

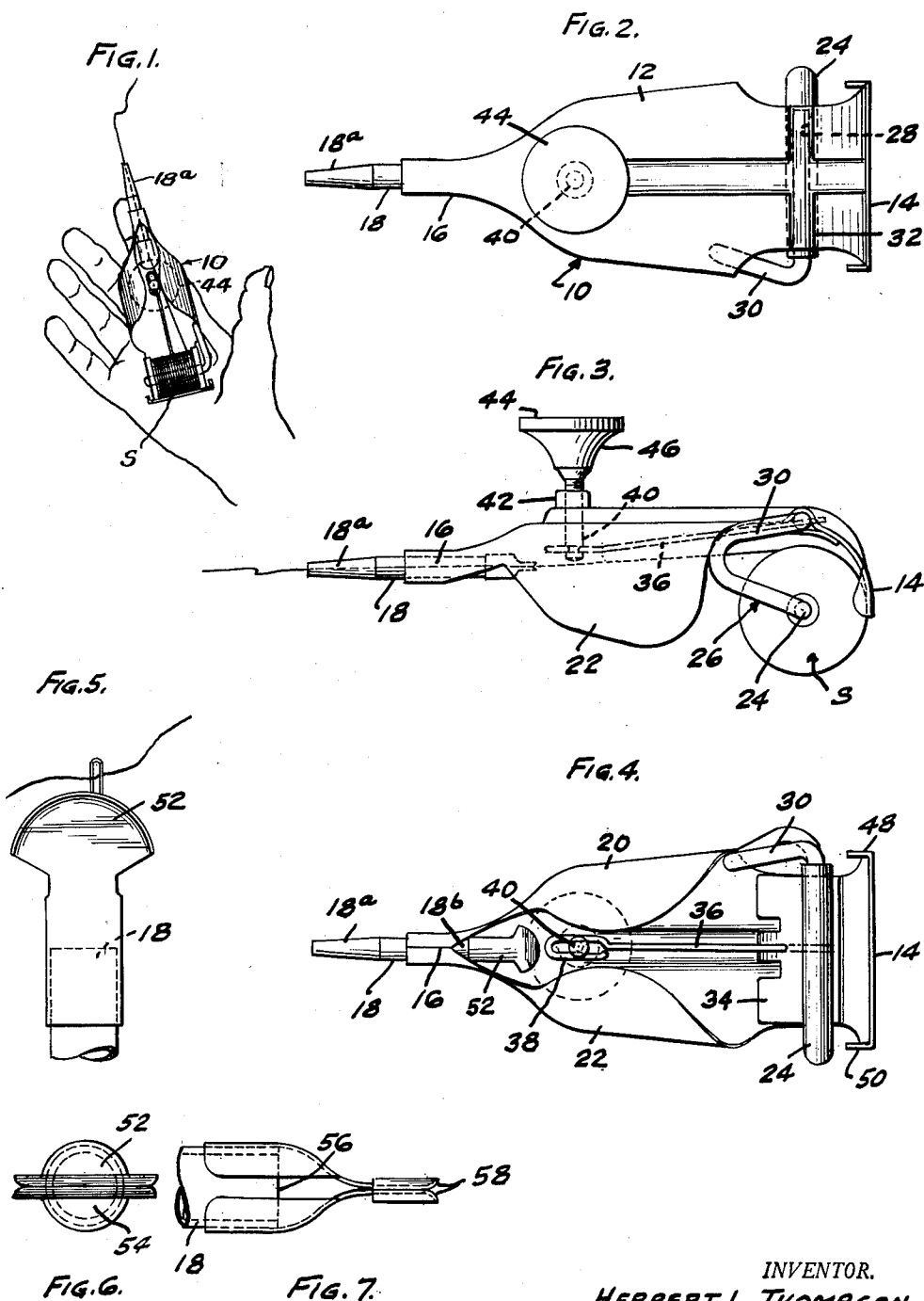
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H. L. THOMPSON

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FLY-TYING BOBBIN

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INVENTOR.
HERBERT L. THOMPSON
BY
Harry H. Hitzman
ATTORNEY.

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FLY-TYING BOBBIN

Herbert L. Thompson, Elgin, Ill.

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My invention relates to improvements in fly-tying bobbins.

In tying flies, the feathers and other materials which are fastened to a fish hook to make it resemble an insect or some fanciful object that is thought to attract fish, are bound to the hook shank by a thread. This thread, known as the tying thread, is first bound to the hook shank, then the part remaining is used as needed to lash the succeeding members of the parts comprising the fly into place. Traditionally, this thread was cut from its original spool, waxed and manipulated entirely by hand, and remained attached to the fly until its completion; after which the thread remaining was cut from the fly and discarded.

