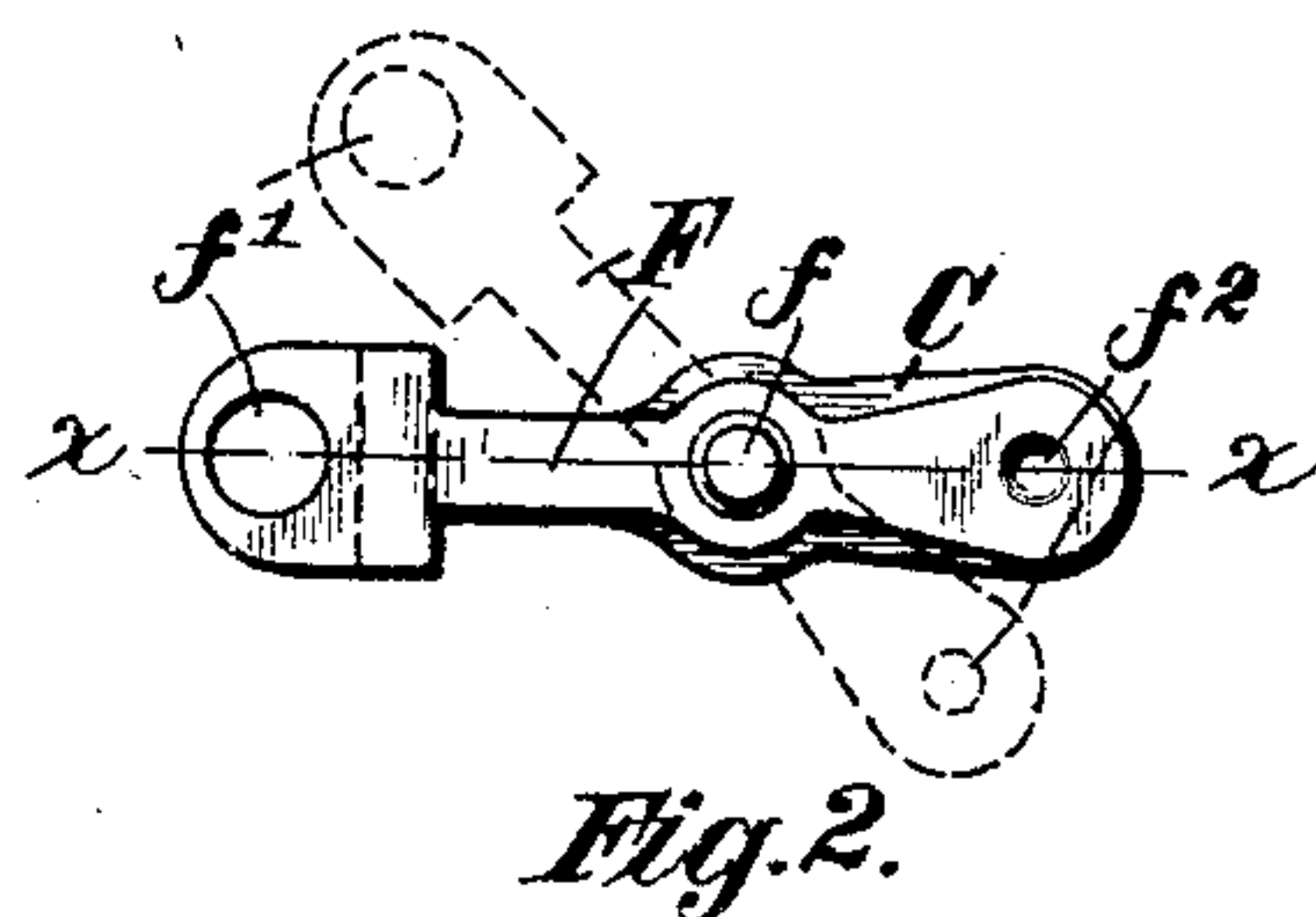
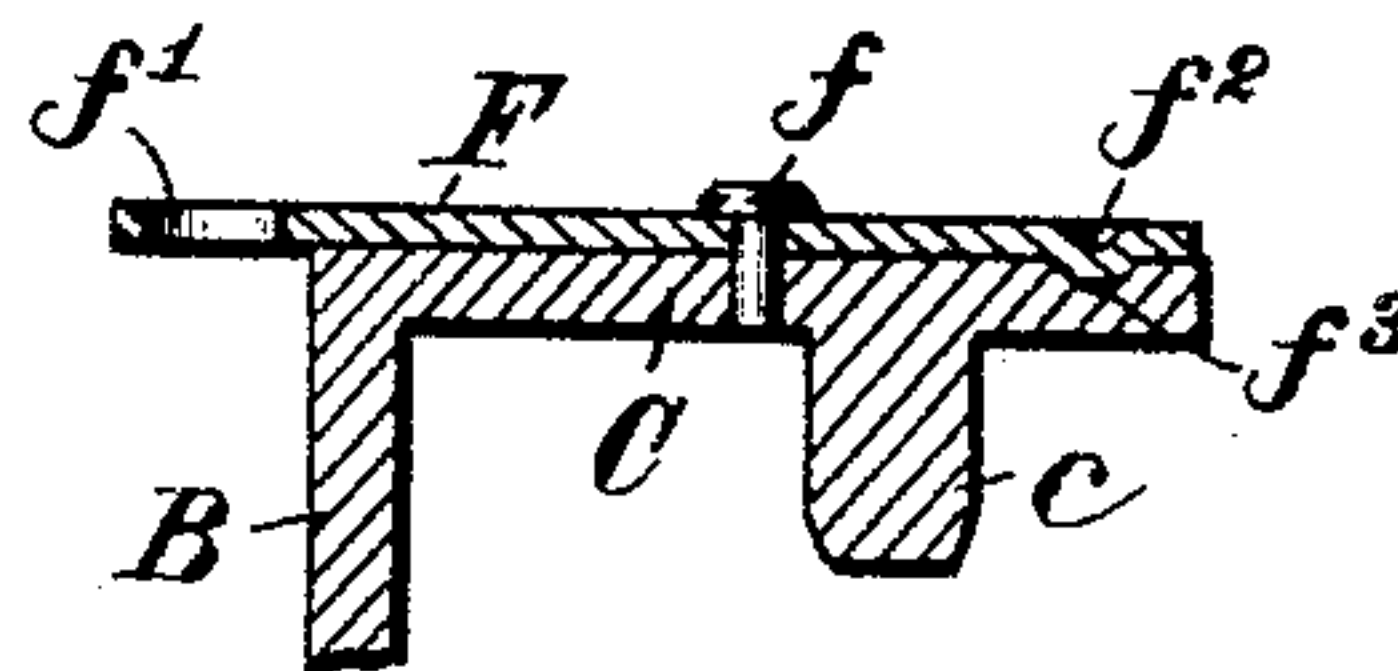
