

No. 30,948.

PATENTED DEC. 18, 1860.

A. PARKINSON.
LOOM.

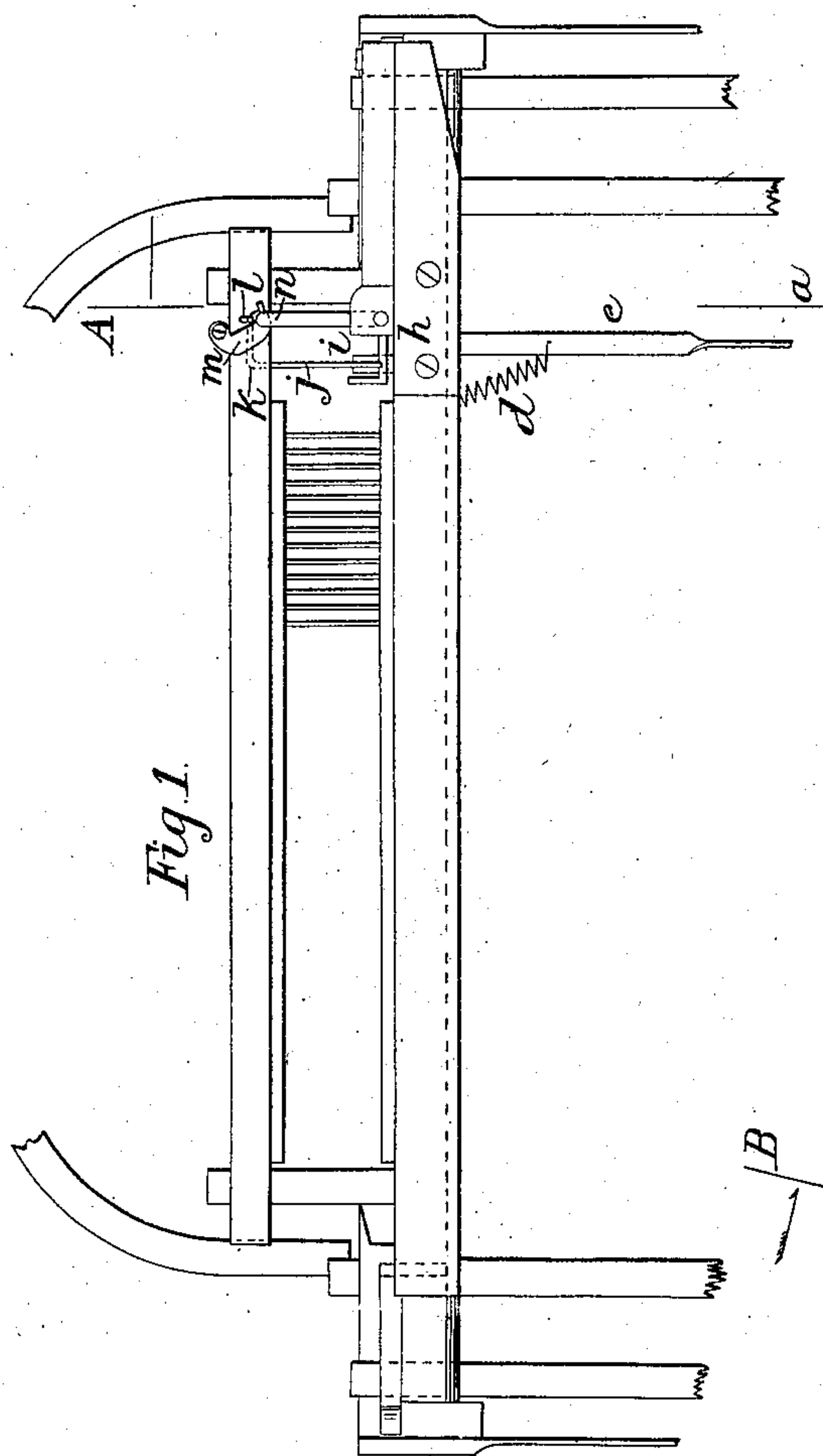


Fig. 3. B, b.

