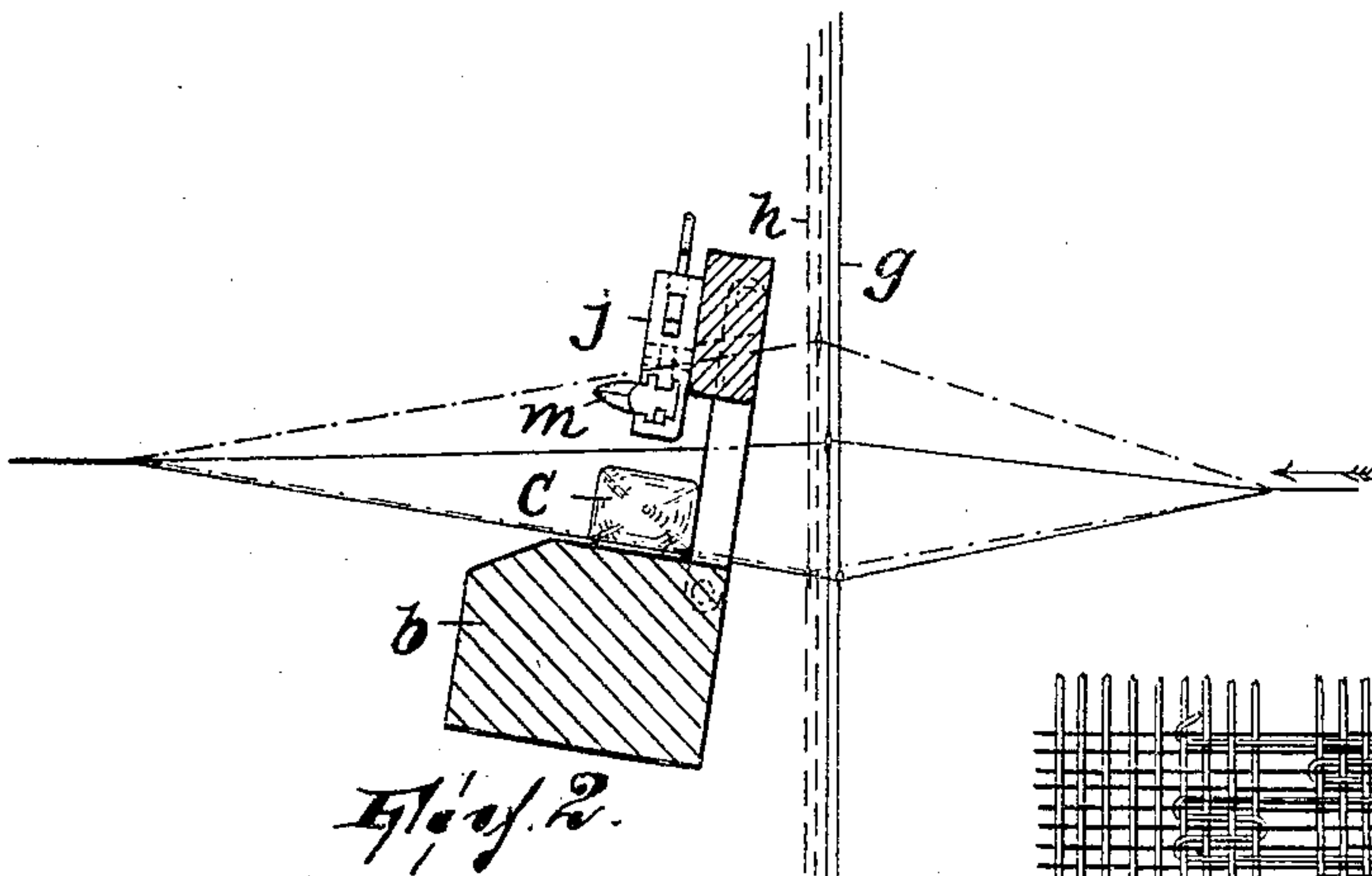
