

(No Model.)

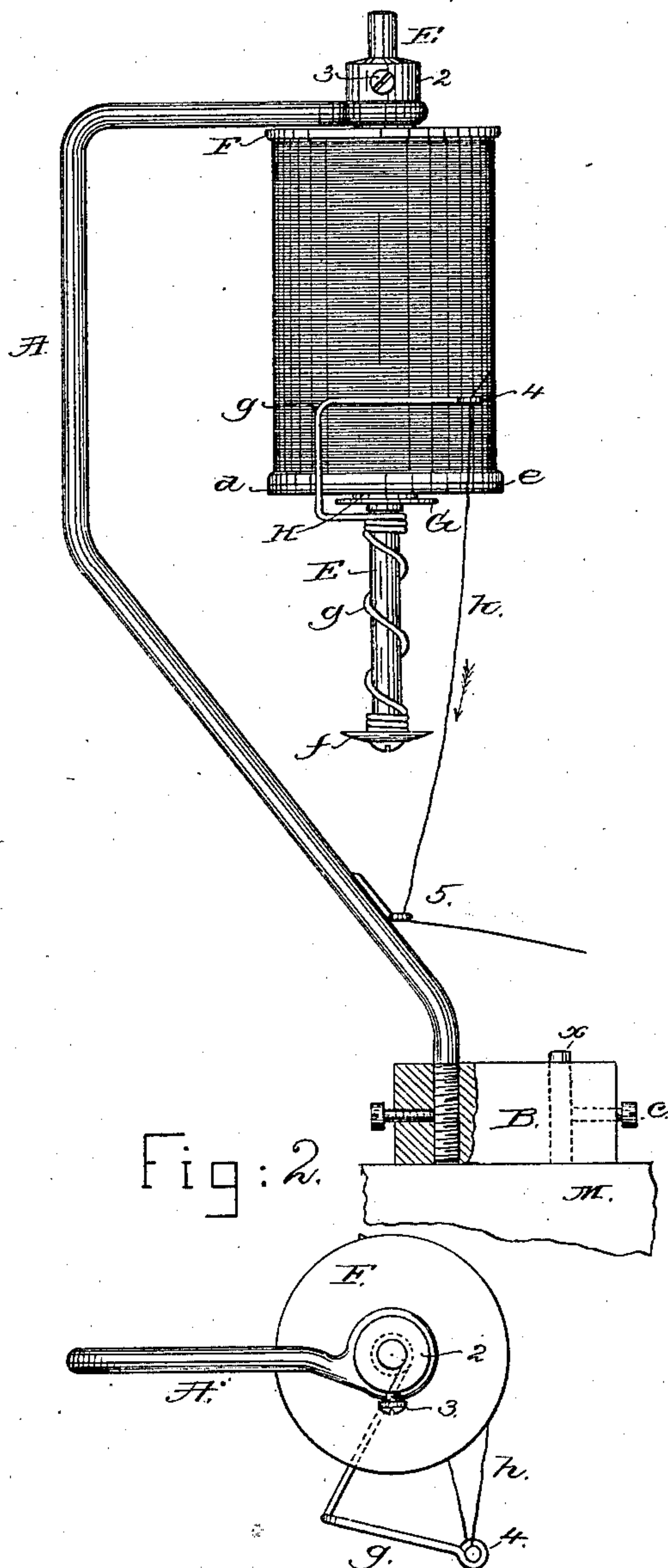
D. C. MORGAN & C. H. FRENCH.

THREAD DELIVERY ATTACHMENT FOR SEWING MACHINES.

No. 285,148.

Patented Sept. 18, 1883.

Fig: 1.



Witnesses.

Fred A. Powell.

John F. C. Prudden

Inventor.

Dewitt C. Morgan and
Charles H. French.

by Crosby & Gregory, Attys.

UNITED STATES PATENT OFFICE.

