

No. 632,975.

Patented Sept. 12, 1899.

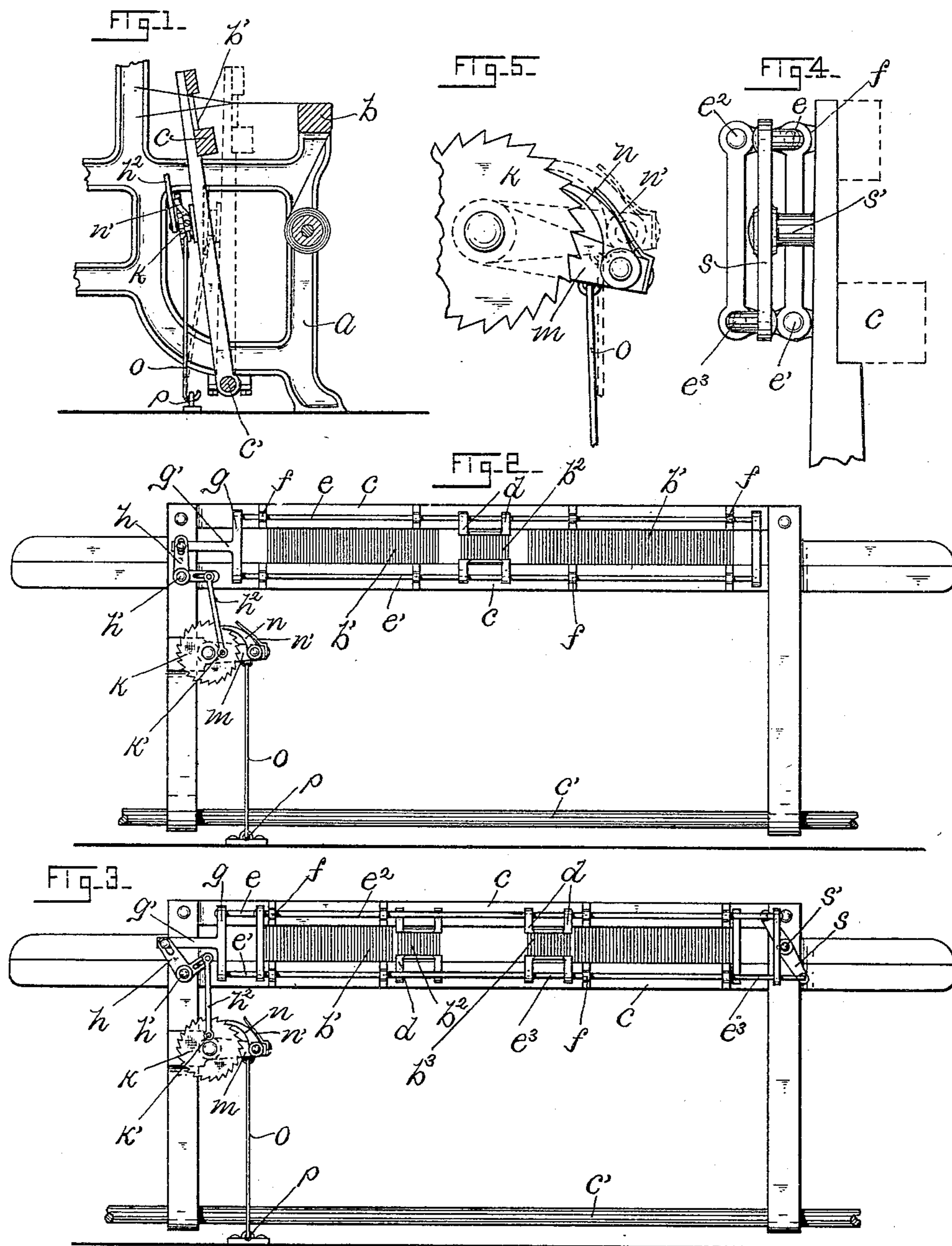
P. E. VICTORY.

LOOM.

(Application filed Jan. 9, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

Clayton R. Luther.
May F. Ritchie.

INVENTOR,

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2 Sheets—Sheet 2.

