

No. 695,881.

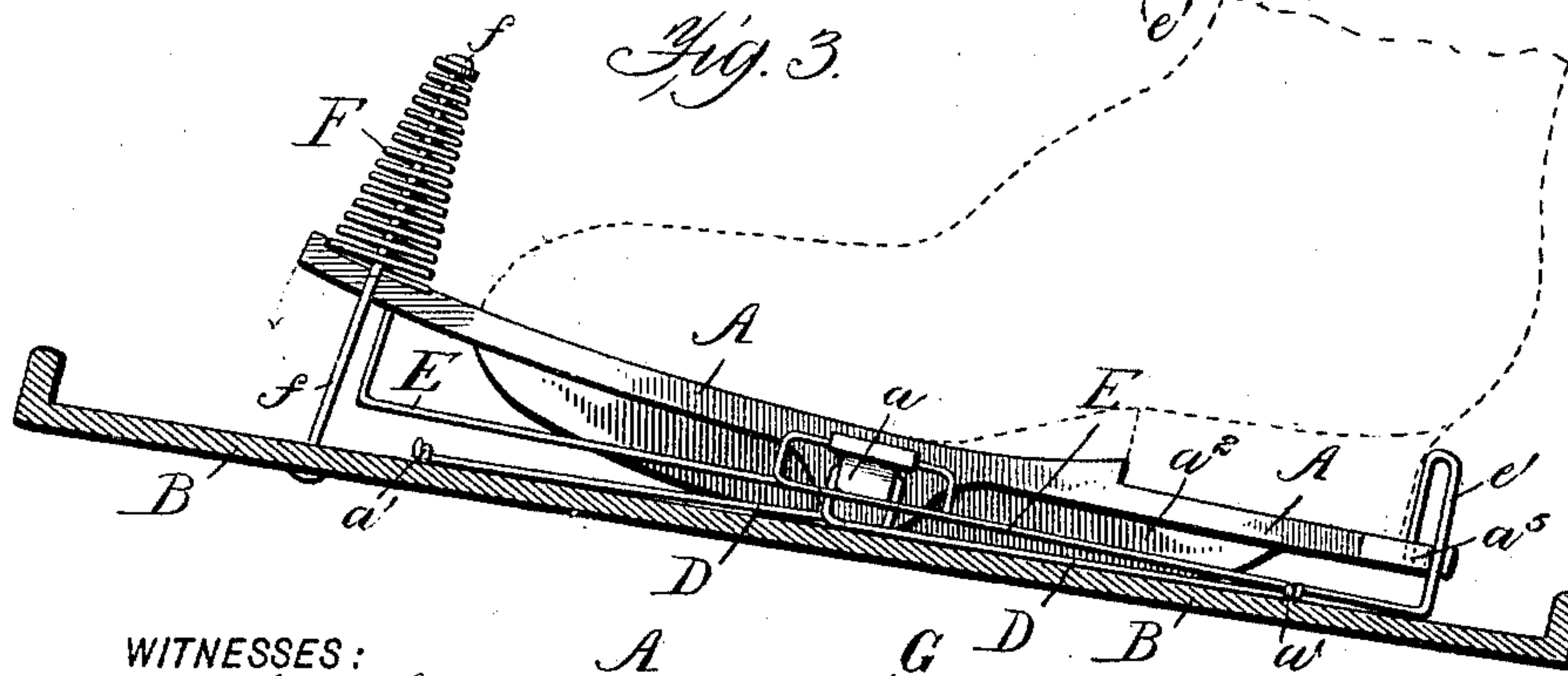
