

(No Model.)

4 Sheets—Sheet 1.

A. J. GOODWIN.

INVALID BEDSTEAD.

No. 326,111.

Patented Sept. 15, 1885.

Fig. 1.

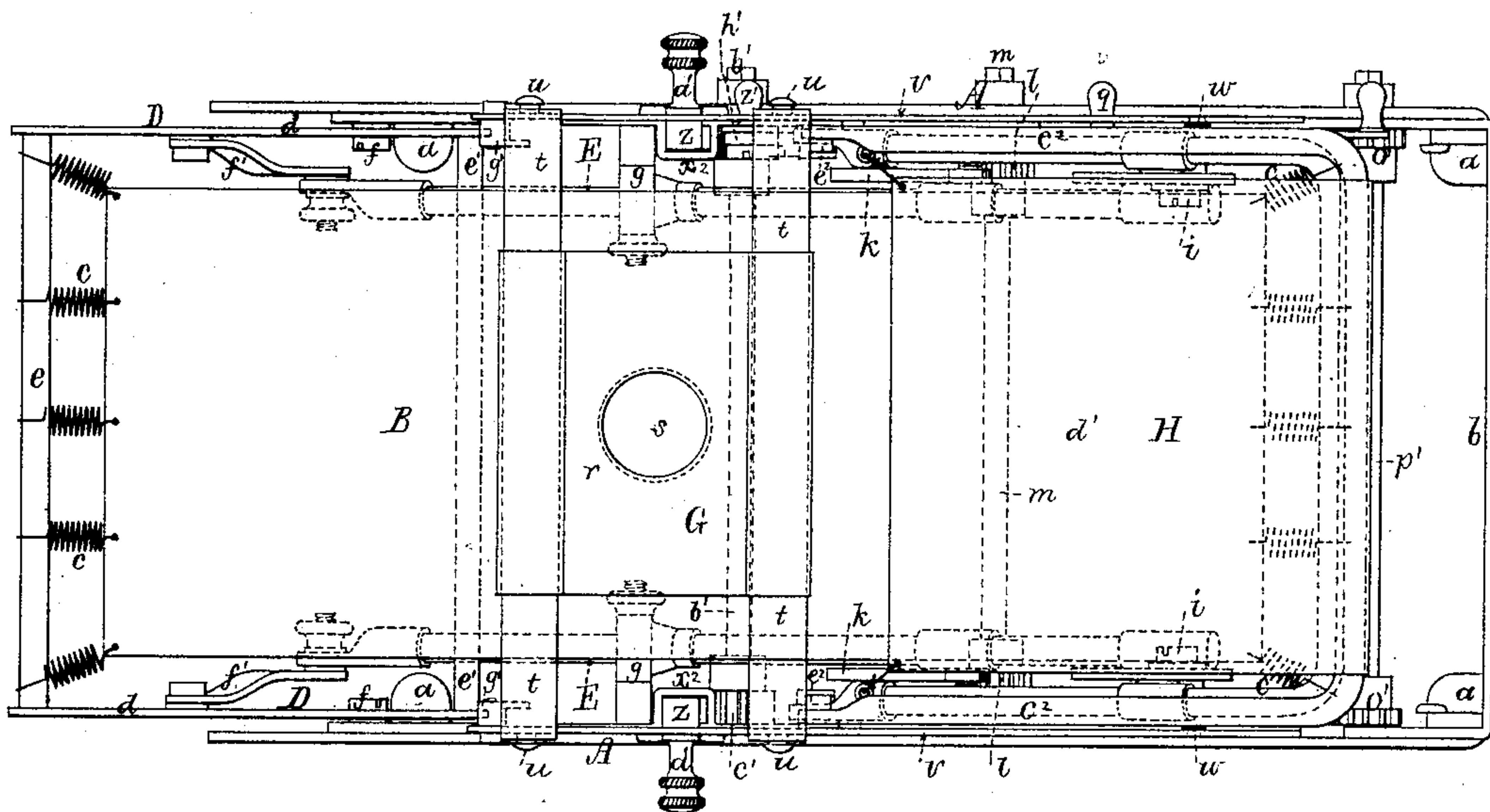
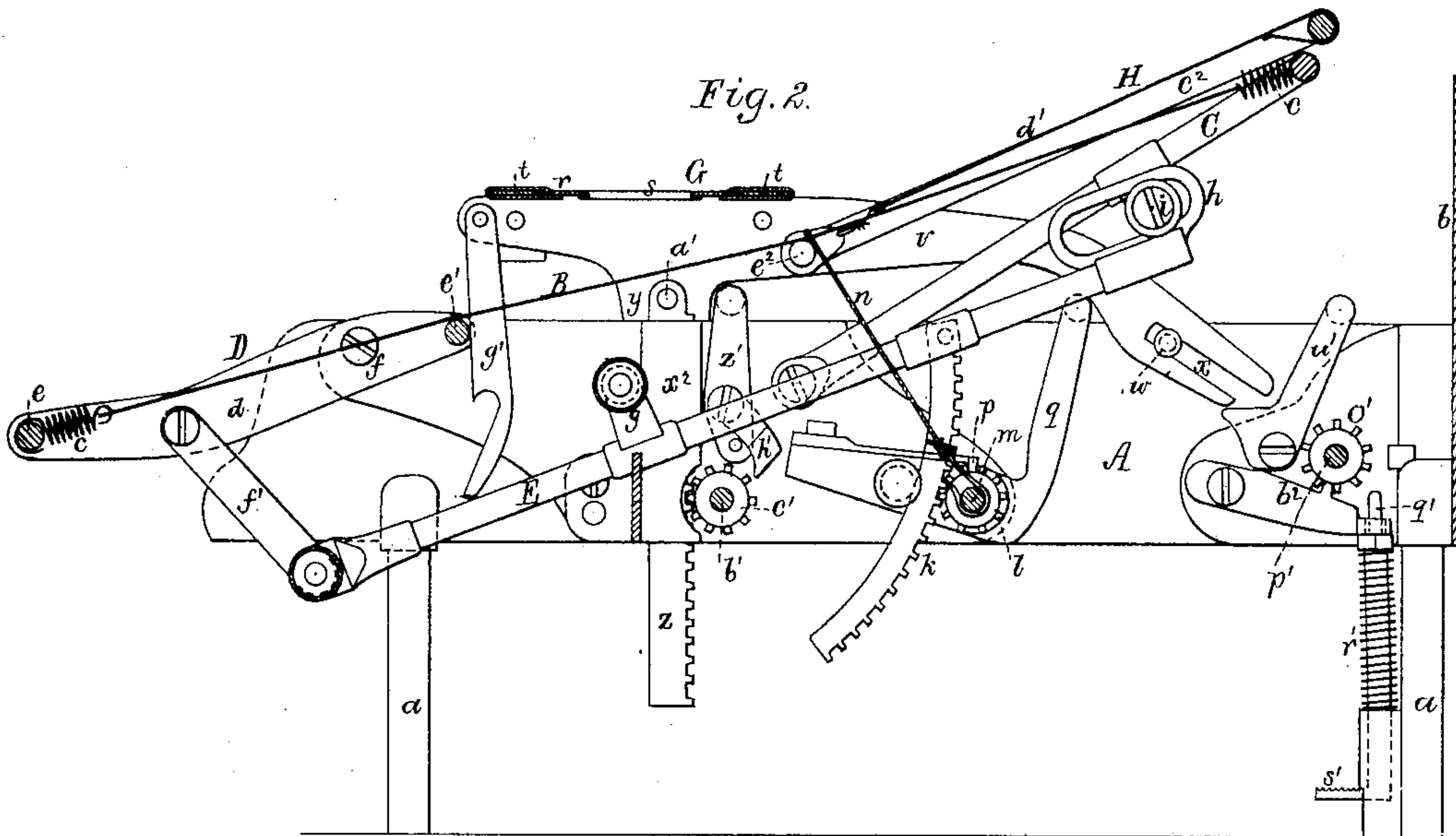


