J. DORNAN.

Loom-Shuttles.

No. 156,337. Patented Oct. 27, 1874.

Fig. 1.

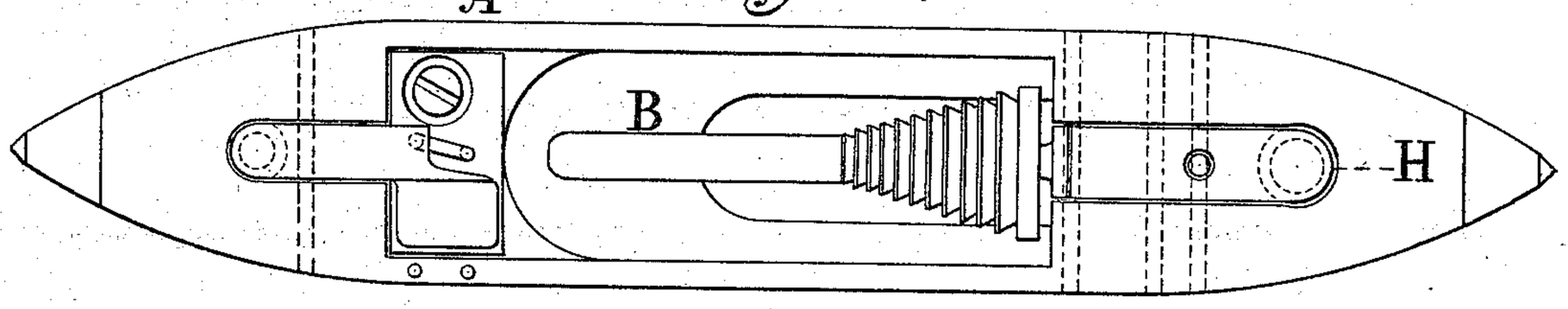


Fig. 2.

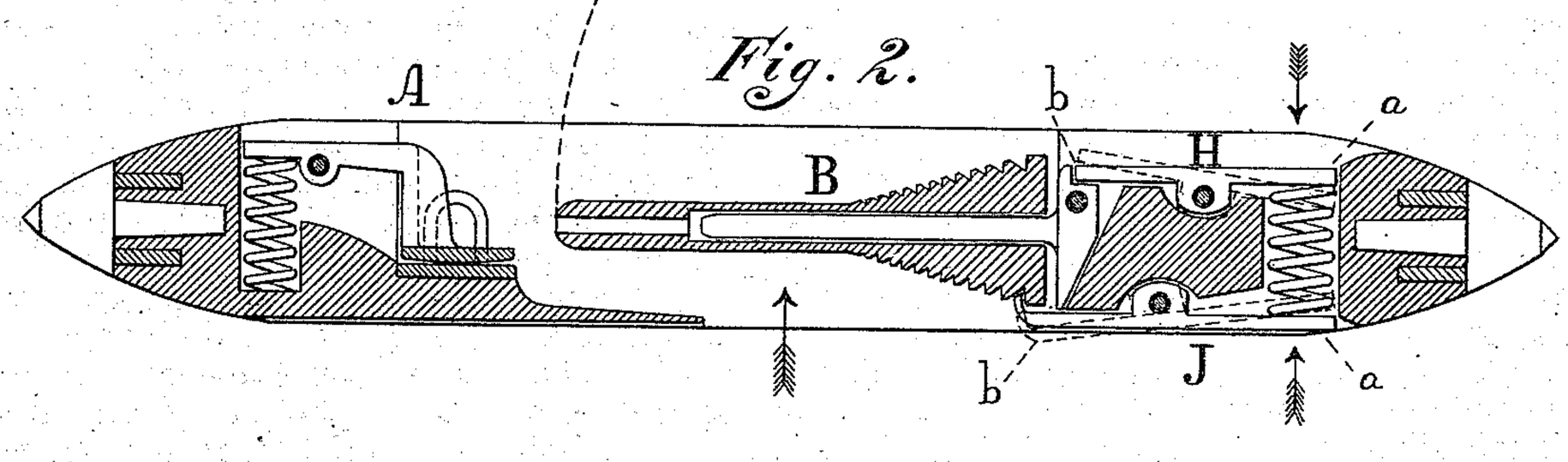
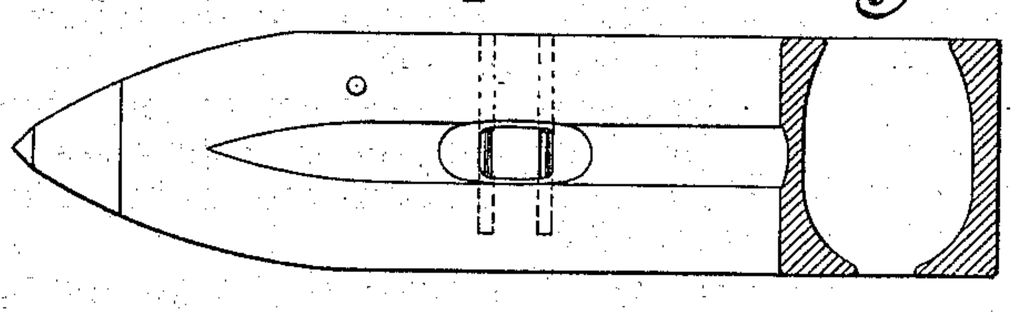


Fig. 3.