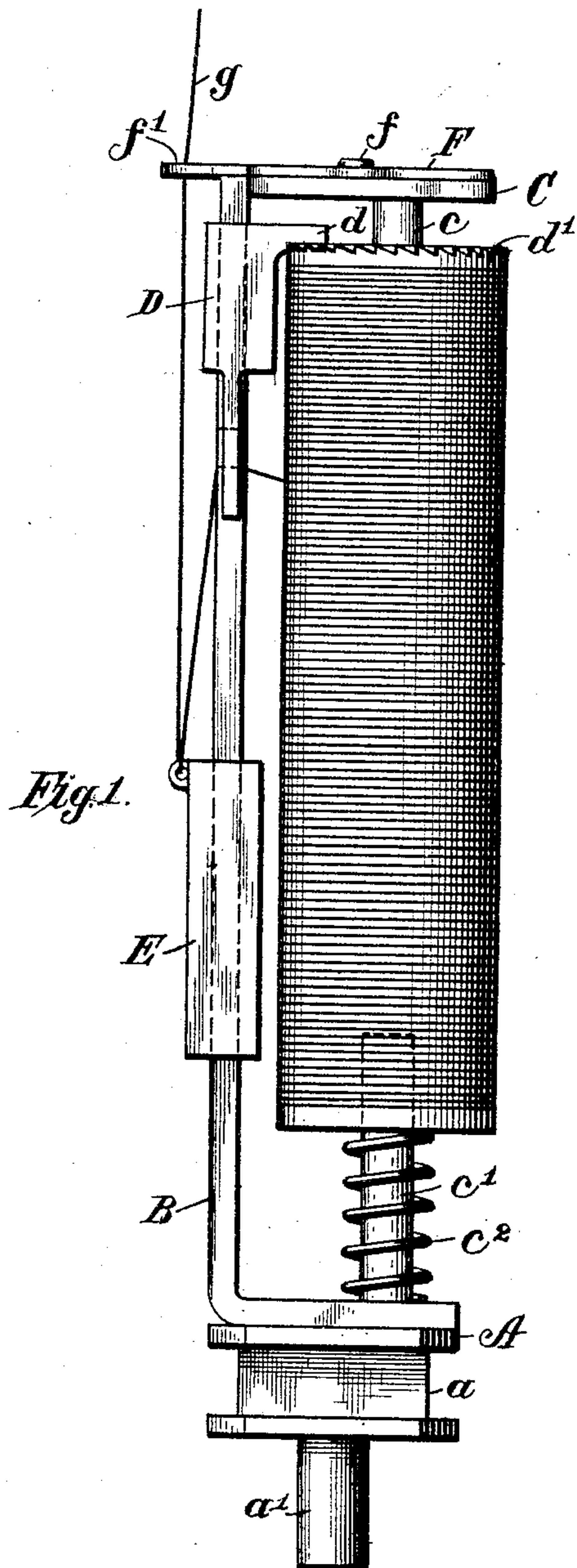


