J. Conant & L. Dimock,

Winding Silk.

No. 7,833. Patented Dec. 17. 1850.

Fig. 1.

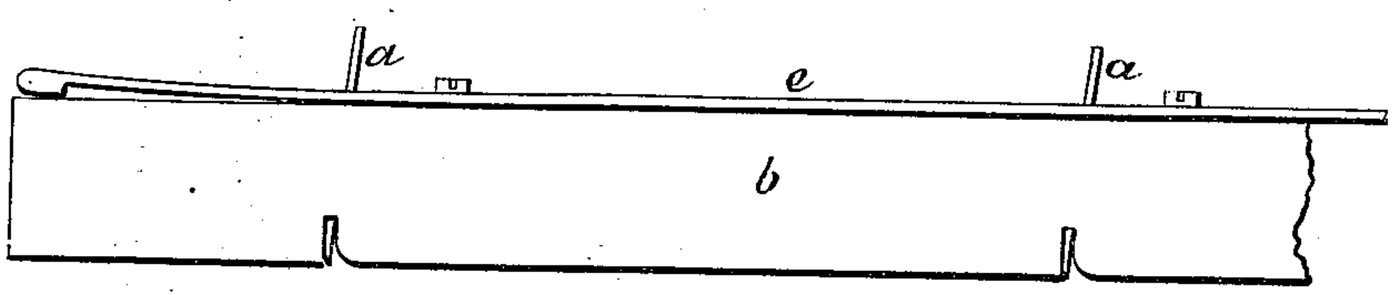


Fig. 2.

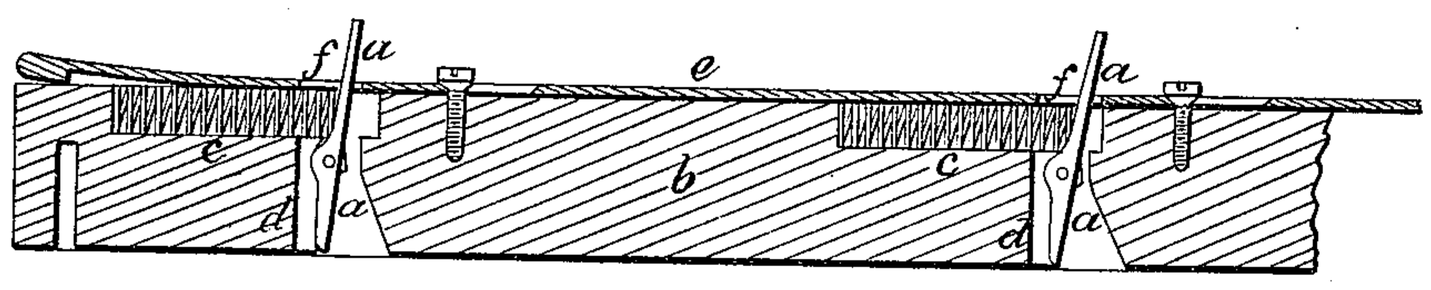


Fig. 3.

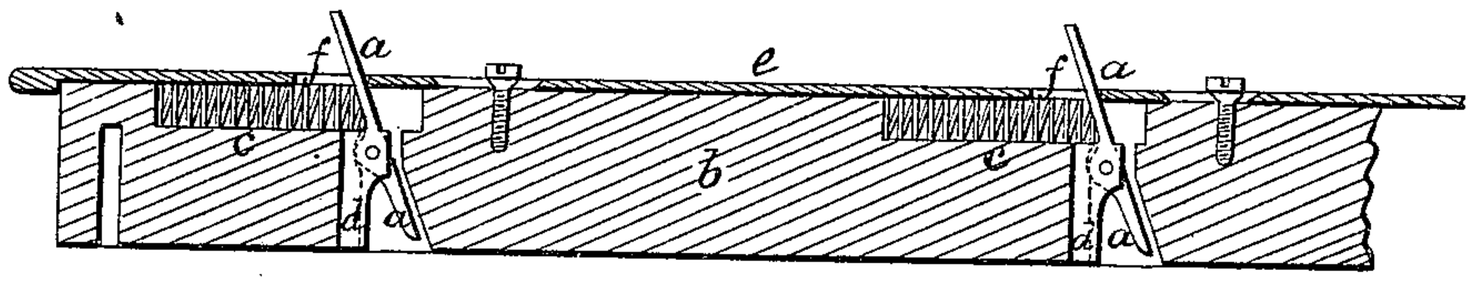
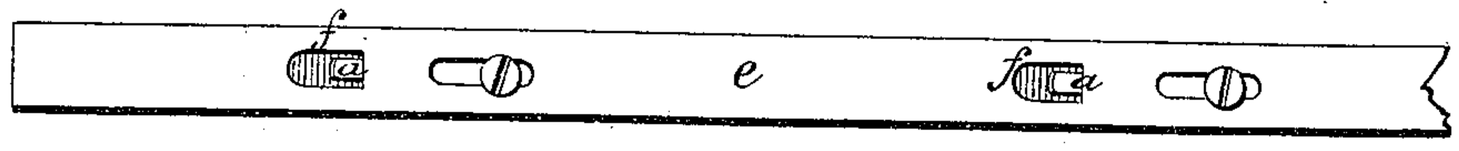


Fig. 4.



