No. 848,002. PATENTED MAR. 26, 1907.

J. BIM.

SHUTTLE BOX FOR LOOMS.

APPLICATION FILED JAN. 2, 1907.

FIG. 2.

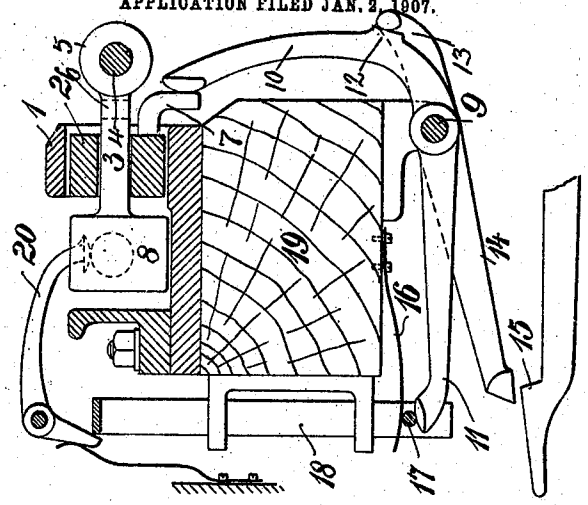


FIG. 1.

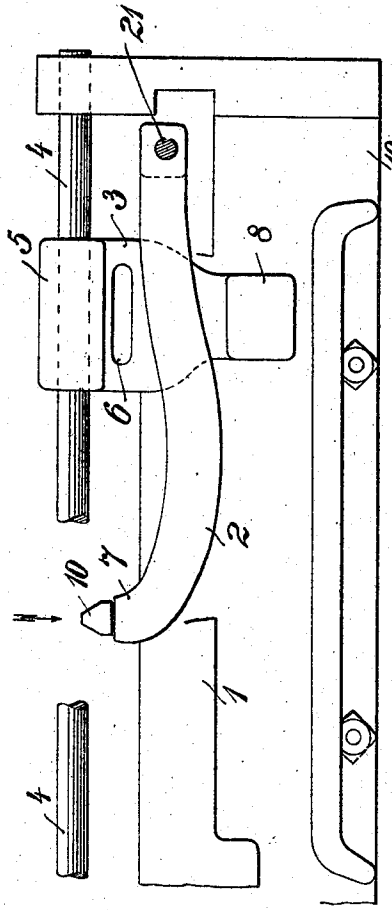
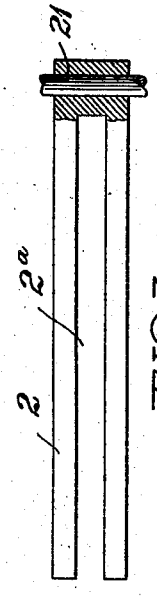


FIG. 3.



WITNESSES;

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SHUTTLE-BOX FOR LOOMS.

No. 848,002. Specification of Letters Patent. Patented March 26, 1907.

Application filed January 2, 1907. Serial No. 350,506.

To all whom it may concern:

Be it known that I, JOSEF BIM, textile engineer, a subject of the Emperor of Austria-Hungary, residing at Vienna, 19 Kolingasse, Austrian Empire, have invented a new and useful Improvement in a Shuttle-Box for Looms for Weaving; and I do hereby declare the following to be a full, clear, and exact description of the same.

The object of the present invention is to provide a shuttle-box for looms for weaving having an automatic device for changing the weft of such character as to deviate as little as possible from the ordinary loom construction as hitherto generally adopted. This has the great advantage that the loom can be operated by a weaver without difficulty and without any special effort to master its working being necessary.

In a shuttle-box as ordinarily constructed the swell is attached to the back of the box. In the present invention in order to use the shuttle-box swell in this position and to guide the picker by means of a rod arranged behind the shuttle-box, which in looms of the description in question is of great importance for accurate work, the swell is formed with a slot in which the waist or middle portion of the picker slides in such a way that both the swell and the picker can move independently of each other.