Fig. 2.



Witnesses.

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(No Model.)

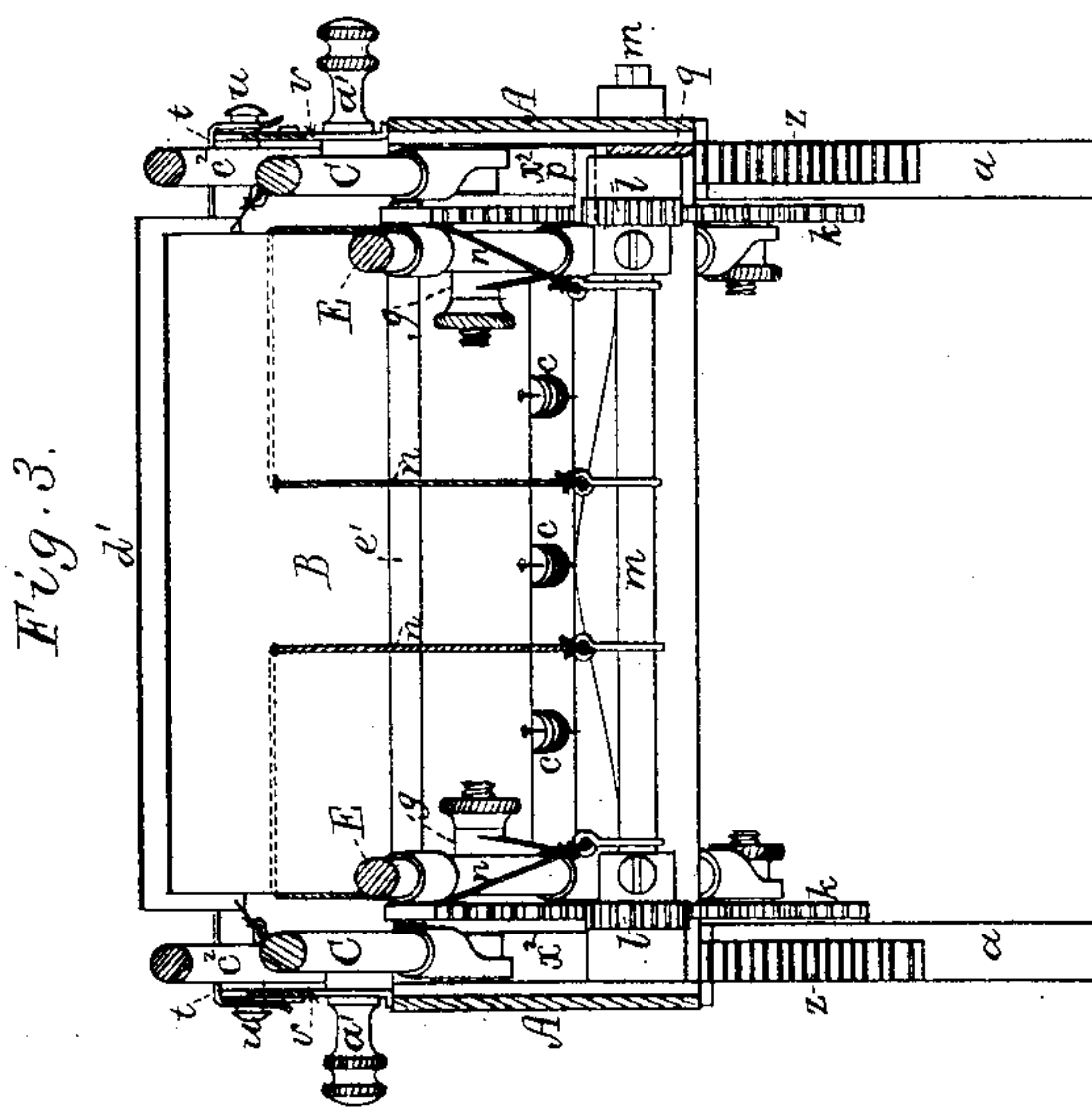