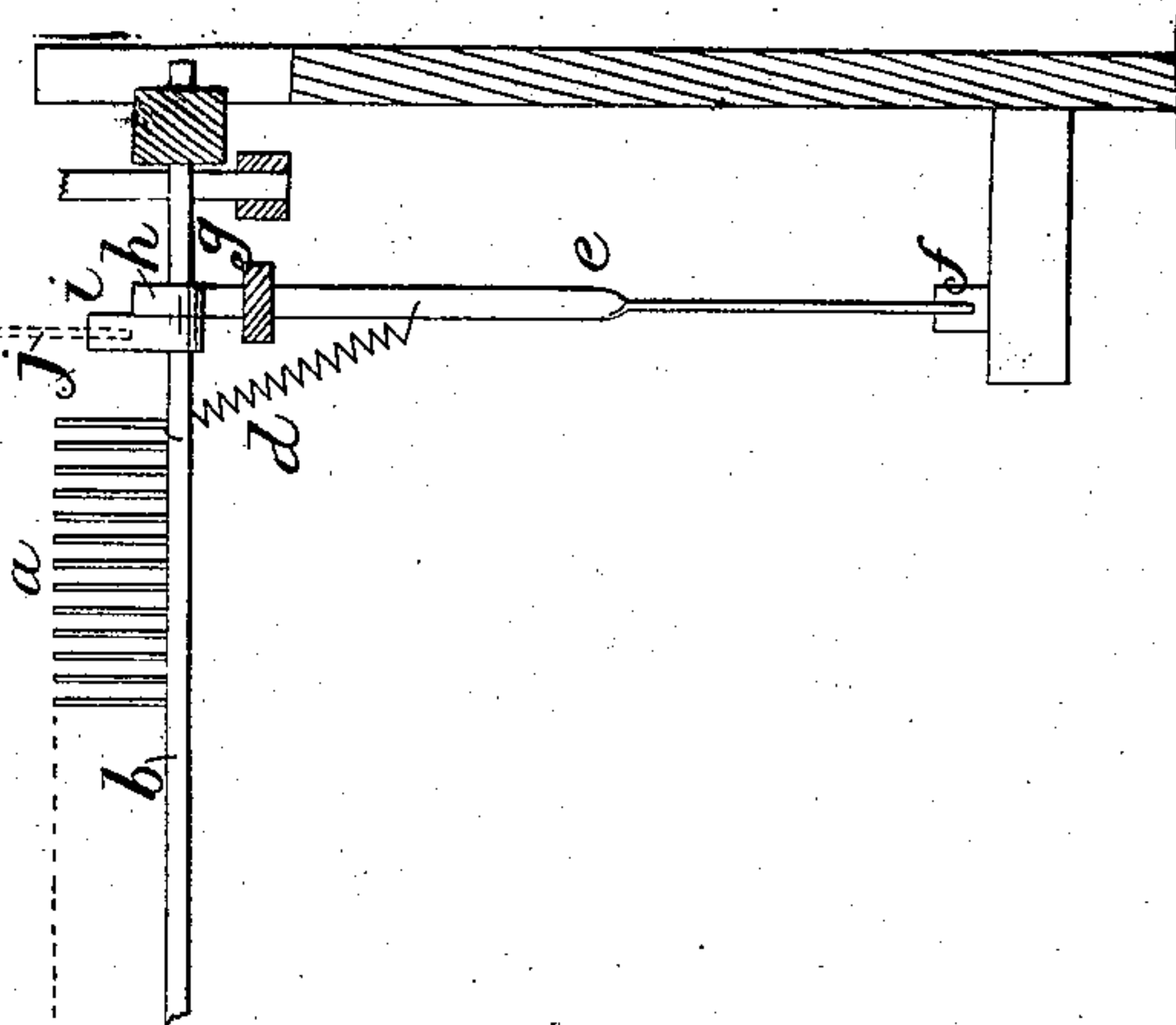
