E. G. GIBSON.

Cloth-Stamping Machine.

No. 223,223. **Patented Jan. 6, 1880.**

Fig. 1.

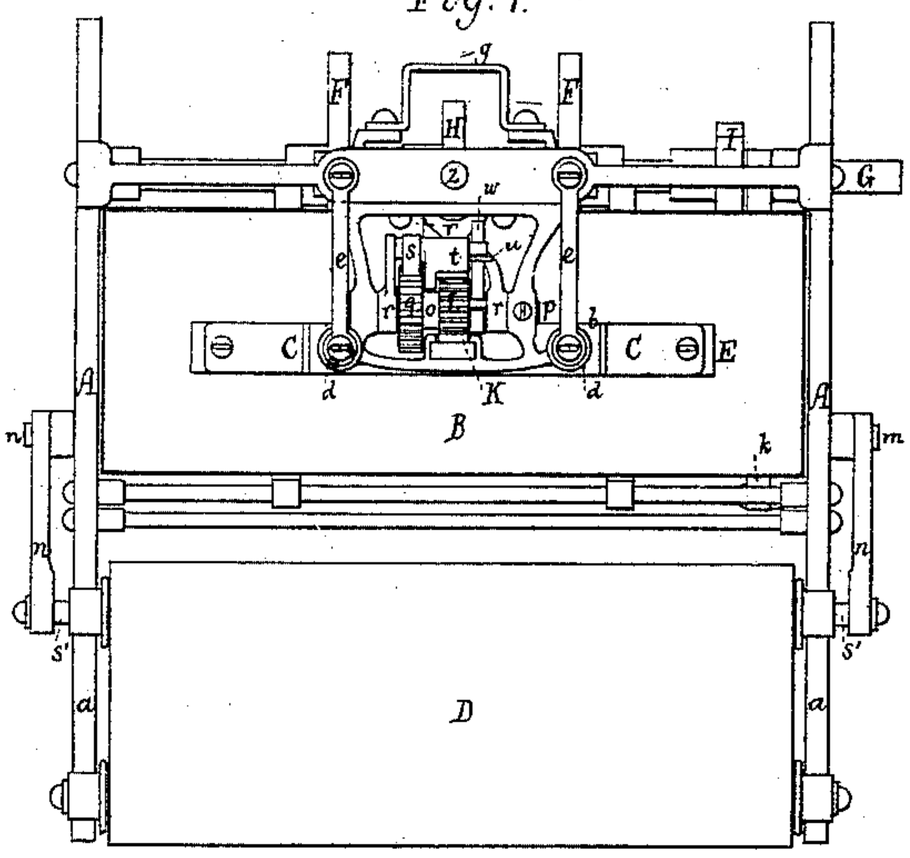


Fig. 2.