Fig-6-

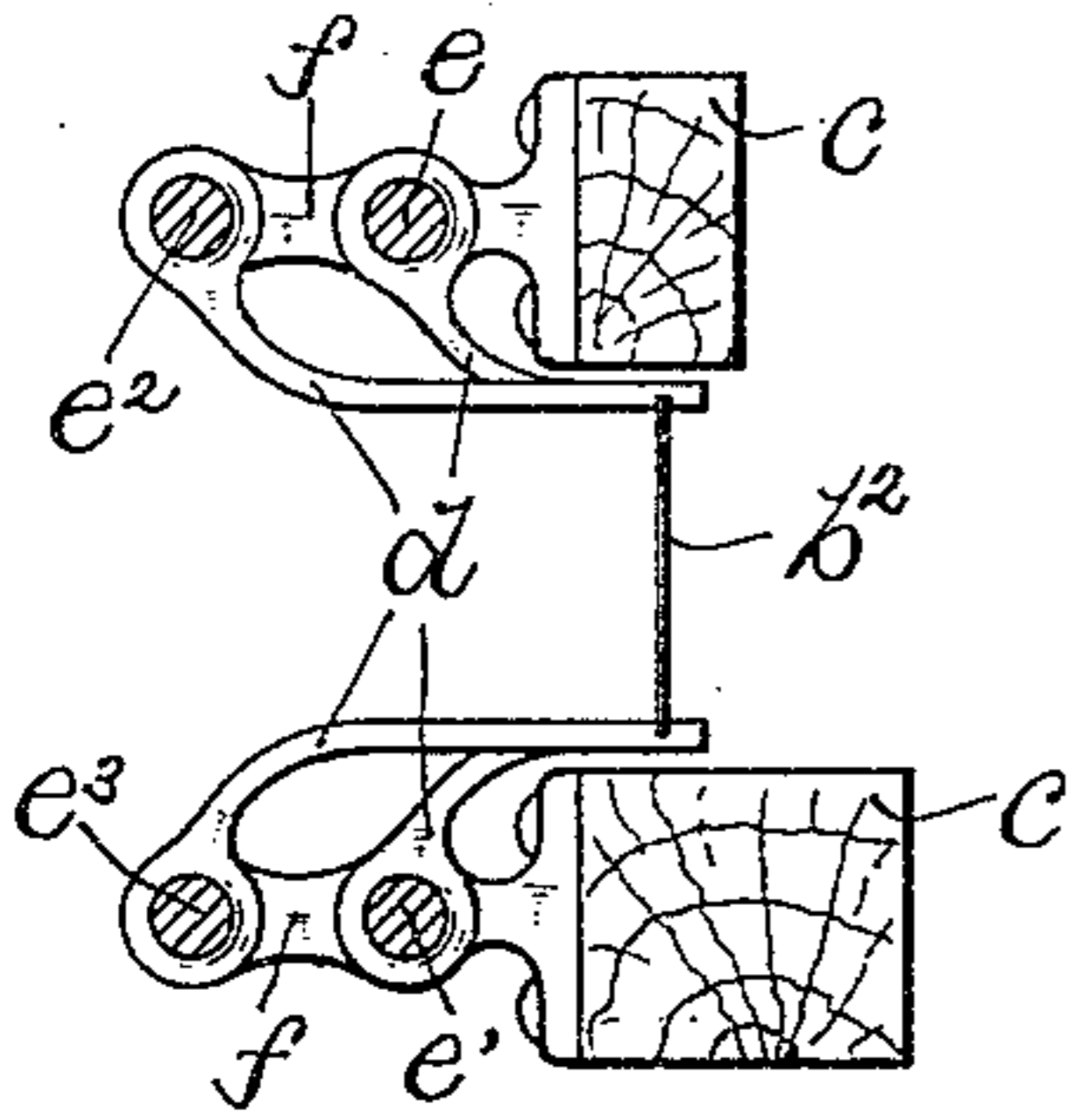
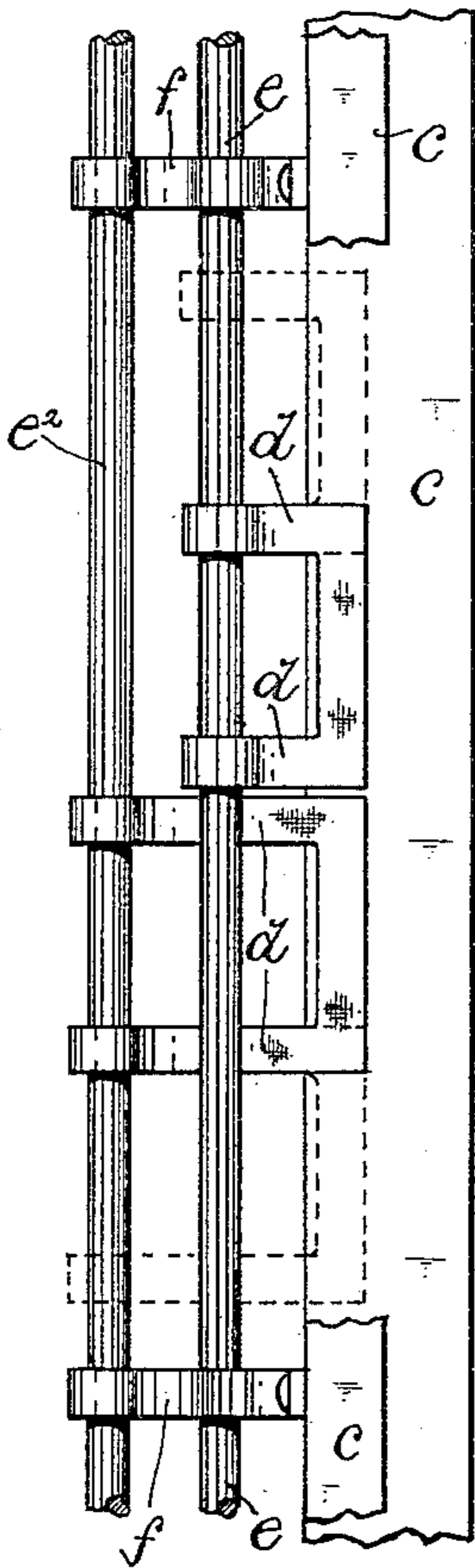


