

No. 669,339.

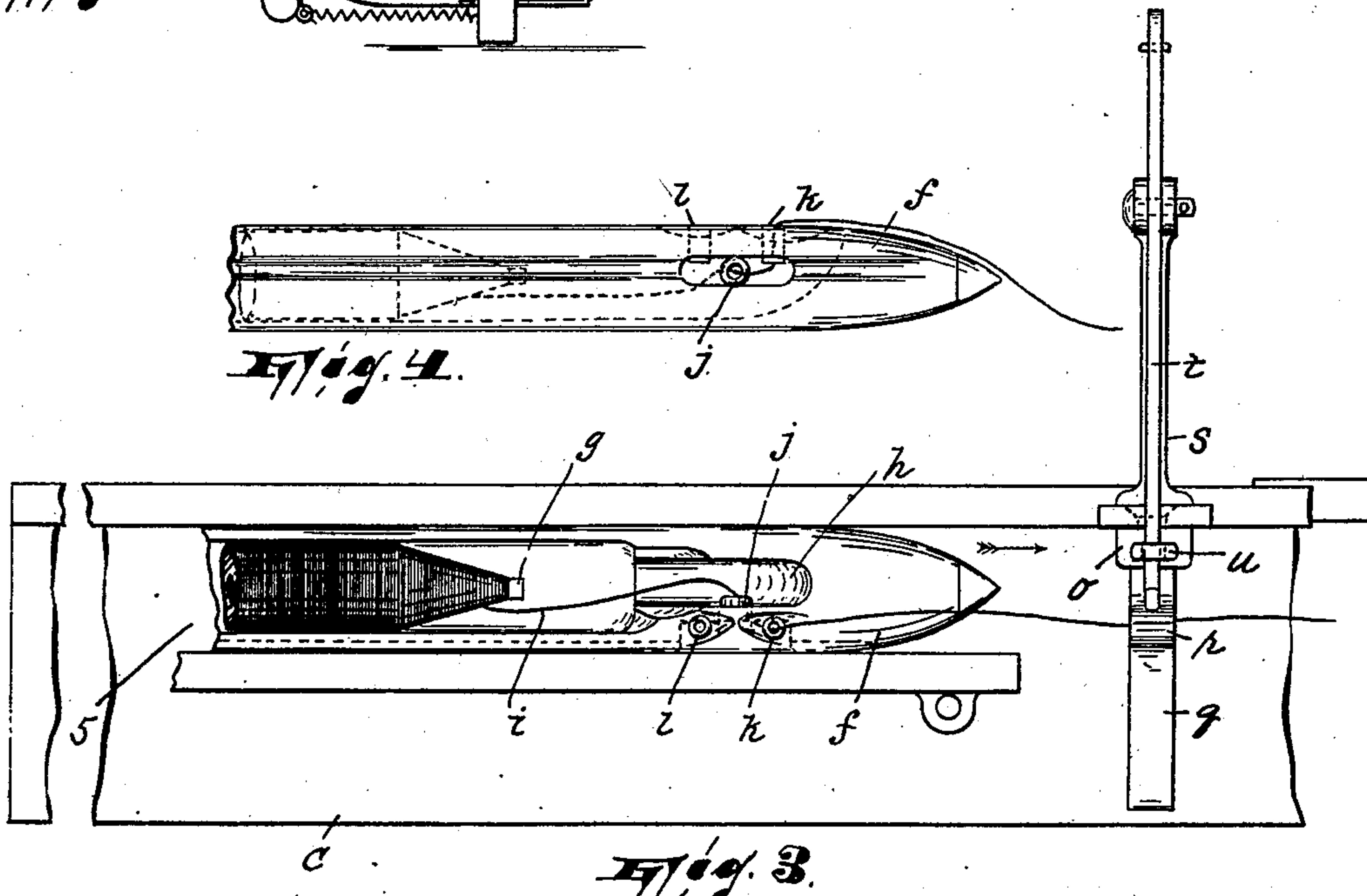