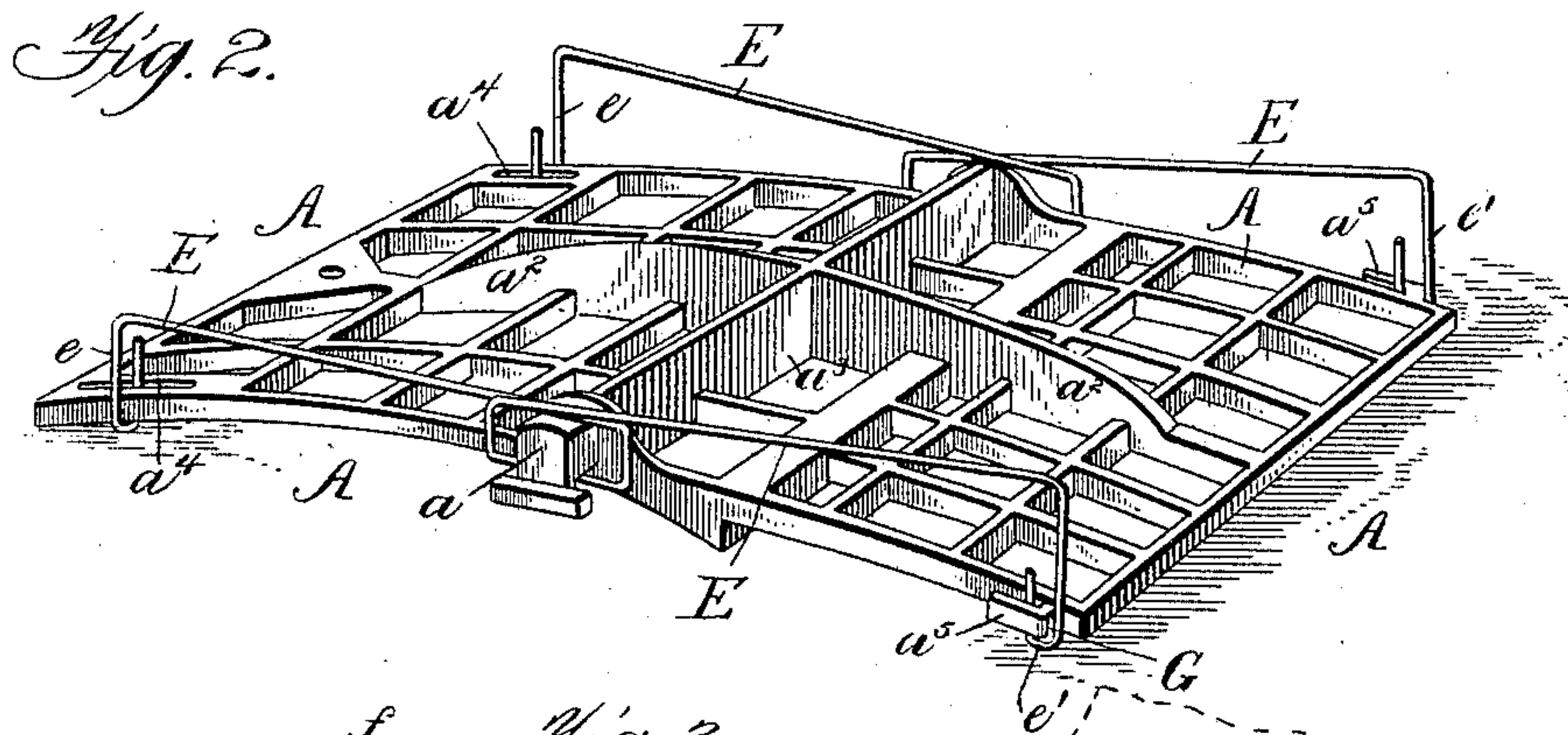
