

(No Model.)

J. A. TUCKER.

SHUTTLE OPERATING MECHANISM FOR LOOMS.

No. 434,533.

Patented Aug. 19, 1890.

Fig. 1.

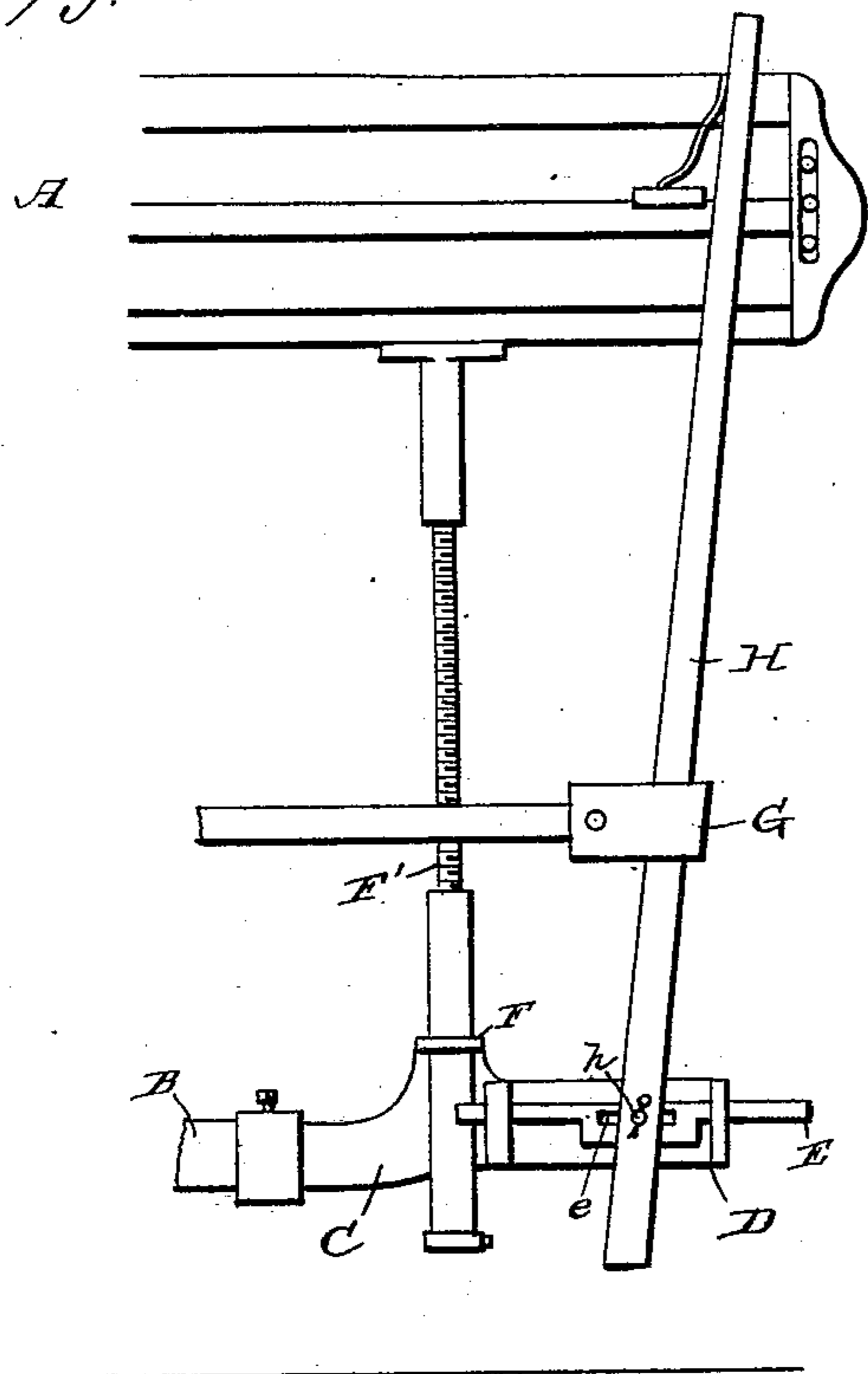


Fig. 5.

