W. H. SELLEY.

LOOM DOBBY.

APPLICATION FILED OCT. 20, 1908.

955,559. **Patented Apr. 19, 1910.**

2 SHEETS—SHEET 1.

Fig. 1.

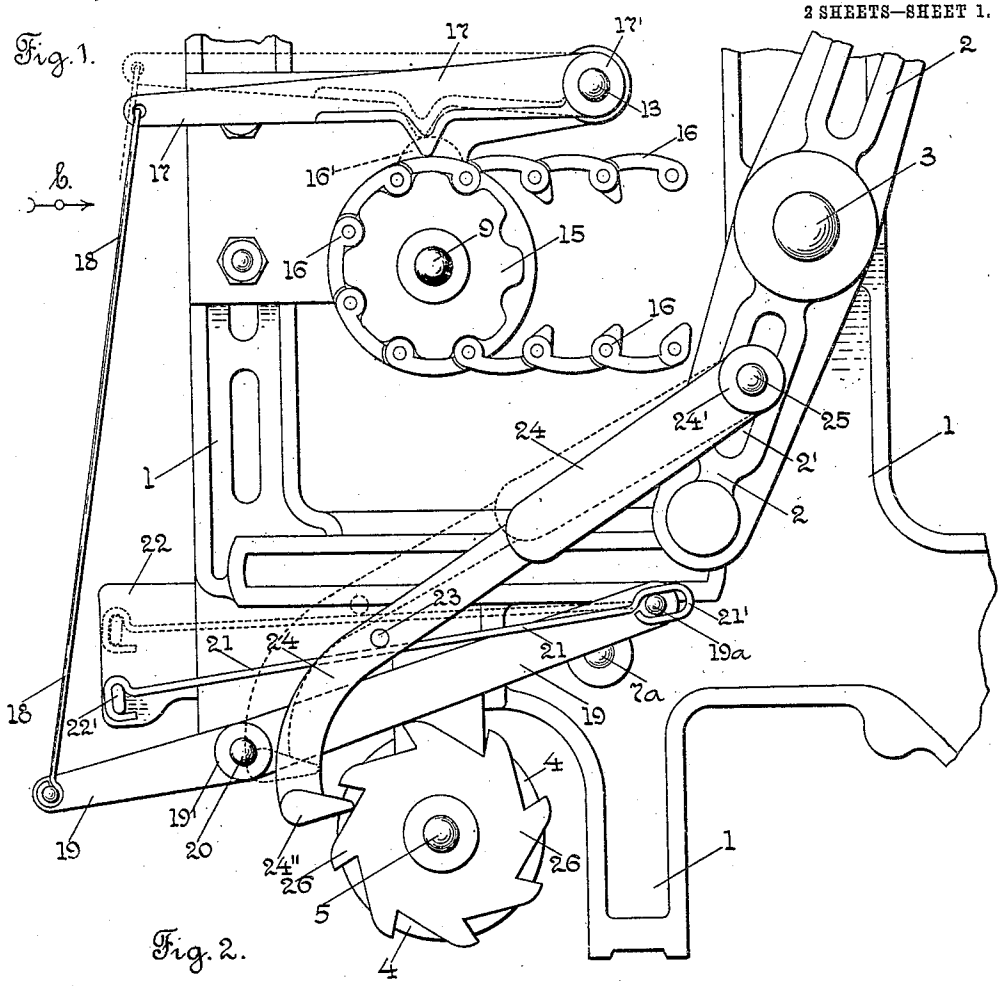
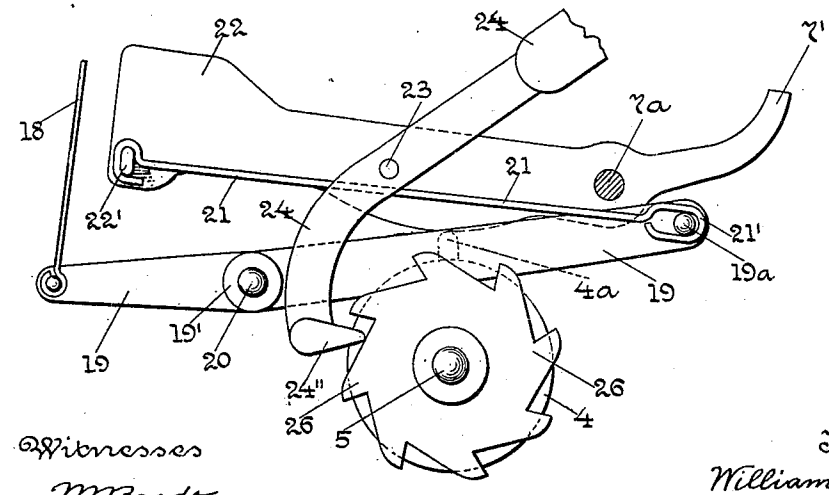