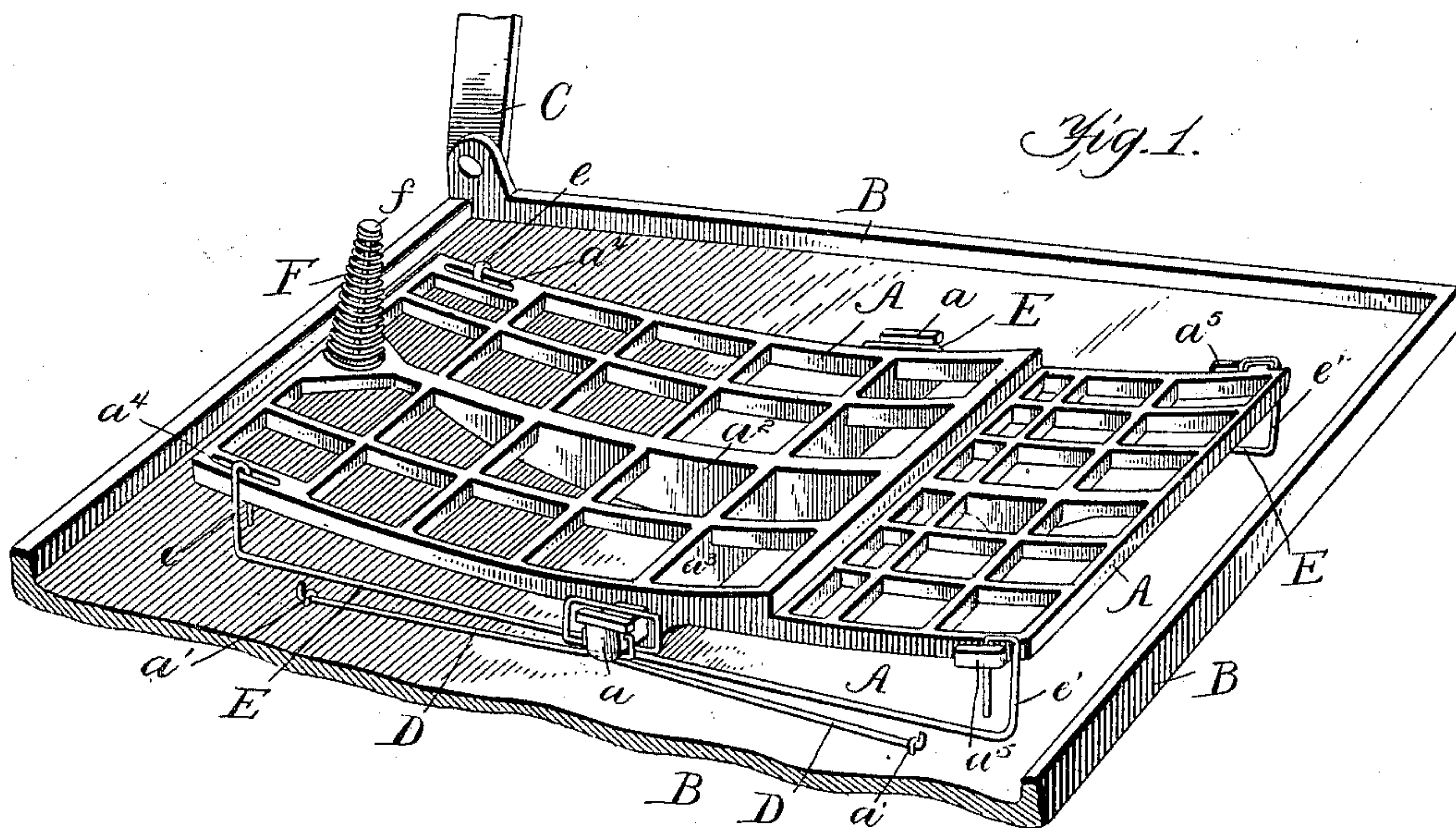
Patented Mar. 18, 1902.