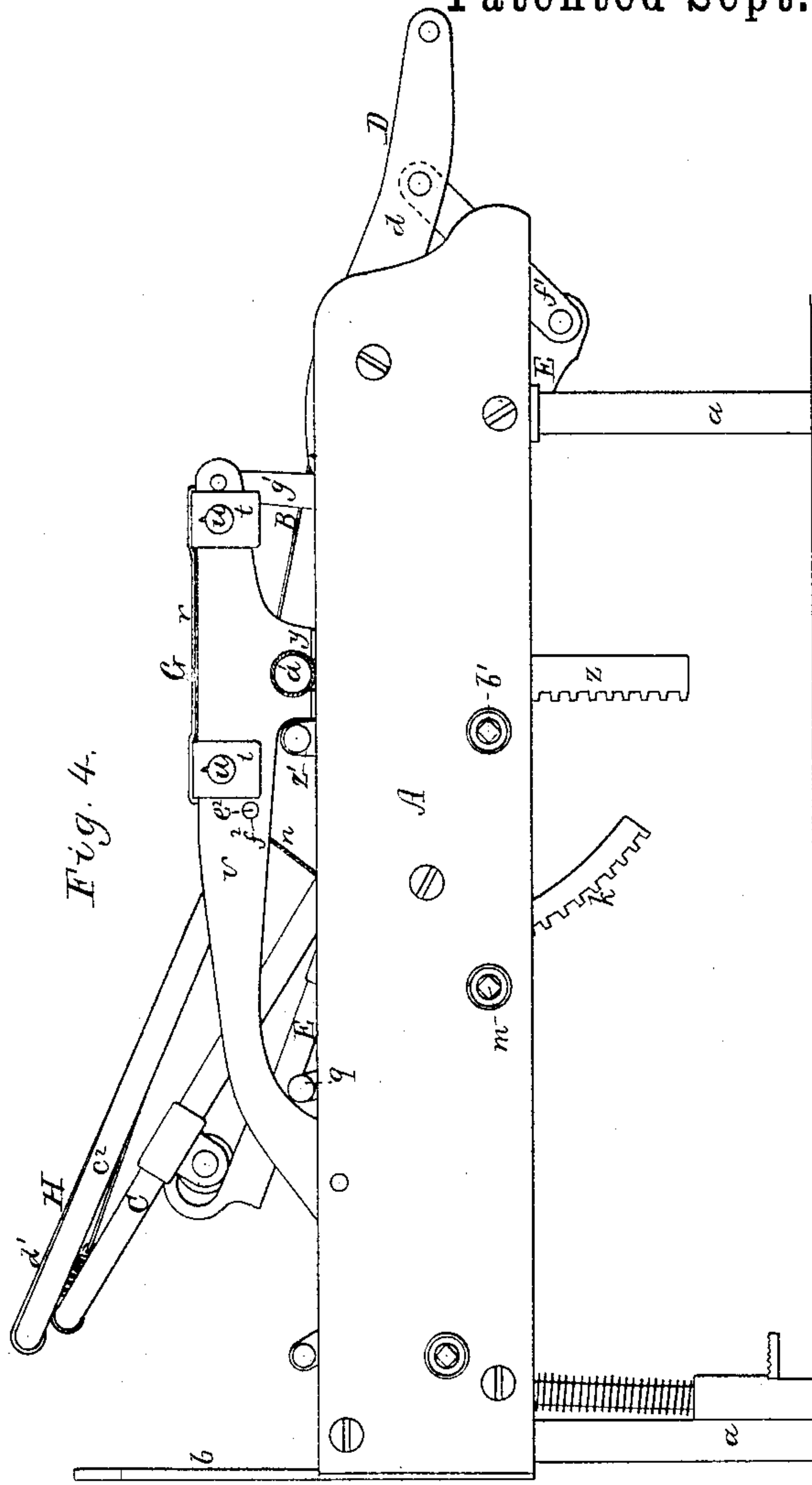
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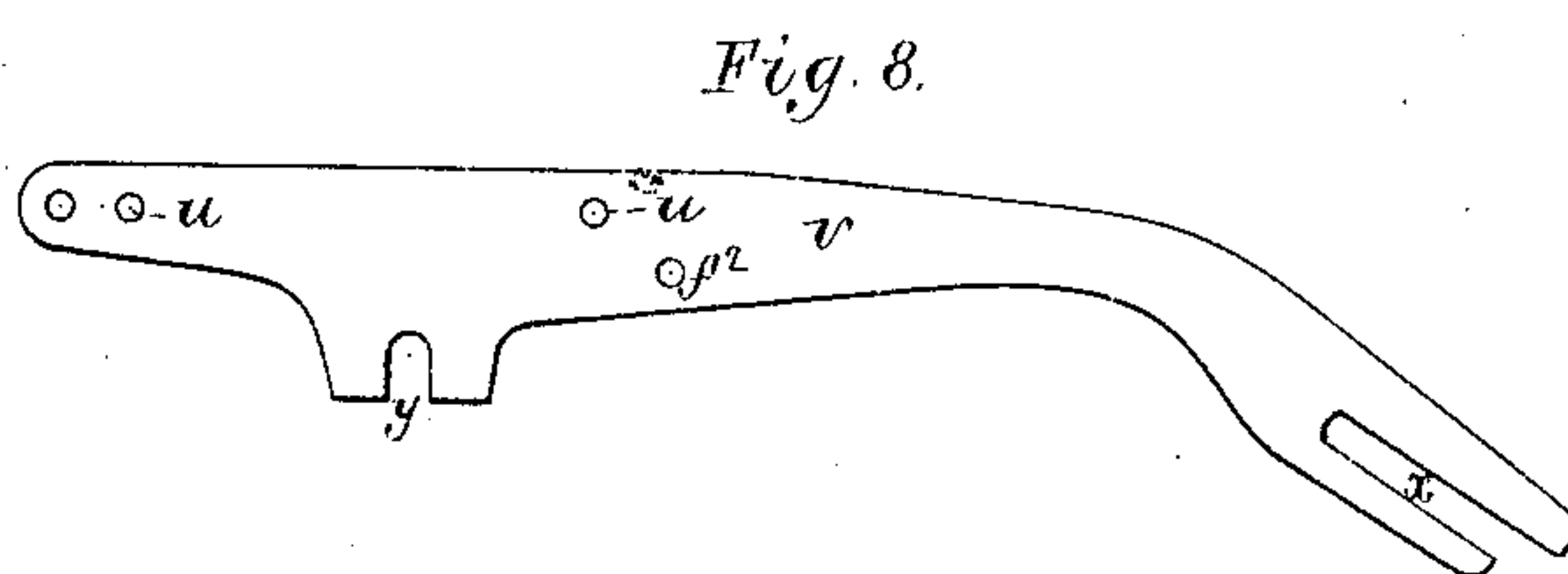
