T. Kohn,

Finishing Thread,

No. 48,958. Patented July 25, 1865.

Fig. 2.

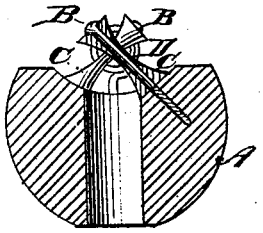
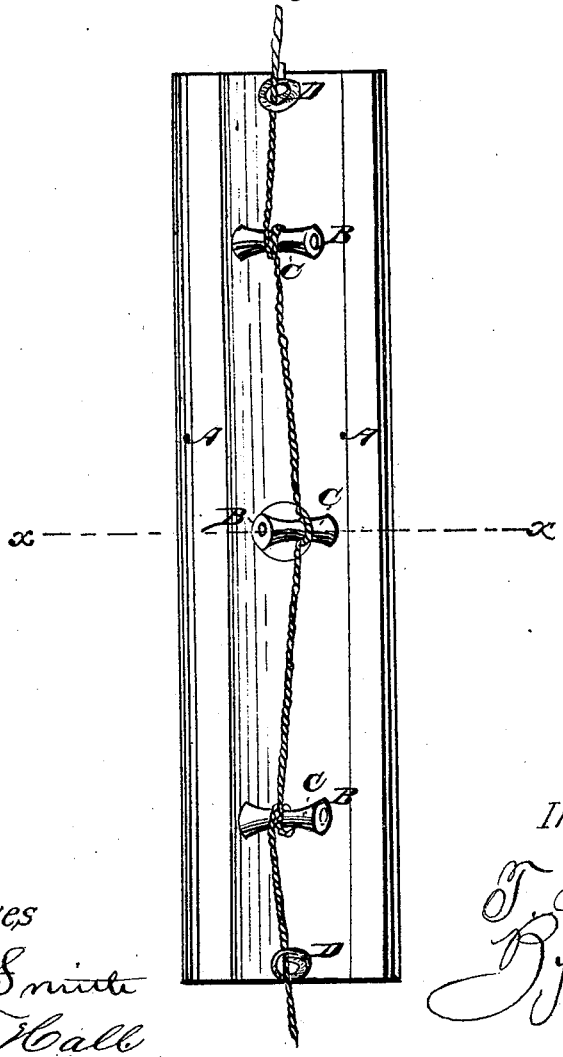


Fig. 1.



Witnesses

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TOBIAS KOHN, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN DEVICES FOR FINISHING THREADS.

Specification forming part of Letters Patent No. **48,958**, dated July 25, 1865.

To all whom it may concern:

Be it known that I, TOBIAS KOHN, of Hartford, in the county of Hartford and State of Connecticut, have made new and useful Improvements in Devices for Finishing Thread; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of the improvement. Fig. 2 is a transverse section on the line *x x*, Fig. 1. The same letters refer to corresponding parts in the two figures.

My invention consists in the peculiar form and position of the rollers in a traversing carriage, upon which rollers the thread is wrapped, so that as the carriage is reciprocated longitudinally the fuzz or loose fiber is removed by friction and pressure, giving a smooth and finished appearance to the thread.

To enable one skilled in the branch of manufacture to which my invention is allied to construct and use the same, I will proceed to describe it.

A is a carriage provided with pins B, which are inserted into the sides of the carriage in such a manner as to cross each other, viewing the device in end elevation or in the transverse section, Fig. 2. On these pins are loose rollers, C, of a concave shape, which move freely under the impulse of the thread or cord, which, being inserted through the guides D at each end, is wrapped once around each roller of the series, as shown in Fig. 1. The thread being thus placed in position, the carriage is reciprocated longitudinally by any suitable means, whether by hand or by machine, and the effect upon the thread is to wear off or rub down the loosely-projecting fiber, by which additional strength and beauty is attained.

I am aware that this mode of finishing thread is not new, as the same has been done by cylindrical rollers and by a large needle operated by hand; but in my improvement the rollers are concave on their faces, so as to cause the thread to chafe against itself in its passage round the rollers, which it would not be compelled to do were the rollers cylindrical. The concave form, by giving the point of greatest depression the smallest diameter, causes the thread to slip naturally into it as the tension is applied from either direction, and thus the threads bear against each other.

Another point of improvement consists in mounting the rollers on axes, each of which is at right angles to the one next in series. The tendency of the thread as it traverses upon the roller is to gradually move toward one end or the other, according to the direction in which it is rotating. By placing the adjacent axes at right angles they tend to correct this tendency in each other, as the deflection caused by thus traversing longitudinally on the roller is at right angles to the axis of the next roller, and consequently in a direction in which it cannot give way to accommodate the said deflection. It is thus restrained within limits of oscillation on either side of a central line parallel to the length of the carriage, and passing through each one of the rollers and through the openings in the guides. Thus, as I have said, the two objects are secured—one to cause the thread to chafe against itself, and the other to keep it within due bounds on the rollers. The pins carrying the rollers, being attached at but one end to the carriage, afford a ready means of placing the thread upon the rollers.

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

1. The described concave-faced rollers on which to wrap the thread to be finished by the longitudinal motion of the carriage on which the rollers are mounted.

2. Placing the alternate rollers on axes at, or nearly at, right angles to each other, so as to partially counteract the tendency of the thread to traverse lengthwise of the rollers.

The above specification of my improved device for cleaning and finishing thread and other articles, signed this 15th day of June, 1865.

TOBIAS KOHN.

Witnesses:
C. D. SMITH,
W. F. HALL.