F. P. HARRIS.

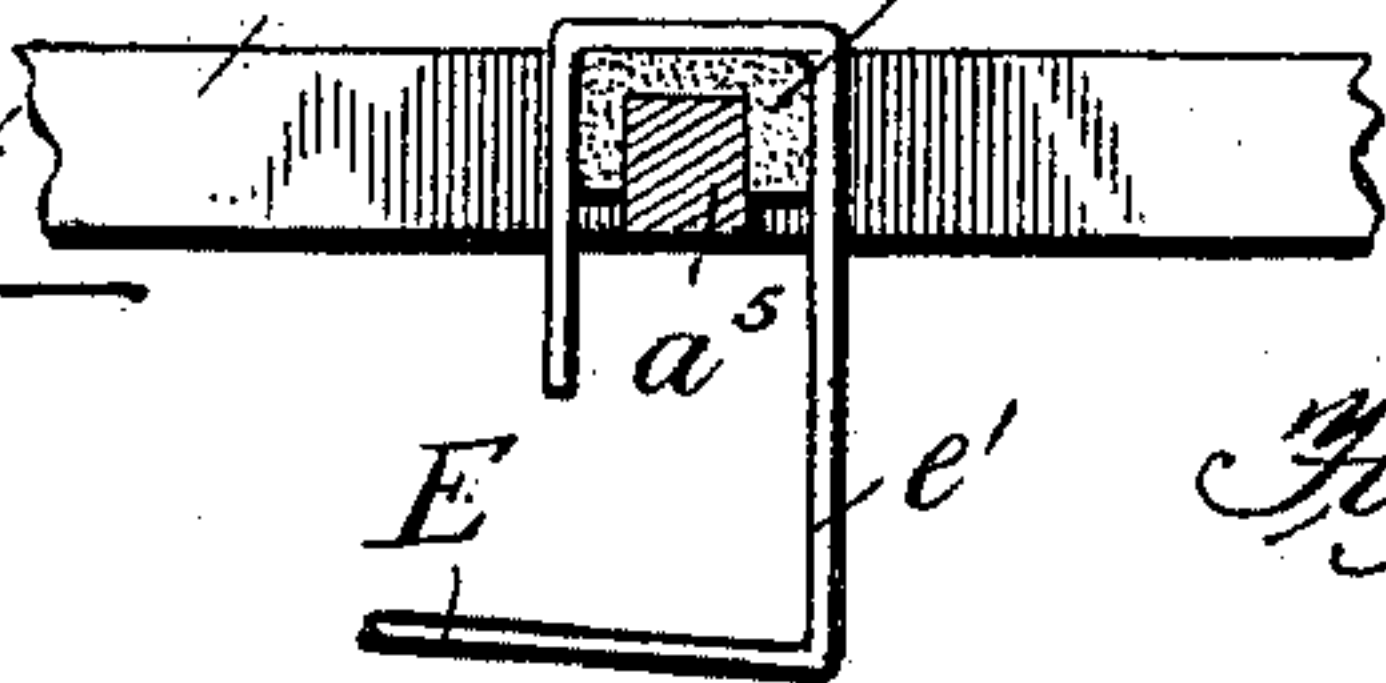
ROCKER ATTACHMENT FOR SEWING MACHINE TREADLES.

(Application filed Dec. 21, 1901.)

(No Model.)



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ROCKER ATTACHMENT FOR SEWING-MACHINE TREADLES.

SPECIFICATION forming part of Letters Patent No. 695,881, dated March 18, 1902.

Application filed December 21, 1901. Serial No. 86,740. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN PIERCE HARRIS, a citizen of the United States, and a resident of Greenville, in the county of Muhlenberg and State of Kentucky, have made certain new and useful Improvements in Rocker Attachments for Sewing-Machine Treadles, of which the following is a specification.

It is the object of my invention to provide an improved foot-rocker attachment for sewing-machine treadles, whereby the physical exertion required for operating the latter is greatly lessened as compared with ordinary treadles, in which the operator's foot rests directly upon them.

The invention is embodied in the construction and combination of parts hereinafter described, and illustrated in accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a sewing-machine treadle provided with my improved rocker. Fig. 2 is a perspective view of the rocker inverted. Fig. 3 is a central longitudinal section of the rocker and sewing-machine treadle. Fig. 4 is a detail section hereinafter referred to.