The invention will be fully described with reference to the accompanying drawing, in which one form of the invention is shown.

Figure 1, plan of right-hand shuttle-box provided with the invention; Fig. 2, transverse section through the slay and shuttle-box; Fig. 3, side view of the swell.

On the back 1 of the shuttle-box is pivoted on the pin 21 in the slay 19 the swell 2, which is provided with a slot 2^a. The waist 3 of the picker 8 extends the latter out and connects it with a guide-socket 5, which encircles the guide-rod 4 behind the back 1 of the shuttle-box. A slot 6 in the arm 3 serves to receive the picker-arm in underpick looms or to fasten the picker-strap in overpick-looms, so that the device can be used both for underpick and overpick weaving.

When the shuttle reaches the shuttle-box, it presses the spring-swell 2 outward, and the latter, by means of a nose or projection 7, Fig. 2, displaces a bell-crank lever 10 11, which is rotatable on a pivot 9, in such manner that the shoulder 12 of the lever 10 raises the forward extremity of the two-armed lever 13 14. When the slay moves forward, the raised extremity of the arm 14 of the two-armed lever 13 14 rides over a stop 15, which is a portion of the mechanism for throwing the loom out of gear. If, however, there is no shuttle in the box, the arm 14 is not raised. Then when the slay 19 moves forward the arm 14 engages the stop 15, carries it along with it, and brings the loom to a standstill at once. A blade-spring 16 presses downward upon a pin 17, attached to the vertical rod 18, and consequently also upon the arm 11 of the bell-crank lever 10 11, by means of which, through the swell 2, the shuttle is maintained in the box.

The swell is instrumental in stopping the loom when there is no shuttle in the box, while, conversely, after the shuttle has run into the box the "feeler" 20 can be actuated in such a way by the bar 18 that it is only pressed down upon the cop after the shuttle controlled by the swell has run properly into the box. If a shuttle has run properly into the shuttle-box and the swell 2 accordingly moves out, the rod 18 is lifted by the arm 11 of the bell-crank lever 10 11, and whenever the rod 18 is raised the feeler 20 moves down onto the weft-cop.

The swell being provided with a guide-slot for the picker, the usual guide-groove in the slay may be dispensed with, and the under side of the picker is made smooth without any projection. It is essential that the slot 2^a of the swell should be an accurate guide for the waist 3 of the picker, and consequently for the picker 8 itself, which can be accomplished without difficulty.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A shuttle-box for looms having a swell movable on said box and provided with a slot, and a picker having a part fitting and guided by said slot.

2. A shuttle-box for looms having a swell movable on said box and provided with a slot, a picker for said box and having the waist of said picker fitting and guided by said slot, and a guide-rod for the picker.

3. A shuttle-box for looms having a swell movable on said box and provided with a slot, and a picker having a part fitting and guided by said slot, in combination with a loom-stopping mechanism comprising a lever in engagement with the movable swell aforesaid.

4. A shuttle-box for looms having a swell movable on said box and provided with a slot, and a picker having a part fitting and guided by said slot, in combination with a loom-stopping mechanism comprising two levers, one of which is in engagement with the swell aforesaid and one of which has a projection which engages the other lever.

5. A shuttle-box for looms having a swell movable on said box and provided with a slot, and a picker having a part fitting and guided by said slot, in combination with a loom-stopping mechanism comprising two levers, one of which is in engagement with the swell aforesaid and other of which levers is temporarily held out of stopping position by lever first named.

6. A shuttle-box for looms having a swell movable on said box and provided with a slot, and a picker having a part fitting in and guided by said slot, in combination with a loom-stopping mechanism comprising a lever in engagement with the movable swell aforesaid, and with a pivoted feeler for said box and a part movable by the aforesaid lever and operating upon said feeler.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEF BIM.

Witnesses:

LOUIS JACOBI,

ALVESTO S. HOGUE.