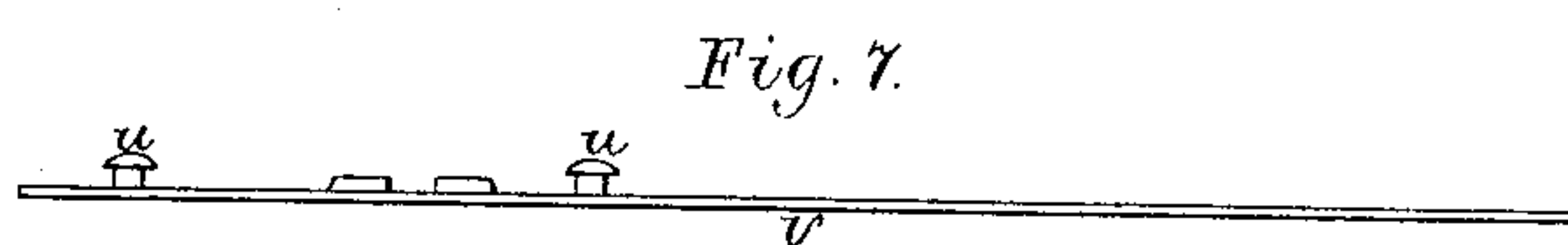
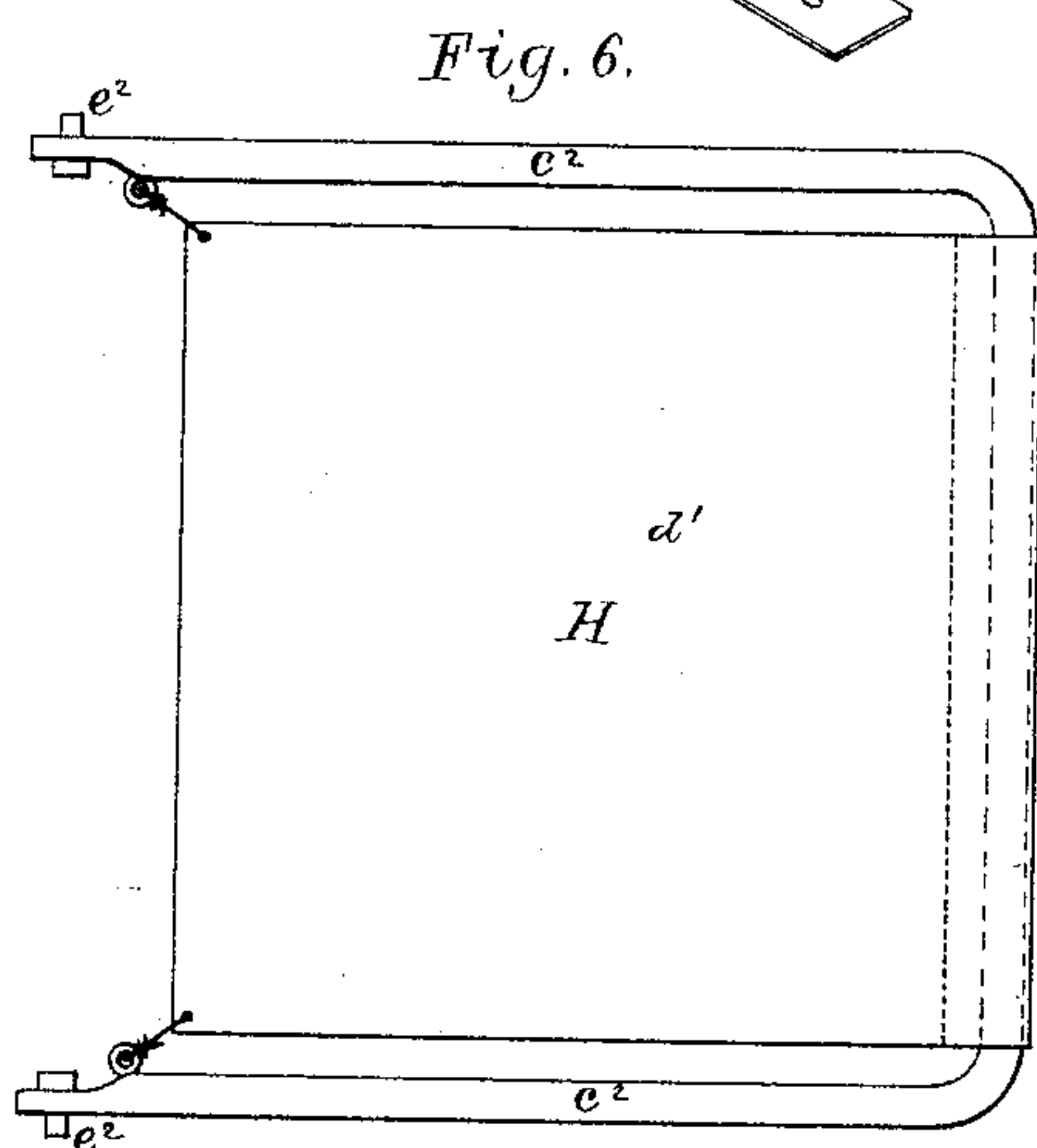
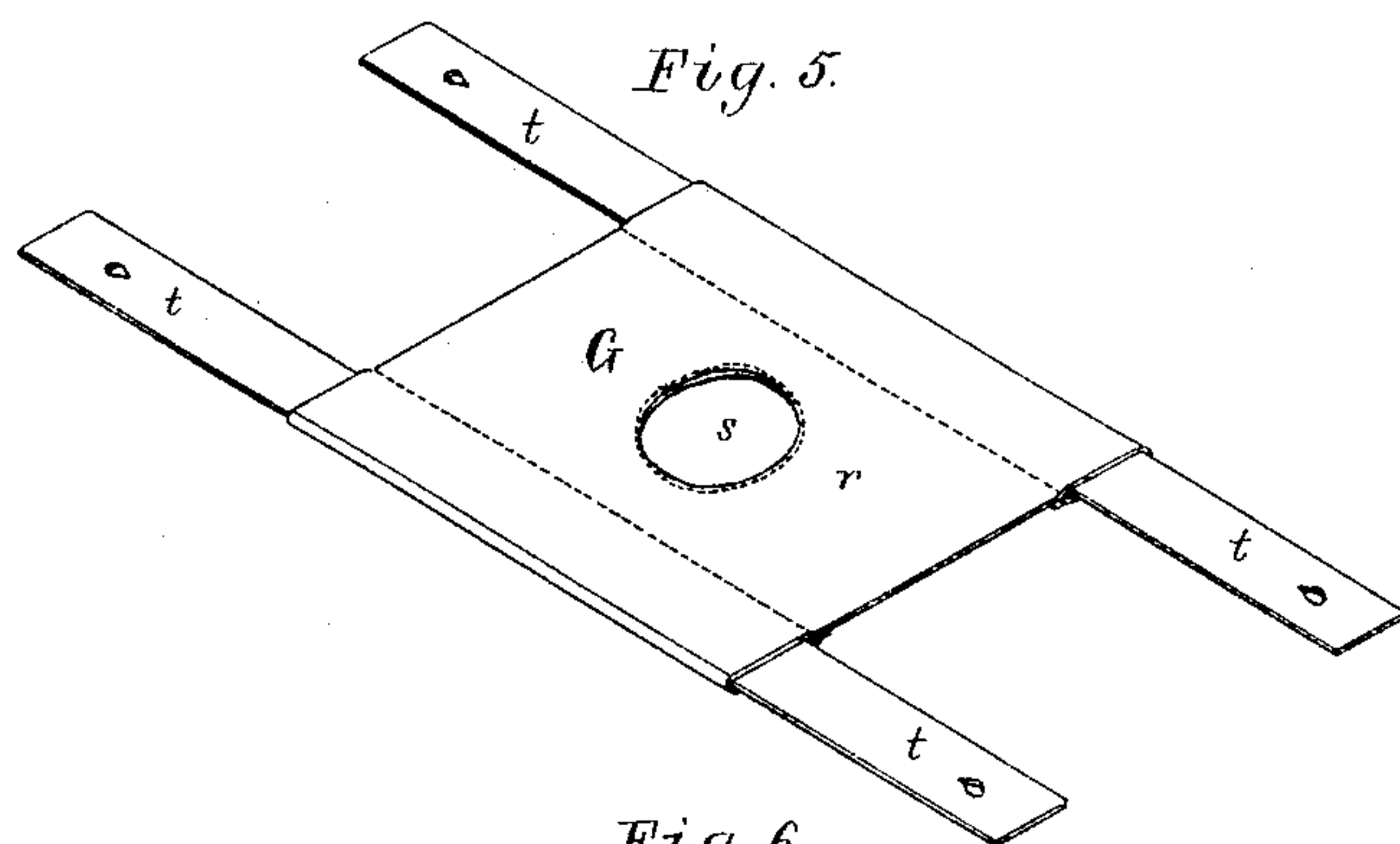