No. 785,718.

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G. DINGENDAHL.
BOBBIN CARRIER.

APPLICATION FILED JAN. 24, 1905.



Witnesses:

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BOBBIN-CARRIER.

SPECIFICATION forming part of Letters Patent No. 785,718, dated March 28, 1905.

Application filed January 24, 1905. Serial No. 242,496.

To all whom it may concern:

Be it known that I, GUSTAV DINGENDAHL, a citizen of the German Empire, residing at West Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Bobbin-Carriers, of which the following is a specification.

The invention to be hereinafter described relates to bobbin-carriers for braiding-machines, and has for its object to provide such a structure with a thread-guide and lock therefor which will effectually prevent the upward removal of the usual sliding pawl and tension-weight under the lifting action of the thread during the operation of the machine.

It is well known in the art of braiding that in those types of bobbin-carriers employing a rotating bobbin the bobbin or spool may be held between an upper and a lower bearing, the latter being formed on the base portion of the carrier, while the upper bearing may be formed on a horizontal arm projecting from a tension-weight standard rising from the base of the carrier, and that to control rotation of the spool or bobbin and consequent supply of yarn a pawl and tension-weight may be slidingly mounted on the tension-weight standard, the pawl being adapted to contact with teeth in the head of the bobbin. In order to change the tension-weights for different characters of yarn or thread, it is also well known that they may be moved upward from the standard and others substituted therefor. It is essential, however, that the tension-weight and pawl be not permitted to jump upward from the standard during normal operations of the machine, and various specific forms of thread-guides and locks therefor have been devised, the guide forming a stop at the upper part of the standard against which the pawl and weight would contact when forcibly projected upwardly by the pull or tension of the yarn or thread under the sudden strains to which it is subjected.

It will be evident in order that the thread-guide may effectually prevent this accidental upward removal of the pawl and tension-weight said thread-guide and its lock must be constructed so that any blow on the thread-

guide from beneath will not detach it from its locking instrumentality, and with this fact in view the present invention is devised and the thread-guide and locking means so disposed that any upward blow upon the thread-guide will serve not only to prevent the said guide being detached from its locking means, but will serve to increase and insure the locking function.

With these objects in view the invention consists of the thread-guide pivotally mounted between its ends and substantially midway of its length upon the horizontal arm projecting from the standard and a locking means formed partly in that end of the thread-guide remote from the thread-eye and partly in the corresponding end of the horizontal arm, so that any blow upon the eye end of the thread-guide which projects over the tension-weight standard serves to more securely engage the two parts forming the locking means and effectually prevents accidental unlocking of the thread-guide.

In the drawings, Figure 1 represents in side elevation a bobbin-carrier of any well-known construction having the present invention applied thereto. Fig. 2 is a top plan view of the thread-guide and its central mounting and end locking means. Fig. 3 is a section on line *xx* of Fig. 2.

