

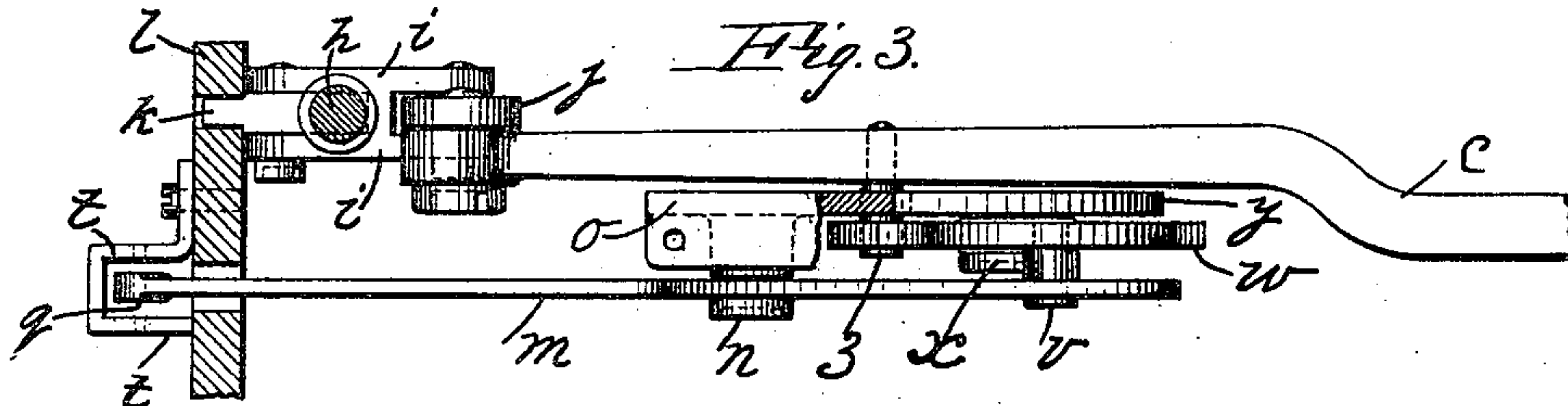
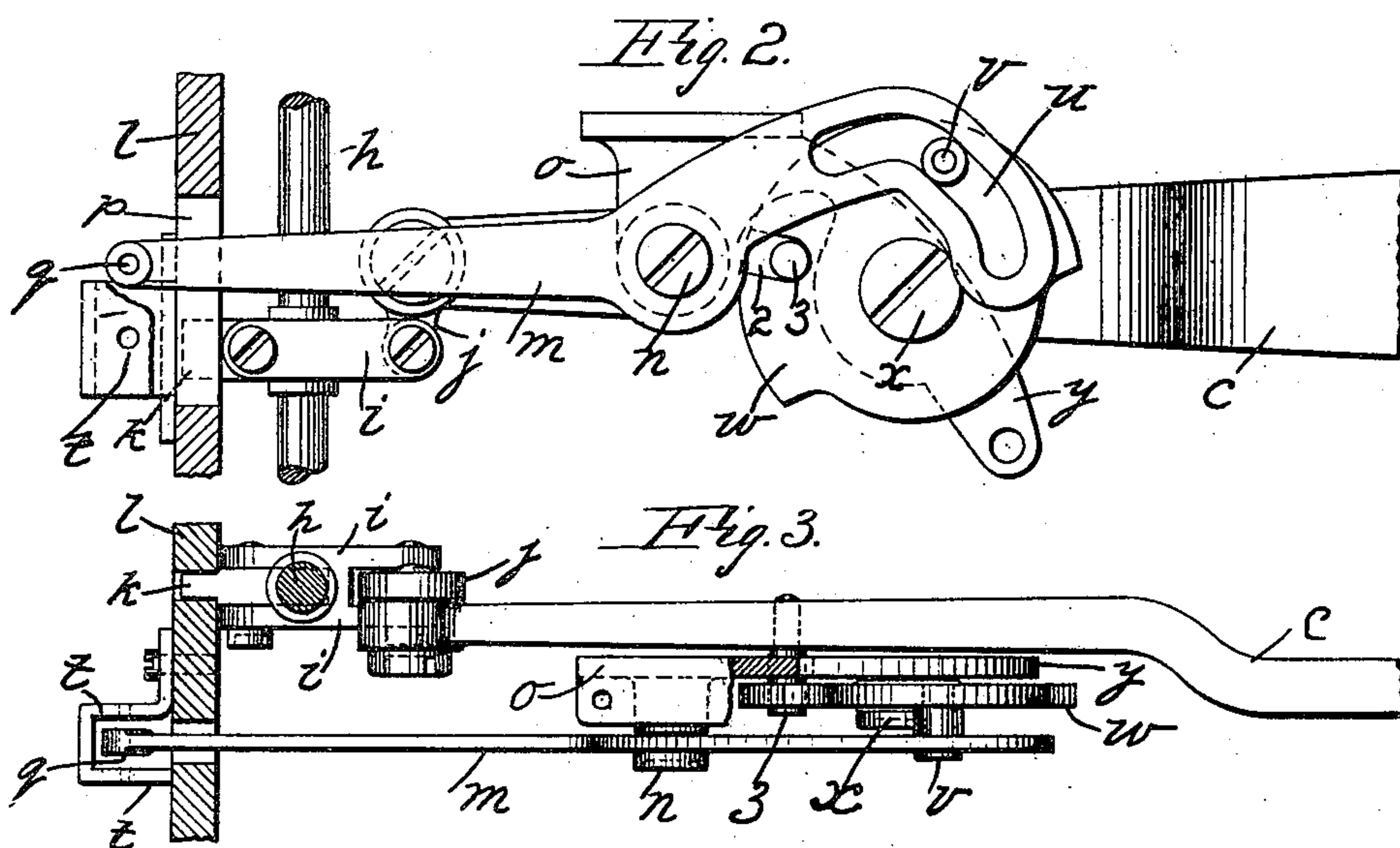