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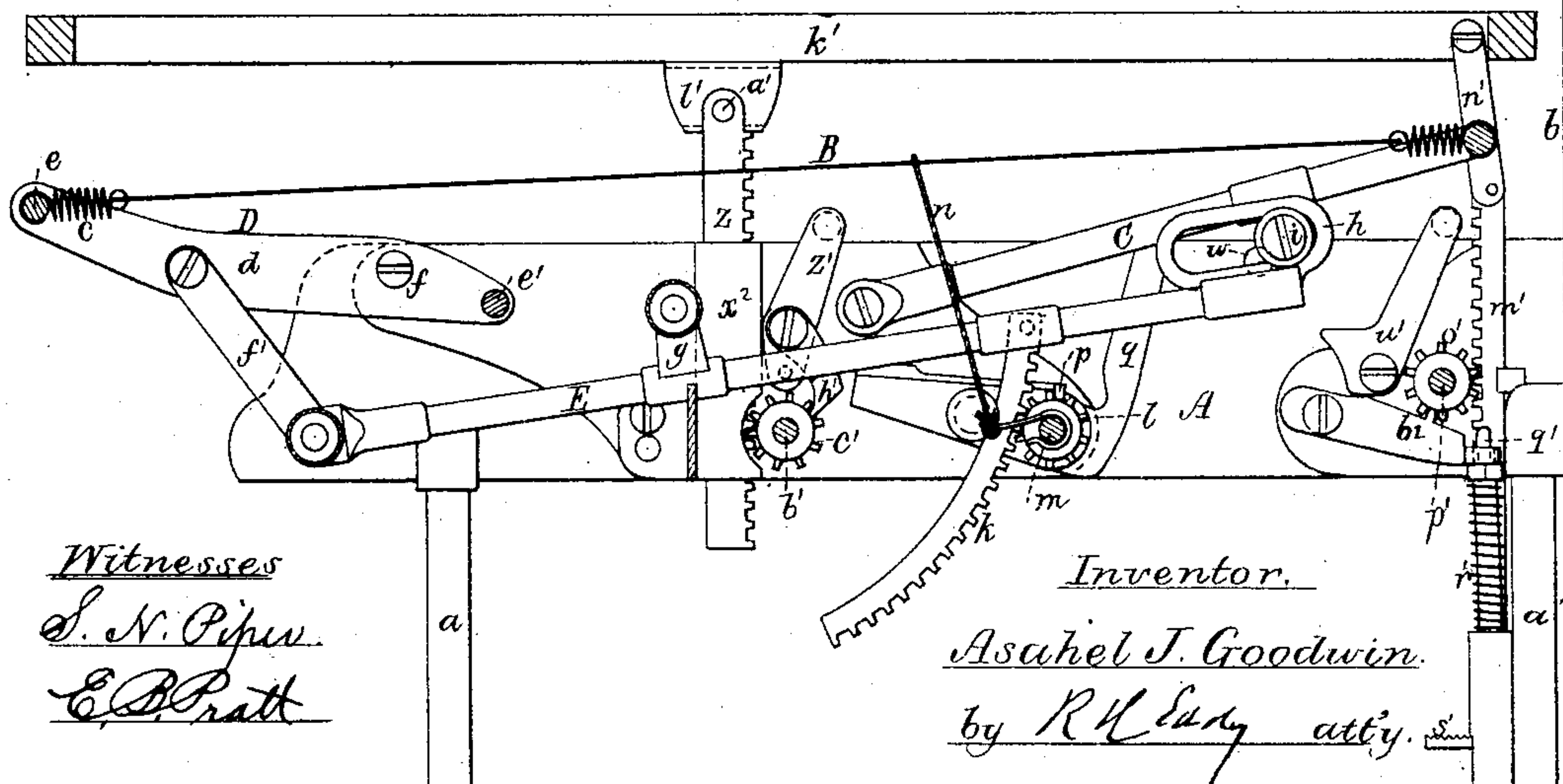
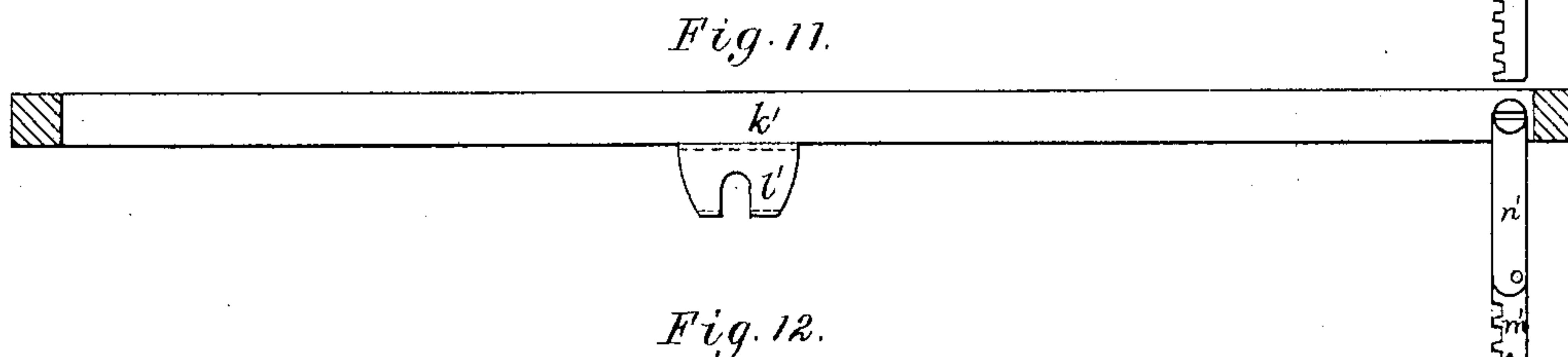
