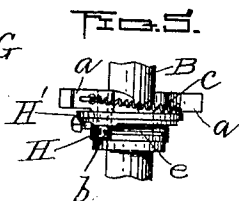
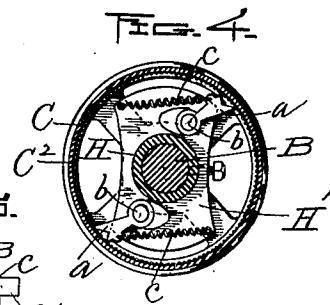
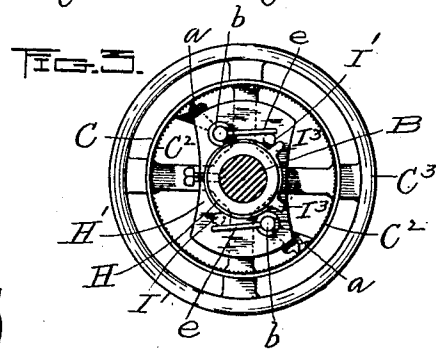
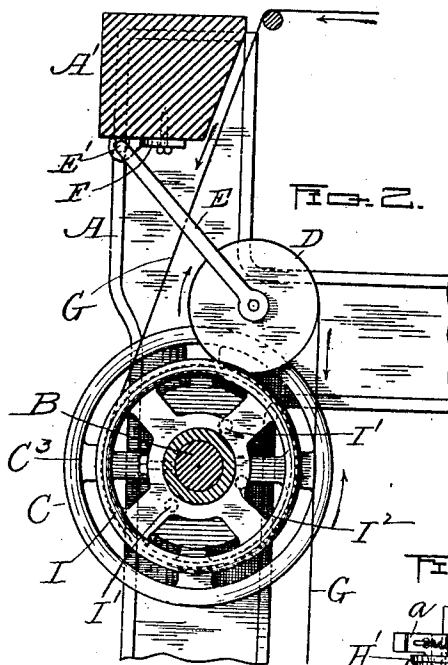
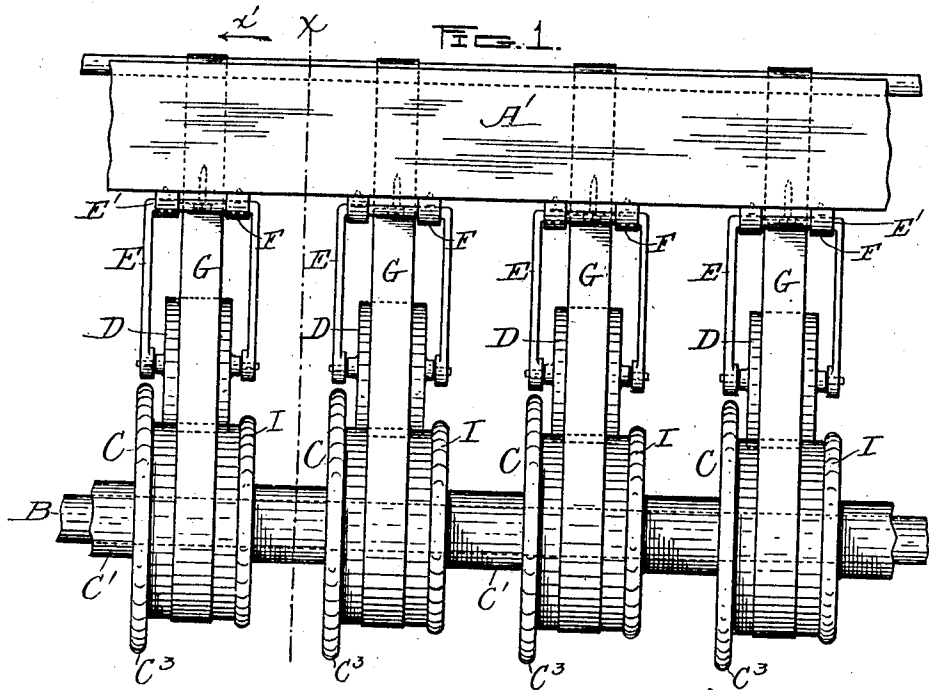


No. 876,407.

PATENTED JAN. 14, 1908.

A. H. STEELE,
INDIVIDUAL TAKE-UP MECHANISM FOR NARROW WARE LOOMS.

APPLICATION FILED MAY 31, 1905.



Witnesses,
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By Albert A. Parker, Atty.

UNITED STATES PATENT OFFICE.

ALBERT H. STEELE, OF WORCESTER, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO CROMPTON & KNOWLES LOOM WORKS, A CORPORATION OF MASSACHUSETTS.

INDIVIDUAL TAKE-UP MECHANISM FOR NARROW-WARE LOOMS.

No. 876,407.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed May 31, 1905. Serial No. 262,986.

To all whom it may concern:

Be it known that I, ALBERT H. STEELE, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Individual Take-Up Mechanism for Narrow-Ware Looms, of which the following is a specification.

