

W. S. LAYCOCK.
Improvement in Looms for Weaving Hair-Cloth.
No. 132,014. Patented Oct. 8, 1872.

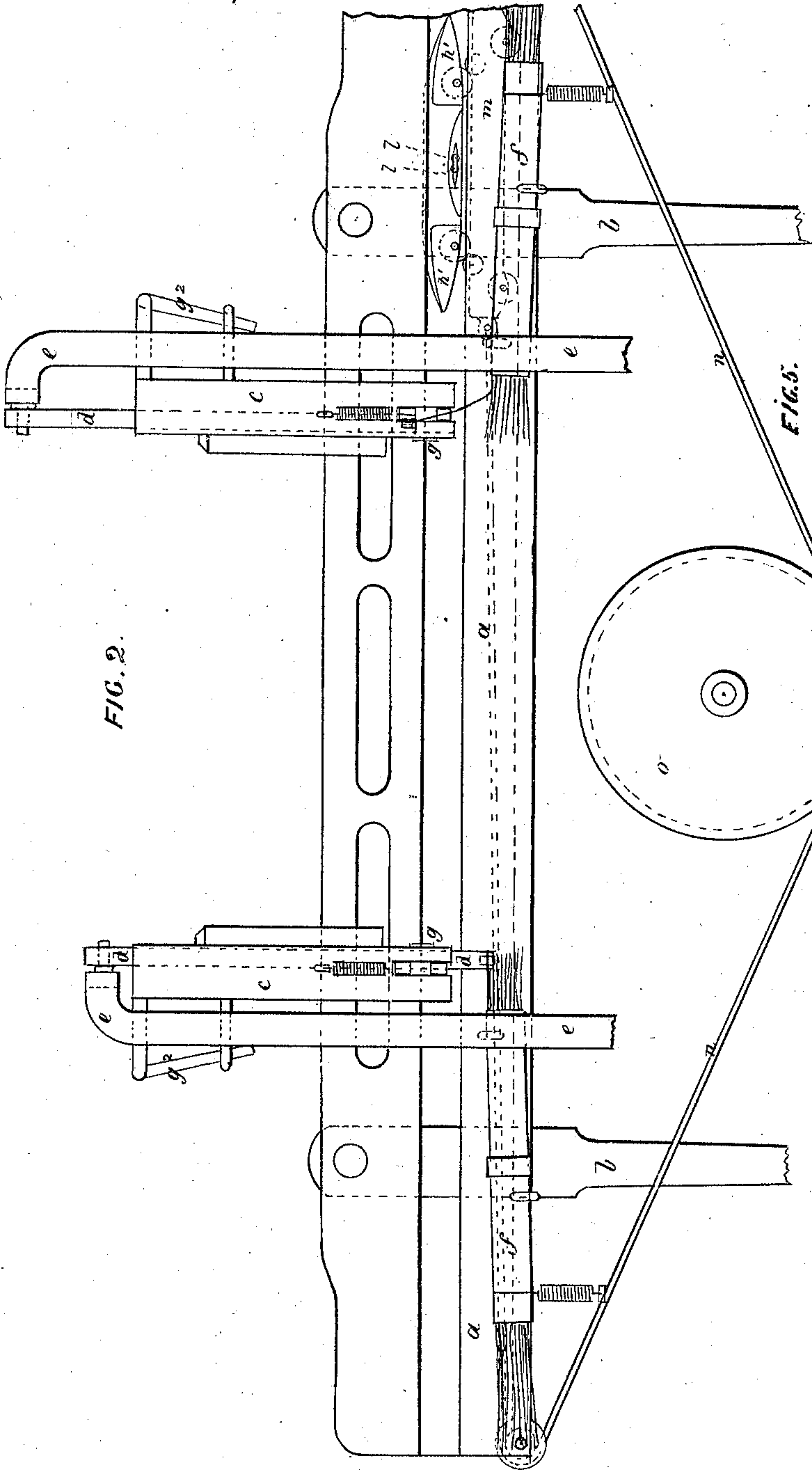


FIG. 2.

FIG. 5.

