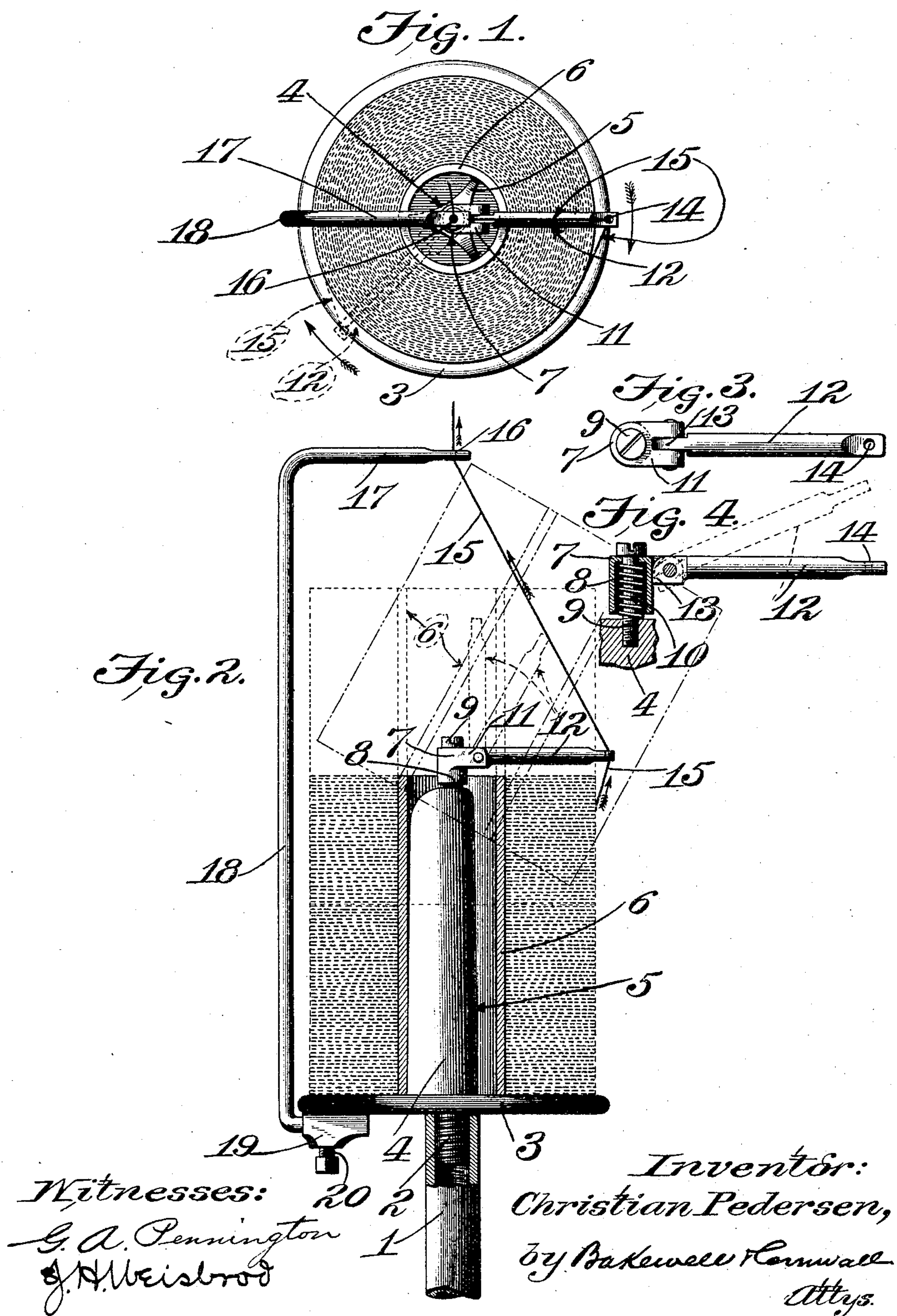


No. 765,856.

PATENTED JULY 26, 1904.

C. PEDERSEN.
THREAD TAKE-OFF.
APPLICATION FILED DEC. 24, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

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THREAD TAKE-OFF.

SPECIFICATION forming part of Letters Patent No. 765,856, dated July 26, 1904.

Application filed December 24, 1903. Serial No. 186,430. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN PEDERSEN, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Thread Take-Offs, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of the invention applied. Fig. 2 is a view in side elevation of the spool-support, the thread-guide and its standard, and the take-off, the spool being shown in section. Fig. 3 is a top plan view of the take-off; and Fig. 4 is a vertical longitudinal sectional view therethrough, the fastening device and the spring being shown in elevation.