The letter A indicates the foot-rocker, and B a sewing-machine treadle, which is supposed to be pivoted centrally, so as to oscillate in the usual way, and to be connected by a rod C with the fly and band wheel (not shown) of a sewing-machine. The rocker A is a reticulated plate curved slightly lengthwise to adapt it to conform to the shape of the foot of the operator. It is provided with central lateral projections to which wires D are attached, the same being extended lengthwise of the treadle B and secured at their ends by means of staples or equivalent devices a' . By this arrangement and connection of parts the rocker A is pivoted and held in due position on the treadle B. On the underside the frame A is provided with a central lengthwise rib a^2 , which is curved or convex, as shown, to adapt it to serve as a rocking support for the frame A. A straight-edged rib a^3 is arranged at right angles to the rib a^2 and cast integrally with it and the frame or rocker proper, A. It will be noted that the ribs a^2 a^3 are of the same height at their intersection.

On each side of the rocker A is arranged a

wire spring E, which is coiled about the lateral projection a of the rocker and extended to near the end of the latter, where it is detachably connected with the same—that is to say, each end of the springs E is turned inward and engaged with the rocker A, as shown. The upper end e passes through a slot a^4 in the rocker, and the lower end e' catches upon a lateral hook a^5 of the rocker. The foot-support A resting on the ribs a^2 and a^3 , it is adapted to rock or oscillate on the treadle B in the lengthwise direction and at the same time prevented from lateral oscillation. The springs E are so constructed and attached to the rocker A, their central portions being raised above the treadle B, that they exert downward pressure on both ends of the support or rocker A and would normally hold it balanced, or nearly so, on the central convexity of the rib a^2 . Hence when pressure is applied to the support A by the heel of the operator the downward movement of the lower portion of the rocker is resisted by the forward portion of the springs E, which engage the slots a^4 , and, contrariwise, if pressure be applied by the toe of the operator the rear ends e' of the springs E similarly resist the downward movement of the front end of the rocker A. In brief, the side springs E resist a rocking movement of the support A, and the force applied directly to the latter by alternating heel and toe pressure, which is produced by merely shifting a portion of the weight of the foot and leg supported on the rocker, is in turn applied to the treadle B elastically or without any sudden strain. Consequently the physical exertion is very easy and in the aggregate less than required to operate the ordinary treadle, and the fatigue ordinarily incident to running a sewing-machine is reduced correspondingly. Since the force required to cause the connecting-rod C to make the upward thrust is greater than to move the same downward, I provide a supplemental spring attachment for the front portion of the rocker A, the same consisting of a spirally-wound compression-spring F, which is seated in a socket (see Fig. 3) in the rocker or foot-support A and is connected with the treadle B by means of a small rod or stout wire f . It is apparent that since this

spring tends to hold the front end of the rocker A pressed down it will resist heel-pressure upon the same, and therefore be compressed when the rocker is raised at its front end, as shown in Fig. 2. The effect of the spring is therefore to overcome any tendency to sudden strain or jar incident to the upward movement of the connecting-rod C. When the spring F rebounds or reacts, it assists in the downward movement of the connecting-rod C, and thus the latter is carried from the highest to the lowest center by the natural weight of the foot on the treadle.

It is apparent that the side springs E may be made of any length required for any size of rocker or treadle, and, further, that the tension of said springs at either end may be regulated at will by interposing blocks or pieces G, (see Fig. 4,) of leather, felt, or any other suitable material, between the hooks e' of the springs and the hooks a^5 of the rocker.

It will be seen that by reason of the hooks of the side springs E being turned in, as shown and described, there is no danger of their catching in the dress of the operator, and it will be further seen that by reason of the provision of the longitudinal slots a^4 of the rocker the forward or upper hooks e of the side springs E have a sliding engagement with the rocker as it oscillates.

