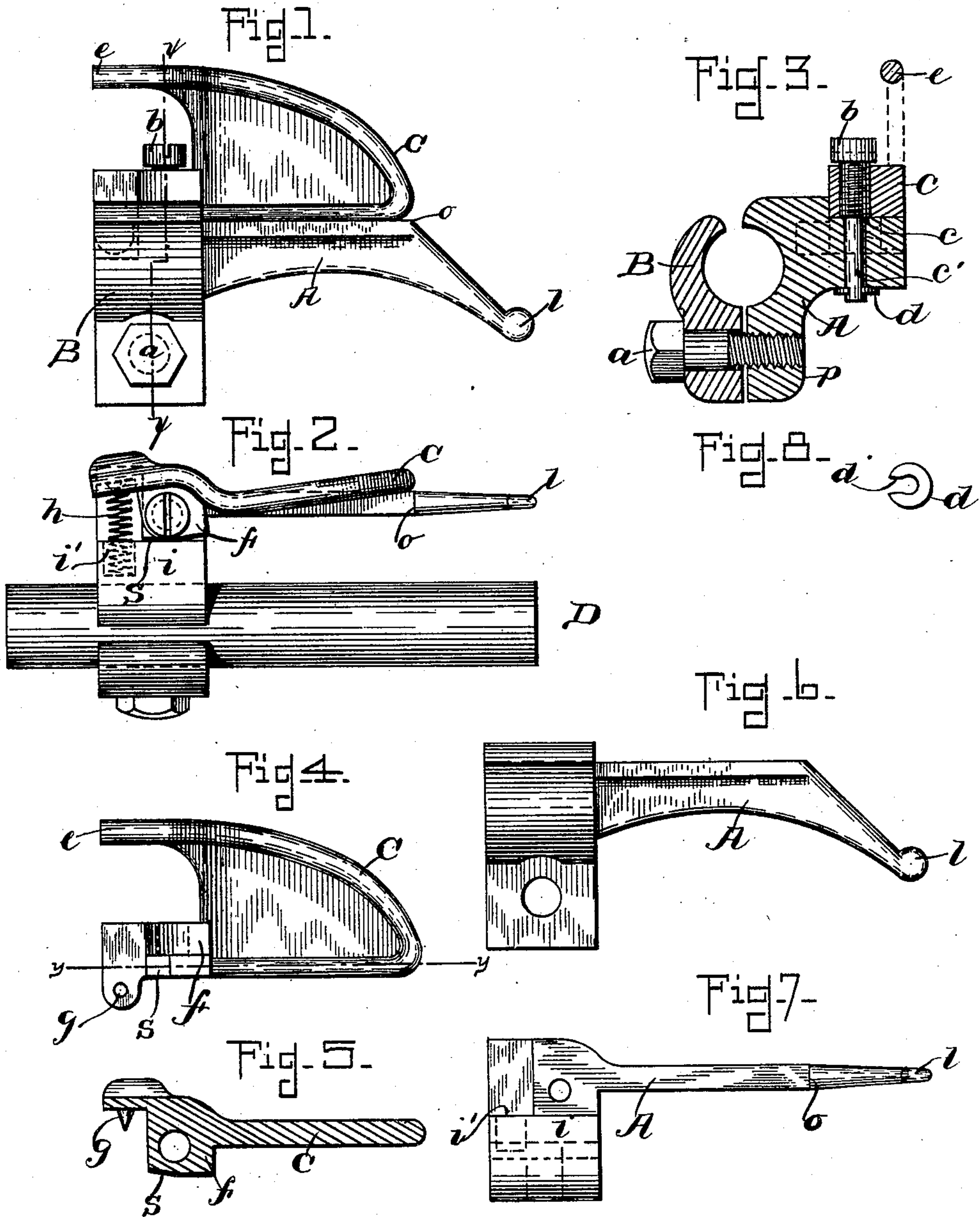


(No Model.)

C. KOFFINKE.
THREAD GUIDE.

No. 587,098.

Patented July 27, 1897.



Witnesses.
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UNITED STATES PATENT OFFICE.

CARL KOFFINKE, OF HOPEDALE, MASSACHUSETTS.

THREAD-GUIDE.

SPECIFICATION forming part of Letters Patent No. 587,098, dated July 27, 1897.

Application filed April 30, 1897. Serial No. 634,629. (No model.)

To all whom it may concern:

Be it known that I, CARL KOFFINKE, of Hopedale, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Thread-Guides, of which the following is a description sufficiently full, clear, and exact to enable those skilled in the art to which it appertains or with which it is most nearly connected to make and use the same.

My invention consists of a new and improved yarn guide and clearer, and has for its principal objects to provide a cheap and simple device which is capable of easy and accurate adjustment and which can be cleaned with ease and without injury to the parts of the guide itself.

It consists in its essential features of a fixed jaw, a movable jaw pivoted thereto, and a means for holding it securely to the guide-rod by which it is carried.

Yarn-guides as at present made are cleaned by inserting a thin piece of metal between the jaws and scraping them with it, which results in rapidly wearing away and roughening the faces of the jaws, so that they soon become worn out and have to be replaced. Furthermore, in the yarn-guides commonly in use at the present time the means for adjusting the jaws is so arranged that there is a tendency to loosen the clamping part by turning the adjusting-screw, whereby the guide is caused to slip from its proper position on the guide-rod, thus rendering it necessary to call a skilled workman to restore it to the exact position which it should occupy.