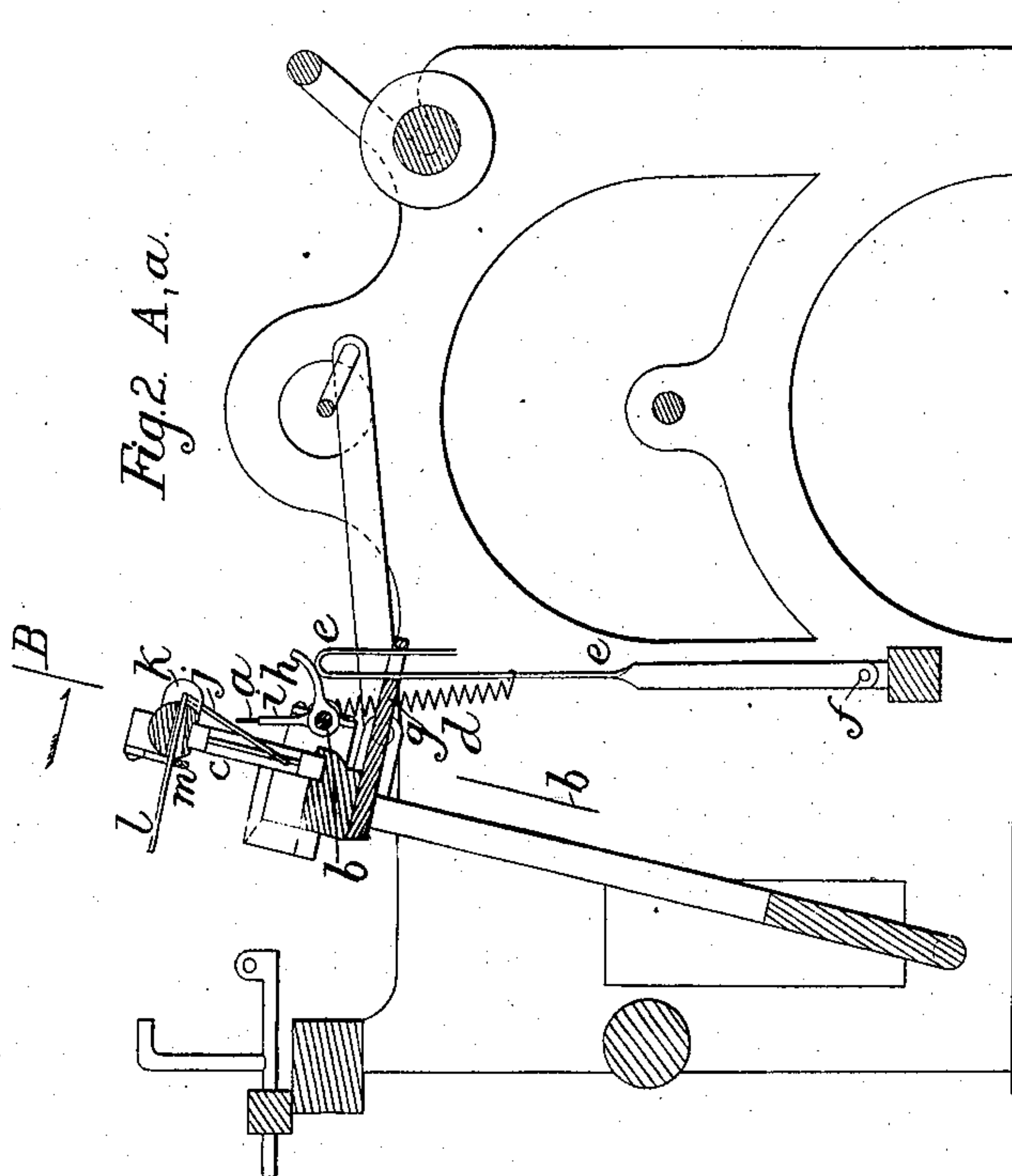