What I claim is—

1. The combination, with a sewing-machine treadle adapted to oscillate, of a foot-rocker pivotally mounted thereon, and springs connected therewith and tending to throw the ends of the same downward, substantially as shown and described.

2. The combination, with the sewing-machine treadle adapted to oscillate as described, of a rocker pivoted thereon, and side balance-springs connected with the same centrally and extending to and connected with the ends of the rocker and exerting downward pressure thereon, substantially as shown and described.

3. The combination, with a sewing-machine treadle, of a foot-rocker pivotally mounted thereon, and side springs connected with the same at its pivotal point and extending toward its ends, the ends of said springs engaging the rocker, substantially as shown and described.

4. The combination, with the treadle, of the convex rocker having lateral projections, side balance-springs which are attached to the said projections and raised at such points above the treadle, and their ends engaging the ends of the rocker and tending to press the same alternately downward when the rocker oscillates, substantially as shown and described.

5. The combination, with the sewing-machine treadle, of a convex rocker pivoted centrally thereon, and wire springs connected with the rocker at its pivotal point, and extending along the side of the latter, and turned inward at their ends to form hooks as speci-

fied, the rocker having a slot at one end to receive one of said hooks and a lateral projection at the other for engagement of the lower hook, substantially as shown and described.

6. The combination, with a sewing-machine treadle, of a rocker pivotally mounted thereon, side springs connected with the pivotal portion of the rocker and having hooks at their ends which engage the latter, and a supplemental block or piece of suitable material interposed between said hooks and the engaged portion of the rocker, as and for the purpose specified.

7. The combination, with a sewing-machine treadle, of a rocker pivotally mounted thereon and having lengthwise slots at one end, and side balance-springs composed of wire and extending alongside the rocker and having hooked ends which engage the latter, the forward ends entering the said slots, substantially as shown and described.

8. The combination, with the sewing-machine treadle, of the rocker having a central, convex, longitudinal rib on its underside, and a straight transverse rib at right angles to the longitudinal one, and side springs connected with the rocker centrally and at their ends, to operate as specified.

9. The combination, with a sewing-machine treadle, a convex rocker, and spring attachment therefor, of means for securing and pivoting the same, consisting of wires secured to the lateral projections of the rocker and at their ends to the treadle proper, in the manner shown and described.

10. The combination, with a sewing-machine treadle and a rocker pivotally mounted thereon, of a spring connected with both treadle and rocker at their upper ends and tending to resist the upward movement of the rocker at that point, substantially as shown and described.

11. The combination, with a sewing-machine treadle and a rocker pivotally mounted thereon, of a compression-spring arranged on the rocker and connected with the treadle in the manner shown and described.

12. An improved foot-rocker attachment for sewing-machine treadles comprising a convex plate or rocker proper, side springs connected with the rocker at its pivotal points, and extending along the sides of the same and connected with it at or near its ends, substantially as shown and described.

13. An improved rocker attachment comprising a foot-support having a convex longitudinal rib and straight transverse rib on the under side, and side balance-springs attached to the foot-support at center and ends, as shown and described.

14. The improved rocker attachment for sewing-machine treadles, comprising a foot-support having a convex under side and lateral projections, and side balance-springs secured to such projections, and raised above the highest connexity of the support, and con-

nected with the ends of the latter, as shown and described.

5 15. An improved rocker attachment for sewing-machine treadles comprising a foot-support proper having a central longitudinal and convex rib and lateral supports having the same height as the central portion of the convex rib substantially as shown and described.

10 16. As an improved article of manufacture a rocker attachment for sewing-machine treadles comprising a reticulated plate or frame which is provided with a lengthwise convex

rib on the under side the same being cast integrally with the body of the rocker, substantially as shown and described.

15 17. An improved rocker attachment for sewing-machine treadles comprising a foot-support having a convex lengthwise rib on the under side and balance-springs attached thereto, substantially as shown and described. 20

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