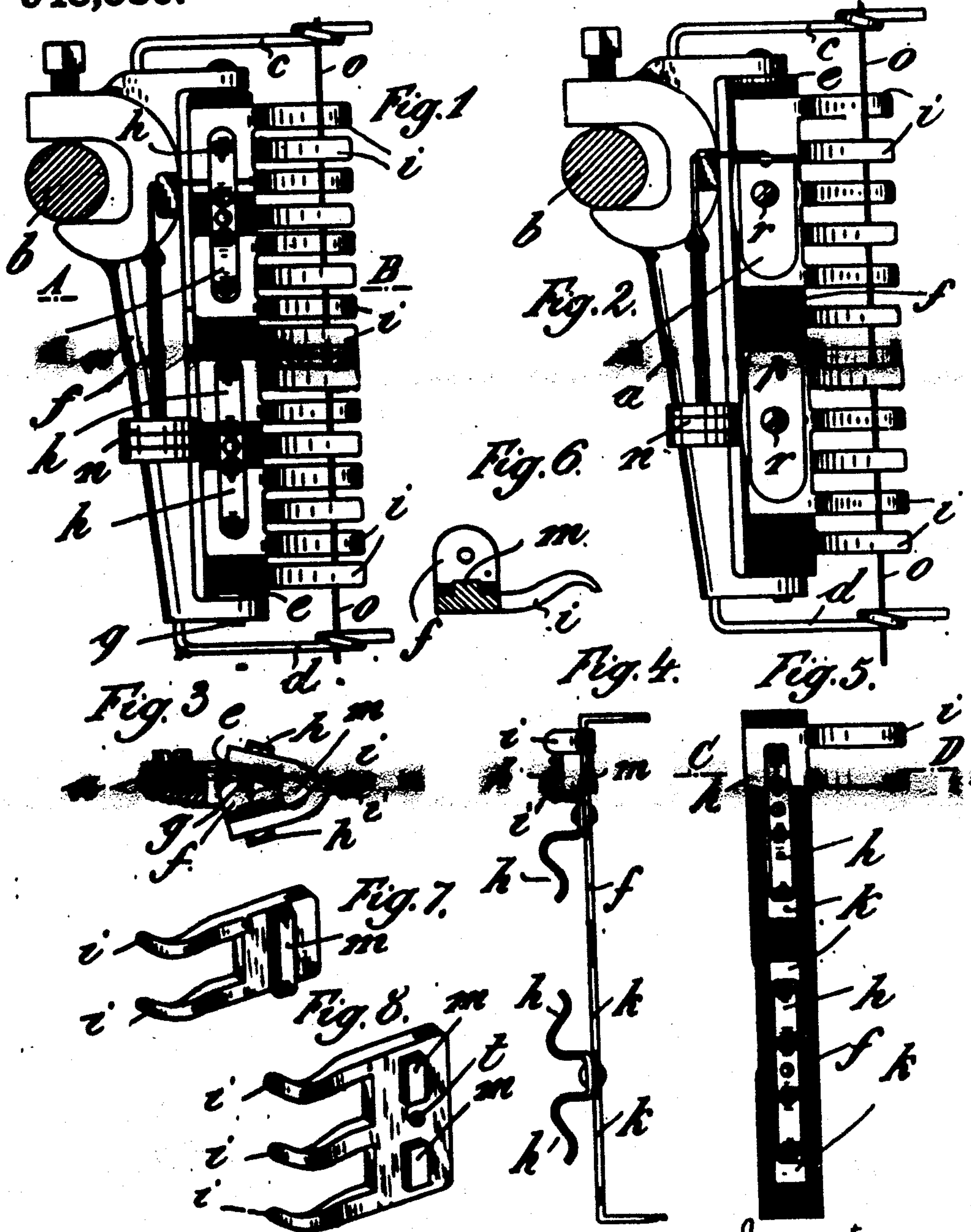


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 THREAD TIGHTENING DEVICE FOR REELING AND OTHER TEXTILE MACHINES  
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948,580.

Patented Feb. 8, 1910.



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# UNITED STATES PATENT OFFICE.

JEAN SCHWEITER, OF HORGEN, NEAR ZURICH, SWITZERLAND.

THREAD-TIGHTENING DEVICE FOR REELING AND OTHER TEXTILE MACHINES.

948,580.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed March 17, 1909. Serial No. 483,952.