Today, fly-tying bobbins are rapidly coming into use. They consist generally of a small tube large enough to allow the tying thread to pass through its bore; the tube having rigidly attached thereto means for supporting a spool of thread to rotate and feed thread into the bore when pulled from the opposite end of the tube. Some means are generally provided to apply slight friction to resist the pull on the thread and prevent the spool from rotating faster than the pull on the thread forces it to turn. Some bobbins are made to take the original spool of thread as bought, others take a special spool upon which thread is wound after being waxed. Those taking the original spool must allow for a few inches of thread being pulled forward and waxed and then rewound on the spool for use.

It must be known that in the use of a bobbin, its advantages cannot be fully obtained unless the tying thread issuing from the point of the tube is short. That is, the shorter the distance from the point of the tube to the fly, the shorter and more confined will be the motions to distribute the thread about the fly, resulting in greater accuracy and speed for the tier. However, as the bobbin must be placed in a rest somewhat removed from the fly to permit the winding of body material, hackle, or to provide room for wing setting, it is impossible to maintain the short length of tying thread between the fly and the bobbin, as the retreat of the bobbin involves the necessity for pulling out more thread. Naturally, the thread pulled out must be returned to the spool before work with the bobbin can be effectively resumed.

The principal object of the present invention is to provide an improved construction of a bobbin of the original spool type.

A further object of my invention is to provide an improved bobbin so constructed that it may be retained in the hand by a large headed tension screw, so that, as the screw protrudes between and partly embraces the index and third fingers, no effort of the thumb is necessary to retain it in working position, and the thumb can be used efficiently to retract the thread by rotating the spool backward with the thumb of the one hand alone.

A bad feature of many bobbins is that when held near vertical without tension on the thread, the free thread is likely to drop back through the tube and form a free loop between the tube and the spool which may slip over the end of the spool and engage the spool arbor, making it

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necessary to remove and replace the spool to get the spool feeding properly again. To overcome this difficulty, I place a pair of spring steel lip members on the intake end of the tube to very lightly press upon the thread to maintain slight tension between the end of the tube and the spool. This insures that the thread will always be positioned to wind on or unwind from the spool.

Though the thread may be placed and tensioned for rewinding on the spool, it is obvious that in most cases it takes two hands to perform this operation, one to support the bobbin while the other rotates the spool to rewind the thread. In the present bobbin, this operation is readily performed with one hand, as it is unnecessary to support the bobbin with the other hand. A firm grip on the bobbin is attained by holding the large headed tension adjustment screw between the index and third finger of the hand. It is not necessary to embrace the bobbin with the fingers, though, of course, that is the most convenient way to hold it in regular use. When retrieving thread, the bobbin, being firmly held between the two fingers, is in perfect position to be brushed by the thumb on the spool to rotate it and wind up the thread. As the thumb rotates the spool by friction it automatically urges it away from the brake which is restraining its rotation by the torsion applied by the tension spring upon the axle. Thus, when the thumb is applied to turn the spool, the tension restraining its rotation is automatically removed, though it is instantly reapplied as the thumb leaves the spool.

Another advantage of my improved construction is the fact that only one side of the spool is exposed for rotation by the thumb, thereby excluding the possibility of turning it in the wrong direction.

A further object of the invention is to provide improved brake means for normally preventing rotation of the spool. Another object of the invention is to so arrange the spool arbor, frame and associated parts that excessive motion of the arbor, such as when installing or removing a spool, is prevented.

Other objects and advantages will be more apparent from the following description wherein reference is had to the accompanying sheet of drawings, upon which

Fig. 1 is a view looking at the palm of a user's hand, showing the bobbin being held in position between the index and the third finger by means of the tension adjustment screw;

Fig. 2 is a plan view of the bobbin;

Fig. 3 is a side elevational view thereof;

Fig. 4 is a bottom plan view of the bobbin with the spool of thread removed from the arbor;

Fig. 5 is an enlarged fragmentary view of the end of the tube showing the spring steel lip members attached to the same to maintain a slight tension on the thread;

Fig. 6 is a front view of the spring lips and tube; and

Fig. 7 is a fragmentary side elevational view of the same.

In the embodiment of the invention which I have chosen to illustrate and describe the same, the bobbin generally comprises a frame 10 which is formed with a top wall 12, a downwardly bent back wall 14, and a tapered forward end 16 which is bent around the thread tube 18 and soldered to the same to fixedly hold the tube 18 in position. A pair of side walls 20 and 22 are bent downwardly and inwardly as shown, leaving a space adjacent the back of the frame sufficiently large to insert a spool of thread.