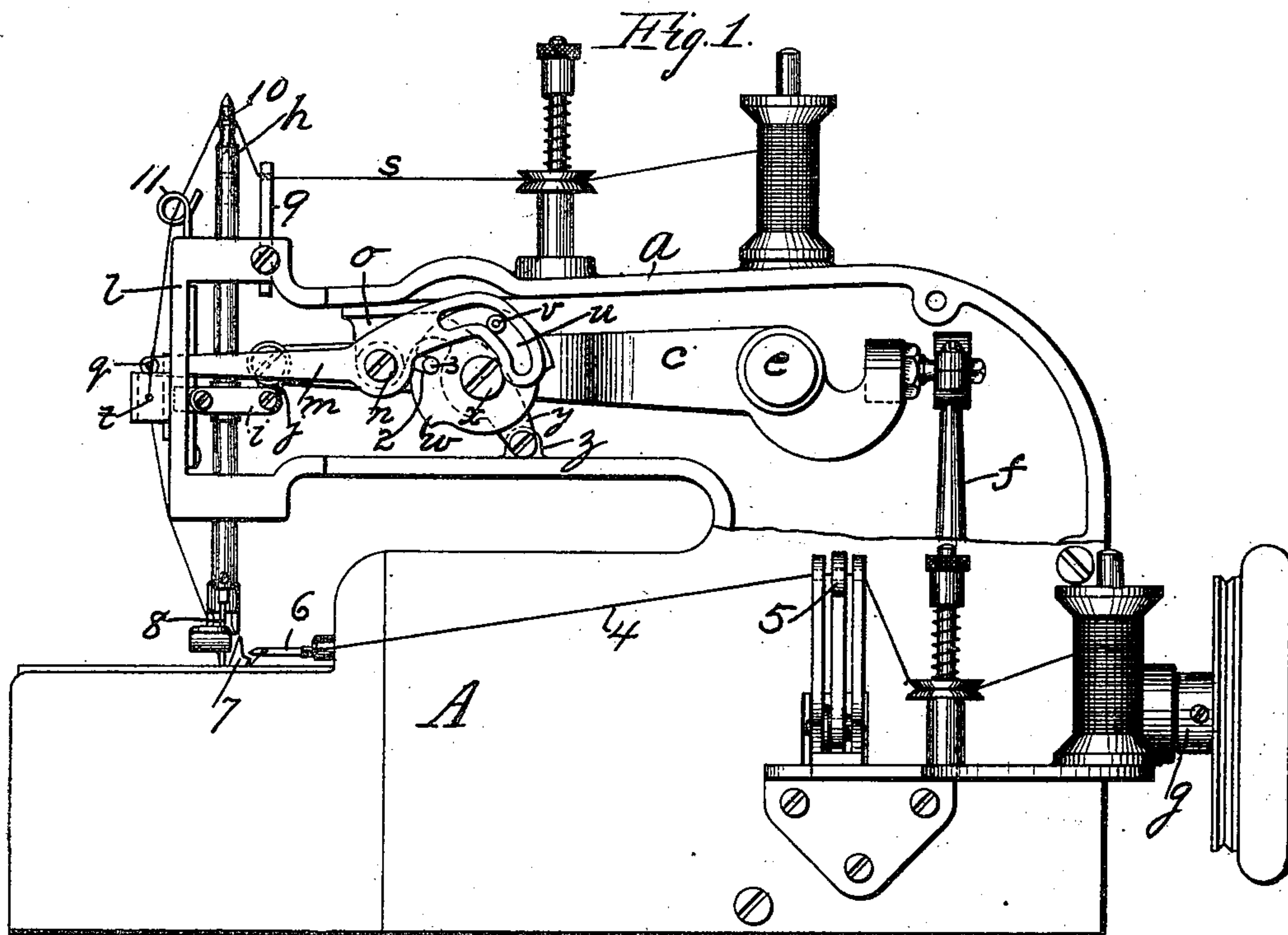
No. 667,712.