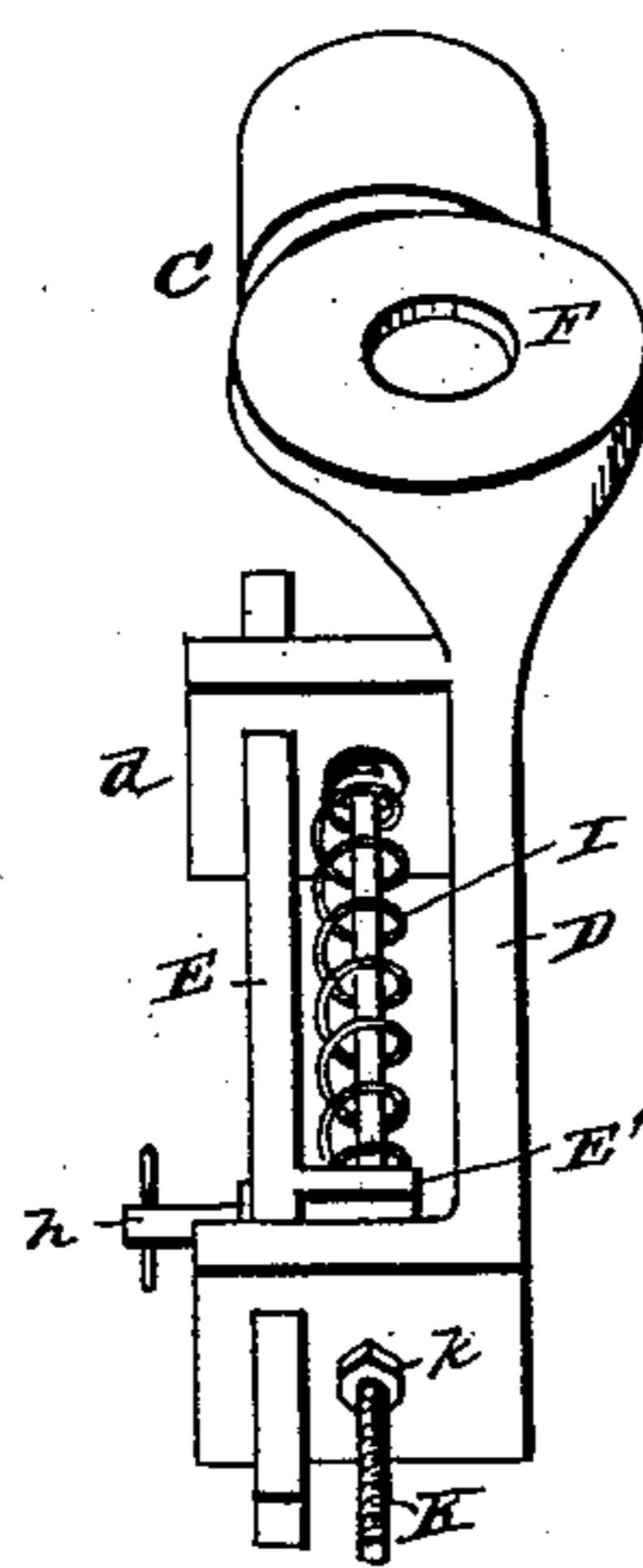


Fig. 2.

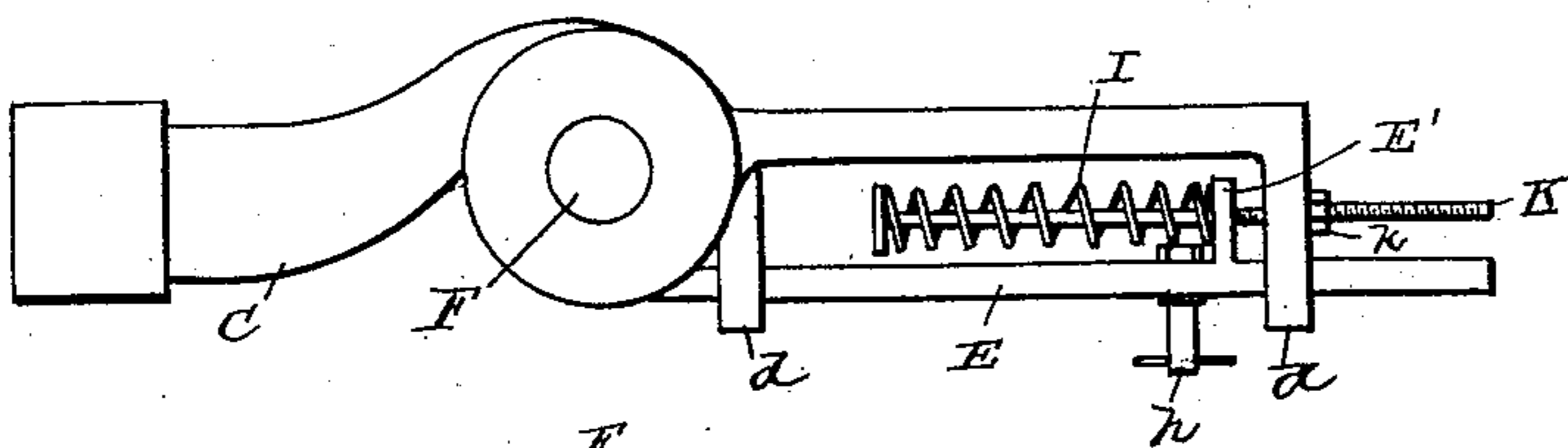


Fig. 3.