A spool supporting arbor 24 is provided for a spool of thread S, the arbor comprising one leg of a spring wire 26 which has another parallel leg 28 forming an axle for the same. The legs are connected together by a V-shaped end portion 30. The axle 28 is mounted in the top of the frame in an arcuate ridge 32, the lower side of the ridge being closed by a flat metal strip 34 which is spot-welded to the inner wall of the top of the frame.

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The axle is held against removal by a wire 36 which passes through a hole in the axle 28 and extends to the forward end of the frame where it is formed with an elongated loop 38.

The loop 38 embraces the shank 40 of a tension adjustment screw that is screw-threadedly mounted in a boss 42 on the top wall 12 of the frame, the screw being provided with a comparatively large head 44 formed with the conically shaped side wall 46. Thus, by adjusting the tension screw, greater or less tension is placed upon the axle and arbor 24. In the position shown in the drawing, the arbor is under sufficient tension to yieldingly hold the spool against the back wall 14 of the frame. A pair of inwardly turned ears 48 and 50 help to position the spool and prevent accidental displacement or removal of the same.

The thread tube 18, which is fastened in the forward end of the frame 10, may have a portion 18a extending forward from the frame 10 and a portion 18b extending backwardly from the front end of the frame, as shown.

As previously mentioned, a free thread can easily drop back through the tube when the bobbin is held in a vertical position. To prevent the thread from dropping out of the tube, I have provided a pair of spring steel lip members 52 and 54 which are soldered or otherwise affixed to the inlet end 56 of the tube 18. The lips 52 and 54 may be flattened and shaped to an arc as shown, with the edge 58 of the lips being turned outwardly. With this construction, when a thread has been pulled through the tube, the spring steel lip members press lightly upon the thread with sufficient force to maintain a slight tension on the thread between the end of the tube and the spool.

In common with all bobbins, a threader is usually necessary to start the thread from the spool through the tube. This is made necessary by the fact that the thread from the spool is always waxed and the wax always leaves a coating of wax on the inside of the tube, making it practically impossible to place an unsupported thread through the tube.

The threader is generally composed of a very thin piece of spring wire doubled to form a small loop at one end so that the thread may be passed through the loop and then pulled through the tube. With the present construction the thin lips provided to bear on the thread are tempered and sufficiently flexible to admit the threader and then to close to slight friction contact upon its removal.

In using my improved bobbin, to load the same, hold the bobbin needle or tube with the open side of the frame up and the needle pointing away, place the hole in the spool of thread over the protruding end of the arbor with the thread leaving the spool on the lower side toward the needle. Press the spool and arbor toward the needle until the spool will pass over the flange 50 of the back wall of the frame and can be thrust clear on to the arbor. Do not force the spool forward further than just enough to clear the flange, as this will put an unwarranted strain on the tension spring 36.

To thread the bobbin, pass the thread through the open eye of a threader and pass the threader through the flared lips 52 at the back end of the tube or needle, and draw the thread through.

To hold the bobbin during use, as can be seen in Fig. 1, it is advisable to clasp the enlarged head 44 of the tension screw between the index and third finger. The thumb and other fingers will naturally fall into their proper positions. The other fingers will be located to easily control the extra tensions needed by braking on the end of the spool, and the thumb is free to contact on the frame. As the tool can now be held securely by two fingers alone, the thumb is always free to retract the thread rapidly by rotating the spool without the use of the person's other hand. The normal tension should be set by the tension screw to just support the weight of the bobbin. If this

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is correctly done, dropping the bobbin will simply unwind the thread instead of breaking it.

When the thread is pulled forward to wax or for other reasons, it can be retracted by winding it back on the spool until it is the proper length for use, by rotating the spool in contact with the other arm or hand or by rolling it along a flat surface. When this is done the spool is urged away from its normal contact with the brake so that it will easily rotate. The brake, of course, is the arcuate wall 14 of the frame which extends downwardly and frictionally engages the spool.

When the thread is in use on a fly, the thumb of the hand holding the bobbin can be used to rotate the spool and bring the bobbin nearer to the work. As can be seen in Fig. 1, the position of the bobbin in the hand, due to the fact that it is held between the two fingers, permits complete independent use of the thumb for any of the manipulation above described.

While I have illustrated and described a specific embodiment of the invention, it will be apparent to those skilled in the art that changes and modifications may be made in the exact details shown and I do not wish to be limited in any particular; rather what I desire to secure and protect by Letters Patent of the United States is:

1. A fly-tying bobbin having a flat sheet metal frame with downwardly depending partial side walls and an arcuately shaped back wall spaced from said side walls, the forward end of said frame being tapered inwardly to form a tubular portion, a hollow metal needle fastened in said tubular portion and projecting forward and back from the same, a member comprising a combined spool supporting arbor and axle carried at the back of said frame, said member being a spring wire formed with a pair of parallel legs connected at one side by a V-bend, said arbor portion being disposed parallel with the back wall of said frame and spaced therefrom sufficiently to permit a spool of thread to be placed on the same, inwardly turned flanges on both sides of said back wall to position a spool therebetween, a tension spring for holding said spool resiliently against said back wall, said tension spring having one end connected to the axle portion of said member, a tension adjusting screw mounted in said frame near the front end of the same and projecting upwardly therefrom, the other end of said spring connected to said screw, said screw having an enlarged head by means of which the bobbin may be held in the palm of the hand and supported for use between two fingers so that the spool may be rotated by the thumb of the user.