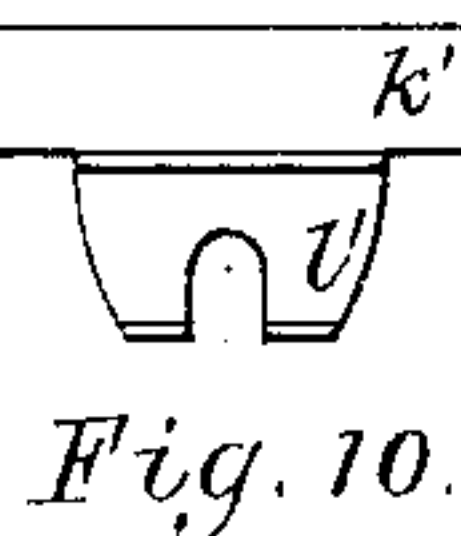
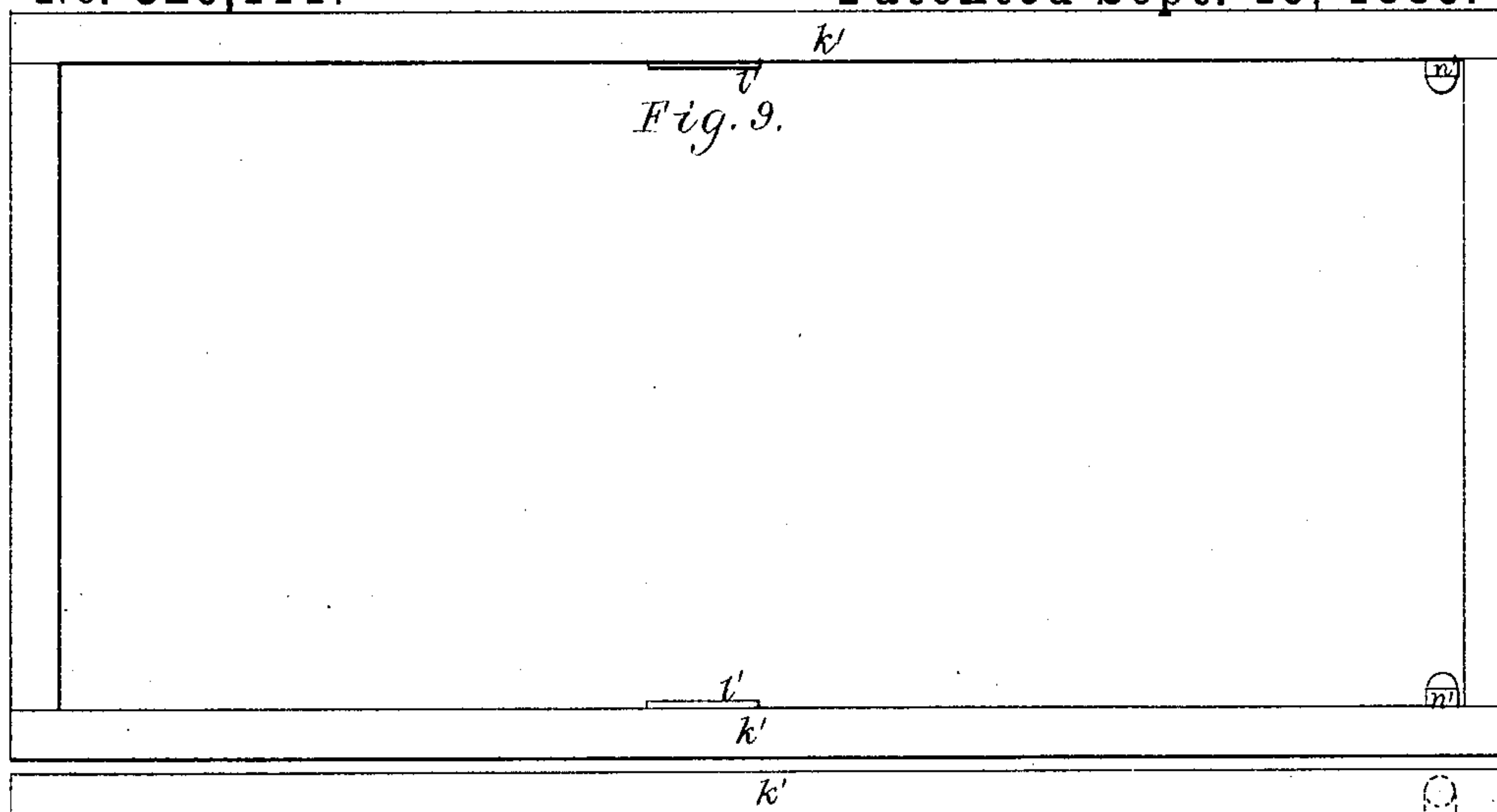
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INVALID-BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 326,111, dated September 15, 1885.