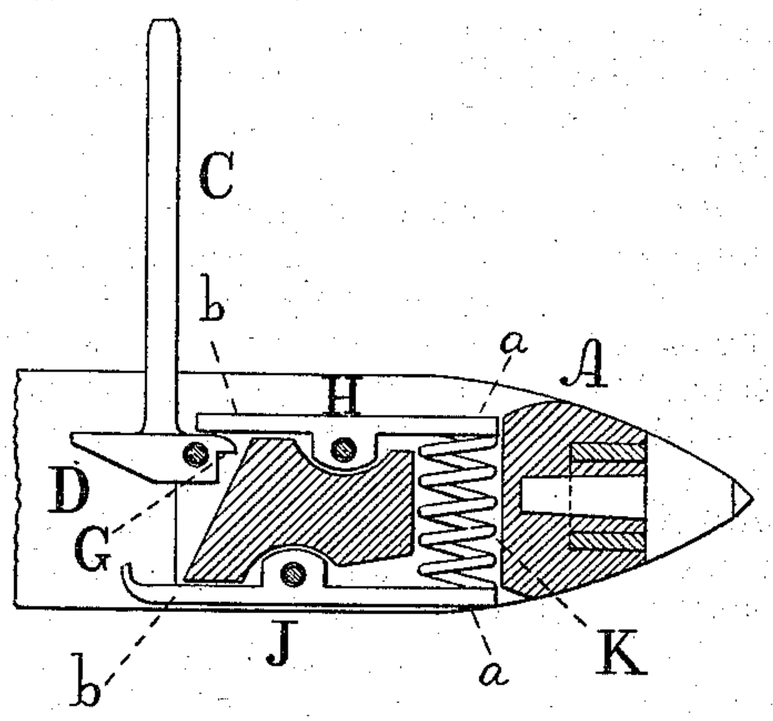


Fig. 4.

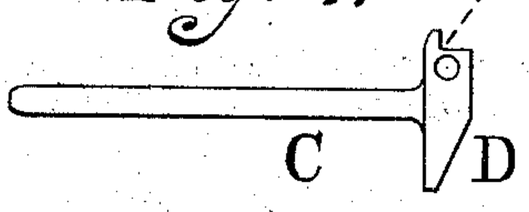


Fig. 5.

Fig. 6.

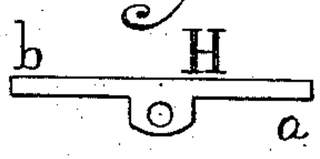
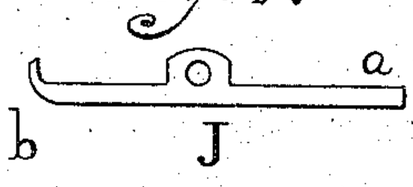


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN DORNAN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN LOOM-SHUTTLES.

Specification forming part of Letters Patent No. **156,337**, dated October 27, 1874; application filed May 29, 1874.

To all whom it may concern:

Be it known that I, JOHN DORNAN, of the city and county of Philadelphia, and the State of Pennsylvania, have invented a new and useful Improvement in Shuttles; and I do hereby declare the following to be a clear and exact description thereof, sufficient to enothers skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a top or plan view of the device embodying my invention. Fig. 2 is a central longitudinal vertical section thereof. Fig. 3 is a side view of one portion of the shuttle, and a longitudinal section of the other portion. Figs. 4, 5, 6, and 7 are views of detached parts.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in the arrangement, on opposite faces of the shuttle, of the catch that holds the tongue on which the bobbin is fitted, and the catch which holds the bobbin, whereby the parts will be firmly held, and the catches are convenient of access, and a single spring interposed between the two catches, for holding the latter in position.

Referring to the drawings, A represents a shuttle, and B the bobbin thereof, which may be of any well-known form and construction. C represents a tongue hinged to the shuttle, and on which the bobbin is fitted, the said tongue being connected to a head, D, through which passes the pin which forms the axis of the tongue. This head extends vertically in the shuttle, and one end is formed with a shoulder, G, against which is adapted to bear a catch, H, which is hinged to the shuttle, and extends longitudinally thereon. A longitudinally-arranged catch, J, is hinged to the shuttle beneath the catch H, and its inner end is adapted to engage with the grooves of the bobbin, as seen in Fig. 2, for preventing longitudinal movement thereof. K represents a spring, which is arranged in the shuttle between the outer ends *a* of the catches H J, and bears simultaneously against said ends of the catches in opposite directions, so that the inner ends *b* of both catches are pressed toward each other. The two catches H J are respectively arranged near the upper and lower surfaces of the shuttle, so as to be conveniently accessible.

When the bobbin is to be removed from the shuttle, the operator presses the outer end of the upper catch, H, thus elevating the inner end thereof, and clearing it of the shoulder G of the head D of the tongue C. The lower catch, J, may now be operated to be moved free of the groove of the bobbin; but both catches may be simultaneously operated to relieve the head of the tongue and groove of the bobbin. The bobbin may now be swung up, or made to assume a vertical position, in which condition it is readily slipped off of the tongue C. Another bobbin can now be fitted on the tongue C, and, by moving it down to a horizontal position, the catch H engages with the shoulder G of the head D, thus locking the tongue C, and preventing the rising of the bobbin, which otherwise would injure and break the warp-threads.

The longitudinal movement of the bobbin is prevented by the action of the lower catch, J, as has been stated, and thus the bobbin is firmly fixed in position.

It will be seen that the single spring K serves to hold both catches in position, and operates them simultaneously.

A long and powerful spring may thus be used; and the construction of the shuttle is more simple than if each catch was pressed by its own spring.

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

The combination, with the notched spindle-head, of the catch H and the bobbin-catch J, and the single spring K, the catches being arranged on opposite sides of the spindle-head, and the spring interposed between the two catches, substantially as and for the purpose set forth.

JOHN DORNAN.

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