(No Model.)

A. WAGNER.

SWIVEL LOOM.

No. 473,563. Patented Apr. 26, 1892.

FIG. 1.

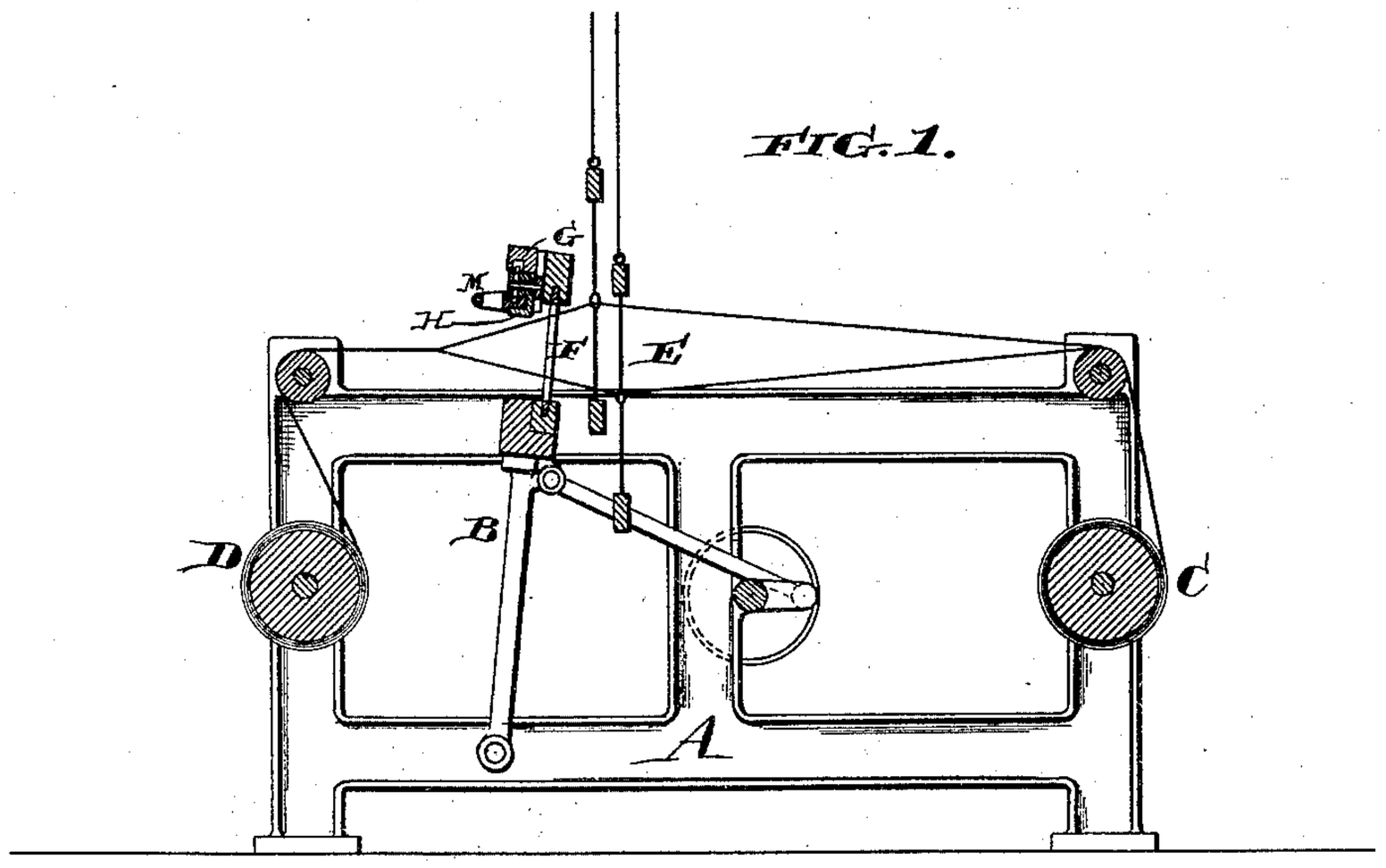


FIG. 2.