My invention is devised for the purpose of overcoming these difficulties.

Referring now to the drawings, Figure 1 represents a side elevation of my improved yarn-guide. Fig. 2 is a plan view thereof applied to the rod which carries the guide. Fig. 3 is a vertical section taken upon the sectional plane *xx* of Fig. 1. Fig. 4 is an elevation of the upper or pivoted jaw. Fig. 5 is a plan view of the same in section. Fig. 6 is an elevation of the lower or fixed jaw. Fig. 7 is a plan view of the same. Fig. 8 is a plan view of the key which locks the adjusting-screw in place.

My device comprises a fixed jaw A, provided with a flat face *o* and with a projection *p*, which is properly recessed to receive the

guide-rod D. I preferably provide this jaw with an inclined portion terminating in a shoulder or knob *l*, the knob serving as a stop to prevent the yarn from slipping off the jaw, when it is allowed to snap into place. I connect with this fixed jaw A a clamping-jaw B by means of a set-screw *a*. The movable jaw C is pivoted to the said jaw A by means of an adjusting-screw *b*. The adjusting-screw is formed with a suitable head, with a shoulder *c*, at which point the threaded portion terminates, and a plain portion *c'*. The lower end of the screw is notched to receive the key *d*, which is formed with suitable jaws, the space between which is a little narrower near the periphery of the key than at the center thereof to more firmly grip the screw, as shown at *d'*.

The jaw C is formed with a shoulder *f*, which abuts against a similar shoulder *i* on the fixed jaw A. The end of the jaw C projects somewhat beyond the block or shoulder *f* and is preferably provided with a projection *g*, which is intended to prevent the spring *h* from slipping out of place. The spring *h* is also seated in a recess *i'*, formed in the block or shoulder *i*. This spring serves to keep the flat face of the jaw C in alinement with the corresponding face *o* of the jaw A.

The shoulders *f* and *i* serve as stops to prevent the spring *h* from pressing the part C out of alinement. The upper part of the jaw C may be continued to form a small handle *e*, by pressing against which the jaw C may be opened.

I vary the space between the jaws, according to the size of the thread, by means of the adjusting-screw *b*. Since the set-screw is held from longitudinally moving by the shoulder *c* and the key *d*, when it is turned the jaw C must ride up or down thereon, thus varying the space between the faces of the two jaws. It will be noticed that this is done without disturbing in the least the clamp which holds the entire device in position.

When it is desired to clean the faces of the jaws, it is only necessary to press the jaw C out of alinement with the opposing jaw, when both jaws can be quickly and easily wiped off with a cloth or piece of waste.

Upon removing the hand therefrom the spring *h* causes the pivoted jaw to spring back to its proper position.

I have shown at s in Figs. 2, 4, and 5 a shoulder on the jaw C, which serves to limit the outward movement of the jaw.

The advantages which I secure by my improved construction are numerous. By it I am enabled to quickly and easily wipe accumulations of lint and the like from the jaws, as above described, without roughening the same by scraping, and can accomplish this without in any way interfering with the adjustment of the jaws with the clamp which fastens it to the rod. I am also enabled to change the adjustment without in any way interfering with the clamp.

Another important advantage of my construction is that it renders impossible the changing of the vertical distance between the planes of the opposing faces of the jaws by the insertion of a match or other foreign substance, which is often done by the operative in order that the knots may run through clear without breaking the thread or yarn, while it does at the same time permit the operative to move the pivoted jaw sufficiently to keep the faces clean and smooth.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. In a yarn-guide the combination of a fixed jaw; of a movable jaw pivoted thereto by means of a screw, said screw serving also to adjust the pivoted jaw with relation to the fixed jaw.

2. In a yarn-guide the combination of a fixed jaw; of an adjusting-screw provided with a shoulder; of a key cooperating with the shoulder to prevent longitudinal movement of said screw; and of a movable jaw pivoted on said screw.

3. In a yarn-guide the combination of a fixed jaw having an inclined portion, provided with a stop or shoulder; of a movable jaw adjustably pivoted to said fixed jaw; of a spring for keeping the jaws in alinement; and of means to prevent said spring from slipping out of position.

4. In a yarn-guide the combination of a fixed jaw; of a movable jaw pivoted to move transversely thereto, the movable jaw having a shoulder to limit its outward movement; of a spring to keep the jaws normally in alinement with each other.

5. In a yarn-guide the combination of a fixed jaw, an opposing jaw movable into or out of alinement with said fixed jaw, and means for normally holding said movable jaw in alinement with said fixed jaw.

6. In a yarn-guide the combination of a fixed jaw, a movable jaw, said jaws having opposing parallel faces, a pivot-pin upon which said movable jaw is pivoted said pivot-pin being perpendicular to the planes of said faces, whereby the face of the movable jaw is always maintained in substantially the same plane.

7. In a yarn-guide the combination of a fixed jaw, of an opposing jaw adapted to be moved transversely to said fixed jaw, and an adjusting device for varying the distance between said jaws in a plane substantially perpendicular to the plane of said transverse movement.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 29th day of April, A. D. 1897.

CARL KOFFINKE.

Witnesses:

GEO. H. HAYWARD,
GEO. N. GODDARD.