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Patented Jan. 29, 1901.

H. A. KLEMM.

NEEDLE THREAD TAKE-UP FOR SEWING MACHINES.

(Application filed Oct. 20, 1900.)

(No Model.)

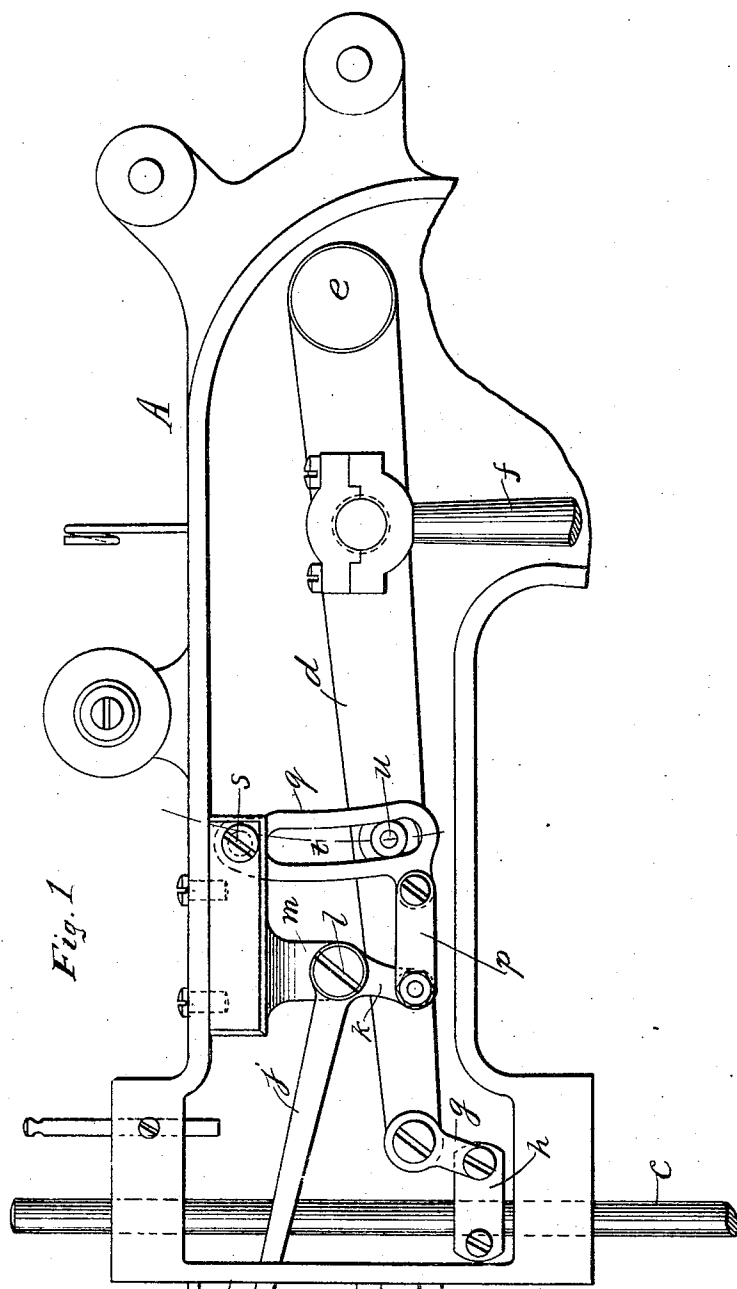


Fig. 1

Fig. 2

WITNESSES:

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HERMANN A. KLEMM, OF NEW YORK, N. Y.

NEEDLE-THREAD TAKE-UP FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 667,170, dated January 29, 1901.

Application filed October 20, 1900. Serial No. 33,684. (No model.)

To all whom it may concern:

Be it known that I, HERMANN A. KLEMM, a citizen of the United States of America, and a resident of New York city, county and State of New York, have invented certain new and useful Improvements in Needle-Thread Take-Ups for Sewing-Machines, of which the following is a specification.

My invention consists of improved constructions and arrangements of needle-thread take-up devices for sewing-machines whereby it is designed to provide more simple, economical, and quiet-running high-speed apparatus, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 represents a side elevation of my improved take-up apparatus as applied to the needle-bar and presser-bar supporting arm of a sewing-machine, with the cover of the recess in said arm in which the said apparatus is arranged detached. Fig. 2 is a plan view of the thread-guide with which the take-up lever coöperates.

A represents the said stationary arm; *b*, the head of the same; *c*, the needle-bar; *d*, the lever for operating the needle-bar; *e*, the pivot of said lever; *f*, the connecting-rod whereby motion is imparted to said lever by an eccentric on the main shaft, (not shown in the drawings); *g*, a link, and *h* a clamp by which the needle-bar and lever are connected, said link being pivoted to the lever and clamp at its ends, respectively. These parts are all of well-known construction and are not claimed; but in connection with them I provide the bell-crank lever, comprising the long thread-take-up arm *j* and the short working arm *k*, pivoted at *l* to a supporting-bracket *m*, located so as to support the pivot *l* at a suitable distance back of the head *b* and along the lever *d* in the direction of its pivot.

The arm *j* reaches forward through a slot in the head *b*, with its end having an eye *n* projecting from the head over a duplex thread-guide *o*, and the arm *k* reaches downward from the pivot along one side of lever *d* and is connected by a link *p* with the lower free end of a lever *q*, the upper end of which is pivoted

at *s* to a fixed support, which in the drawings is a part of bracket *m*, but may be any other suitable part.

The lever *q* extends downward along the side of lever *d* and has a slot *t* ranging lengthwise of it, and the lever *d* carries a roller-stud *u*, working in the slot. The pivot *s* is set in a larger radius of pivot *e* of the needle-bar-working lever *d* than stud *u*, so that as the needle rises the eye *n* of take-up lever *j* descends and releases the thread for action of the looper, and when the needle descends said eye *n* rises and draws up the slack of the loop.

It is manifest that a lever *q* without the slot *t* and working between two studs on lever *d* would be an equivalent of the arrangement shown and therefore alike within the scope of the invention.

It will be seen that the lever *q* and stud or studs of the lever *d* afford very simple, easy, working, and reliable means of operating the take-up lever.

What I claim as my invention is—

In a needle-thread take-up device for sewing-machines, the combination with the needle-bar, and the needle-bar-operating lever, said lever arranged on the side of the stationary needle-bar-supporting arm, of the elbow take-up lever *j*, *k* pivoted at *l*, the lever *q* pivoted at *s*, a stud or studs on the lever *d*, operating said lever *q*, the link connecting said lever *q*, and arm *k* of the take-up lever, and thread-guide *o*, the long arm *j* of said take-up lever extending forward of the head of the stationary supporting-arm, the pivot of the lever *q* being in the eccentric relation to the actuating stud or studs for causing down movement of the take-up lever when the needle-bar-actuating lever rises, and up movement of said take-up lever when said needle-bar-actuating lever swings downward.

Signed at New York city, N. Y., this 15th day of October, 1900.

HERMANN A. KLEMM.

Witnesses:

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J. M. HOWARD.