In the drawings, A represents the usual base, having the groove *a* for engaging the raceway of the ordinary braiding-machine and the usual projecting stud *a'*, by which the carrier is moved by its operative devices along the raceway. Projecting upward from the base A is the tension-weight standard B of the usual construction and having at its upper end a horizontal arm C. Slidingly mounted on the tension-weight standard B, as usual, are the pawl and tension-weight D E, respectively. The pawl D has the projecting finger *d* to engage suitable teeth *d'* on the head of the bobbin to control the supply of yarn or thread, the bobbin being supported between a pin or stud *c*, projecting from the under surface of the horizontal arm C, and the upwardly-projecting stud *c'*, projecting from the base A of the carrier, and a spring *c''* maintains the bob-

bin in its relation to its supporting-studs, all of said parts so far described being of the usual and ordinary construction and operation.

Centrally mounted upon the horizontal arm C, by means of a pin f , is the thread-guide F, having its end which projects over the tension-weight standard provided with a guide-eye f' , as best shown in Figs. 2 and 3. The end of the thread-guide F remote from the guide-eye f' is provided on its under side next the horizontal arm C with a projection f^2 , preferably formed by indenting the upper side of the thread-guide with a suitable tool. The end of the horizontal arm C is provided with an indent or depression f^3 , which may be formed as the projection f^2 by a suitable punch or tool. The part f^2 in the tail end of the thread-guide and the indent f^3 in the projecting end of the horizontal arm thus provide a lock the parts of which can be engaged or disengaged by a side thrust against the thread-guide, as indicated in Fig. 2, the yielding action of the thread-guide permitting this engagement and disengagement.

By virtue of the fact that the thread-guide F is centrally pivoted on the horizontal arm C and the locking device comprising the projection and indent on the tail end of the thread-guide and the end of the horizontal arm, it will be apparent that any upward thrust against the guide-eye end f' of the guide will serve to more firmly unite the two parts of the locking device, the pivot f centrally of the thread-guide and horizontal arm acting in this case as the fulcrum of a lever to cause the downward or locking engagement of the tail end of the thread-guide upon an upward thrust against the guide-eye end thereof.

Thus in operation when the tension-weight and pawl are suddenly raised on the standard B by reason of the yarn tension they will strike the under portion of the guide-eye end f' of the thread-guide F, and instead of acting to unlock the thread-guide they will, by the particular location of the central pivot of the guide and the disposition of the locking device at the tail end of such guide, serve to seat the two parts f^2 f^3 of the locking device more firmly together, and thus prevent any accidental unlocking of the thread-guide due to sudden or quick strains upon the yarn g during the operation of the machine. If, however, it becomes necessary to move the thread-guide on its pivot so that the pawl and tension-weight can be moved upward from the standard, it is not necessary to lift any part

of the thread-guide, such as the tail-locking portion, for the reason that a simple side thrust on the thread-guide will be sufficient to cause the inclines of the projection f^2 on the tail of the guide to ride up the similar inclines of the indent f^3 . Thus while the guide can be readily moved from its position overhanging the standard it cannot be unlocked accidentally by the upward thrust of the weight and pawl.

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

1. A bobbin-carrier, comprising a base, a tension-weight standard projecting upward therefrom and having a horizontal arm, a tension-weight and pawl slidingly mounted on said standard, a thread-guide centrally pivoted on the horizontal arm of the standard, and a locking device disposed on one side of the central pivot of the thread-guide, and a guide-eye in the opposite end of said thread-guide, whereby an upward thrust against the guide-eye end of the thread-guide will tend to maintain the locking device in its locked position.

2. A bobbin-carrier, comprising a base, a tension-weight standard projecting upward therefrom and having a horizontal arm provided with a top bearing for the bobbin, a tension-weight and pawl slidingly mounted on the standard, a thread-guide centrally pivoted on said horizontal arm and having a guide-eye at one end projecting over the standard, and a locking device disposed on the side of the pivotal mounting of the thread-guide opposite the guide-eye end thereof.

3. A bobbin-carrier, comprising a base, a tension-weight standard projecting upward therefrom and having a horizontal arm provided with a top bearing or stud for the bobbin, a thread-guide centrally pivoted upon the horizontal arm and having a guide-eye projecting over the standard, and a locking device disposed at the end of the thread-guide on the side of the pivotal connection thereof opposite the guide-eye, said locking device comprising a projection on the under side of the tail end of the thread-guide and an indent in the top of the horizontal arm.

In testimony whereof I affix my signature in presence of two witnesses.

GUSTAV DINGENDAHL.

Witnesses:

J. WILMER FISHER,
CATHARINE S. FEGELY.