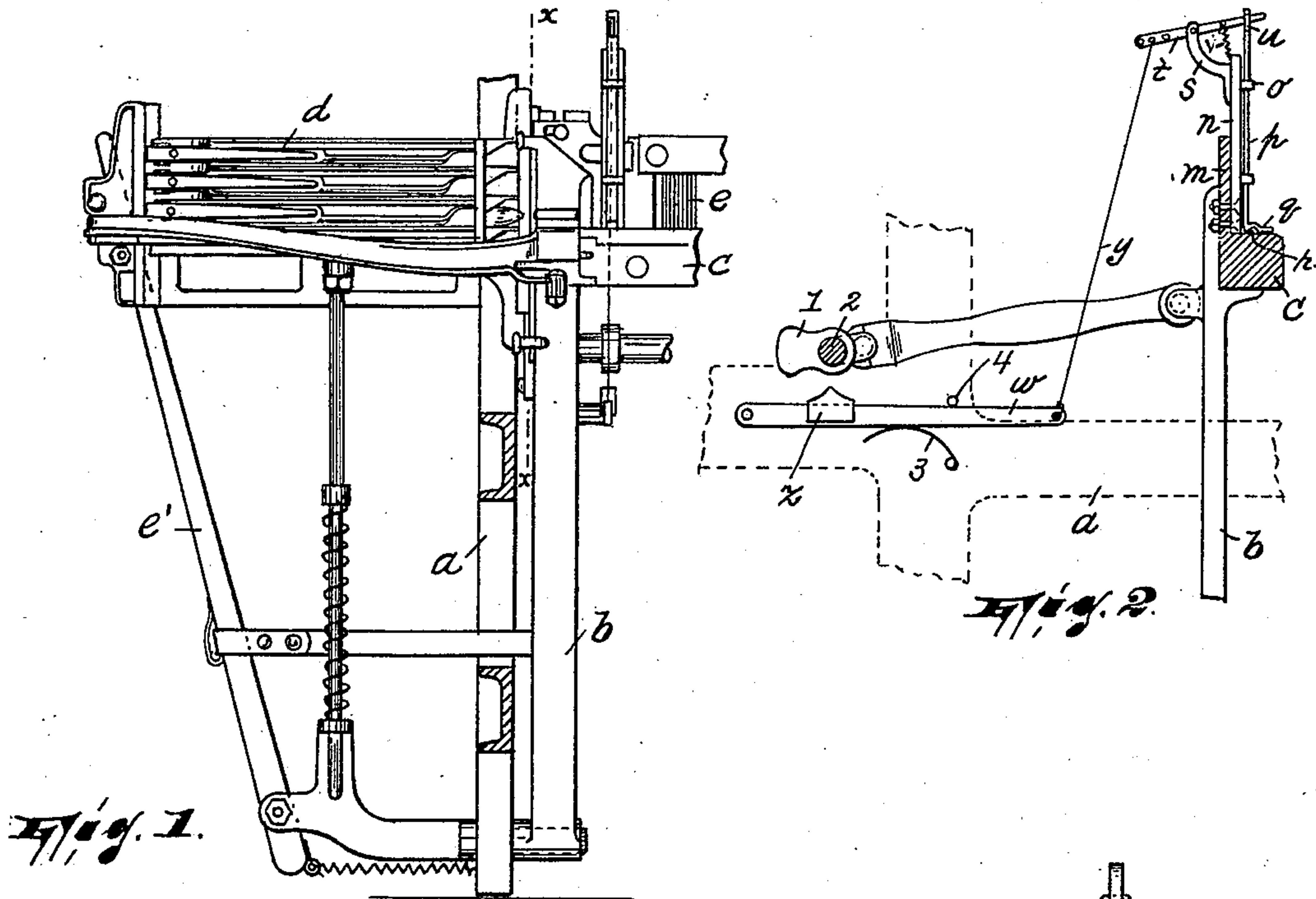
Patented Mar. 5, 1901.

