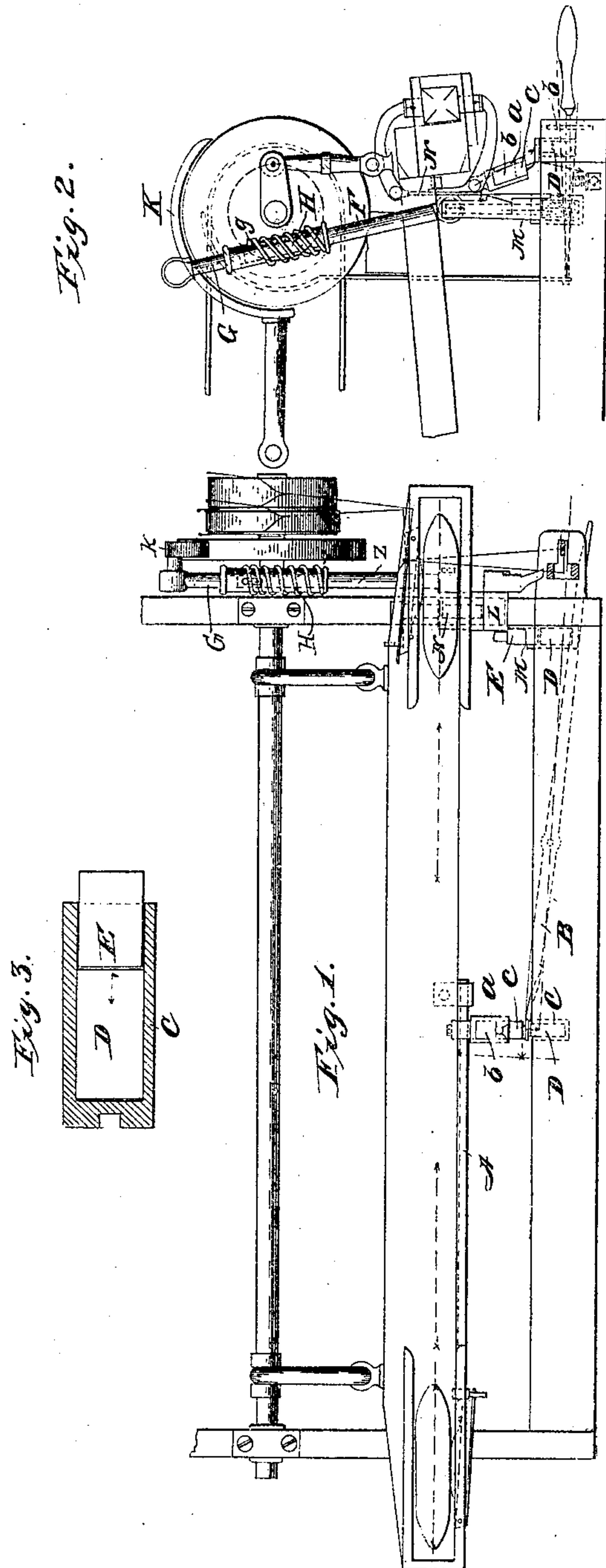


J. SALSURY.
LOOM.

No. 81,113.

Patented Aug. 18, 1868.



Witnesses:

(H. B. Ymout)
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Inventor:

John Salsbury

UNITED STATES PATENT OFFICE.

JOHN SALSURY, OF CENTRAL FALLS, RHODE ISLAND.

IMPROVEMENT IN LOOMS.

Specification forming part of Letters Patent No. 81,113, dated August 18, 1868.

To all whom it may concern:

Be it known that I, JOHN SALSURY, of Central Falls, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Looms; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a top view of a loom with my improvements attached. Fig. 2 is an end elevation of the same. Fig. 3 is a view of a part of my invention detached.

The object of my improvements is to increase the durability of a loom by materially lessening the sudden shock and strain which the various parts receive whenever the shipping mechanism is brought into instant use by reason of the loom failing to perform its work in a proper manner.

