(No Model.)

W. A. BRICKILL.

Selvage Forming Device.

No. 237,087. **Patented Feb. 1, 1881.**

fig. 1.

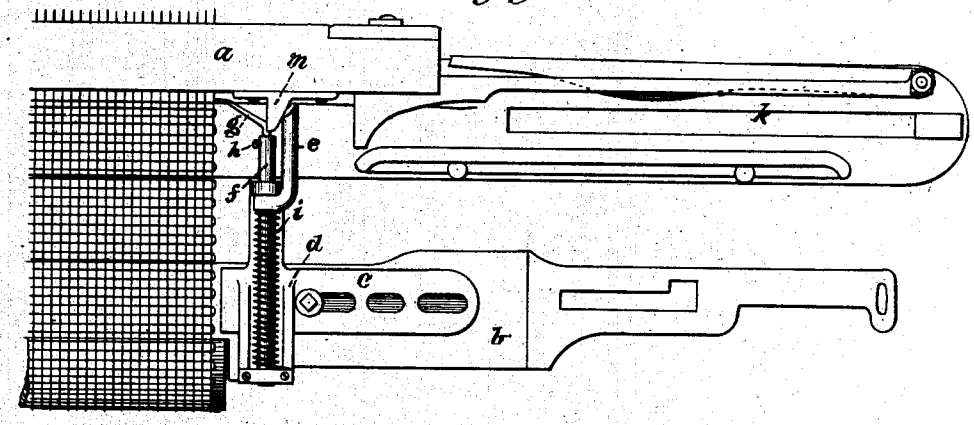


fig. 2.

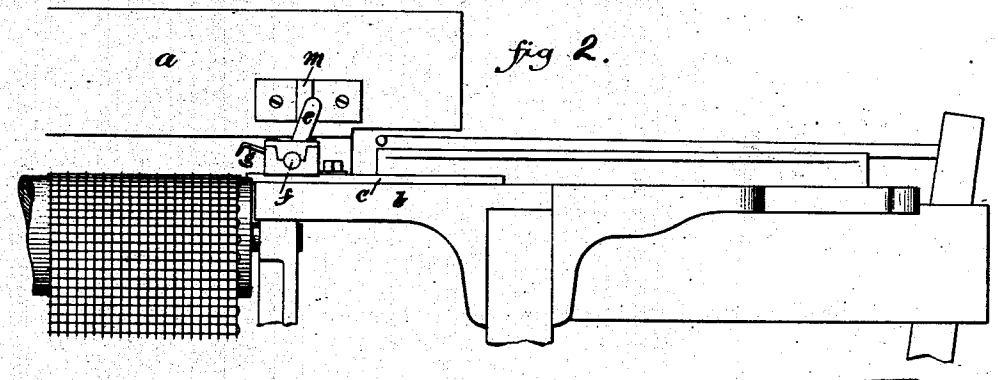
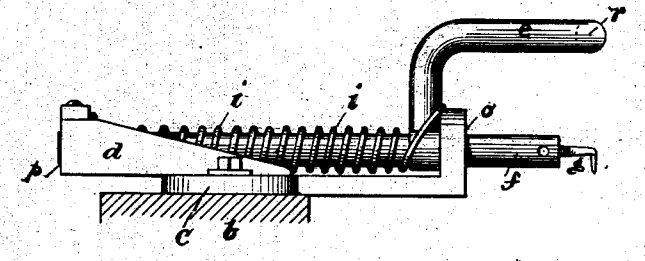


fig. 3.



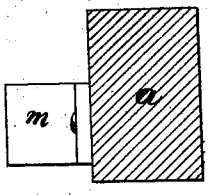
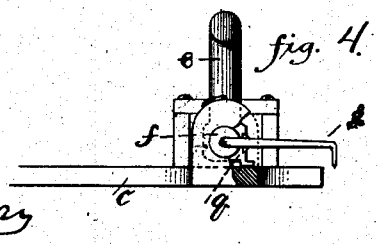


fig. 4.



Witnesses:

James A. Hudson

Walter Large

Inventor,

W. A. Brickill

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM A. BRICKILL, OF BELLEVILLE, NEW JERSEY, ASSIGNOR TO DE WITT WIRE CLOTH COMPANY, OF NEW YORK.

SELVAGE-FORMING DEVICE.

SPECIFICATION forming part of Letters Patent No. 237,087, dated February 1, 1881.

Application filed July 21, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. BRICKILL, of Belleville, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Devices for Forming the Selvage of Wire-Cloth and Analogous Materials, of which the following is a specification.