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

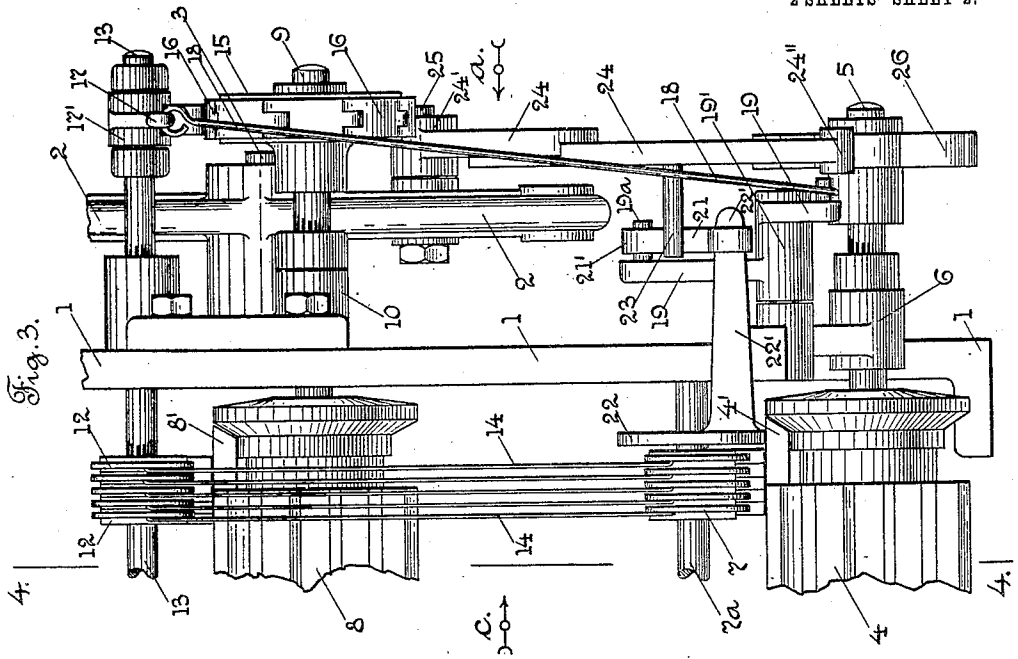
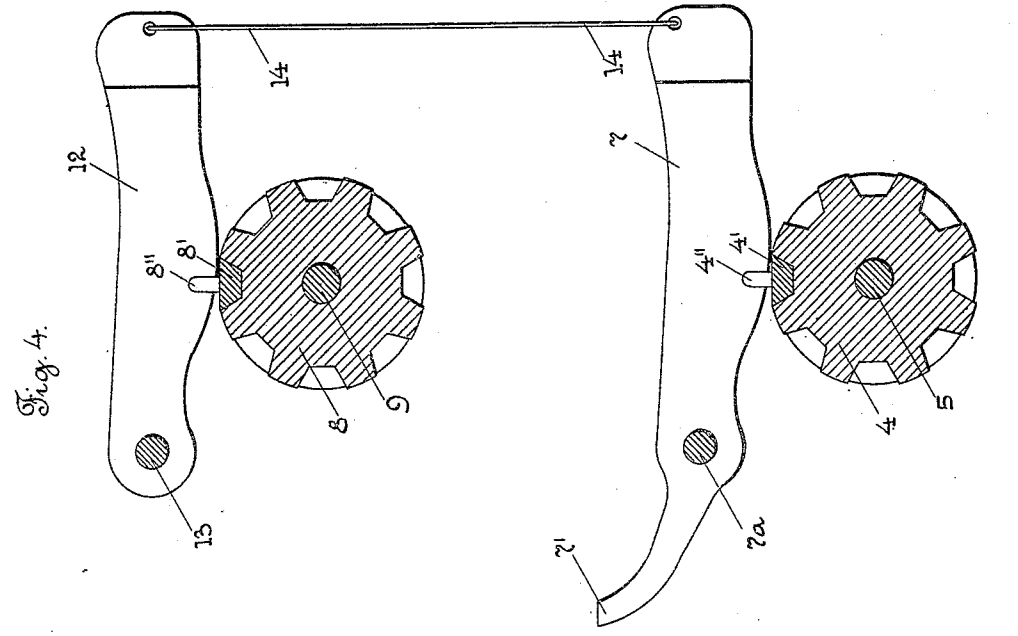


Fig. 4.