Fig-7-



WITNESSES

Oliver W. Luther.
May F. Ritchie.

Fig-8-

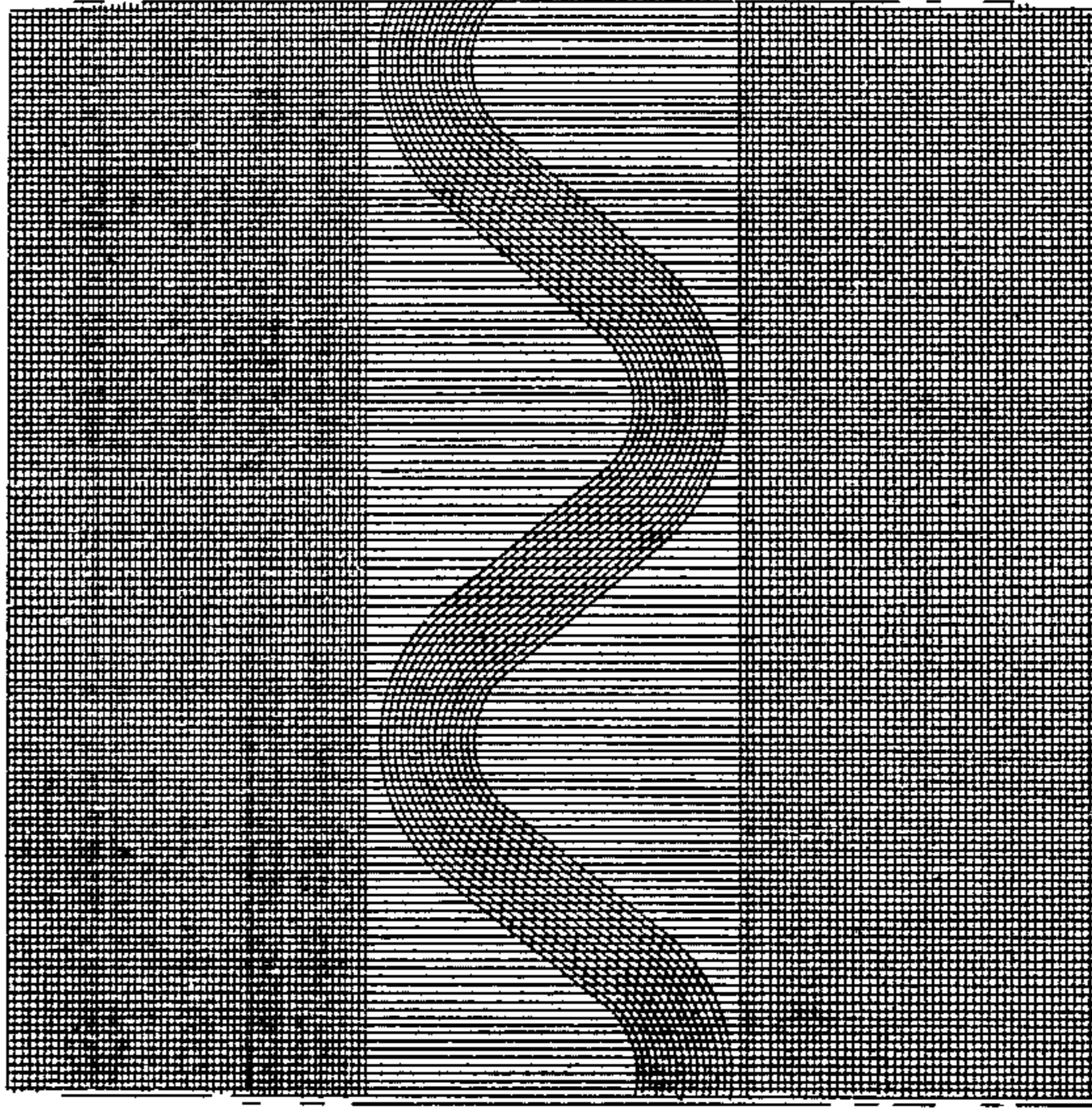
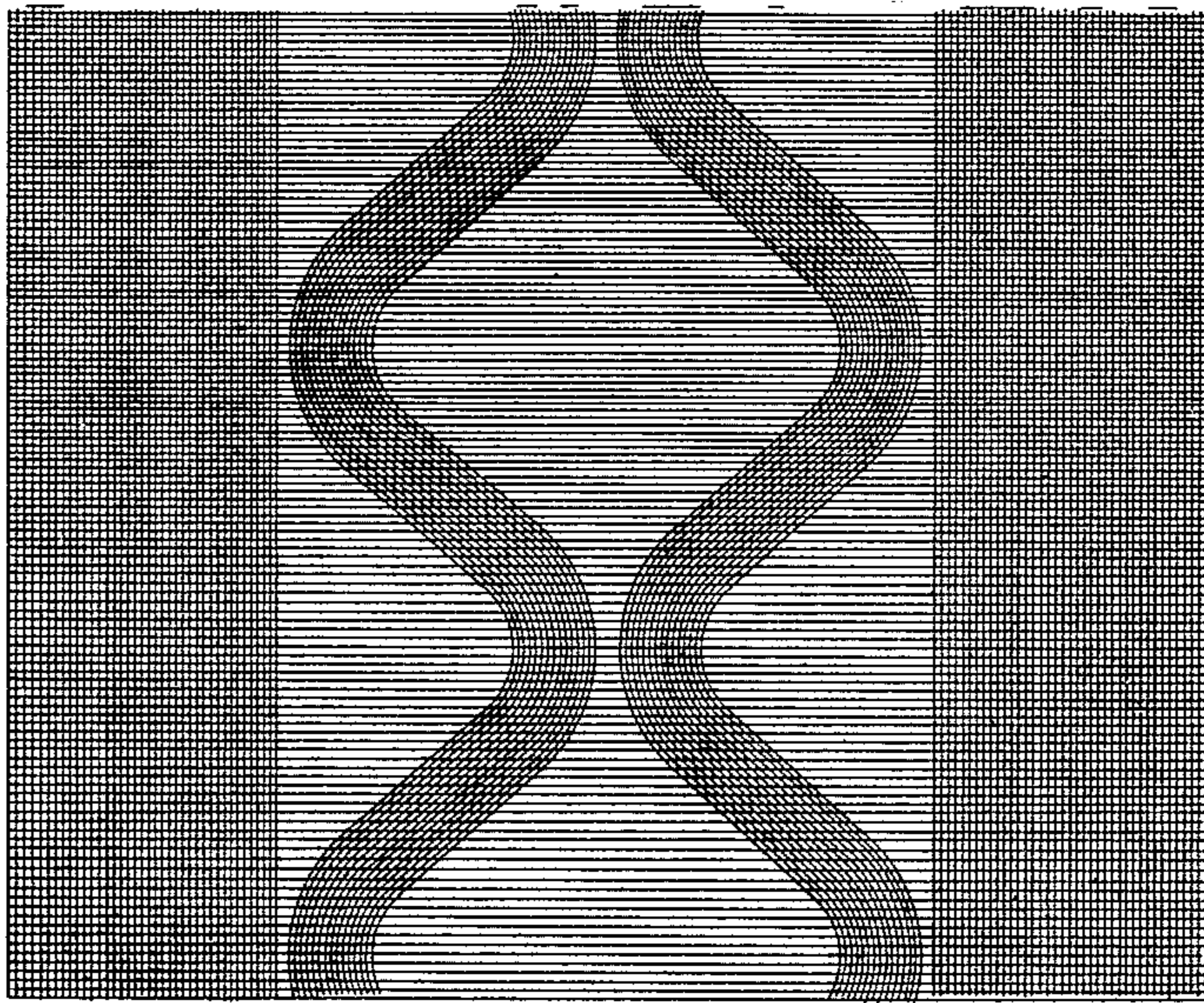


