

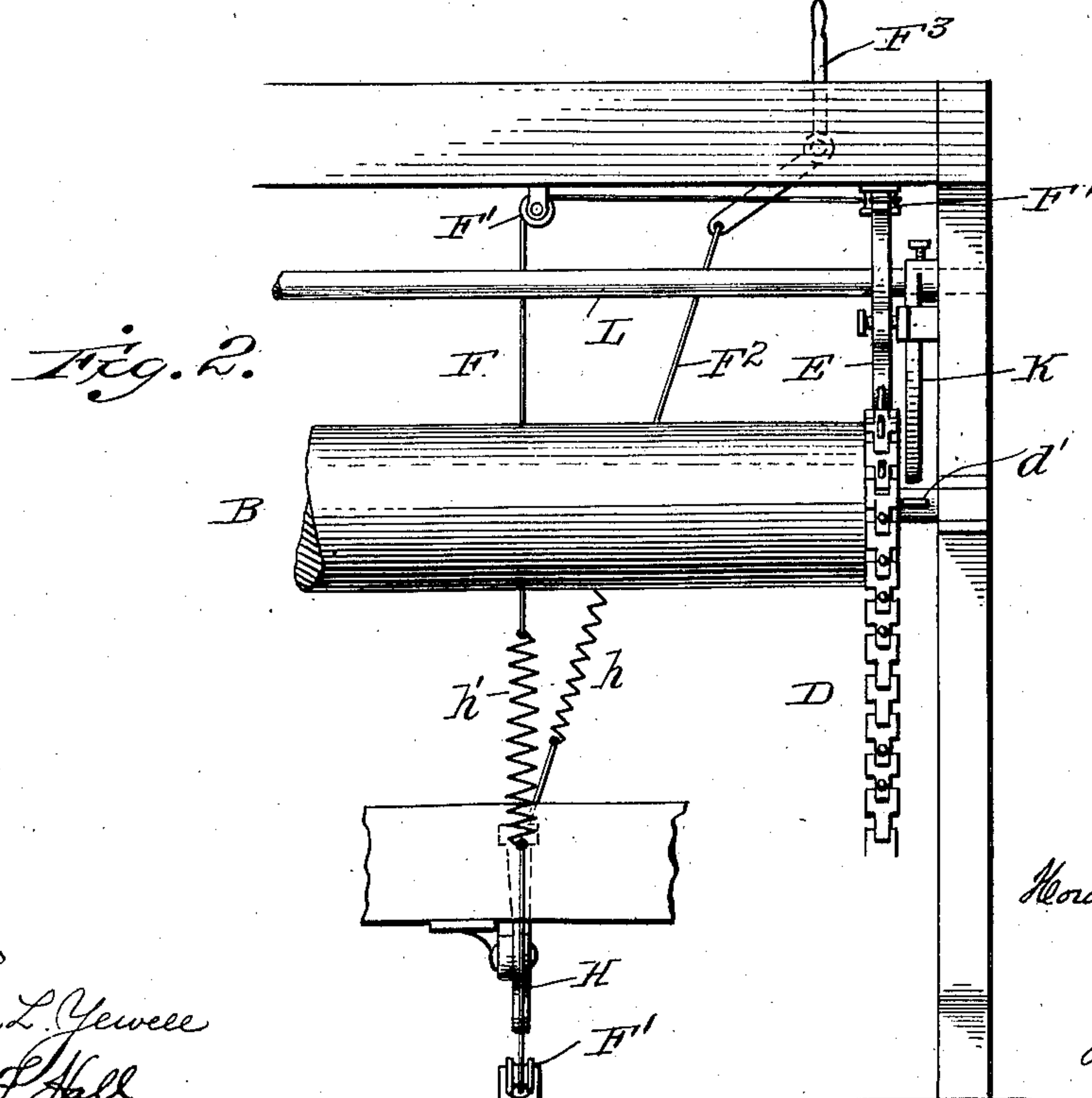
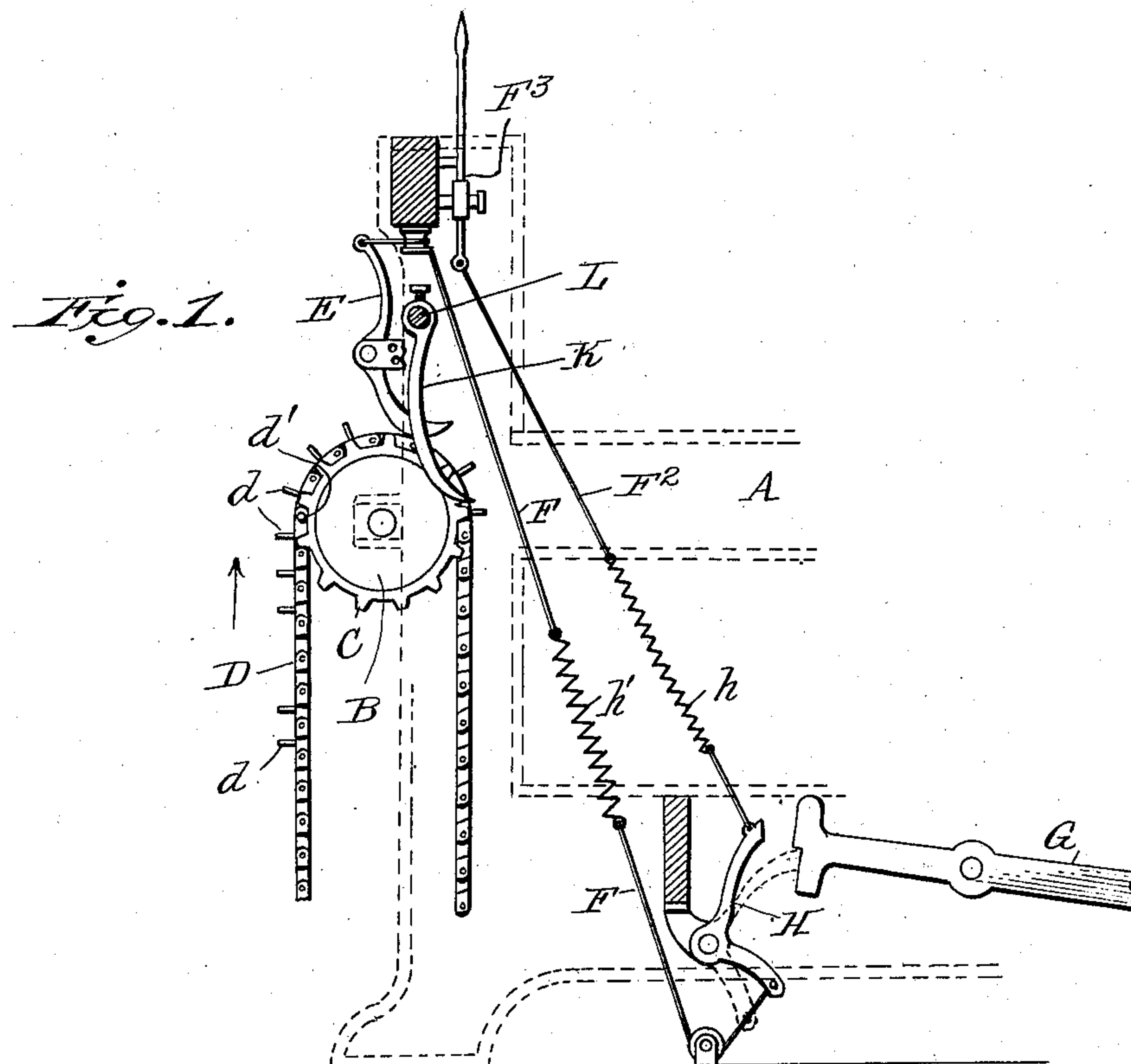
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H. S. GRIFFITH.