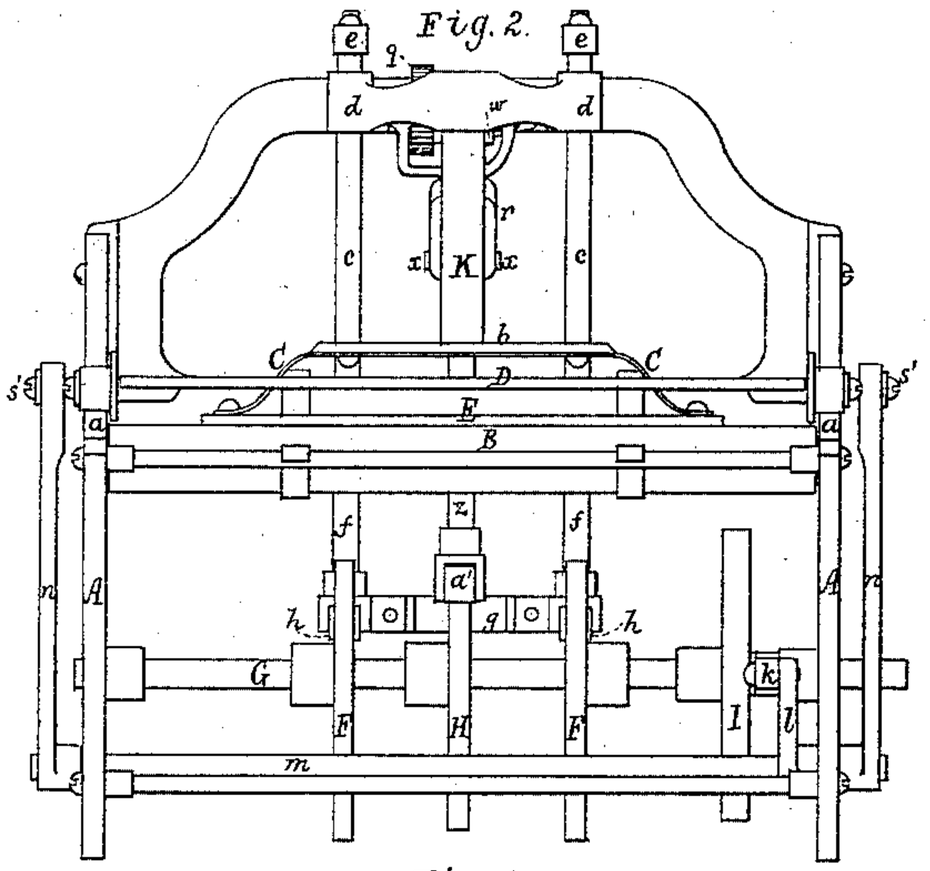


Fig. 3

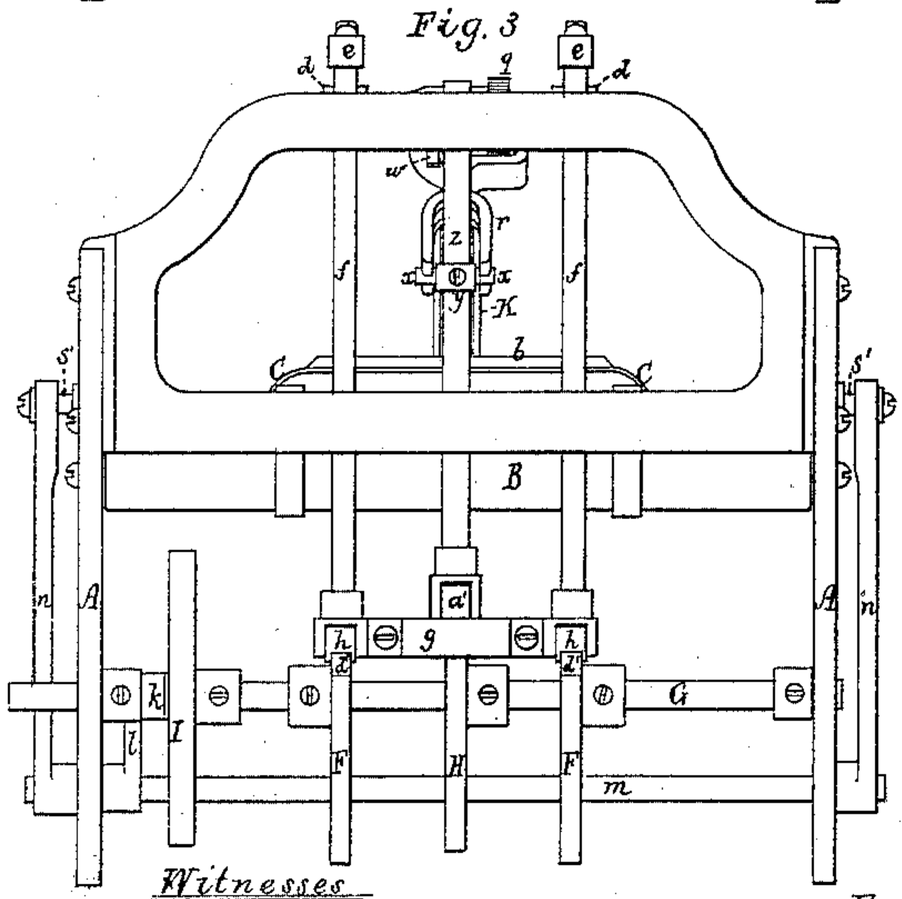


Fig. 6

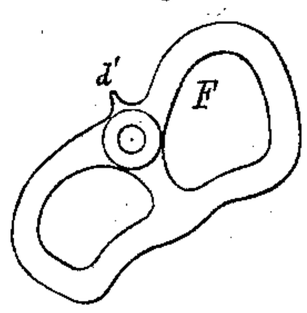


Fig. 7.

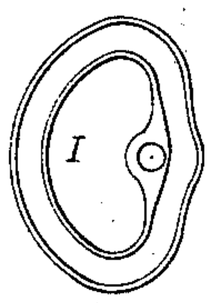


Fig. 8.