C. FUCHS.

WEFT THREAD CONTROLLING ATTACHMENT FOR LOOMS.

(Application filed July 18, 1900.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

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WEFT-THREAD-CONTROLLING ATTACHMENT FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 669,339, dated March 5, 1901.

Application filed July 18, 1900. Serial No. 24,038. (No model.)

To all whom it may concern:

Be it known that I, CARL FUCHS, a subject of the Emperor of Germany, residing in Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Weft-Thread-Controlling Attachments for Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention relates to looms; and the object of the invention is to provide a loom with a shuttle having its thread-feed eyelet disposed in the top portion thereof, so that the possibility of the thread contacting with the sides of the shuttle-box, which become more or less soiled as the shuttle moves against them, is reduced, and to also provide, in combination with such a shuttle, means for holding the thread fed out of the shuttle in proper position after the shuttle enters its box and while the weft is being beaten up.

The invention consists in the means, constructed substantially as hereinafter described, for holding the thread in proper position after the shuttle has entered its box and also in the combination of such means with a shuttle having its thread-feed eyelet in its top portion.

The invention is fully illustrated in the accompanying drawings, wherein—

Figure 1 is a view in front elevation of the end portion of a box-loom. Fig. 2 is a vertical sectional view on the line *xx* in Fig. 1. Fig. 3 is an enlarged top plan view of a portion of the batten of a plain loom, showing a shuttle having its thread-feed eyelet in the top portion thereof and my thread-holding means disposed on said batten; and Fig. 4 is a view in side elevation of a portion of the shuttle.

In said drawings, *a* designates the loom-frame, in which are arranged in the usual manner the fulcrumed lay-swords *b*, carrying the batten *c* and reed *e*, the box mechanism *d*, and the picker-stick *e'*.

f denotes the shuttle, the same containing

the usual cop-holding quill *g* and having a recess *h* in one end thereof, through which the thread *i*, coming from the quill, is adapted to extend before passing through a thread-eyelet *j*. From this eyelet the thread may be extended through either of two eyelets *k l*, (arranged the one in advance of the other,) according as more or less tension on the thread is needed, it being observed that if the thread is passed through the eyelet *l* its course will be more indirect than if it is passed through the eyelet *k*.

To an upright *m*, extending from the back of the batten, is secured a standard *n*, having guides *o*, in which is movable a rod *p*, having a foot *q*, with a notch *r* in its under side formed, preferably, by bending the foot, said foot resting squarely upon the upper face of the batten. The standard carries a bracket *s*, in which is fulcrumed a lever *t*, which at one of its ends projects through a loop *u* in the upper end of the rod *p*. A spring *v* connects the said lever with the bracket, tending to force the rod *p* downwardly. The rear end of the lever *t* is connected with another lever *w*, suitably fulcrumed in the loom-frame by a flexible connection *y*, said last-named lever carrying a block *z*, adapted to be engaged by a tappet *1*, which is secured upon the main shaft *2* of the loom. The lever *w* is pressed upwardly by a spring *3*, being thereby normally held against a stop *4*.

In the operation of the loom, the tappet *1* being properly arranged upon the shaft *q*, as the batten swings back the tappet strikes the block *z*, depressing the lever *w* and also the rear end of the lever *t*, the result, of course, being the lifting of the rod *r*. The tappet continues in engagement with the block, thus maintaining the rod elevated until the shuttle has shot past the foot of the rod into its box, (either one of the boxes *d* or in the case of a plain loom the fixed box *5* on the batten,) whereupon the tappet leaves the block *z*, thus permitting the rod to drop. The action of the parts should be so timed that the rod will drop immediately after the shuttle enters the box. The notch *r* in the foot is so disposed as to be directly over the thread trailing from the shuttle, so that as the foot drops the thread extends under the notched portion of the foot, and so is kept in proper position on

the batten until the beating up occurs. After the batten has moved forward and the beating up has taken place when the batten returns the rod *p* is again elevated in the
5 same manner as before, so as to permit the shuttle to be shot across the batten in the other direction.

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

In a loom, the combination, with the main drive-shaft and with the batten operatively connected thereto, of a shuttle arranged on
15 said batten, a thread-holding device also arranged on said batten between the limits of movement of the shuttle and consisting of a

vertically-movable rod having a foot adapted to rest on said batten, guiding means for said rod mounted in the batten, a lever fulcrumed in said guiding means for movement in a ver- 20 tical plane and engaging said rod, a tappet arranged on said drive-shaft, another lever fulcrumed in operative proximity to said tappet, and operative connection between said levers, substantially as described. 25

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of July, 1900.

CARL FUCHS.

Witnesses:

JOHN W. STEWARD,
ALFRED GARTNER.