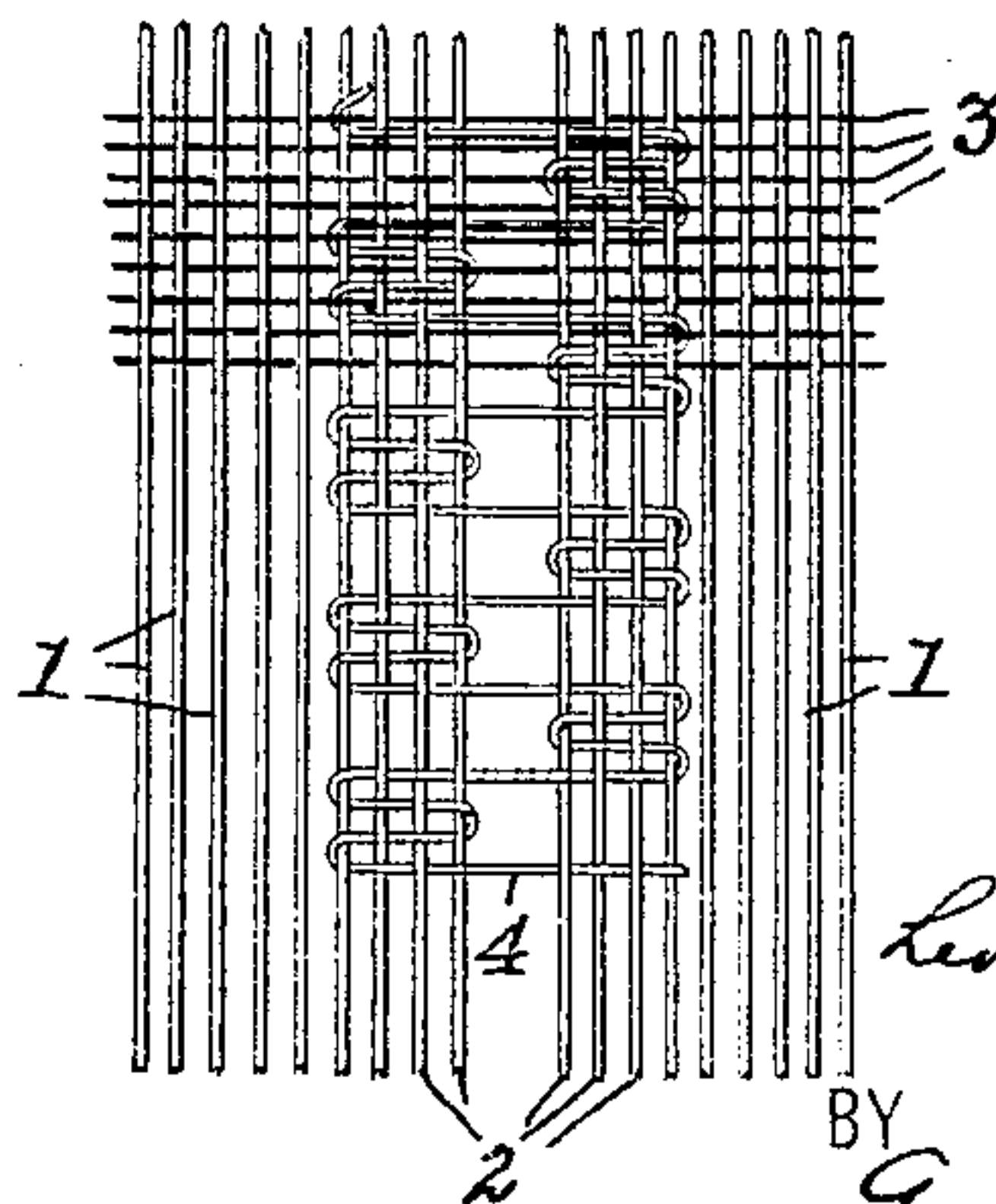