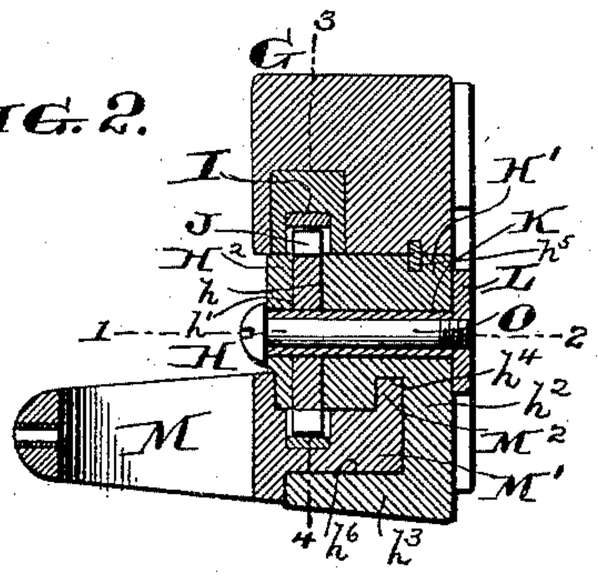


FIG. 3.

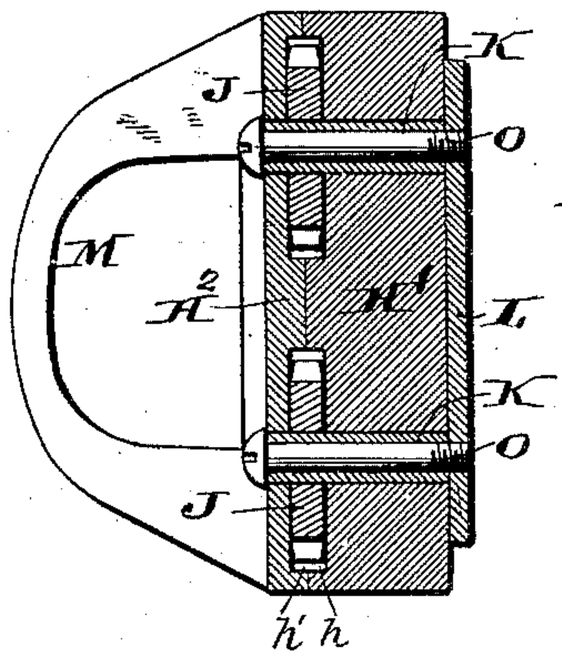
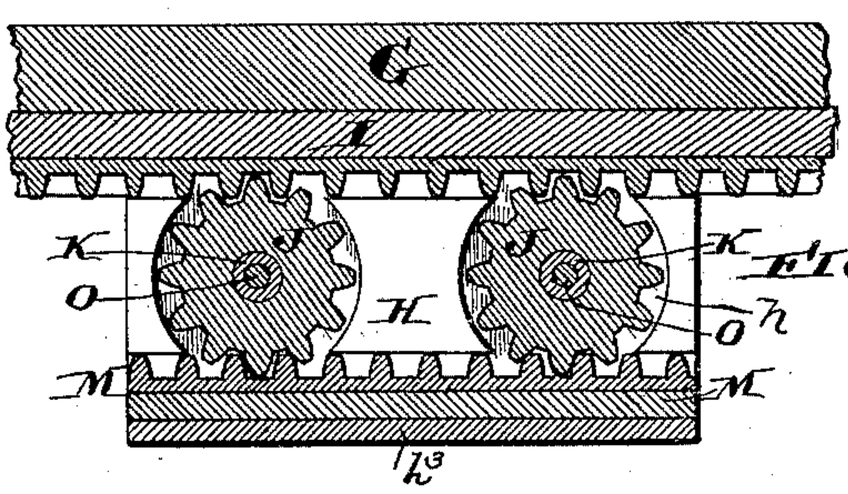


FIG. 4.



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UNITED STATES PATENT OFFICE.

AUGUST WAGNER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO SCHAUM & UHLINGER, OF SAME PLACE.

SWIVEL-LOOM.

SPECIFICATION forming part of Letters Patent No. 473,563, dated April 26, 1892.

Application filed May 18, 1891. Serial No. 393,218. (No model.)

To all whom it may concern:

Be it known that I, AUGUST WAGNER, of the city and county of Philadelphia, State of Pennsylvania, have invented a certain new and useful Improvement in Swivel-Looms, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the construction of the blocks or carriers in which swivel-shuttles are carried and which are attached in series to a shuttle-carrying beam or batten in swivel-looms—such, for instance, as that shown and described in the patent to Joseph Wadsworth, No. 338,891, of March 30, 1886.