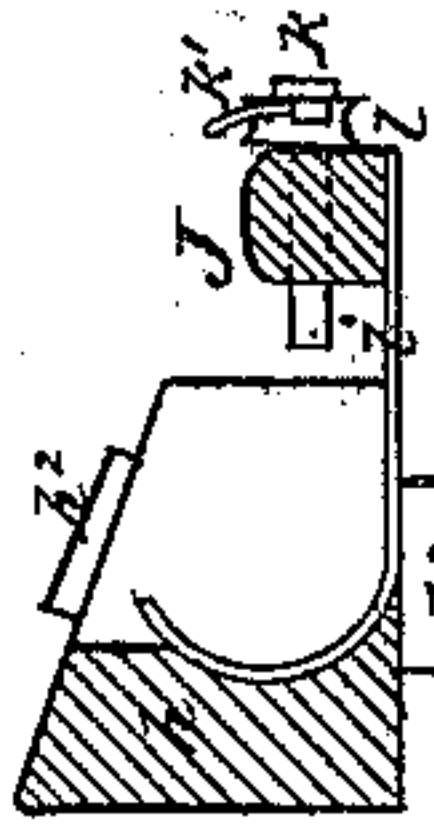


FIG. 4.

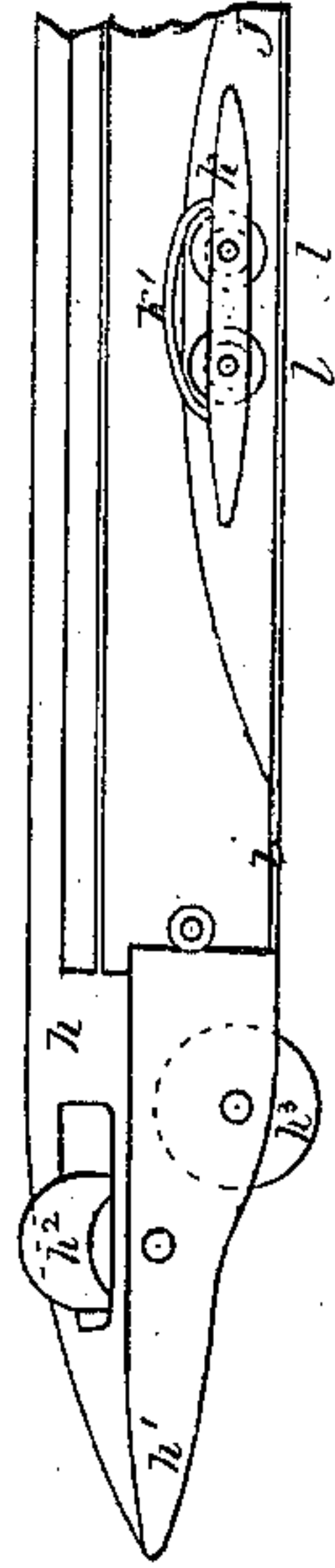


FIG. 3. half size.