In the accompanying drawings, in which similar letters of reference designate like parts, Figure 1 is a plan of a portion of a loom and of my new device thereon. Fig. 2 is a front elevation of the same. Fig. 3 is a side elevation of the parts of my new device on an enlarged scale, and Fig. 4 is an end elevation of a portion of Fig. 3.

a is the hand-rail of the lay, beneath which is the reed, and with which it is moved backward and forward from and to the line of the woven fabric at every flight of the shuttle. Attached to the side of this rail, facing the position of the operator, and near each end thereof, is a wedge or inclined-plane shaped cam, *m*, preferably of metal.

b is the breast-beam of the loom, attached to which near each end thereof, and opposite the cams already described, is a frame, *d*, having a base, *c*, in which are formed slots to receive a bolt or bolts for convenience of adjustment on the beam, and provided with bearings *o* and *p*, in which rests a rod, *f*, adapted to partially revolve in and slide through them to a limited extent. This rod *f* is provided with a rigidly-attached arm, *e*, a spring, *i*, and a hook, *g*. The arm *e* is curved or bent over, as shown in Figs. 1, 3, and 4, and its free end is beveled or cut diagonally through in a plane perpendicular to the rod *f*. A stop, *q*, Fig. 4, is formed at the lower end of this arm at the side of the rod *f*, and the spring *i* is wound around this rod loosely, and has its rear end attached to or resting against the frame *d* and its forward end attached to the rod or resting against the arm *e*.

Secured by the screw *h* in that end of the rod *f* that is beneath its curved arm *e* is a hook, *g*, the shaft of which is bent laterally at an angle of about forty-five degrees to the rod *f*, and its free end is bent down at right angles to its shaft, as shown in Figs. 3 and 4.

In the drawings my devices are shown arranged for use only at that end of the loom that would be at the right of the operative when at work. For use at the other end of the loom it will be readily understood that the cam *m*, beveled end *r* of the arm *e*, stop *q*, spring *i*, and lateral bend of the shaft of the hook *g* must all be reversed.

When the loom is at rest and the cams *m* and *r* not in contact with each other, as seen in Fig. 3, the spring *i*, by its resistance to uncoiling, holds the stop *q* securely upon its bed on the frame *d*, and by its resistance to longitudinal compression holds the rod *f* forward in its bearings, as shown in Figs. 3 and 4. The cam *m* and rod *f* must be so adjusted relative to each other upon their respective supports that the beveled faces of the cam and of the arm *e* will engage with each other when the forward movement of the lay carries the forward end of the cam *m* into the perpendicular plane of the beveled face *r*. Provision for lateral adjustment for this purpose is made by the bolt and slots above mentioned.

From the position above indicated the further progress of the lay toward the breast-beam brings the beveled face of the cam *m* hard against the beveled face *r* of the arm *e*, and as the former is rigidly affixed to the hand-rail, while the latter is held in position only by the action of the spring *i* and the bearings *o* and *p* of the rod *f*, the arm *e* yields laterally under the pressure, its beveled face *r* sliding readily over the beveled face of the cam *m*, whereby the rod *f* is caused to revolve partially in its bearings, lifting the hook *g* above the surface of the woven fabric. While in this position the lay still continues to advance until the edge or end of the arm *e* comes in contact with the base of the cam *m*, and then, as it moves on until the reed reaches the line of the woven fabric, it forces back the rod *f* through its bearings, compressing the spring *i* until the lay has reached the farthest limit of its forward travel, and then as it recedes the rod *f* follows, impelled by the spring *i*, until the base of the arm *e* comes in contact with the bearing *o*, when the beveled faces begin to disengage and the spring *i* to operate to force the arm over again into its position of rest, which is attained when the beveled faces have become fully disengaged.

Starting from the relative positions of the

parts, as shown in Figs. 1 and 2 of the drawings, the operation may be further described as follows: The cam-faces being engaged, as shown in Fig. 1, the hook is lifted from the woven fabric, the hook at the end of the loom (not shown) having done service during the last flight of the shuttle, and the hook shown having done no service during that flight, the shuttle is at rest in the shuttle-box, (shown at *k*,) the lay advances a little farther, forcing back the rod *f* out of the way of the advancing reed, which drives into place the thread that followed the last flight of the shuttle, and then the lay recedes, disengaging the cams, the spring *i*, by its action on the bar *f*, restores both it and its arm *e* to their position of rest, as above described, the stop *q* preventing the hook from being thrown too far over by the spring, thereby leaving the hook in position (preferably beyond the first warp-thread) to catch and hold the bight of the filling that an instant later is formed by the flight of the shuttle to the other end of the loom.

It will be readily understood that other springs may be substituted for the spiral spring shown, and the forms of the parts described may be considerably modified without departing from my invention; but the spiral spring is cheap and durable, and in it and the other parts of the device I have shown and described what, after much experimenting, I have found to possess in the greatest degree the necessary features to its successful operation.

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

The cam *m*, adapted to be secured to the hand-rail *a*, in combination with the frame *d*, adapted to be supported upon the beam *b*, and the bar *f*, provided with the spring *i*, hook *g*, and curved arm *e*, having the cam-shaped end *r*, all substantially as shown and described.

WILLIAM A. BRICKILL.

Witnesses:
JAMES A. HUDSON,
WALTER LARGE.