Fig. 2. A, a.



Witnesses:

Thomas Holland
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Inventor:

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NEWARK, NEW JERSEY.

LOOM.

Specification of Letters Patent No. 30,948, dated December 18, 1860.

To all whom it may concern:

Be it known that I, ANDREW PARKINSON, of Norwich, in the State of Connecticut, have invented certain new and useful Improvements in Weaving-Looms; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a front elevation of a portion of the loom. Fig. 2, a cross vertical section taken at the line A, *a*, of Fig. 1; and Fig. 3, a longitudinal vertical section taken at the line B, *b*, of Fig. 2.

The same letters indicate like parts in all the figures.

Whenever a warp thread breaks back of the reed the broken ends are liable to get across the other warp threads, and form in the cloth what is termed by weavers a "float," that is the broken end so woven in is not in unison with either the warp or weft threads, and when this occurs either so much of the cloth must be cut and the fragments of weft thread picked out, or the entire piece of goods must be finished with defects. And when the broken thread interlocks the other warp threads at the side they are prevented from opening to form the shed, and in such cases it sometimes happens that the shuttle is thereby thrown out of the loom at the risk of serious injury to other looms in close proximity.

The object of my invention is to prevent these evil consequences by an apparatus which in case any of the warp threads break or any loose thread gets into the warp between the heddles and lay, will either lay such thread in lines parallel with the warps, to be properly woven in, or will stop the loom that the attendant may rectify the threads. And to this end my said invention consists in combining with the lay and back of the reed, a comb, which passes between the warp threads, and in so doing either lays the broken end or loose thread in line parallel with the other warp threads, that it may be properly woven in, or if such loose thread lies across the other warp threads is thereby stopped in its vibratory motion, and by being so stopped sets a lever or any equivalent mechanism, which on the forward or beating up motion of the lay, will act upon any suitable stop motion to stop the loom that

the attendant may remedy the defect before any imperfect weaving takes place.

The accompanying drawings represent a loom of the usual construction with my invention applied but which may be as well applied to any other construction of loom. And in the said drawings (*a*) represents what I term the comb, that is, a series of wires or dents projecting from a shaft (*b*) mounted to turn in suitable boxes attached to the back of the lay and moving with it. The wires or dents of this comb correspond with and pass between the warps just like the dents of the reed (*c*). And as the lay moves back and forth the comb moves with it, but in addition to this, it has a vibratory motion on the axis of its shaft which may be imparted by the following or any equivalent way.

A spring (*d*) tends constantly to make the comb vibrate back from the reed, as it is bodily moving forward with the lay during the beating up motion, this being permitted by the mechanism which vibrates it toward the reed as it is moving bodily backward with the lay, this mechanism being a standard (*e*) the lower end of which turns on a fulcrum pin (*f*) at the lower part of the frame while the upper end passes through a mortise in a bracket piece (*g*) projecting back from the lay. This standard and the swords of the lay are not parallel but are farther apart at their lower than at their upper end, from which it results that as the lay vibrates back and forth the upper end of the said standard slides up and down relatively to the shaft (*b*) of the comb, so that it acts against the under face of an arm (*h*) on the shaft (*b*) of the comb, and thereby imparts to the comb the required vibratory motion to comb out of the warps any broken or loose thread which, if permitted to remain, might form a float. On the back motion of the lay when this comb comes in contact with any broken or loose thread lying across the warps and presenting sufficient resistance the comb is thereby retained while the lay is moving back so that the comb is thereby vibrated that its teeth or dents will be brought nearer the reed than by the mechanism above described. When this takes place it is necessary to stop the loom to prevent the formation of a "float" or to prevent any accident to the shuttle. And to effect this there is

another arm (*i*) on the comb shaft (*b*) which acts on an arm (*j*) of a bent lever, that has its fulcrum at (*k*) in the upper part of the lay, which throws up the other
5 arm (*l*) of the said bent lever, so that a weighted hinged catch (*m*) drops under it and holds it in that position until the forward beat of the lay when the arm (*l*) of the bent lever will strike the stud (*n*) on
10 the stop motion to stop the loom. If the comb, on the back motion of the lay, does not meet with such impediment the bent lever (*j, l*) will not be moved; so that it will not be put in position to act on the stop
15 motion of the loom.

It is deemed unnecessary to describe the stop motion as any of the stop motions used on looms will answer the purpose by having a stud or projection which will be struck by
20 the arm (*l*) of the bent lever when put in position by the comb when it meets with an obstruction during the back motion of the lay. And although I prefer to give to the comb a vibratory combing motion, such as
25 above described, in addition to its motion with the lay deeming it best to give it such

motion, I do not however wish to be understood as limiting my claim of invention to such vibratory motion, as my said invention will answer a good, although not so good a
30 purpose, by dispensing with the mechanism which imparts the vibratory motion, and using a stop to prevent the spring from vibrating it back beyond a given range whenever it is vibrated forward by some obstruction
35 to set the lever to act on the stop motion to stop the loom. Nor do I wish to limit my claim to the use of the bent lever interposed between the comb and stop motion as other and equivalent means may be substituted.
40

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

The employment of a comb, substantially such as herein described, in combination
45 with the lay of a loom, substantially as, and for the purpose, specified.

ANDREW PARKINSON.

Witnesses:

THOMAS HOLLAND,
JOHN W. CAREY.