T. Mayor.

Spinning Flyer.

No. 57,938. Patented Sept. 11, 1866.

Fig. 1

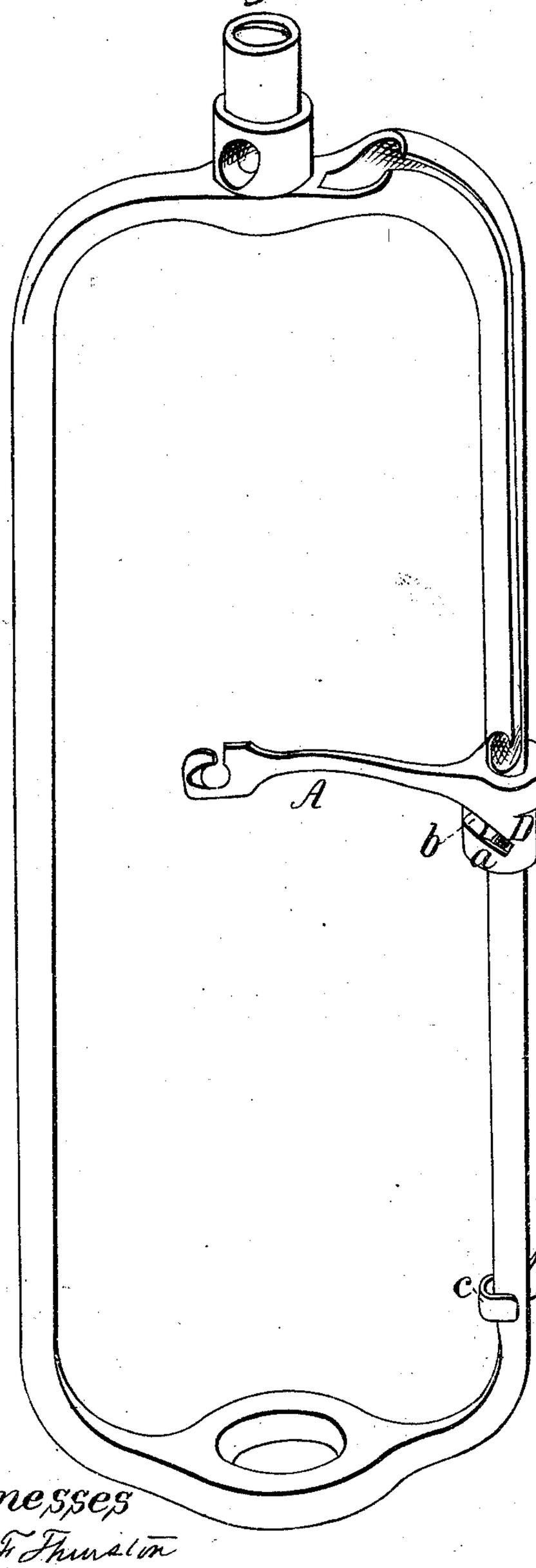


Fig. 3

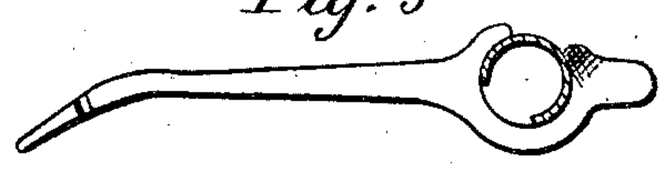
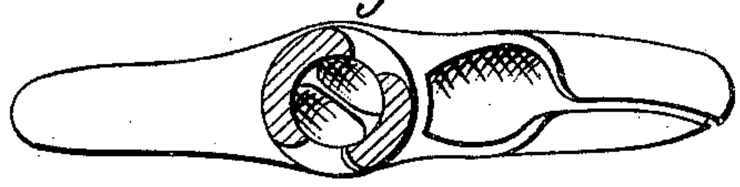


Fig. 2



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS MAYOR, OF PAWTUCKET, RHODE ISLAND.

IMPROVEMENT IN FLIERS FOR ROVING-FRAMES.