Fig. 2.



WITNESSES:

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Fig. 3.

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# UNITED STATES PATENT OFFICE.

LEON LEMIEUX, OF PATERSON, NEW JERSEY.

## METHOD OF WEAVING.

No. 809,118.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed May 31, 1905. Serial No. 263,043.

*To all whom it may concern:*

Be it known that I, LEON LEMIEUX, a citizen of the United States, residing in Paterson, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Methods of Weaving; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

My invention is a novel method of weaving fabrics having intermediate selvages or double or twin fabrics—*i. e.*, fabrics which are woven two at a time as one piece to be afterward cut apart.

My invention has for its principal objects, first, to so weave the fabric that each part will have a well-formed and durable inside selvage, and, second, to effect the first-named object in a manner which will require simple and readily-operated expedients, so that the work will be done expeditiously and well and without requiring a material increase of the moving parts of the loom.

I have illustrated my method in the accompanying drawings, in which—

Figure 1 is a front view of a loom, whereby my method of weaving may be performed. Fig. 2 is an enlarged sectional view through the batten structure and showing how the shed is formed, and Fig. 3 illustrates the weave.

In performing my method an interior section of the warp corresponding to the part thereof which is to be incorporated into the two selvages is so manipulated by the harness of the loom and so associated with a special filling that, in the first place, after the parts of the fabric are cut apart each shot of the filling for the selvage is just as proof against being drawn out of the goods as the ground-filling is, and, in the second place, one filling serves for both inside selvages, which latter is accomplished by throwing the selvage-filling back and forth several times through the part of said section of the warp which is to be comprised in the selvage of one part of the fabric and then back and forth several times through the part of said section of the warp which is to form the selvage for the other part of the fabric, and so on alternately.

The herein-described method is performed by making the shed of the part of the selvage section of the warp which is being at the time interwoven with the selvage-filling wider than the main shed upon each shed change, so that the selvage-filling can be entered into the selvage-shed outside of the space of the main shed.

Referring again to the drawings, *a* is the loom-frame; *b*, the batten; *c*, the shuttle for the ground-filling, which is thrown back and forth across the batten by the picker-sticks *d*; *e*, the take-up roller; *f*, the reed; *g*, the harness for the ground-warp; *h*, the harnesses for the inside selvage-warp, one set being employed for each selvage, and *i* a head-motion whereby the two sets of harness are controlled, all these parts being arranged and constructed substantially as usual.

In Fig. 1, *j* is a block formed with guideways *k*, separated by an opening *l* in the block across which a shuttle *m*, which carries a selvage-filling, moves as it passes from one guideway to the other and up into which the selvage portion of the warp may be elevated by its harness *h*. (See Fig. 2.) As one means for operating the shuttle *m* I show a rack *n* and pinions *o*, which latter transmit the movement of the rack to the shuttle in the manner characteristic of the ordinary ribbon-loom. The rack *n* slides in the block *j* and may be reciprocated so as to actuate the shuttle *m* by cords *p*, connected to an eye *r* on the rack and extending in opposite directions therefrom around pulleys *s*, being connected to some means for actuating them, such as the head-motion *i*. Each time a shed is formed in the warps the raised warp-threads for the inside selvage of one part of the fabric are held higher by one set of the harness *h* than the raised warp-threads for the inside selvage of the other part of the fabric and also of course than the raised warp-threads which go into the body of the fabric. The main shuttle is now thrown through the main shed, as usual, while the selvage-shuttle *m* is thrown under that particular portion of the warp-threads which is raised highest by the harness *h*. A shed change now follows, and the one set of harness *h* referred to raises the previously-depressed threads of the selvage-warps for the same part of the fabric which was before made to have a wider shed than the main shed higher than the raised warp-threads of the ground. Both shuttles *c* and *m* are then



thrown back to their original positions. The operation so far described is repeated for several picks of the two shuttles, whereupon the one set of harness *h* ceases to form the wider shed in the selvage-threads for the one part of the fabric and the other set of harness *h* operates in identically the same manner upon the selvage-threads of the other part, continuing so for several picks of the shuttles *c* and *m*, after which the set of harness *h* first operated effects again a wide shed of the selvage-threads for the part of the fabric first acted upon, and so on alternately. The effect of this is well illustrated in Fig. 3, where 1 designates the warp-threads for the body of the two parts of the fabric; 2, the warp-threads for their inside selvages; 3, the ground-filling, and 4 the selvage-filling. Each shot of the ground-filling, it will be noticed, is beaten up by the reed with a shot of the selvage-filling before the change of the shed, and such change of the shed, furthermore, follows before the return of either the ground or selvage fillings, so that the selvage-filling is thus as securely locked in the goods as the ground-filling itself is.

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

1. The method of weaving twin fabrics which consists in forming sheds in the warp, projecting the ground - filling through the sheds, and simultaneously projecting a single inside selvage-filling back and forth through first one portion and then the other portion

of an interior section of the shed, substantially as described.

2. The method of weaving twin fabrics which consists in forming sheds in the warp, projecting the ground - filling through the sheds, and simultaneously projecting a single inside selvage-filling back and forth through first one portion and then the other portion of an interior section of the shed, the shed being changed after the projecting through of the selvage-filling in each direction, substantially as described.

3. The method of weaving twin fabrics which consists in forming sheds in the warp and at certain intervals raising, alternately, first the raised threads of the inside selvage-warps for one part of the fabric and then the raised threads of the inside selvage-warp for the other part of the fabric, higher than the remaining raised threads of the warp, projecting the ground-filling through the sheds, and simultaneously projecting a single inside selvage-filling back and forth between the more highly raised selvage warp-threads and the remaining threads of one shed alternately with the threads of the other shed, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of May, 1905.

LEON LEMIEUX.

Witnesses:

JOHN W. STEWARD,  
WM. D. BELL.