This invention relates to thread take-offs; and it is particularly designed to facilitate the removal of thread from spools or bobbins as applied to sewing-machines. However, I do not wish to limit myself to any particular use, as it will be obvious that the device may be employed in connection with cord-holders for use in stores in removing the cord to facilitate wrapping of packages, &c.

Heretofore considerable inconvenience has been experienced in the utilization of spools containing large quantities of thread in sewing-machines, owing to the fact that the resistance of the spool in unwinding has had a tendency to bend the needles or prevent the successful taking off of the thread as it was needed.

It is the purpose of this invention to permit the spool to remain stationary and unwind the thread therefrom by a suitable device termed the "take-off," so that a uniform tension will be present at all times, thus obviating the necessity of regulating the machine tension to compensate for that of the spool.

It is also the purpose of this invention to provide a structure capable of being readily attached to the ordinary spool-support without materially changing its present form, so

that the take-off can be readily applied to any of the spool-supports now generally in use.

Other objects and advantages, as well as the novel details of construction, will be specifically described hereinafter, it being understood that changes in form, proportion, and minor details of construction may be resorted to without affecting the scope or departing from the spirit of this invention.

The support for the base is illustrated as being a tubular internally-threaded standard 1 to receive the externally-threaded projection 2, carried by the base 3 of the spool-holder. For convenience the base 3 will generally be in the form of a disk, and concentrically arranged thereon is an upwardly-projecting finger 4, having radial wings or blades 5 to frictionally engage the inner walls of the spool or bobbin 6, on which the thread is contained. The spool or bobbin may be of any standard form or construction designed to contain a large quantity of thread, and by the frictional contact thereof with the finger 4 said spool will be held fixed with relation to the finger and base. The finger terminally supports a rotating take-off, which is designed to swing in an arc of a circle continuously around the spool and be actuated by the tension or feeding of the thread. The preferred embodiment of this take-off comprises a rotating head 7, having a socket 8, through which a headed fastening device 9 (illustrated as a screw) projects. The fastening device engages the end of the finger, so that the top of the head of the take-off will rest against the head of the fastening device, in which position it will be supported by the spring 10, interposed between the terminal of the finger and the floor of the socket 8. The laterally-disposed bifurcated lug 11, fixed to the socketed head, is provided for the purpose of supporting the take-off arm 12, which is pivoted thereto and is provided with a cam-terminal 13, capable of engagement with the side of the head to limit the downward movement of the arm; but the arm will be permitted to swing in an upward direction, so that the spool can be readily removed from or placed

upon the base. The end of the arm is provided with an opening 14, through which the thread 15 may pass on its way up to and through the opening 16 in the end of thread-guide 17. This thread-guide is removably secured to the base 3 by a suitable standard 18, which engages a socketed casting 19 on the base. 20 is a fastening device for securing the standard in proper position.

10 When all the parts are properly assembled, as illustrated in Fig. 2, the thread will pass through the opening 14 in the take-off and up through the opening 16 in the thread-guide superimposed above the spool, thence to the

15 feeding mechanism. Any strain on the thread will be sufficient to rotate the arm 12 on its pivot to remove the thread from the spool; but only so much of the thread will be removed as is needed at each operation, because

20 the spring 10 will exert tension against the socketed head to force it against the head of the fastening device, so that the latter will be frictionally engaged by the socketed head and prevent too free a movement of the take-off.

25 When it is desired to remove the spool for any purpose, the arm 12 can be readily swung up to a position (shown in dotted lines in Fig. 2) so as to permit an easy removal of the spool. Under ordinary conditions, however,

30 as when the spool is in its operative position with relation to the rest of the mechanism, the take-off will act as a lock to prevent an accidental removal of the spool, due

to any cause, without affecting the successful operation of the take-off.

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

1. A spool-holder having a spool-receiving finger, a take-off device comprising a socketed head, a screw projecting through the socketed head and into the finger, a spring surrounding the screw and respectively bearing against the head and finger, said spring being housed by the socketed head, projections carried by the head, and a vertically-swinging arm carried by the projections in combination with an arm rigid on the spool-holder; substantially as described.

2. A spool-holder having a spool-receiving finger, a socketed head, a screw projecting through the head and into the finger, a spring bearing against the head and finger and incased by the head, parallel projections carried by the head, and a vertically-movable pivoted finger carried between the projections and provided with a cam end to engage the head, whereby the movement of the latter finger will be limited; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 19th day of December, 1903.

CHRISTIAN PEDERSEN.

Witnesses:

B. F. FUNK,
GEORGE BAKEWELL.