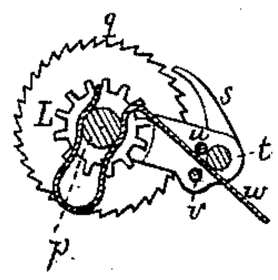


Fig. 4.

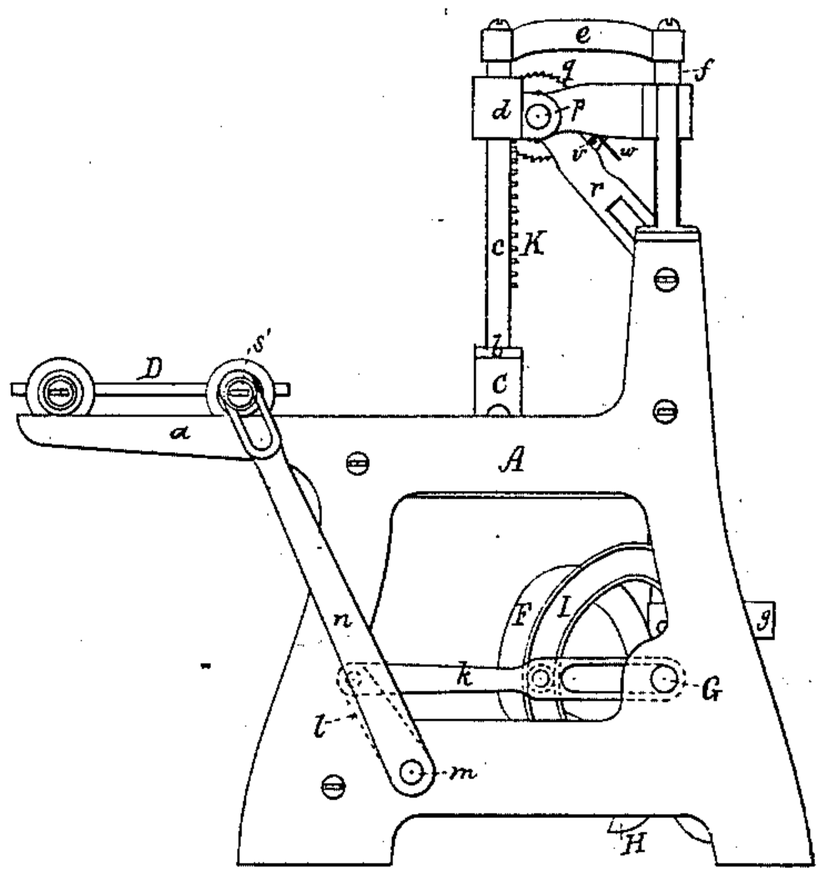
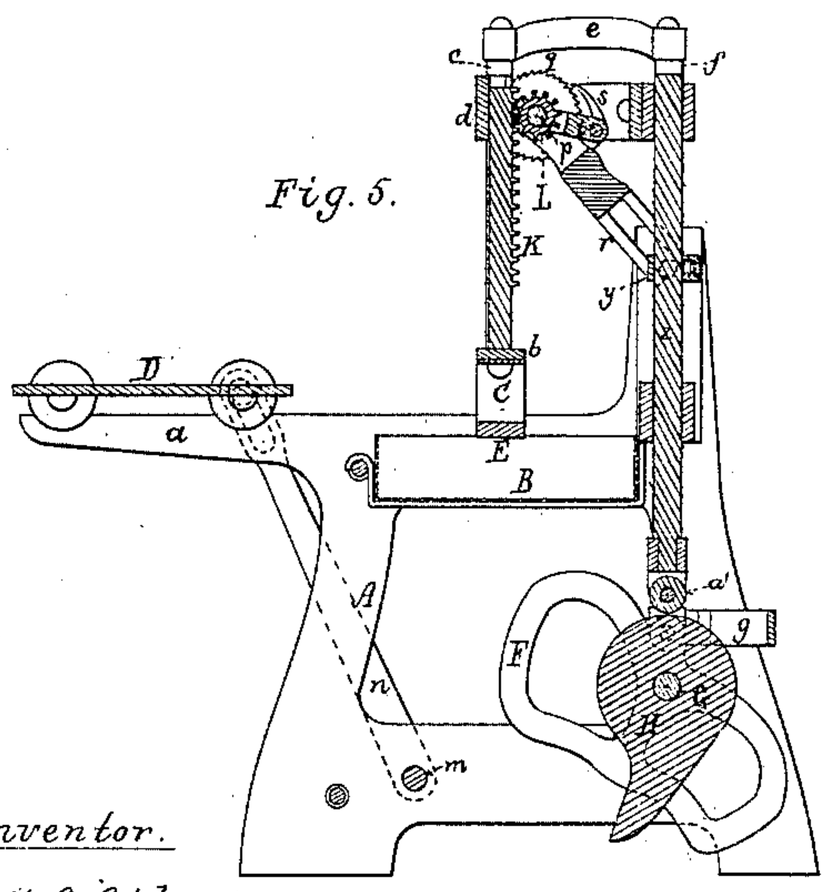


