

*G. Crompton,
Shuttle.*

Patented Nov. 9. 1869.

N^o 96,670.

Fig. 1.

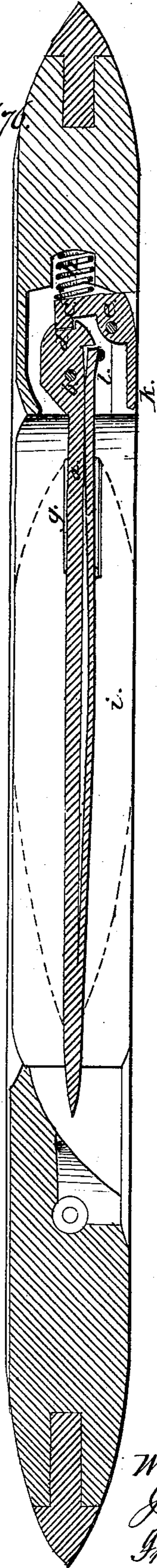
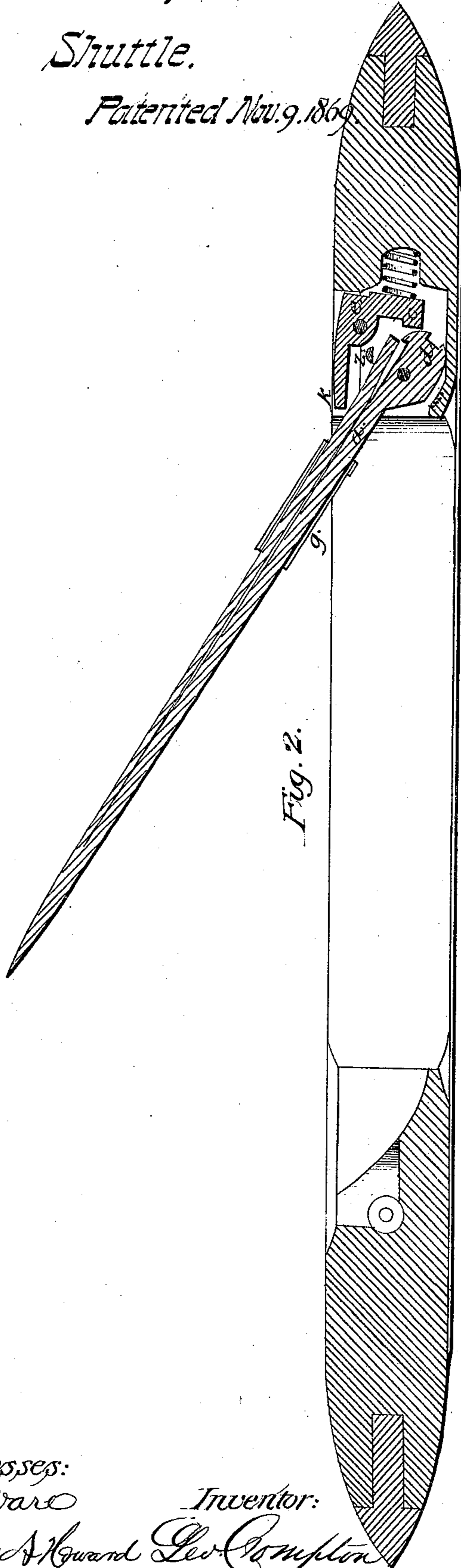


Fig. 2.



Witnesses:

Galvao

Frank A. Howard

Inventor:

Geo. Crompton

UNITED STATES PATENT OFFICE.

GEORGE CROMPTON, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN SHUTTLES FOR LOOMS.

Specification forming part of Letters Patent No. 96,676, dated November 9, 1869.

To all whom it may concern:

Be it known that I, GEORGE CROMPTON, of the city and county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Cop-Shuttles; and I do hereby declare that the following, viewed with the drawings, is a full, clear, and exact description thereof.

Figure 1 is a longitudinal section taken through the spindle-cop and the mechanism connected therewith. Fig. 2 is a similar view with the spindle in its elevated position.

Fig. 1 is a sectional view of a shuttle. The spindle *a* is pivoted on a pin, *b*, and is retained in its horizontal position by a bar, *c*, fitting into a notch of the spindle *d*. This bar and notch are kept in contact by the angular lever *e*, fulcrumed at *f* by the pressure of the spiral spring *h*. The spindle is split, and the upper portion terminates in an inclined elevation against a stationary pin, *l*, the action of which curves the upper portion, and is expanded, and keeps the cop *i* from sliding off the spindle. When it is desirable to raise the spindle to remove the tube *J* and mount a new cop, the operator presses the angular piece *e* at *k* against the spring, which releases the bar *c* from the notch *d* in the spindle. The elastic upper tongue of the spindle, by the pressure of its heel on the pin *l*, causes the spindle to par-

tially rise, which is a convenient position from which the operator can raise the spindle to its highest elevation and remove the cop-tube *J*, and mount a new cop. Without injury to the base of the spindle, the pressure of the spindle to its original and horizontal position re-engages the bar *c* with the notch in the spindle, thus completely locking it, while at the same time the pressure of the heel of the upper split or tongue of the spindle, by its pressure against the pin *l*, has produced a separation from the lower part of the spindle or ellipse, and expanded so much in the core of the cop as to secure it firmly thereon.

It will be thus seen that in this shuttle a great desideratum is met, viz: the absolute security of the spindle from rising to catch the warp-threads, and the immovability of the cop on the spindle.

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

The combination of a locking-device, substantially as described, with an expansive split spindle and spindle-head, for the purpose set forth.

GEO. CROMPTON.

Witnesses:

J. A. WARE,

FRANK A. HOWARD.