Figure 1 represents a front view of so much of a narrow ware loom as is necessary to illustrate my invention. Fig. 2 is a vertical, transverse section therethrough, taken on line X, Fig. 1, looking in the direction of arrow X'. Fig. 3 is a transverse section through the take-up shaft with the detachable hand-wheel of one of the take-up pulleys removed, showing a side view of said pulley and its spring-pawl mechanism, hereinafter described. Fig. 4 is a similar transverse section looking in the opposite direction, through the rim and hub of the take-up pulley showing the opposite side view of said spring-pawl mechanism, and Fig. 5 is a plan of said mechanism and the internal hub which supports the same, also hereinafter described.

My invention relates to what are commonly known as narrow ware looms, for weaving narrow fabrics, such as tape, suspender material and similar narrow goods.

The object thereof, is to provide mechanism connected with the take-up shaft of this class of looms, whereby each web of fabric may be independently adjusted without interfering with any of the other webs on said loom, and said invention consists in combining with the take-up shaft, a series of loose pulleys, each provided upon the inner surface of its rim with longitudinal corrugations or teeth, a fixed hub for each pulley fitted and fastened on said take-up shaft; spring-pawls mounted on each fixed hub and engaging with the internal corrugations on the pulleys and a hand-wheel for disengaging said spring-pawls from said corrugations on the pulleys, as hereinafter more fully set forth.

To enable others to better understand the nature and purpose of my said invention, I will now proceed to describe it more in detail.

Referring to the drawings A represents part of the loom frame, and B part of the usual take-up shaft, which extends longitudinally through the front side of the machine. The parts marked C are the individual take-

up pulleys which are mounted on said take-up shaft about two inches apart, and the parts D are the knee-rolls mounted in the outer ends of the swinging arms E, pivoted at their opposite ends at E', to a fixed bearing F on cross beam A', each of said knee-rolls being each adapted to rest on its respective web G over the take-up pulleys, to produce the required friction on said web during the weaving operation.

The take-up pulleys C are fitted loose on shaft B and are each held in position longitudinally thereon by the outer collar C' and internal hub H, both of which are secured to said shaft; upon each internal hub H, are mounted two pawls *a, a* at opposite sides of the shaft, each pawl being pivoted at *b*, provided with a holding spring *c* and their outer ends adapted to engage with the longitudinally corrugated or toothed, inner surface C' of its respective pulley C, as is best shown in Figs. 3, 4 and 5 of the drawings. The normal positions of the pawls are in engagement with the aforesaid corrugated surfaces of pulleys C, being thus held in engagement by said springs *c*, one end of which is attached to hub H and the other end to the pawl. The inner ends of the pawls *a, a* are provided with extensions or made cam-shaped to engage with the hub H, and form a stop to prevent the pawls from being drawn over too far by the spring *c*.

Combined with each take-up pulley C is a detachable hand-wheel I, loosely mounted on the hub H. The hand-wheel I has thereon two projections or pins I', I' adapted to come in contact with two levers *e, e* secured upon the pivot pins *b, b* of the pawls *a*. In Fig. 3 of the drawings, the positions of said projections on the detachable hand-wheel are shown by dotted lines against the pawl pivot levers *e, e*.

The pawls *a, a* being normally in contact with the internal, corrugated surfaces of the take-up pulleys, it is obvious that said pulleys are thereby normally held from turning in one direction, and that direction is the direction opposite to the draft of the web G being fed through. So long as no trouble occurs in the weaving, the parts remain in said locked, normal positions, but if for any reason it is desirable to loosen the draft upon one of the webs, to adjust or correct the same in any way, its hand-wheel I is turned

to disengage the pawls *a, a*, from said corrugated surface of the take-up pulley by forcing its inner projections *I¹ I¹* against the pawl pivot levers as previously described, said operation freeing said take-up pulley so that it may be turned backwards a partial revolution and thus relieve the draft upon the web so that it may be drawn longitudinally and the required repair or correction made without stopping the loom, or interfering in any way whatever with the weaving of the other webs on said loom. It is preferable to employ a stop for controlling the rotation of the detachable hand-wheel *I* within proper limits to prevent damage to the pawl mechanism by turning said hand-wheel too far in the wrong direction, but I do not limit myself thereto as it is not an essential feature. In this instance, I have shown said result as being accomplished by providing a projection *I²* on the inner surface of the hand-wheel which strikes against shoulders *I³ I³* on the hub *H* when said hand-wheel is turned in either direction. The take-up pulleys *C* are each provided with the fixed hand-wheel *C³* formed upon or secured thereto in the usual

way, and by means of which said pulleys are turned in either direction, as desired.

It will be understood that the details of construction of my improvements may be varied if desired.

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

A take-up mechanism for narrow-ware looms, comprising a take-up shaft, a loose pulley on said shaft, said pulley having teeth or corrugations upon its inner surface, a fixed hub for said pulley on the take-up shaft, spring actuated pawls mounted on said fixed hub, and adapted to engage the corrugated or toothed surface on said pulley, levers connected with said pawls, a loose hand-wheel having projections adapted to engage with said levers to disengage the pawls.

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

ALBERT H. STEELE.

Witnesses:

ALBERT A. BARKER,
E. N. BARKER.