Fig. 5.



Witnesses
S. N. Pitpet
W. W. Lunt.

Inventor.
Everett G. Gibson.
by attorney.
R. H. Eddy

UNITED STATES PATENT OFFICE.

EVERETT G. GIBSON, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO LOWELL MACHINE SHOP, OF SAME PLACE.

CLOTH-STAMPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 223,223, dated January 6, 1880.

Application filed October 9, 1879.

To all whom it may concern:

Be it known that I, EVERETT G. GIBSON, of Lowell, of the county of Middlesex and State of Massachusetts, have invented a new and useful or Improved Machine for Stamping or Printing Trade-Marks or various other prints upon pieces of cloth; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a front elevation, Fig. 3 a rear elevation, Fig. 4 an end view, and Fig. 5 a transverse section, of it.

In some respects this machine is like that represented and described in the United States Patent No. 21,716, granted in 1858 to Algernon S. Wright—that is to say, like the machine so patented, my improved one has not only a reciprocating carriage or table for supporting the piece of goods to be stamped, but mechanism for operating the stamp for stamping the said piece; and, furthermore, it has mechanism or devices for inking the stamp or applying color thereto.

My improvement or invention relates specially to mechanism for operating the stamp, for properly coloring or inking it, and for imparting to it its necessary movements and intervals of rest, all of which is hereinafter described.

In the drawings, A denotes the frame of the machine, in which, arranged as shown, is a color trough or cistern, B, which may or may not be provided with an endless coloring or inking apron of the usual kinds. Besides the said ink-trough the frame A supports a movable bed or carriage, D, by means of horizontal and parallel ways *a a*, upon which the wheels of said carriage rest, in order for it to be moved both over the inking-trough and away from over it. Directly above the said trough is the stamp E, which, by means of an arched spring, C, is connected to a horizontal bar, *b*, from which two slide-rods, *c c*, extend upward vertically through supports *d d*, and are connected to arms *e e*, projecting, as shown, from the upper parts of two other vertical slide-rods, *f f*. These latter rods extend upward from a horizontal bow or arch, *g*, in which are two friction-rollers, *h h*, that bear on the peripheries of two cams, F F, which are alike in shape. One of such cams is shown in side view in Fig. 6. These cams are fixed on a driving-shaft, G, which also carries two other cams, H I, the latter of which is a grooved cam, and is shown in side view in Fig. 7. The said cam I receives in its groove a friction-roller arranged on a stud projecting from the side of a slotted connection-bar, *k*, which rests and slides on the driving-shaft, and is pivoted to an arm, *l*, extending up from a rock-shaft, *m*. On the said rock-shaft there are fixed two slotted arms, *n n*, into the slots of which studs *s'* from the carriage D project.

From the above and what is hereinafter described it will be seen that, on the driving-shaft being revolved, not only will the carriage be moved back from over the ink-trough, but the stamp will be allowed to move, and will move downward into such trough to be inked. The stamp will next rise a short distance upward and again be depressed to receive a second coating of color or ink, after which the stamp will be raised upward, in order for the carriage (which in the meantime is to be supposed to have had a piece of goods placed on it) to be returned again to its place over the trough. This having taken place the stamp will move down and rest on the piece to be stamped, immediately after which the self-adjusting pressure mechanism, to be hereinafter described, will be put in operation to press the stamp down upon the piece with force sufficient to complete the imprint.

After the stamp may have thus printed the piece, such stamp will rise off the piece, and the carriage will be moved backward from underneath the stamp to have the piece removed and a fresh piece substituted.

