

# A. L. Fuller. Take-Up for Loom.

N<sup>o</sup> 16,271.

Patented Dec. 23, 1856.

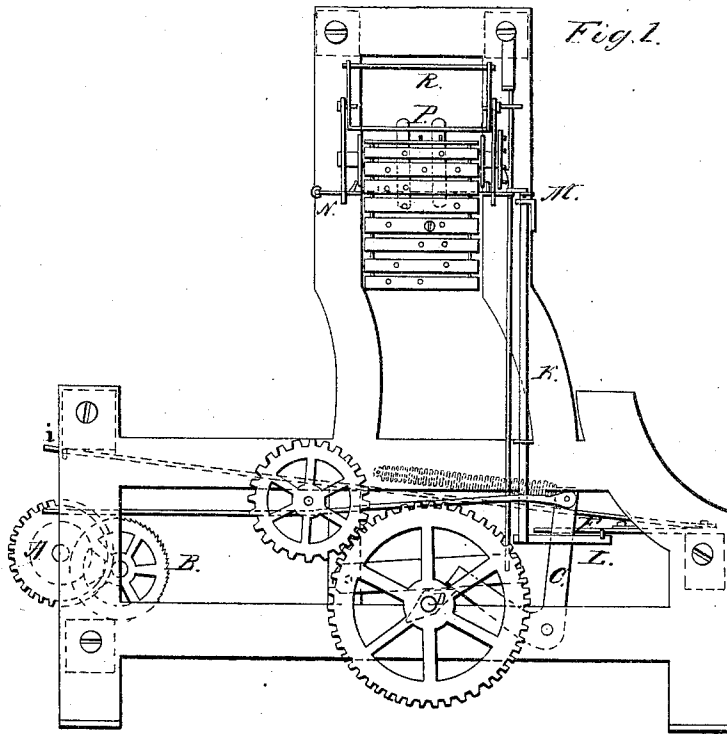


Fig. 1.

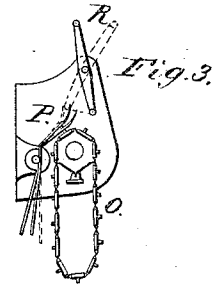


Fig. 3.

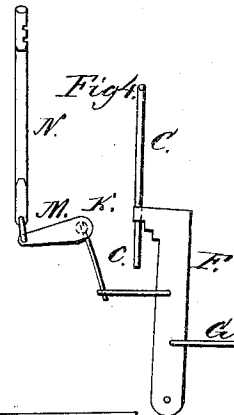


Fig. 4.

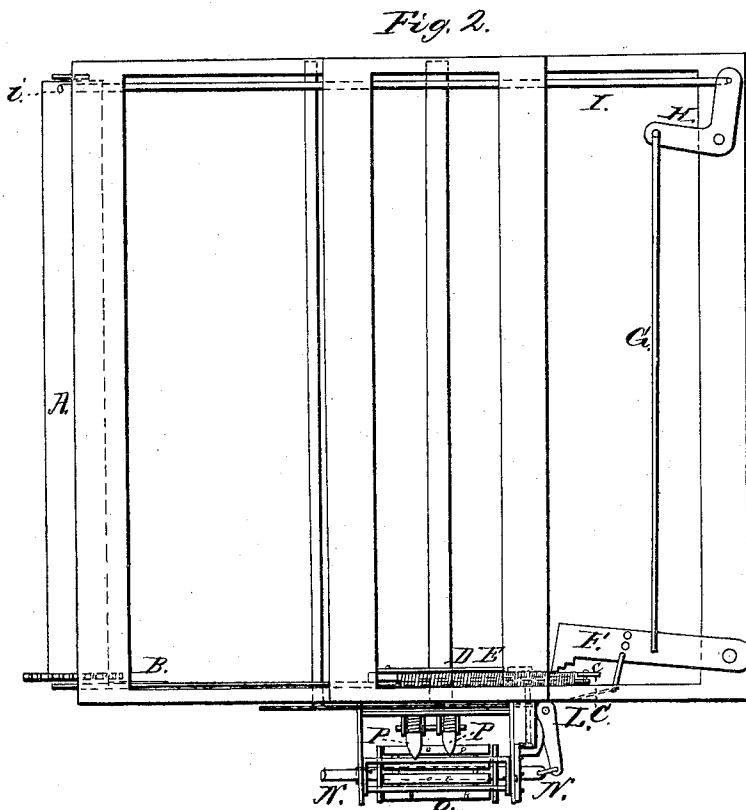


Fig. 2.