To all whom it may concern:

Be it known that I, JEAN SCHWEITER, a citizen of the Swiss Confederation, and resident of Horgen, near Zurich, Switzerland, have invented certain new and useful Improvements in Thread-Tightening Devices for Reeling and other Textile Machines, of which the following is a specification.

In reeling-, winding- and other textile machines there are used, as a rule, thread-tightening devices, the object of which is to give to the thread to be reeled or wound on, on the one hand, a uniform tension and to effect, on the other hand, a uniform feeding, or admission, of the same to the reel. The thread tightening devices consist, as a rule, of metal grids, catching into each other crosswise, and provided with any desired number of teeth, between which the thread is guided. One of the grids can be moved toward and away from the other and stands under the action of a weight. These metal teeth, however, have the drawback that, although they are hardened, they are easily attacked by the yarn passing through, especially by raw silk, artificial silk and twine, and can then not be used any longer. A further drawback of the said devices is that the size of their braking-surface cannot be regulated as demanded by the different sorts of yarn.

The present invention aims at removing these drawbacks by making the teeth of the grid exchangeable.

The drawing illustrates two sample forms of construction of the thread tightening device.

Figures 1 and 2 are side views, Fig. 3 is a section on the line A—B of Fig. 1. Figs. 4 to 6 show three views of a grid, Fig. 6 being a section on the line C—D of Fig. 5. Figs. 7 and 8 are perspective views of the teeth.

Similar letters refer to similar parts throughout the several views.

In the sample forms shown in the drawing *a* is the frame of the tightening-device, fastened, in a manner already known, to the bar *b* of the reeling or similar machine. *c* and *d* are the thread-guides fixed on the same. Inside of the frame the grid *f* of the tightening-device turns on the pin *g*, while the second grid *e* may be unmovably screwed to the frame *a*. These grids are, as can be seen from Fig. 4, formed of bent slats or rails which, as shown in Fig. 1, may be provided with clamping-springs *h* which

receive between them the peculiarly shaped teeth *i* which are preferably made of porcelain or glass. In order to reliably journal these teeth, the grids *e* and *f*, as shown in Figs. 5 and 6, possess recesses *k* into which fit the projections *m* arranged on the back of the teeth. But it is to be remarked that the teeth may quite as well be without projections or be provided with recesses into which enter the corresponding elevations or projections of their holders. The movable grid or holder *f* stands, in a manner already known, under the action of a weight or spring *n*, in order to make the teeth continuously rest against the thread *o*.

In the construction shown in Fig. 2 braking or tensioning teeth are arranged in sets or units comprising three teeth to a set or unit, and in this instance two sets of teeth are united with each other, and they are fastened on their holders *e* and *f* by metal plates *p* and by screws *q*. For this purpose the teeth are provided with screw-holes *r* (Fig. 8). These teeth possess besides these several projections *m*. If the thread to be worked can only stand a slight stretching, all that is necessary is to remove one or several teeth and thereby adjust the tightening device for the respective thread.

In Figs. 7 and 8 are shown the teeth used for the said sample forms of construction on an enlarged scale, from which everything further will at once be seen.

Instead of the teeth united with each other there may also be used single teeth without changing the essential feature of the invention.

What I claim as my invention and desire to secure by United States Letters Patent is:

1. A thread tensioning device comprising a holder, tooth-units, and clamping means independent of said tooth units releasably securing said tooth-units individually upon the holder.

2. A thread tensioning device comprising a holder, tooth-units, and means releasably securing said tooth-units individually upon the holder, said means comprising seats on said holder and clamping means holding said units upon their seats.

3. A thread tensioning device comprising a holder, tooth-units, and means releasably securing said tooth-units individually upon the holder, said means comprising seats on said holder and spring clamping means holding said units upon their seats.



4. A thread tensioning device comprising  
a holder provided with recesses, forming  
seats, tooth-units, projections secured there-  
to and adapted to fit in said seats, and  
5 means releasably securing said units on the  
holder.

5. A thread tensioning device comprising  
a holder, tooth-units, and means interposed  
between and overlapping the adjacent units,  
10 whereby the said units are releasably se-  
cured on the holder.

6. A thread tensioning device comprising  
a holder, tooth-units, and means interposed

between and overlapping the adjacent units,  
said means comprising a U-shaped member, 15  
the end portions bent outwardly in opposite  
directions and arranged to overlap the ad-  
jacent units and releasably secure them on  
the holder.

The foregoing specification signed at Zu- 20  
rich, Switzerland this 2d day of March, 1900.

JEAN SCHWEITER.

In presence of—

WEN BAUMGARTNER,  
J. SURBER.