

A. HOAGLAND.

Tension for Sewing Machines.

No. 17,835.

Patented July 21, 1857.

Fig. 1.

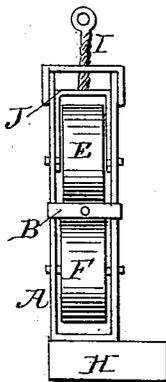


Fig. 2.

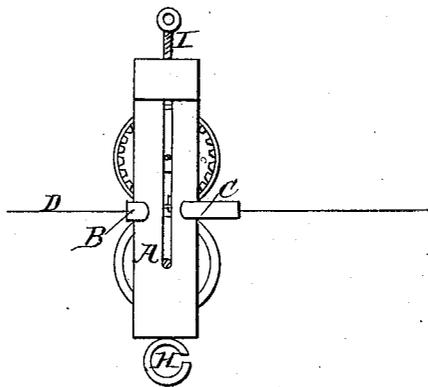


Fig. 3.

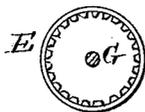
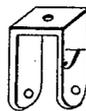


Fig. 4.



# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN TENSION APPARATUS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 17,835, dated July 21, 1857.

*To all whom it may concern:*

Be it known that I, ABRAHAM HOAGLAND, of Jersey City, county of Hudson, State of New Jersey, have invented a new and useful Improvement in the Apparatus for Holding with the Proper Tension the Thread in Sewing-Machines; and I hereby declare that the following is a full and exact description thereof.

To enable others to make and use my invention, I proceed to describe its construction and operation, reference being had to the drawings hereunto annexed and making part of this specification.

Figure 1 is a front elevation; Fig. 2, side elevation; Fig. 3, side of one of the wheels; Fig. 4, the saddle.

To apply my invention to sewing-machines for the purpose of regulating the tension of the thread, I construct a frame of suitable size. For ordinary machines it would be of the general dimensions, (shown in the drawings.) I make the frame of brass, with a slot in each side to receive the journals of the wheels.

*The wheels.*—There are two wheels or rollers, E and F, between which the thread passes. The core of these wheels, G, Fig. 3, is solid, and may be made of metal or any hard substance, though this is not necessary, as all the wheel may be made elastic. Around the wheel F, I cast or otherwise secure a thick coating of vulcanized india-rubber or other elastic substance of a suitable nature. The upper roller, E, has for its core a cog-wheel. Around this is cast or formed a coating of india-rubber, vulcanized, or other elastic material thin enough to allow the cogs to corrugate the periphery-surface. The lower wheel, F, may be made in the same way, so that the

two wheels thus made will mesh, or partially mesh, so that one cannot turn without the other.

*The saddle.*—This (see Fig. 4) is to govern the upper wheels, E. The journals pass through the sides, and the wheel is thus held by them. The saddle, thus holding the upper wheel, is put into the frame at top. The journals extend through the slot on each side. At the top is a thumb-screw. It passes down through the frame, and is secured into the top of the saddle, in which it turns with a swivel.

The lower wheel being set in at the bottom of the slot, and the upper wheel also placed in, they are pressed together by means of the thumb-screw, acting upon the saddle, as much as may be required. The thread is passed through the eyelet (seen in Fig. 1) and between the wheels, and then, if necessary, round the under wheel, and then through the other eyelet. The wheels are made to roll by the tension of the thread, so as not to take the twist out, and this enables them to sew with any kind of thread that will go through the eye of a needle.

The apparatus is attached to the sewing-machine at the required place.

What I claim, and desire to secure by Letters Patent, is—

The use of two elastic wheels or rollers, (governed by the saddle and thumb-screw,) between and around which the thread is passed to give it any required tension in sewing with a machine, constructed and operated substantially as above described.

A. HOAGLAND.

Witnesses:

OWEN G. WARREN,  
ISAAC HALSTEAD.