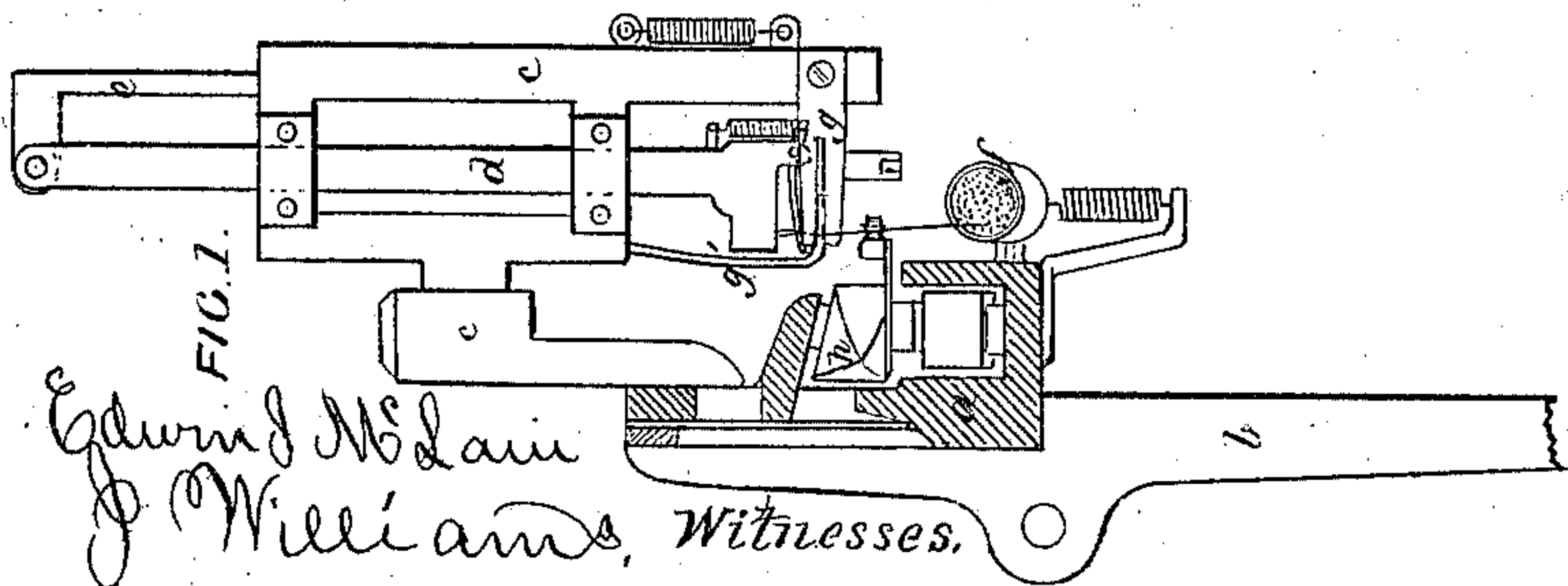
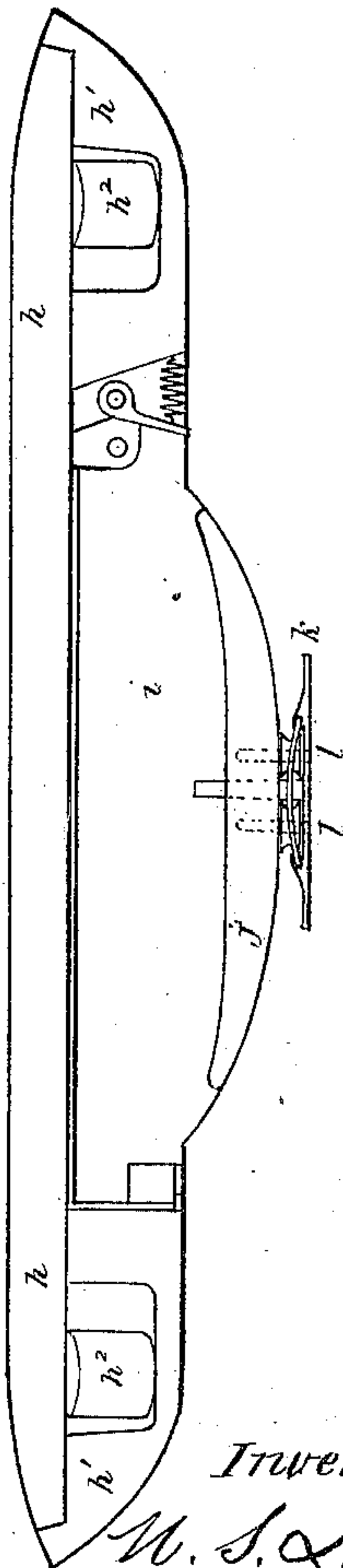


FIG. 1.

Inventor.

W. S. Laycock.

By *Wm. H. C. Atty*

UNITED STATES PATENT OFFICE.

WILLIAM SAMUEL LAYCOCK, OF SHEFFIELD, ENGLAND.

IMPROVEMENT IN LOOMS FOR WEAVING HAIR-CLOTH.

Specification forming part of Letters Patent No. 132,014, dated October 8, 1872.