DEWITT C. MORGAN AND CHARLES H. FRENCH, OF LYNN, MASSACHUSETTS,
ASSIGNORS OF ONE-THIRD TO NELSON N. KENT, OF SAME PLACE.

THREAD-DELIVERY ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 285,148, dated September 18, 1883.

Application filed June 2, 1883. (No model.)

To all whom it may concern:

Be it known that we, DEWITT C. MORGAN and CHARLES H. FRENCH, both of Lynn, county of Essex and State of Massachusetts, have invented an Improvement in Thread-Delivering Attachments for Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to improvements in that class of thread-delivering attachments which permit the thread to be delivered from the end of a stationary spool; and the object of our invention is to suspend the spool so that the unwinding-guide may rotate freely below it, and so that the thread may be delivered from the lower end of the spool rather than from its upper end, as now common, as downward pull on the thread to take it from the spool insures the more uniform tension.

In our invention the pull on the thread to deliver it from or past the end of the spool is in the direction of the gravitation of the thread rather than against it as when the thread is drawn from the top of the spool. By suspending the spool and delivering the thread over its lower end, all liability of the thread dropping and becoming caught and entangled at the lower end of the spool and between it and its supporting-spindle is completely obviated.

Figure 1 in side elevation represents a thread-delivering attachment embodying our invention, and Fig. 2 a plan or top view thereof.

Our attachment may be applied to any usual sewing-machine to suspend the spool of needle thread or silk.

The crane A, bent as shown in Fig. 1 and forming part of our attachment, is shown as having its lower end confined in a block, B, having a suitable hole to fit over the ordinary spool-pin *x* on the machine-arm M, a set-screw securing the block to the said spool-pin. The upper end of the crane A is bent or forged to form a loop or bearing or collar, 2, which is provided with a set-screw, 3, to act against the spool-suspending spindle E near its upper end and hold the same in place, as

shown in Fig. 1, after the spool F has been applied thereto. The spindle E, between its ends, has fast upon it a collar, G, and above the latter and preferably separated from it by a washer, H, is a thin disk, *d*, and above the latter we preferably place a piece of felt, as at *e*, against which rests the lower end of the spool. After the spool has been placed on the spindle E, as shown, the latter is inserted upward through the collar 2, and there fastened by the set-screw 3, so that the friction upon the spool between the disk *d* and crane is sufficient to prevent rotation of the spool. At its lower end the spindle E is provided with a detachable head or nut, *f*, which supports the lower end of the unwinding guide *g*, herein shown as a piece of wire, a part of which is bent into spiral form, as in Fig. 1, and extended from the detachable head to the lower side of the collar G, a portion of the said unwinding-guide being bent outward and upward about the lower end of the spool, where it is bent to form an eye, 4, to receive down through it the thread *h* from the spool, as shown in the drawings, the said thread passing directly downward from the said eye 4 to the guide-eye 5, attached to the crane, the thread passing from thence horizontally to and through the usual tension devices and thread-guides. The pull on the thread between the spool and the guide-eyes 4 and 5 is always in the direction of the arrow, Fig. 1, and always downward in the direction of the gravitation of the thread as its coils are loosened; and, as the thread is so pulled by the stitch-forming devices, the unwinding-guide is made to travel about the spool and below its lower end, and the strain on the thread at the spool is reduced to the minimum, and the tension is enabled to act uniformly and without any interference by reason of undue or variable friction or strain to be overcome at the spool.

Instead of employing the block B to receive the lower end of the crane, the latter may be provided with a screw-thread and be screwed directly into a tapped or threaded hole in the upper side of the head or arm of the machine.

We claim—

The crane provided with a thread-guide located below the lower end of the spool-sus-

pending spindle, and the spindle suspended from the upper end of the said crane and adapted to receive and suspend the spool, combined with the unwinding-guide provided with an eye and placed upon the said spindle, and adapted to be rotated about the spool by the pull upon it of the thread being delivered, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

DEWITT C. MORGAN.
CHARLES H. FRENCH.

Witnesses:

G. W. GREGORY,
B. J. NOYES.