# UNITED STATES PATENT OFFICE.

A. L. FULLER, OF CLINTON, MASSACHUSETTS.

## LOOM.

Specification of Letters Patent No. 16,271, dated December 23, 1856.

*To all whom it may concern:*

Be it known that I, ANDREW L. FULLER, of Clinton, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Looms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side view, Fig. 2 is a top view, Fig. 3 shows a section of the pattern chain, fingers, and guard; and Fig. 4 shows the connection of the slide which shifts the pattern-chain, with the stop F hereinafter to be described; the same letters denoting the same parts wherever they occur.

The object of my improvements is to control the feed-motion or take-up in relation to the change of pattern or fineness of beat required, and is more particularly applicable to the form of loom known as the Blanchard loom, (to which the following description applies,) and also to others when weaving two or more thicknesses in different parts or when a variation in the number of picks to the inch is wanted to be made.

To construct my improvements see drawings in which A is the cloth roll, B is a fine ratchet wheel with pinion attached gearing into wheel on A, the ratchet B receiving its motion by a catch on a connecting rod attached to the lever C, the lever C being operated by cam D at every pick of the loom, so as to give motion to B and depending on the spring E to return it to place, near C place the stop F so that its notches shall control the amount of motion given C by the spring E by stopping its return more or less as may be wanted, thus preventing its taking more hold on the ratchet B than is wanted, the notches on F corresponding to the variety of picks wanted in the fabric. To the stop F attach the rod G connecting to the lever H, to which is attached the rod I extending to the fore part of the loom at a convenient place for the operator to work the stop F when necessary. The fingers P and pattern chain O may be of the usual form, the pattern-chain having two (sets of pins or) patterns, one passing between the fingers while the other operates, the position of the pattern-chain being controlled by the slide N to hold either pattern in play, above the fingers P

place the guard R which is so arranged that by turning it into the position shown in dotted lines in Fig. 3 it raises the fingers P so as to allow the pattern-chain to be shifted sidewise, after which the fingers are let down again. The slide N is connected to the lever M, the lever M being fast to the rod or shaft K; the rod K having a flexible arm L which is connected to the stop F, the arm L being stiff enough to move the stop F and yet flexible enough to allow the stop to be moved by the rods I and G without moving the rod K and slide N, this flexibility also allows the pattern to be shifted without regard to the position of the lever C so that when the cam moves the lever the spring of the arm L moves the stop to its place. The other parts of the loom not described may be of most any of the common patterns and modes of construction and on that account it is not deemed necessary to show or describe them particularly.

The operation of my improvements will be more clear perhaps by referring to that class of fabrics in which two thicknesses are woven at once for a part of their length then changing to a single thickness as bags etc., the loom in weaving the single part is arranged to feed say about twenty picks to the inch with the lever C at full play, and when it is wished to change to double, lifting the fingers P by the guard R move the slide N to the double pattern this shifts the feed to a finer one say about fifty picks to the inch making the body of the bag part finer than the single, and when the proper length is woven the pattern and slide are changed back again to single work and coarser feed, and in some cases it may be desirable to weave a few picks fine before shifting to double work, this is done by the weaver holding the stop F by the rod I a few picks before he shifts the pattern, and by similar means he may weave a few picks fine after shifting from double to single work.

That my improvements may be applied in a variety of ways is evident as indeed no two patterns of looms will require the same form, and the almost infinite variety of fabrics that can be made and in which they will act to advantage will suggest the particular form and arrangement adapted to each kind. I do not claim controlling the feed or take up motion of a loom as has

heretofore been done but only in connection with the devices and arrangement herein before described.

But what I claim as new and desire to secure by Letters Patent is—

1. I claim regulating or changing the feed by governing the action of the lever C by means of the graduated stop F or its equivalent in connection with the change of slide and pattern in the manner and for the purposes as above set forth and described or any other substantially the same.

2. I claim the guard R for lifting the fingers when constructed and operating in the manner and for the purposes described. 15

3. I claim the flexible connection between the stop F and the rod or slide to allow motion to the stop without moving the slide as described or any other substantially the same.

A. L. FULLER.

Witnesses:

BENJAMIN ARNOLD,  
JAS. G. ARNOLD.