The object of my present invention is to provide an improved shuttle-carrying block for such machines.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a loom, showing the position, with regard to the shed and the reed, of the swivel-shuttles and the beam which carries them. Fig. 2 is a cross-sectional view through my improved shuttle-carrying block, the shuttle, and the beam to which it is attached, taken through one of the tubes K; Fig. 3, a cross-sectional view taken on the line 1 2 of Fig. 2; Fig. 4, a cross-sectional view taken on the line 3 4 of Fig. 2.

A is the frame of the loom; B, the lay; C, the warp-beam; D, the cloth-roll; E, the shed; F, the reed; G, the swivel-batten beam, or beam to which the shuttle-carrying blocks are attached. This beam in practice is intermittently moved upward and downward or upward, downward, and sidewise, as described in the Wadsworth patent mentioned above. In the present case I have not thought it necessary to illustrate the mechanism for actuating this beam, as it forms no part of the present invention.

H is the shuttle-carrying block, formed and adapted to carry a horizontal or substantially horizontal shuttle. It is made up of two parts—to wit, the part H′, the face of which is provided with circular recesses h h and the back of which is formed with a downwardly-extending flange h^2, from the end of which extends a horizontal flange h^3, said flange extending to or substantially to the level of the face of part H′ and inclosing the groove h^6, at the back of which is formed the upwardly-extending communicating groove h^4. The said part H′ is made from a single piece of boxwood or similar material, and the remaining part of the shuttle-carrying block consists of the piece H², adapted to cover the face of the part H′ and having in it recesses h', corresponding and adapted to register with recesses h of the part H′.

J J are pinions which are placed in the chambers made up of the adjacent recesses h and h' and the teeth of which extend above the top of the block and down into the groove h^6. As shown, the pinions are placed on hollow tubes K, which extend through the parts H′ and H², and the said parts are held together by screws O, the heads of which rest against the face of the part H² and the threaded ends of which screw into the clamps L, which extend along the back of the part H′. The blocks are secured to the beam G by means of clamps L, which clamps are firmly secured to the backs of the blocks and are provided with an upward extension, which lies against the side of beam G and is secured to it by screws or similar devices.

h^5, Fig. 2, is a feather extending into registering grooves in the block H and beam G, the use of which is simply to properly align the blocks with the beam.

I is a rack movable in the slot in beam G, the teeth of which rack engage the projecting teeth of the pinions J.

M is the shuttle, which is provided with an extension M′ M², which fits neatly in the grooves h^6 h^4, and in the extension M′ is formed a rack end, which is engaged by the teeth of the wheels J. The mode in which the movements of the rack I throws the shuttle M from one carrying-block to the one adjacent is familiar and need not be further described.

By the above-described construction of the blocks which carry the shuttles it will be seen that each one is independent of the others attached to the beam and is secured together independently—that is to say, its parts are attached together by means independent of those which attach the whole block to the beam—and that each block can be separately removed from the beam by simply detaching

the clamp L, which extends up alongside of the beam in a position where it can readily be reached and easily attached and detached. In addition to these features the construction of the shuttle-carrying block of the two peculiarly-formed pieces H′ and H² and the spur-wheels secured between them is at once simple, cheap, and durable.

The device illustrated in the drawings for attaching two or more parts making up a shuttle-carrying block together is, I believe, new with me, but is not specifically claimed in this case for the reason that it forms in part the subject-matter of another application for Letters Patent filed by me May 18, 1891, Serial No. 393,217.

It will of course be obvious that the whole block H may be made of a single piece of wood and the grooves or recesses $h\ h'$ cut through the solid material, and equally of course said recesses may be formed entirely in either part H′ or H² instead of partly in each. The construction illustrated in these respects is given simply as what I consider best, and, save where expressly limited in claims, must not be understood to relate to the specific arrangement shown.

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

1. The independent shuttle-carrying blocks formed with downwardly-extending flanges h^2 and horizontal flanges h^3, said flanges being made integral with the blocks and inclosing the L-shaped recesses $h^4\ h^6$, and said blocks having also vertical recesses formed in their fronts, in combination with pinions J, journaled in the vertical recesses and having their teeth extending into groove h^6 and above the top of the block.

2. The shuttle-block H, consisting of a part H′, having a downwardly-extending flange h^2, with a horizontal flange h^3 extending from its bottom and inclosing groove h^6, a groove h^4 at the back of groove h^6, and recesses h in its front face to receive pinions J, said part being formed of one piece, in combination with a face-plate H², grooves or recesses $h\ h'$ being formed between parts H′ H² and pinions secured in said recesses $h\ h'$ and extending into groove h^6, all substantially as and for the purpose specified.

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