TERRY LOOM.

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Witnesses

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TERRY-LOOM.

No. 812,788.

Specification of Letters Patent.

Patented Feb. 13, 1906.

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To all whom it may concern:

Be it known that I, HORACE S. GRIFFITH, a citizen of the United States, residing at Glen Riddle, in the county of Delaware and State of Pennsylvania, have invented new and useful Improvements in Terry-Looms, of which the following is a specification.

My invention relates to looms provided with a terry-motion similar to that shown in Letters Patent granted to J. and C. Rothwell, No. 257,517. In said patent the locking device for suspending, at intervals, the terry-motion is operated by hand. Since the grant of said patent several controlling mechanisms for operating the locking device have been produced, which automatically put on and off the terry-motion. Heretofore the objection to such automatic control has been the expense of applying it to a terry-loom, generally requiring a new loom mechanism.

Now the object of my invention is to provide a simple and inexpensive mechanism adapted to be applied to a terry-loom of the character named which will automatically control the locking-lever of the terry-motion to put on or off said motion at given intervals.

It is also my object to provide in connection with said automatic control of the locking-lever means for automatically operating the stop-rod to stop the loom at given intervals—as, for example, in weaving Turkish toweling to stop the loom while pulling or forming fringe.

In the accompanying drawings only such parts of a terry-loom are shown as are necessary for those skilled in the art to understand the application and working of my invention.

Figure 1 is a fragmentary view giving portions of a terry-loom frame with the usual sand-roller mounted thereon and showing my invention applied. Fig. 2 is a front end of one end of the loom with my invention applied.

Referring more particularly to the drawings, A denotes portions of the frame of a terry-loom.

B denotes the sand-roller journaled to the frame and provided at one end with a sprocket-wheel C, having teeth which mesh with a pattern-chain D. *d* denotes the usual pins detachably connected to said chain and disposed thereon in the manner usual to form a given pattern of Turkish toweling.

d' denotes a pin detachably connected to the side of one of the links in the pattern-

chain and projects laterally to one side of the chain and sprocket-wheel, as shown in Fig. 2.

E denotes a lever pivoted to the frame above the sprocket-wheel, its lower end lying in the path of the sprocket-chain pins *d*. The upper end of this lever is provided with an eye into which is fastened a chain F. F' F' F' denote pulleys attached to the frame, through which said chain passes, and is thereby led to a pawl, hereinafter mentioned, which controls the putting on and off of the terry-motion.

G denotes the lever for putting on and off the terry-motion pivoted to a stud on the loom-frame, as shown in Fig. 1, and provided with an extension having a notch in its lower end. H denotes a pivoted pawl which controls the lever G by engaging with said notch.

h denotes a coiled spring interposed in a cord or chain F², attached at one end, and to upper end of pawl H at the other.

h' denotes a coiled spring interposed in the length of a cord or chain F, which extends from the pawl H to lever E.

K denotes a lever keyed to the stop-rod L of the loom and depends therefrom over and to one side of the sprocket-wheel and pattern-chain, its lower end lying in the path of the pin *d'*.

The operation of the several parts in throwing off and on the terry-motion will now be described. In Fig. 1 of the drawings the lever G, which controls the action of the loom in weaving plain or terry fabric, is shown as disengaged from the pawl H, and so long as the lever is in this position the terry-motion is on and the loom is weaving terry fabric. At this time, as reference to Fig. 1 will show, the lower end of lever E lies in the path of the pattern-chain pins. As the sand-roller revolves in the direction shown by arrow said pins are brought to bear upon the lower end of lever E and move it forward and upward, causing the upper end thereof to move in the opposite direction and pull backward upon the chain F. Thus the chain led by the three pulleys to a point under the pawl H pulls it downward in the path of the notch on the lever G, said lever having a rocking motion, as well understood by those skilled in the art. The pawl H is shown in dotted lines as engaging said notch, holding lever G from further movement. In this locked position of lever G the terry-motion is off and the loom is weaving plain fabric, such as the border of

Turkish toweling. Said lever G will remain in this position so long as the row of pattern-chain pins are passing under lever E, causing its upper end to pull on the chain F and hold pawl H in said notch. After the row of pins have passed under lever E it resumes its normal position, (shown in Fig. 1,) and the pull upon chain F being relaxed spring H simultaneously draws pawl H back to its normal position. The object of interposing spring h' in chain F is to afford a yield in the chain should the end of lever G strike the pawl while throwing on or off the terry-motion. It will be seen that the operation of throwing on and off the terry-motion is automatic in all particulars and the function of the hand-lever F³ is to enable the attendant, in case of any stoppage in said automatic action, to immediately release such stoppage. The means for automatically stopping the loom is also operated by the motion of the sand-roller. Upon completion of a towel the loom is automatically stopped by the pin d' coming in contact with the lower end of lever K and moving it sidewise. This lever being rigidly keyed to the stop-rod turns or rocks the stop-rod, and thus stops the loom. This automatic stoppage is gaged to occur at the completion of the towel, or just

after the border, which is plain woven, is formed, the object being to stop the loom while the operator is pulling or forming fringe.

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

In a loom provided with a terry-motion, the combination with the lever which puts on and off the terry-motion, of an automatic shifting mechanism for operating said lever to throw on and off said motion, consisting of the sand-roller, a sprocket-wheel attached to said roller, a pattern-chain meshing with said wheel provided with projecting pins, a lever pivotally suspended above said chain having its lower end in the path of said pins, a chain F connected to the upper end of said suspended lever, a spring-held locking-pawl attached to said chain F and adapted to engage the notched end of said lever which puts on and off the terry-motion.

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

HORACE S. GRIFFITH.

Witnesses:

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