J. E. CHAPIN.

PLAITING-MACHINE.

No. 191,832. Patented June 12, 1877.

Fig: 1.

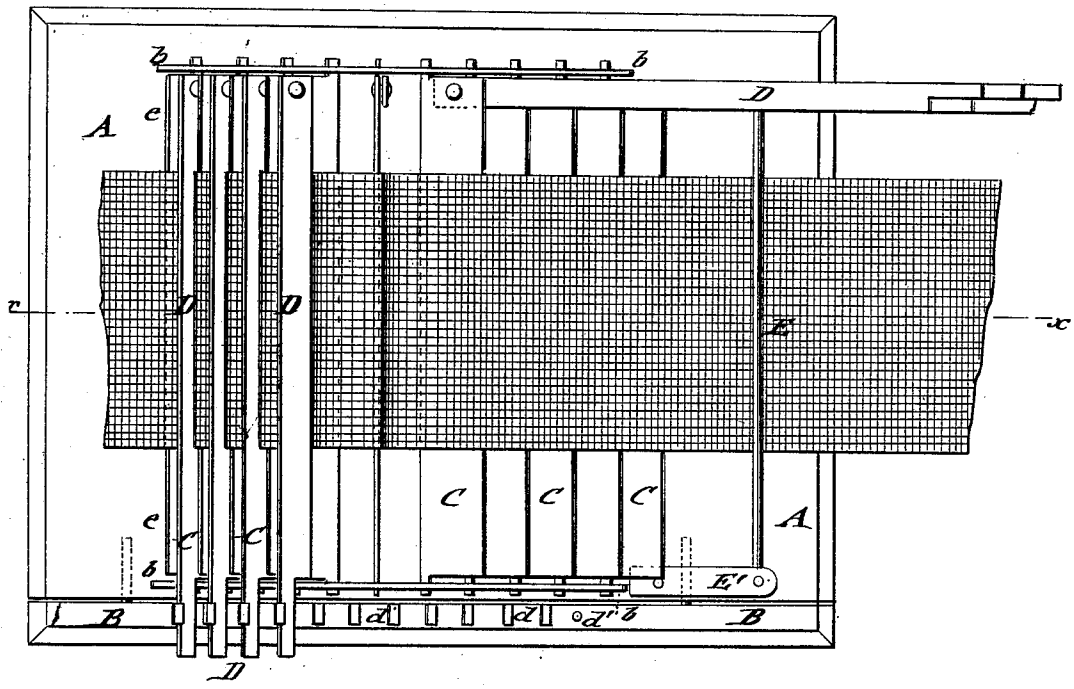



Fig: 2.

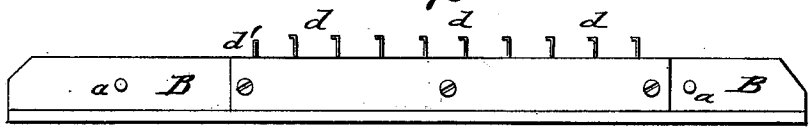
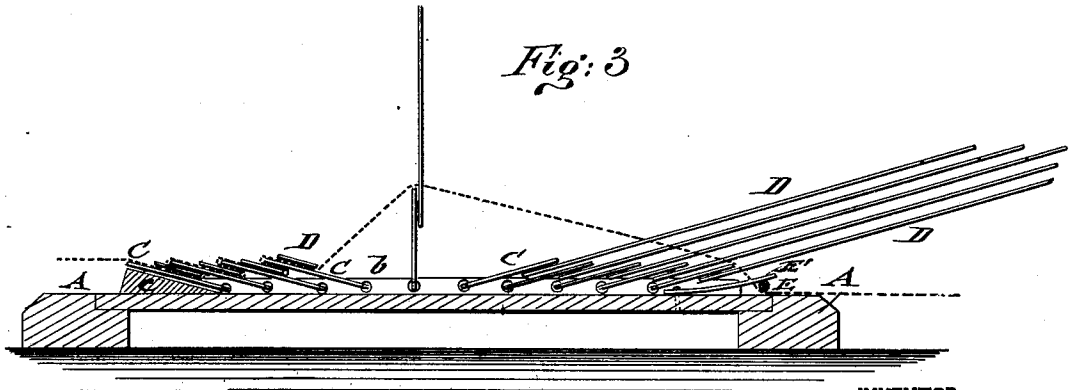



Fig: 3




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# UNITED STATES PATENT OFFICE.

JOHN E. CHAPIN, OF NEW YORK, N. Y.

## IMPROVEMENT IN PLAITING-MACHINES.

Specification forming part of Letters Patent No. **191,832**, dated June 12, 1877; application filed May 5, 1877.

*To all whom it may concern:*

Be it known that I, JOHN E. CHAPIN, of the city, county, and State of New York, have invented a new and Improved Plaiting-Machine, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view of my improved plaiting-machine; Fig. 2, an inside view of the detachable locking-strip; and Fig. 3, a vertical longitudinal section of the same on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention relates to an improved plaiting-machine that is worked with great facility, and admits the taking out of the plaiting-needles at one time after the fabric is plaited, so as to remove the same without delay from the machine; and it consists of a plaiting-board with hinged plates and plaiting-needles pivoted at one end to the same. A detachable side strip of the plaiting-board, with catches or hooks, locks the needles, and releases them simultaneously on being taken off. The tension of the fabric to be plaited is regulated by a spring tension-rod at one end.

In the drawing, A represents a plaiting-board of suitable size, and B the detachable side strip of the same, which is secured thereto by pins *a* entering holes of the main board. The main board is provided with perforated strips *b*, running parallel to the side edges, to which the folding-plates C are pivoted.

A plaiting-needle, D, is pivoted to each folding-plate at that end opposite to the detachable side board B, the free ends of the needles being extended over the side strip B, and retained by a series of corresponding catches or hooks, *d*, of the same. A wedge-shaped strip, *e*, of wood, adjoining the first folding-plate C, serves to facilitate the starting of the plaiting operation, and imparts a slight inclination to the folding-plates.

A tension-rod, E, attached to end springs, is applied to the plaiting-board at the end opposite to that to which the inclined strip is attached, the fabric being passed through between tension-rod and main board, and then folded by the consecutive action of the plates and retaining-needles. All the plates, with the needles thrown out at right angles to the same, are swung over toward the tension-rod, the fabric being first held between the inclined strip and the first folding-plate, and the needle of the same brought down and secured to the first catch of the side strip B. The second plate is then carried over, producing, in connection with the tension device, the stretching and tight folding of the fabric, the fold being again secured by the second needle, and so on until all the plates are turned forward and the needles secured to the catches. The last needle is retained between the catch and an end pin, *d'*, so as not to be liable to slip out. The fabric is then ironed by passing an iron over the plates and needles, and the end strip B detached from the main board, so as to release all the needles at one and the same time. The needles may then be taken out from between the folding-plates and the plaited fabric removed. The plates and needles are then carried back into the first position, being ready for the next plaiting operation.

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

1. The combination of a main board, having hinged folding-plates and needles pivoted to the latter, with a detachable side strip, having needle-locking catches or hooks, substantially as and for the purpose set forth.

2. The combination of the main board A, having a wedge-shaped strip, with the hinged folding-plates C and needles D pivoted to one end of the plates, substantially as specified.

3. The combination of the main board A, having hinged folding plates C and needles D pivoted thereto, with a spring-actuated tension-rod, E, substantially as and for the purpose specified.

JOHN E. CHAPIN.

Witnesses:
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C. SEDGWICK.