To all whom it may concern:

Be it known that I, WILLIAM SAMUEL LAYCOCK, of Portobello Place, Sheffield, in the county of York, in England, have invented certain new and useful Improvements in Machinery for Weaving certain kinds of Fabrics; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawing forming part of this specification.

My invention is applicable to those looms in which the weft is of horse-hair, or other material in short lengths; and it consists in the application of certain parts to the shuttle, which parts catch hold of the weft and deposit it in the shed.

Description of the Drawing.

Figure 1 is an end elevation, and Fig. 2 a front elevation, of part of a loom particularly adapted for weaving horse-hair, to which my improvements are applied.

The picking motion and the mechanism for working the lay or batten are supposed, in this instance, to be constructed in the manner described in the specification of Letters Patent granted to James Lyall, in England, on the 26th day of March, 1868, No. 1042, but my improvements are equally applicable to other looms.

Figs. 3, 4, and 5 are three detached views of my improvements applicable to shuttles.

In Figs. 1 and 2, *a* is the lay or batten, and *b* the lay-swords. To the lay or batten *a* are fixed the tubes *f* containing the bunches of horse-hair and the weft-selectors, which form no part of my present invention, and are only shown here to illustrate the action of my improved shuttle. Each weft-selector consists of a frame, *c*, in which the upright *d* is moved up and down by the lever *e*, actuated by a cam on the second motion-shaft of the loom, or otherwise. At the lower end of each upright are the needle, lever, and spring, forming the nipper that selects the single horse-hair out of the bunch, as described in the specification of Letters Patent granted to me in America on the 13th day of December, 1870. To each selector-frame is also fixed a slotted plate, *g*,

which, in combination with the feeler *g*¹ and the tumbler-catch *g*², forms a weft stop-motion, which comes into operation when the lay recedes from the fabric. My improvements applicable to the shuttle are shown in plan in Fig. 3, in front elevation in Fig. 4, and in section in Fig. 5. The shuttle consists of a back piece, *h*, with ends *h*¹, and a bottom plate, *i*, to which is fixed the front rib *J*, which parts are made as usual. In this front rib is fixed the guard *k*, and between this guard and the rib *j* are two small grooved rollers, *l l*. The guard *k* is also provided with a curved wire, *k'*, to hold the horse-hair in the grooved rollers *l*, and to prevent the warp rubbing against them when the warp closes before the shuttle has got out of the shed. The shuttle is provided with upper rollers *h*², which run against the under side of the cover of the shuttle-race and with other rollers, *h*³, which rest upon the shuttle-carriage *m*, shown in Fig. 2, and this shuttle-carriage is traversed to and fro in the lay or batten *a* by the cord *n* and pulley *o* in the manner described in the patent of James Lyall, above referred to. The drawing, Fig. 2, represents the right-hand selecting instrument up, and the horse-hair caught hold of by it is held in a slanting position from the nipper to the end of the tube *f*. The shuttle is also shown at the right-hand end of the lay or batten ready to commence its traverse to the other side of the loom. When the shuttle, in traversing, brings one of the rollers *l* near the selected horse-hair it is guided into the groove of the roller by the guard *k*, and curved wire *k'*, and as the traverse of the shuttle continues while the end of the selected horse-hair is held in the nippers, it is evident that the shuttle draws the horse-hair out of its bunch in the tube *g* and deposits it in the shed, the nippers of the right-hand selector being opened as soon as the shuttle has arrived near the left-hand selector to release the horse-hair. The left-hand selector is shown down in Fig. 2, and as soon as the shuttle has passed it is raised to lift the end of a horse-hair, and to hold it while the shuttle returns.

Having thus stated the nature of my inven-

tion, and described the manner of performing the same, I wish it to be understood that what I claim herein as new, and desire to secure by Letters Patent, in looms for weaving horse-hair and certain other fabrics, is—

The shuttle provided with the rollers *l* and guides or guards *k k'*, by which the weft is drawn out of the tube *f* or weft-holder, and

deposited into the shed, as shown and described.

In testimony whereof I have hereunto set my hand before two subscribing witnesses.

W. S. LAYCOCK.

Witnesses:

H. B. BARLOW, *Manchester.*

J. W. APPLEBY, *Manchester.*