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UNITED STATES PATENT OFFICE.

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LOOM-DOBBY.

955,559. Specification of Letters Patent. Patented Apr. 19, 1910.

Application filed October 20, 1908. Serial No. 458,591.

To all whom it may concern:

Be it known that I, WILLIAM H. SELLEY, a citizen of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Loom-Dobbies, of which the following is a specification.

My invention relates to a loom dobby, or pattern mechanism of a loom of the "dobby" type, and more particularly to a supplemental or auxiliary pattern cylinder, combined with a dobby pattern mechanism.

The object of my invention is to provide an auxiliary pattern cylinder, which can be combined with a dobby of ordinary construction, to weave the borders of handkerchiefs, towels, etc., in the direction of the length of the fabric, the main pattern chain being constructed to weave the transverse or cross borders, and the plain central body portion of the handkerchiefs, towels, etc.

In my improvements, the auxiliary pattern cylinder so-termed is preferably located above the ordinary pattern cylinder so-termed, and is operated by the usual operating mechanism of a dobby. Intermediate mechanism is employed, to communicate the pattern indications from the auxiliary pattern cylinder to the dobby fingers of the ordinary pattern cylinder.

My invention consists in certain novel features of construction of my improvements as will be hereinafter fully described.

I have only shown in the drawings detached portions of a dobby pattern mechanism, with my improvements combined therewith.

Referring to the drawings:—Figure 1 is a front view of some parts of a dobby, and of my improvements applied thereto, looking in the direction of arrow *a*, Fig. 3. Fig. 2 shows the lower pattern cylinder, and some other parts shown in the ordinary part of Fig. 1, detached from the frame, and some of the parts in a different position. Fig. 3 is a side view of the parts shown in Fig. 1, looking in the direction of arrow *b*, same figure, and, Fig. 4 is a sectional view of the two pattern cylinders, the auxiliary and the ordinary and the dobby fingers, detached, as a section on line 4, 4, Fig. 3, looking in the direction of arrow *c*, same figure.

In the accompanying drawings, 1 is a portion of a dobby frame, 2 is the rocker lever fast on a shaft 3, which is mounted in suitable bearings on the frame 1, and has a rocking motion communicated thereto by mechanism, not shown, in the usual and well known way. 4 is the ordinary dobby pattern cylinder on a shaft 5, mounted in suitable bearings 6. The dobby pattern cylinder 4 has a chain thereon, made up of bars and pins in the usual way, only one bar 4′, and pin 4″ are shown in the drawings, see Figs. 2 and 4. The pattern chain on the cylinder 4 operates the dobby fingers 7, suitably mounted on a transverse rod 7^a, in the usual way. All of the above mentioned parts may be of the usual and well known construction.

I will now describe my improvements.

A second or auxiliary pattern cylinder 8 is in this instance located directly above the ordinary pattern cylinder 4, and carries a pattern chain, made up of bars with pins thereon, only one bar 8′, and pin 8″ are shown in the drawings, see Fig. 4. The auxiliary pattern cylinder 8 is on a shaft 9, mounted in a bearing 10, see Fig. 3. The auxiliary pattern cylinder 8 receives its rotary motion from any usual mechanism on the opposite end of the dobby, not shown, with a constant rotary motion or a constant intermittent rotary motion, when the dobby is in operation to move a chain bar 8′ every two picks, to control the auxiliary dobby fingers 12, which are loosely mounted on a transverse rod 13. The fingers 12 are connected through wires 14 with the regular dobby fingers 7, see Figs. 3 and 4. The fingers 12, through the wires or connectors 14, move the dobby hooks, not shown, through the extensions 7′ on the fingers 7, so that said hooks may engage, or may not engage with the dobby knives, not shown. The outer end of the shaft 9 of the auxiliary pattern cylinder 8, has fast thereon a sprocket wheel 15, which carries a chain 16. This chain is made in this instance with one high link 16′, shown by broken lines in Fig. 1. The rest of the links of the chain 16 are in this instance of uniform shape, and lower than the high link 16′. The chain 16 is adapted to operate a lever or finger 17, which has one end 17′ loosely mounted on the shaft 13, see Fig. 1; the other end of said finger 17 is connected