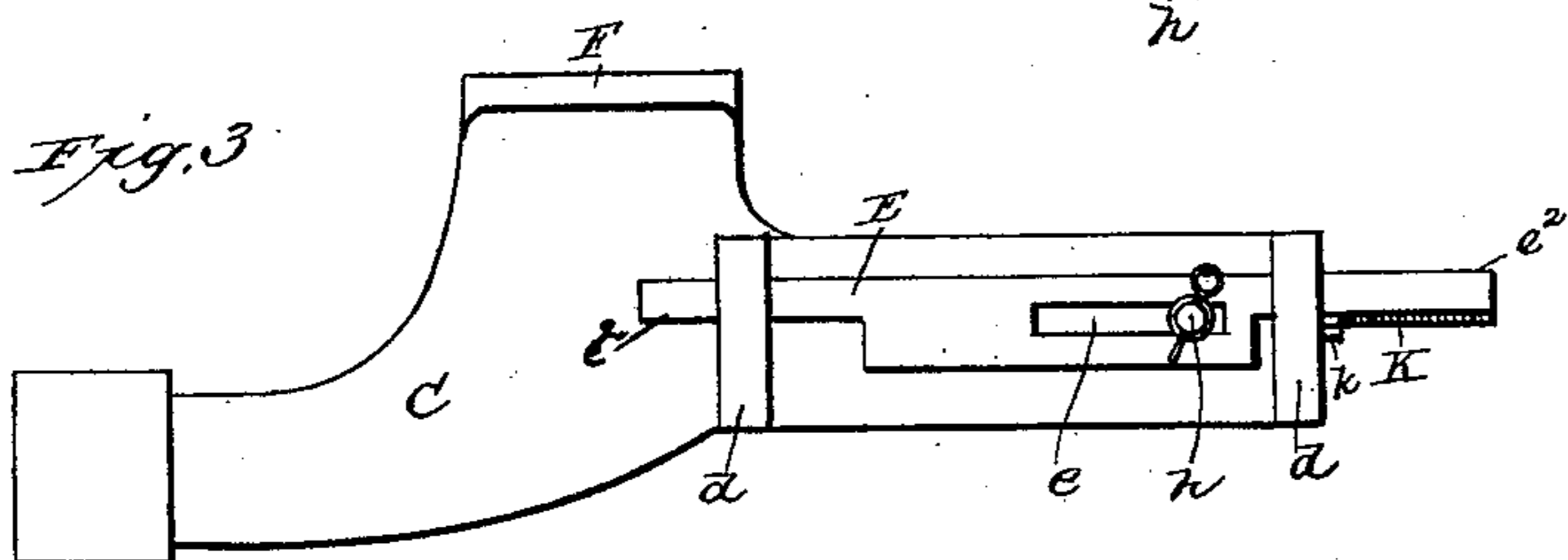
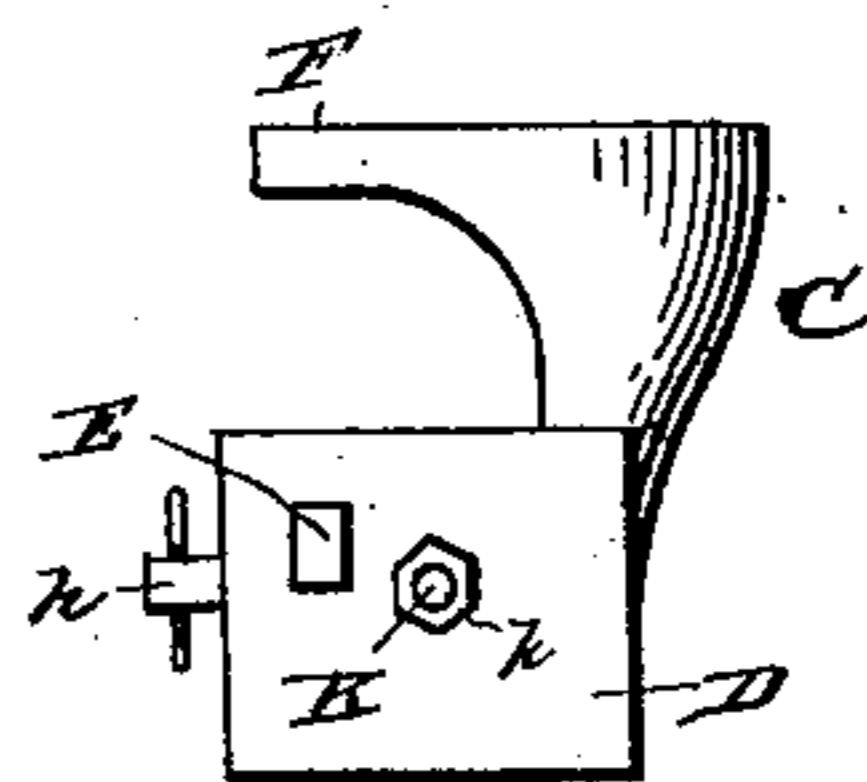


Fig. 4.