On the middle of the bar *b* there rests, at its lower end, a vertical slide-rack, K, so supported by and adapted to the frame A as to be capable of readily moving vertically therein. This toothed rack engages with a gear, L, fixed on a tubular shaft, *o*, which is supported by and turns freely on a stationary shaft, *p*, arranged as shown. There is fixed to the shaft *o* a ratchet-wheel, *q*, and there also turns on the shaft *p* a double furcated arm, *r*, to which is

pivoted a pawl, *s*, to work with the said ratchet-wheel *q*.

From the hub *t* of the pawl two studs, *u v*, project, in manner as shown in Fig. 8, which is a vertical section taken through them, and an elastic arm, *w*, extends between them from the shaft *p*. The lower set of prongs of the arm *r* are slotted lengthwise to receive studs *x x*, projecting from a block, *y*, that is fastened on an upright slide-rod, *z*, which, arranged as shown in the frame A, has at its foot a friction-roller, *a'*, to rest on the periphery of the cam H. By means of the said cam H the rod *z* is forced upward and caused to elevate the arm *r*, they being subsequently allowed by the cam to be moved contrariwise by their weight. On the latter movement taking place the pawl, by its upper stud being borne down upon the arm *w*, will be tripped or thrown out of engagement with the ratchet-wheel, whereby the rack will be free to fall down and rest on the bar *b*, so as to adjust itself to the bar, as the thickness of the piece of cloth to be stamped may determine the altitude of such bar when the stamp may be resting on the cloth after the stamp may have been inked, as described, and moved down upon the cloth. On the furcated arm *r* being forced upward the lower stud of the pawl will be borne against the elastic arm *w*, and as a consequence the pawl will be tripped back into engagement with the ratchet, and, continuing to move, will turn it, and thereby cause the rack to be forced down upon the bar *b* with the necessary pressure for the stamp to complete an imprint on the cloth. Thus, by releasing the pawl from the ratchet at the proper time, it will be seen that the pressure-rack can drop down on the bar *b*, and thereby adjust the mechanism thereto for pressing it down, whatever may be the thickness of the piece of cloth on which the stamp may be resting. As pieces to be stamped usually vary more or less in thickness, such adjustment becomes necessary to insure good printing of them.

Each of the cams F has at its middle the auxiliary cam or angular projection *d'*, formed as shown, its purpose being to cause the stamp, immediately after receiving a coating of ink, to rise from the inking device and to again descend and take or receive from it another coating of ink, thereby insuring the stamp being thoroughly inked.

The cams F H I are formed with certain portions of their bearing-surfaces concentric with the axes of such cams, in order to effect the necessary intervals of rest of the stamp and the carriage.

In the above-described machine I claim as my invention as follows, viz:

1. In combination with the stamp and the driving-shaft, the adjustable pressure mechanism, it consisting of the slide-rack K, pinion L, tubular shaft *o*, ratchet-wheel *q*, stationary shaft *p*, pawl *s*, double furcated arm *r*, pawl-tripping studs *u v*, elastic arm *w*, slide-rod *z*, and the cam H, all arranged and adapted to operate substantially as set forth.

2. The combination of the aforesaid adjustable pressure mechanism, consisting of the slide-rack K, pinion L, tubular shaft *o*, ratchet-wheel *q*, stationary shaft *p*, pawl *s*, double furcated arm *r*, pawl-tripping studs *u v*, elastic arm *w*, slide-rod *z*, and the cam H with the stamp E, the ink-trough B, the carriage D, and the mechanism for imparting to the said carriage and stamp their intermittent reciprocating movements to effect inking of the stamp and the carrying under and out therefrom of a piece of goods to be printed or stamped, the mechanism for so operating the carriage being the studs *s' s'*, slotted arms *n n*, shaft *m*, arm *l*, slotted connecting-bar *k*, and its operative grooved cam I, and the mechanism for so moving the stamp being the slide-rods *c c f f*, cams F F, and connection-bars *b e e*, all being adapted and arranged substantially as and to operate as set forth.

3. The combination of the cams F F, provided with the angular projections or auxiliary cams *d' d'*, with the slide-rods *c c f f*, connection-bars *e e*, and the stamp, all being to operate the said stamp relatively to the inking device or trough, and so as to cause two layers of ink to be imparted to the stamp preparatory to each impression or imprint being made by it, as specified.

EVERETT G. GIBSON.

Witnesses:
R. H. EDDY,
W. W. LUNT.