UNITED STATES PATENT OFFICE.

J. CONANT AND L. DIMOCK, OF NORTHAMPTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINERY FOR DOUBLING AND TWISTING SILK, &c.

Specification forming part of Letters Patent No. **7,833**, dated December 17, 1850.

To all whom it may concern:

Be it known that we, JOSEPH CONANT and LUCIUS DIMOCK, of Northampton, in the county of Hampshire and State of Massachusetts, have invented a new and useful Improvement in the Machine for Doubling, Twisting, and Reeling Silk, being a catch-bar for catching and holding all the threads simultaneously and liberating them successively as required, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a side elevation of a section of the bar. Fig. 2 is a vertical longitudinal section of the same, the catches being closed upon the threads or silk. Fig. 3 is a vertical longitudinal section of the same, the catches being held open by the sliding lock-plate. Fig. 4 is a top view.

Similar letters in the several figures refer to corresponding parts.

The form of the catch-bars heretofore used for holding the threads in machines for doubling, twisting, and reeling thread and silk, being well known, will not require to be particularly described. In securing the ends of the threads by these bars the ends of each pair or set of threads had to be sewed separately, the bar being upon the machine and the threads brought down upon them and under the catches, which were then brought against the threads.

By the use of our improved catch-bar all the threads are grasped and secured at one operation by bringing the bar down upon them and disengaging a slide lock-plate from the end of the bar, which liberates all the catches simultaneously and allows the springs to close them upon the threads, leaving them in such a position that they can be opened to liberate the threads one by one, at the pleasure of the operator. In order to accomplish this object, we arrange the catches *a* in a bar of wood, *b*, with separate springs *c*, to bear against the long arms of the catch-levers for the purpose of pressing the short arms of the catch-levers into the grooves of the catch-boxes *d*, wherein the threads are held securely until the catches are again opened. In order to open all the catches simultaneously, a metallic sliding plate, *e*, is used in connection with the bar, containing as many oblong mortises *f* as there are catches, the long arms of which being extended upward through the mortises in the bar and through the sliding lock-plate. Having opened all the catches by drawing back the slide and forced its hooked end down and against the end of the bar, and thus locked the plate, the bar is next brought down upon the threads, the threads entering the notches in the bar and the angular spaces between the catches and boxes, and the bar being held in a horizontal transverse position by two vertical pins rising from the spindle-frame and entering apertures in the bar. While the bar is in this position raise the hook end of the slide lock-plate and disengage it. As soon as this is done the helical springs will close the catches upon the threads and hold them securely, at the same time throwing the lock-slide forward. The threads are then all cut and the bars shifted, the one last named, which was next to the spindle, being placed on the reel, and the bar which was adjacent to the spools being placed on pins rising from the back of the spindle-frame. The threads are then reeled into skeins. It now becomes necessary to liberate the ends of the threads separately, for the purpose of tying their ends. This is done by bearing the long arm of the catch toward the helical spring, which is operated by hand, the slots in the sliding plate being sufficiently long to allow them to be moved back the required distance. As soon as each thread is liberated the catch will be forced back to its former position by the helical spring.

The sliding lock-plate is attached to the top of the bar by screws passed through oblong mortises in the same, said mortises being of such length and width as to allow the slide to have the required movement longitudinally.

A section of the bar and two catches only are represented in the drawings; but it will be understood that the bar may be from ten to fifteen feet in length and contain from fifty to one hundred catches, according to the size of the machine to which it is to be applied.

Having thus described the nature of our invention and manner of operating the same, what we claim as new, and desire to secure by Letters Patent, is—

So constructing the catch-bar that all the threads or silk, either before or after being twisted, may be secured by the catches simultaneously by simply bringing the bar with its catches down upon the threads, and while in

that position causing all the helical springs to act on the catches at the same time by suddenly disengaging the slide lock-plate from the end of the bar, the mortises in the said plate being so formed as to allow each catch to be opened separately without the aid of the lock-plate, or all to be opened simultaneously by moving said lock-plate longitudinally, in the manner herein fully set forth.

In testimony whereof we have hereunto signed our names before two subscribing witnesses.

JOSEPH CONANT.
LUCIUS DIMOCK.

Witnesses:
JESSE D. HOLTON,
SAMUEL WELLS.