Fig-9-



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UNITED STATES PATENT OFFICE.

PATRICK E. VICTORY, OF DAYVILLE, CONNECTICUT, ASSIGNOR OF ONE-THIRD TO CLARENCE H. TRUESDELL, OF SAME PLACE.

LOOM.

SPECIFICATION forming part of Letters Patent No. 632,975, dated September 12, 1899.

Application filed January 9, 1899. Serial No. 701,602. (No model.)

To all whom it may concern:

Be it known that I, PATRICK E. VICTORY, a citizen of the United States, residing at Dayville, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Looms, of which the following is a full, clear, and exact description.

This invention is in broad looms of the class most commonly used in weaving plain sheetings and the like fabrics, and my purpose is to embody in such looms very simple and inexpensive mechanism whereby certain fancy patterns may be as cheaply produced as plain goods.

To aid in explaining my said invention, I have provided the annexed sheets of drawings, in which—

Figure 1 shows in vertical section a portion of a loom embodying my improvements. Fig. 2 is a rear side elevation of the batten, showing my invention in its simplest form attached thereto; and Fig. 3 is a like view of the batten, showing a development of my invention, by means of which a somewhat more elaborate design may be woven. Fig. 4 is an enlarged view, in end elevation, of the upper part of the batten, looking from the right hand of Fig. 3. Fig. 5 is an enlarged view of a ratchet disk and pawl that coacts with said disk, the same being portions of the mechanism of my newly-invented improvements. Fig. 6 is a cross-sectional view of the batten, the reed, and the reed-supports; and Fig. 7 is a plan view of the same parts. In Fig. 8 I have shown an arbitrary representation of a piece of fabric woven on a loom fitted with my improvements, as illustrated in Fig. 2; and in Fig. 9 I have shown a similar view of a piece of fabric such as might be woven on a loom having the improvements explained in Fig. 3.

My improvements are so planned that they may be readily attached to ordinary looms, and they are specially intended for producing sinuous or serpentine lines which may be variously modified and changed to produce pleasing effects.

In the annexed drawings the reference-letter *a* denotes the loom-frame, *b* the breast-beam, and *c* the batten or so-called "lathe"

as a whole, the said batten being hung on a rod *c'* and adapted to swing forward and backward to lay up the filling-threads, the parts thus referred to being of the ordinary construction, as embodied in the "Knowles," the "Crompton," and like looms.

The major part of the reed, as here illustrated, is fixedly secured to the batten, as is usual, (see *b'*,) but those portions *b²* of said reed that control those warp-threads that enter into and define the course of the sinuous lines of the pattern are adapted to be moved endwise with a prescribed reciprocating motion and are supported at top and bottom by the free ends of arms *d*, that are secured to and controlled by rods *ee'*, that are loosely supported in bracket-bearings *f*, secured to the rear side of the batten. Rods *ee'* are thus made capable of endwise movement, and when thus moved the sections of reed carried by them are correspondingly moved, resulting in deflecting from a straight line of travel the warp-threads supported by said reed. By properly controlling this lateral movement of the narrow reed-sections attractive designs may be woven into the fabric at the same speed and cost that ordinary plain goods are produced. The rods *ee'* are connected and caused to move in unison by a bar *g*, having an extension *g'*, that is pivoted to one arm of a bell-crank lever *h*, that is fulcrumed on a stud *h* on the batten.