by a wire or connector 18, to one arm of a lever 19, which has its hub 19′ pivotally mounted on a stud 20 on the frame 1, see Fig. 1. The other arm of the lever 19 carries in this instance a pin 19^a, to receive the loop end 21′ on one end of a flat wire 21; the other end of the wire 21 engages a projection 22′ on the outside dobby finger 22. The flat wire 21 forms a guide-way or track for a pin 23 on a pawl 24 which has its hub 24′ pivotally mounted on a stud 25, adjustably secured in an elongated slot 2′ in the rocker lever 2, see Fig. 1. The pawl 24 has an engaging end 24″ thereon, to engage with and operate the ratchet 26 on the shaft 5 of the ordinary pattern cylinder 4, and rotate said cylinder 4, and the chain thereon, through the movement of the rocker lever 2.

From the above description in connection with the drawings, the operation of my improvements will be readily understood by those skilled in the art.

When the pattern mechanism is operating, as shown by full lines in Fig. 1, either one of the pattern cylinders 4, or 8, will move the chain bars thereon, every two picks, and the fingers 12 of the auxiliary pattern cylinder 8, through the wire connectors 14 to the regular dobby fingers 7, will control the side or longitudinal borders of the fabric. The ordinary dobby pattern cylinder 4 is operated every second pick by the pawl 24, until a pattern indication 4^a, see broken lines, Fig. 2, on the pattern cylinder 4, comes under the outside dobby finger 22, to lift said finger, and through the projection 22′ thereon, raise the outer end of the flat wire 21, as shown by broken lines in Fig. 1, to lift the pawl 24, through the pin 23, to disengage said pawl from the ratchet 26, to leave the pattern cylinder 4 at rest.

The rotation of the auxiliary pattern cylinder 8, and of the sprocket wheel 15 will bring the high link 16′ on the chain 16 under the finger 17, to raise said finger, as shown by broken lines in Fig. 1, and through the connector wire 18, raise the outer end of the lever 19, see Fig. 2, and lower the other end of said lever 19, and also lower the flat wire 21 secured to this end, to allow the pawl 24 to again engage the ratchet 26, to operate the pattern cylinder 4 again, and move the pattern pin 4^a from under the outside dobby finger 22, to operate the mechanism as above described.

As long as there is no pattern pin or indication under the dobby finger 22, the pawl 24 will operate the ratchet 26, and through said ratchet the pattern cylinder 4 will be rotated. The stopping of the rotation of the pattern cylinder 4, depends upon the location of the pin, or pins 4^a on said pattern cylinder, and the starting of said cylinder 4 depends upon the construction of the pattern chain 16 of the auxiliary pattern cylinder 8 and the location of the pattern indicating surfaces 8″ thereon.

The advantages of my improvements will be readily appreciated by those skilled in the art. They are of very simple construction, and can be readily applied to a dobby of ordinary construction.

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:—

1. In a pattern mechanism for looms, a pattern cylinder having pattern surfaces thereon, a second pattern cylinder having a rotary motion, and having pattern surfaces thereon, a pawl to rotate the first mentioned pattern cylinder, said pawl being under the control of both sets of pattern surfaces, to put into operation and to put out of operation said first mentioned pattern cylinder.

2. In a dobby, the combination with the ordinary pattern cylinder having pattern surfaces thereon, and mechanism for rotating said cylinder, and an auxiliary pattern cylinder having a rotary motion, and pattern surfaces thereon, and dobby fingers for each pattern cylinder, and connections between said dobby fingers, of mechanism, intermediate said pattern cylinders, operated by pattern surfaces on said cylinders, and acting to put out of operation the mechanism for rotating the ordinary pattern cylinder, and put into operation mechanism for rotating the ordinary pattern cylinder.

3. In a dobby, the combination with the ordinary pattern cylinder having pattern surfaces thereon, and mechanism for rotating said cylinder, and an auxiliary pattern cylinder having a rotary motion, and pattern surfaces thereon, and dobby fingers for each pattern cylinder, and connections between said dobby fingers, of mechanism intermediate said pattern cylinders, operated by pattern surfaces on said cylinders, and acting to put out of operation the mechanism for rotating the ordinary pattern cylinder, and put into operation the mechanism for rotating the ordinary pattern cylinder, said intermediate mechanism comprising a lever operated by the auxiliary pattern cylinder, a connector to a second lever, and said second lever, a connector to said second lever and to a dobby finger, of the ordinary pattern cylinder, said connector adapted to engage a pin on the actuating pawl of said ordinary pattern cylinder.

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