2. A fly-tying bobbin having a flat sheet metal frame with downwardly depending partial side walls and an arcuately shaped back wall spaced from said side walls, the forward end of said frame being tapered inwardly to form a tubular portion, a hollow metal needle fastened in said tubular portion and projecting forward and back from the same, the inlet end of said needle having a pair of thin flat spring lips normally closing the same, a member comprising a combined spool supporting arbor and axle carried at the back of said frame, said member being a spring wire formed with a pair of parallel legs connected at one side by a V-bend, said arbor portion being disposed parallel with the back wall of said frame and spaced therefrom sufficiently to permit a spool of thread to be placed on the same, inwardly turned flanges on both sides of said back wall to position a spool therebetween, a tension spring for holding said spool resiliently against said back wall, said tension spring having one end connected to the axle portion of said member, a tension adjusting screw mounted in said frame near the front end of the same and projecting upwardly therefrom, the other end of said spring connected to said screw, said screw having an enlarged head by means of which the bobbin may be held in the palm of the hand and supported for use between two fingers so that the spool may be rotated by the thumb of the user.

3. A fly-tying bobbin having a flat sheet metal frame

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with downwardly depending partial side walls and an arcuately shaped back wall spaced from said side walls, the forward end of said frame being tapered inwardly to form a tubular portion, a hollow metal needle fastened in said tubular portion and projecting forward and back from the same, a member comprising a combined spool supporting arbor and axle carried at the back of said frame, said member being a spring wire formed with a pair of parallel legs connected at one side by a V-bend, said arbor portion being disposed parallel with the back wall of said frame and spaced therefrom sufficiently to permit a spool of thread to be placed on the same, inwardly turned flanges on both sides of said back wall to position a spool therebetween, a tension spring for holding said spool resiliently against said back wall, said tension spring connected to the axle portion of said member, a tension adjusting screw mounted in said frame near the front end of the same and projecting upwardly therefrom, said tension adjusting screw having an enlarged head by means of which the bobbin may be held in the palm of the hand and supported for use between two fingers so that the spool may be rotated by the thumb of the user, said V-bend of the combined arbor and axle adapted to bear against the edge of a side wall of said frame to limit forward movement of said arbor.

4. A fly-tying bobbin comprising a flat elongated frame having an arcuately shaped back wall, downwardly depending side walls and a tapered front end, an elongated hollow tube extending forward from the front of said frame, a spool supporting arbor transversely disposed in said bobbin near the back wall of the frame, said arbor having an axle carried in said frame, said arbor and axle being a continuous piece of spring wire and connected at one side of said back wall by a V-shaped bend disposed adjacent one of said side walls, a tension spring for holding said spool resiliently against the back wall of said frame, said tension spring having one end fastened to said

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axle, a tension spring adjusting member screw-threadedly mounted in and projecting upwardly from the top of said frame, the other end of said spring connected to said member, said member having an enlarged head by means of which the bobbin may be supported for use between two fingers.

5. A fly-tying bobbin comprising a flat elongated frame having an arcuately shaped back wall, downwardly depending side walls and a tapered front end, an elongated hollow tube extending forward from the front of said frame, a spool supporting arbor transversely disposed in said bobbin near the back wall of the frame, said arbor having an axle carried in said frame, said arbor and axle being a continuous piece of spring wire and connected at one side of said back wall by a V-shaped bend disposed adjacent one of said side walls, a tension spring for holding said spool resiliently against the back wall of said frame, said tension spring having one end fastened to said axle, a tension spring adjusting member screw-threadedly mounted in and projecting upwardly from the top of said frame, the other end of said spring connected to said member, said member having an enlarged head by means of which the bobbin may be supported for use between two fingers, the inlet end of said hollow tube having flattened spring lips normally closing the same.

References Cited in the file of this patent

UNITED STATES PATENTS

129,761	Stackpole	July 23, 1872
444,208	Clark	Jan. 6, 1891
2,220,878	Harvey	Nov. 12, 1940
2,338,353	Perkins	Jan. 4, 1944
2,343,190	Kinkel	Feb. 29, 1944
2,474,463	Burrell	June 28, 1949
2,578,045	Conrad et al.	Dec. 11, 1951