To ship the belt, whenever it shall become necessary to stop the loom, two distinct mechanisms have heretofore usually been employed—the one consisting of a protecting-pin of metal, which, by means of a hole through the same, is slipped upon a rod which runs along the front of the lathe, and whenever the shuttle, from any cause, fails to reach its box at the proper time, it becomes slightly elevated, and strikes with great force against the end of the bar fastened to the breast-beam, which, in turn, moves the shipper and suddenly stops the machine, in a manner already well understood. The other consists of a “frog” or “shoe” attached to the frame at one end of the loom, and connected by a rod to the brake upon the balance-wheel, whereby, when made to act by the same causes as the protecting-pin already referred to, a small rod upon the under side of the lathe, slightly flattened at one end, becomes sufficiently lowered to strike against the frog or shoe and move it forward, which moves the shipper and stops the loom.

Both methods being in common use, and familiar to those acquainted with this class of machinery, I do not deem it necessary to enter into a particular description of the same, but only to give such explanation as will enable me easily to connect with them my improvements, hereinafter to be described. In both methods the lathe is allowed to strike with great force whenever the shipping mechanism

is brought into use, the blow varying in power, according to the speed at which the machine is running, from eighty to one hundred and fifty pounds. These blows, occurring frequently, as they do, (it being necessary to stop the machine many times during the day,) are a source of great damage to the loom itself, racking and straining it in every part, and often seriously damaging the cloth, the blow being of sufficient force, whenever the shuttle is left in the “shed,” to break off the threads for a space corresponding to its length. To arrest the force of these blows, and thereby save the machine and cloth from the damage thus sustained, is the object of my improvements, which I will now proceed to particularly describe.

Upon the rod A, I place a protecting-pin, *a*, in the ordinary way, but differing in its construction from any heretofore in use, having its interior drilled out to receive a plug of rubber, *b*, (or a spiral spring, both being equally effective in their operation,) about half the length of the hole thus made, leaving sufficient room to insert the point of the pin *c*, the rear end of which rests against the rubber packing *b*, so that whenever the pin becomes elevated and strikes against the bar B the point of the pin is driven back against the rubber *b*, which destroys the force of the blow. I also produce the same result by boring a hole in the breast-beam, behind the end of the rod B, and inserting therein a barrel, C, Fig. 3, containing a packing of rubber, D, and a piston, E, one end of which rests against the rubber, the other protruding from the barrel. The barrel C may, however, be discarded, and the packing D and piston E may be inserted in the hole bored in the breast-beam. This improvement, combined with a protecting-pin of the old class, produces the same effect as my improved pin above described; both, however, may be used in combination.

In applying this principle to looms which project at the end, I sever the connecting-rod F, which connects the frog or shoe L with the brake K, and reconnect it with the cylinder H, which is attached to one part of the rod by means of a screw. This cylinder is provided with a slot, running lengthwise, and surrounded with a spiral spring. The other part of the rod is then introduced into this cylinder, and

a pin, *g*, Fig. 2, inserted therein. I also attach to the frame a small barrel, *M*, Fig. 1, provided with a rubber packing and piston, as in Fig. 3, already described.

The operation of the parts last described is as follows: The shuttle failing to be in its box at the proper time, the rod *N* becomes lowered and strikes against the frog or shoe, and as it moves it forward toward the shipper, the force of the blow is greatly reduced by the resistance of the spring upon the cylinder *H* and the rubber packing in the barrel *M*. The rubber packing may be used in the cylinder *H* in place of the spiral spring.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The protecting pin *a*, constructed as described, with a rubber packing, *b*, or spiral

spring, and slide or pin *c*, substantially as and for the purposes specified.

2. The combination of the barrel *C*, Fig. 3, rubber packing *D*, and piston *E*, in combination with the breast-beam, in the manner and for the purposes specified.

3. The combination of the rod *F*, cylinder *H*, and spiral spring or rubber packing, constructed and arranged substantially as described, for the purposes specified.

4. The combination of the device shown in Fig. 3, the frog or shoe *L*, and the breast-beam, in the manner described, and for the purposes specified.

JOHN SALSURY.

Witnesses:

W. B. VINCENT,
JOHN L. DALE.