Mounted on the batten-frame just below the crank-lever *h* is a ratchet-disk *k*, and on the stud that supports said disk is an arm *m*, whose free end bears a pawl *n*, that is held in engagement with the ratchet-teeth by a spring *n'*. Arm *m* is connected by a rod *o* with an eye *p*, secured to the floor. The lower arm of the crank-lever *h* is connected by a rod *h²* with a crank-pin *k'*. When the batten swings forward in the act of beating up the filling, the distance between the ratchet-disk *k* and the fixed eye *p* is increased somewhat, the pawl *n* being held back meanwhile by the rod *o* and caused to drop into the next notch of the disk *k*. When the batten swings back to its initial or starting position, the distance between the ratchet-disk and eye *p* is again shortened, and the pawl *n* causes the disk to revolve a distance equal to one tooth of the ratchet, thus

changing slightly the position of the crank-pin k' and correspondingly changing the position of the crank-lever h , which latter slides the rods ee' correspondingly, and thus changes the position of the reed-section b^2 . The step-by-step changes thus made in the position of the crank-pin impart a positive, but almost imperceptible, sidewise reciprocating movement to the reeds b^2 , and inasmuch as the filling is gradually woven into the warp that is thus guided with a sinuous movement the design is preserved in the finished fabric.

The mechanism thus far described is calculated to produce, substantially, the design shown in Fig. 8; but variations of the same may be readily produced by slight modifications of said mechanism. For example, double sinuous lines oppositely disposed may be produced, as seen in Fig. 9, by simply adding another pair of parallel movable rods, as at $e^2 e^3$, Figs. 3, 4, 6, and 7, and securing thereto reed-sections b^3 like the sections b^2 . I then connect rod e of one pair with rod e^3 of the other pair of rods by a lever s , that is mounted on a stud s' in the batten at the end opposite to that which carries the crank-lever h . I thus transmit motion in the opposite direction from one pair of rods to the other pair and cause the reeds b^2 and b^3 to approach and recede from each other with a positive and regularly-ordered movement.

One of the chief advantages of my described invention lies in the cheapness with which the mechanism can be made and applied to ordinary looms, thus converting a plain loom into a fancy loom, and, as I have stated above, making it quite practicable to produce fanciful designs at the cost of plain goods.

Having thus described my invention, I claim as new and wish to secure by Letters Patent—

1. In a loom of the class defined, the combination with a batten, of stationary reed-sections on said batten, a movable reed-section intermediate of said stationary sections,

and means for actuating said movable reed-sections, substantially as specified.

2. The combination with a batten, of stationary reed-sections carried thereby, movable reed-sections intermediate of said stationary sections and mechanism operated by the movement of the batten for actuating the movable reed-sections, substantially as specified.

3. The combination with a batten, of stationary reed-sections carried thereby, a movable reed-section intermediate of the stationary sections and mechanism for shifting the position of the movable reed-section during the return movement of the batten, substantially as specified.

4. The combination with a batten, of stationary reed-sections mounted thereon, a plurality of movable reed-sections intermediate of the stationary reed-sections, and actuating mechanism common to the several movable reed-sections and operated by the movement of the batten, substantially as specified.

5. The combination with a batten and stationary reed-sections thereon, of a plurality of movable reed-sections intermediate of the stationary reed-sections, means for actuating one of said movable sections, and mechanism operatively connecting the several movable reed-sections, and arranged to effect their simultaneous movement in opposite directions, substantially as specified.

6. The combination with a batten and a movable reed-section thereon, a disk carried by the batten, mechanism operatively connecting said disk with the movable reed-sections, and mechanism for actuating said disk through the movement of the batten, substantially as specified.

Signed at Norwich, Connecticut, this 29th day of December, 1898.

PATRICK E. VICTORY.

Witnesses:

ALONZO M. LUTHER,
FRANK H. ALLEN.