Specification forming part of Letters Patent No. **57,938**, dated September 11, 1866.

To all whom it may concern:

Be it known that I, THOMAS MAYOR, of the town of Pawtucket, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in the Presses for Fliers for Roving-Frames; 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 view in perspective of the flier, with my improved presser attached. Fig. 2 is a view, in section, through the neck of the flier, showing also in perspective the mouth of the delivery-tube. Fig. 3 is a side view of the presser.

The flier, which is represented in the accompanying drawings, Fig. 1, embodies the improvements for which other Letters Patent have been granted to me bearing date March 21, 1865. As the improved presser, however, which is the subject of this patent, may be used in connection with other fliers not containing my improvement, I will proceed to describe it separately.

The office of the presser is to deliver the yarn, as it is twisted by the flier, to the bobbin upon which it is to be wound, the bobbin being placed upon a spindle, arranged in connection with the traverse rail so as to be moved upward and downward between the sides of the flier, around which the latter whirls.

It is necessary that the delivery end of the presser should bear against the bobbin, and at the same time to be capable of being readily moved away from the same, to allow of the removal of the bobbin when full, or to repair a break in the yarn. Accordingly, pressers have heretofore been made with a spring, variously arranged, the tension of which will cause the arm A to bear against the bobbin, the arm itself being attached to the side of the flier by the rod B, and hinge-connections C, substantially as shown in Fig. 1, with the exception of the inclined slot *a*, and pin *v*, presently to be described.

It has also been essayed to substitute the action of the gravity of the presser in place of the spring, and for this purpose an inclined plane has been used, located upon the side of the flier, upon which the foot of the rod B rests, the tendency of which is to cause the presser, by its own weight, to bear against the bobbin.

Both these arrangements are attended with objections. There is constant occasion for the attendant upon one of these roving-frames to move the presser-arm A away from the bobbin, not only to insert a fresh bobbin or remove a filled one, but, whenever the yarn breaks, to repair the same. In case of the use of a spring, this frequent backward movement of the arm tends to weaken or to break it, especially as in the hurry of the operation the operator brings it back with a sudden jerk. So also in the case of the inclined plane, located at the foot of the rod B. It frequently happens that an unnecessary delay in the operation of the entire machine is caused by the movement of the presser so far from the bobbin as to throw it off the apex of the inclined plane, or that in the event that a stop is inserted in the side of the flier, to limit the extent of motion of the presser, the rod B is often torsionally strained by reason of the great extent of leverage, so that the delivery end of the arm A, when returned to place, will not bear against the bobbin as it should do. These objections, although apparently of little importance in theory, are nevertheless serious disadvantages in practice, as the aggregate amount of delays and loss of time occasioned by these causes, in a mill of average size, having many thousand of these fliers in operation, will amount to a large percentage upon the whole time for which the same machines would otherwise be able to run.

My improvement consists in furnishing the collar of the presser-arm A, where it is connected with the side of the flier, with a shoulder, D, in which is cut an inclined slot, *a*. I also insert in the side of the flier a stud-pin, *b*, to enter this slot, which serves both for a fixed surface to elevate the presser-arm as it is moved away from the bobbin, so that it will have the tendency to return to its first position by the action of the gravity of the parts, and as a stop to limit the extent to which the presser-arm can be moved.

It will be seen that this improvement combines the advantages of a presser which shall bear against the bobbin with the constant

force of gravity, while it removes the liability of any derangement of the apparatus in case the operator puts back the presser with a jerk, for the location of the stop at the nearest practicable point to the end of the delivery-arm A will involve the necessity of bending the arm A itself, in order to arrange its working.

I do not claim, broadly, causing the arm of a presser to bear by its own weight against a bobbin, by the use of an inclined plane, in combination with such presser; but

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

Forming upon the shoulder of the presser to a flier an inclined plane, *a*, and combining the same with a stud-pin, *b*, or other fixed stop, in the side of the flier, substantially as described, for the purposes specified.

THOMAS MAYOR.

Witnesses:

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