Patented Feb. 12, 1901.

H. A. KLEMM.
TAKE-UP FOR SEWING MACHINES.

(Application filed May 2, 1900.)

(No Model.)



WITNESSES

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TAKE-UP FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 667,712, dated February 12, 1901.

Application filed May 2, 1900. Serial No. 15,186. (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 Take-Up Apparatus for Sewing-Machines, of which the following is a specification.

My invention consists of improvements in the construction and arrangements of take-up apparatus for the needle-thread in sewing-machines, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of a sewing-machine with part of the front side of the case detached, showing the application of my improved take-up apparatus. Fig. 2 is a side view of the take-up apparatus and part of the needle-bar and its connections with the needle-operating lever, detached and enlarged, with a part of the head of the needle-bar and presser-supporting arm in section. Fig. 3 is a plan view of the take-up apparatus with some parts in section.

A represents the base portion of the machine, which is suitably inclosed. *a* represents the hollow needle-bar and presser-supporting arm with its front plate removed. *c* is the needle-bar-working lever. It is pivoted at *e* and connected at the end of its short arm by rod *f* with an eccentric (not shown) on the driving-shaft *g*, as usual. *h* is the needle-bar. It has a short arm *i* clamped to it, one extremity of which is coupled by a link *j* with the end of the long arm of the needle-bar-working lever, and the other end of said arm *i* works in a slot *k* of the head *l* of the supporting-arm *a* for guiding the needle-bar properly. All these parts, however, are of common form and are not claimed herein.

The take-up apparatus which is the subject of the claims is constructed and arranged as follows: A lever *m* is pivoted at *n* to a bracket *o*, attached to the under side of the top plate of arm *a*. One arm of said lever reaches forward through a slot *p* in the head *l* of said arm *a* and has an eye *q*, through which the thread *s* is strung, and the threaded end of said lever-arm plays up and down between two perforated thread-guides *t*, through which the thread is also strung, said thread being

led from the tension device and spool through a guide 9, which is adjustable vertically, also through an eye 10 in the upper end of the needle-bar *h* and through a fixed guide 11. The other rearwardly-extending arm of said take-up lever has a cam-slot *u*, in which a stud *v* works, which is carried on one side of a rocking disk *w*, pivoted at *x* on a branch *y* of bracket *o*, the end of which is attached to a lug *z* of the lower plate of said supporting-arm *a*. The rocking disk *w* has a radial slot 2, in which a stud-pin 3, carried in one side of the lever *c*, works to cause the stud-pin *v* to traverse the cam-slot *u*, and thus operate the take-up lever. The form of the cam-slot and the location of the stud *v* on the rocking disk are gaged in the proper relations with the movements of the needle-bar for timing the operations of the take-up with the needle, as usual in such cases.

The essential advantage of the apparatus is a contrivance of mechanical parts of simple construction, easy operation, and durability in service.

A take-up device for a looper-thread 4 is represented at 5 in connection with a reciprocating looper 6 and a looping-hook 7, used in connection with the needle 8; but these are not claimed and need not be further described.

Any suitable arrangement of thread-guides may be employed, and I do not mean to be limited to the arrangement of guides shown.

What I claim as my invention is—

The combination with the supporting-arm of a sewing-machine the needle-bar-operating lever, and suitable needle-thread guides, of the take-up lever pivoted intermediately of its ends on the supporting-arm with its thread-carrying end in suitable relation with said thread-guides, and having the cam-slot in its rear arm, the rocker-disk also pivoted on the supporting-arm and having the stud-pin engaging the cam-slot of the lever, also having the radial slot, and the stud-pin of the needle-bar-operating lever engaging said radial slot.

Signed at New York city, New York, this 30th day of April, 1900.

HERMANN A. KLEMM.

Witnesses:

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