Witnesses

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SHUTTLE-OPERATING MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 434,533, dated August 19, 1890.

Application filed March 3, 1890. Serial No. 342,378. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. TUCKER, of Leominster, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Shuttle-Operating Mechanism for Looms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention has for its object to provide an improved picker-staff check which will relieve the shock, both when the shuttle is received and when it is started, thereby preventing undue wear on the picker-staff and preventing it from being accidentally broken, a further object being to simplify and reduce the cost of the mechanical parts.

To these ends the invention consists in certain novel details of construction and combinations and arrangements of parts to be now described, and pointed out particularly in the claims at the end of this specification.

Referring to the accompanying drawings, Figure 1 is an elevation of one end of the lay-frame of a "fly-motion" loom having my invention applied thereto. Fig. 2 is a top plan view of the castings or brackets on the end of the lay-shaft which carry the picker-staff support. Fig. 3 is a side elevation of the same. Fig. 4 is an end view, and Fig. 5 is a perspective view of the same.

Similar letters refer to the same parts.

The letter A indicates the lay-beam, and B the lay-shaft, the bearings and lay-operating mechanisms not being shown, as they are well known in the art, and form no part of my present invention. On the end of the lay-shaft B is mounted a casting or bracket C, having the outwardly-extending arm D with the two lugs *d*, provided with bearings for the longitudinally-movable picker-staff support E and the bearing or socket F for the shuttle-box-operating rod F', which may be of any well-known construction, but is preferably screw-threaded, as shown.

The picker-staff H is pivoted on the longitudinally-movable picker-staff support E, before referred to, intermediate the lugs *d*, motion being imparted thereto through the medium of the actuating bar or strap G, con-

nected thereto above its pivotal point, as usual. The picker-staff support E consists of a flat metal piece provided with longitudinal extensions E', which pass through the bearings in lugs *d*, a central slot *e*, and a rearwardly-extending lug or projection E'. In the slots is adjustably secured, by means of suitable set-nuts, a bolt or pin *h*, on which the picker-staff H is pivoted, and engaging the lug or projection E' on the rear is a spring I, the tendency of which is to keep the picker-staff support and lower end of the staff pressed constantly outward, the tension of the spring being regulated by a rod K, which is connected to the end of the spring, passes through the same through an aperture in the projection E' and lug *d*, and is provided on the outside with a nut *k*, which may be tightened and the spring compressed more or less, as will be readily understood. By pivoting the picker-staff adjustably on its support it will be seen that the adjustment of the same may be regulated to a nicety, and the tension of the returning-spring or operating-strap adjusted, as will be readily understood. With this arrangement of parts the impact of the shuttle is taken up by the spring, and in starting the picker to knock the shuttle back across the lay any resistance of the shuttle or too sudden impact is relieved by the movement of the picker-staff support against the tension of the spring I. The mechanism employed is exceedingly simple, not liable to get out of order, and may be adjusted and regulated by any one even though not skilled in the art, the angle at which the picker-staff stands being easily and quickly adjusted by moving the pin *h* in one direction or the other and the tension of the spring by simply setting up or loosening the nut *k*, as will be readily understood.

Having thus described my invention, what I claim as new is—

1. In a loom, the combination, with the lay-frame and the bracket mounted on the lay-shaft and having two bearings therein, of the spring-pressed picker-staff support sliding longitudinally in said bearings, the picker-staff pivoted on said support intermediate the bearings, and the operating strap or rod, substantially as described.

2. In a loom, the combination, with the lay-

frame and the bracket mounted on the lay-shaft and having bearings therein, of the spring-pressed picker-staff support sliding in said bearings, the picker-staff adjustably pivoted on said support, and the operating strap or rod, substantially as described.

3. In a loom, the combination, with the lay-frame and the bracket mounted on the lay-shaft and having bearings therein, of the picker-staff support sliding in said bearings, the picker-staff pivoted on said support, the spring bearing against the same, means for regulating the tension of the spring, and the operating strap or rod, substantially as described.

4. In a loom, the combination, with the lay-frame, the bracket mounted on the lay-shaft and having the outwardly-extending arms provided with the lugs, of the picker-staff support sliding in bearings in said lugs, the spring in rear of said support, the lug on the support against which the spring bears, the adjustable rod engaging the spring to adjust its tension, and the picker-staff pivotally connected to the support, substantially as described.

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Witnesses:

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