Application filed May 1, 1882. Renewed April 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, ASAHEL J. GOODWIN, of Brookline, in the county of Norfolk, of the State of Massachusetts, have invented a new and useful Improvement in Invalid-Bedsteads; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a longitudinal and central section, Fig. 3 a transverse section, and Fig. 4 a side elevation, of a bedstead having my invention, the nature of which is defined in the claims as presented. The remaining figures are hereinafter described.

One object of my invention is to enable an invalid while on the bedstead to be moved from a recumbent to a sitting position, and to be raised to enable a pan or vessel to be placed in a proper manner beneath him to receive fecal or urinal discharges from him.

In the drawings, A denotes the frame or body of the bedstead, its legs being shown at *a* and head-board at *b*. Within such frame is a sacking, B, which at each of its ends is connected to a series of springs, *c*, extending from one of two carriers, C and D, arranged as represented.

The upper carrier, C, of U form, is pivoted at or near each end of it to one of two sides of the frame A, so as to admit of the said carrier being moved from a horizontal position, or thereabout, upward into an inclined or nearly vertical position.

The lower carrier, D, is a rectangular frame composed of two side bars, *d d*, and two round connection-bars, *e e'*, the latter of which may be a roller, arranged as shown. The two side bars, *d d*, are levers, as they are pivoted to the sides of the frame A at a short distance from the inner connection-bar, *e'*, as shown at *f*. By means of links *f'* the longer arms of the levers *d d* are connected with the front ends of two rocker-bars, E E, that are by an extension, *g*, from each pivoted to the sides of the frame A. Each rocker-bar at its head is provided with a slotted projection, *h*, to receive a stud, *i*, extending from the carrier C. Furthermore, there extends down from each rocker-bar E a curved rack, *k*, to engage with a pinion, Z, fixed on a cross-shaft, *m*. On applying a crank to such shaft and revolving it, the pinions will move the racks, whereby the

carrier C will be turned upward and the carrier D simultaneously turned downward.

From the cross-shaft *m* there is extended and fixed to or connected with the sacking a series of stays or lines, *n*, from which it will be seen that while the carrier C is being elevated only that part of the sacking which is in rear of the lines *n* will rise upward with the said carrier. It will also be seen that while the longer arms of the sides or levers of the lower carrier, D, are being moved downward the upper or shorter arms of such levers will rise upward and force the rear bar or roller, *e'*, upward against the sacking, the portion of the sacking that is in front of the bar or roller *e'* and the stays or lines *n* will be horizontal, or about so, the whole sacking being as it were a chair to hold the invalid in an inclined or sitting position.

Any suitable means may be employed to stop the shaft *m* from revolving when the sacking is in the condition last named, that which I generally use being a spring-pawl, *p*, and a lever, *q*, to elevate it, both being pivoted to one side of the frame A, and the pawl being arranged to engage with one of the pinions Z.

In connection with the sacking and its adjuncts, as described, I use a movable auxiliary seat, G, and a movable auxiliary back, H.

Figure 5 is a perspective view of the said auxiliary seat, and Fig. 6 a top view of the back, while Fig. 7 is a top view, and Fig. 8 an inner side view, of one of the furcated side bars of the back H.

The auxiliary seat consists partly of a sacking, *r*, having a hole, *s*, through it at its center, and also having straps *t* to button on studs *u* projecting from the outer sides of the two furcated bars *v*. These furcated bars *v*, arranged within the frame A, are each supported at its rear by a stud, *w*, extending from the side bar of the frame and into the space *x* between the prongs of the bar. Each furcated bar *v* is also further forked, as shown at *y*, each of the prongs of the fork being near its lower end bent outward at a right angle. The fork *y* is to aid in coupling the bar to a vertical rack, *z*, which is accomplished by a screw, *a'*, which goes between the prongs and projects over their bent-out portions and screws into the rack. A shaft, *b'*, extending across the frame A, is provided with a pinion, *c'*, to each of the racks *z*. By applying a crank to such

shaft and revolving it the racks may be simultaneously moved upward, so as to move upward the auxiliary seat to a position above and from the main sacking for a pot or vessel to be placed on it, underneath the hole in the auxiliary seat, such being to enable an invalid to discharge into such pot or vessel excrement or urine. Each rack z slides vertically in a tubular guide, x^2 , projecting inward from the side of the frame A.

The auxiliary back H, consisting of a U-shaped bow, c^2 , and a sacking, d' , arranged within and fastened to it, as shown, has two studs, e^2 , projecting from it at its outer ends. These studs enter holes f^2 in the bars v , and thereby connect the auxiliary back with the auxiliary seat. The said auxiliary back simply rests against the main sacking upper carrier and rises therewith while such carrier is being moved upward into an inclined position. The auxiliary back supports the back of the invalid, so as to relieve it from the friction or downward drag of the main sacking, to which he would be subjected were his back directly against the main sacking, while in the act of being brought into a state for him to assume a sitting position.

In order that the auxiliary seat may be moved upward by the lower carrier, D, rather than by the racks and pinions, as described, each of the furcated bars v may have pivoted to it at its front end a latch, g' , adapted to extend from it and straddle and rest on the rear connection-bar, e' , of the said carrier, from which it will be seen that while the rear part of the said carrier is moving upward the bars v will rise therewith.

A pawl, h' , attached to a lifter, i' , and arranged as shown, is used with one of the rack-pinions to prevent its shaft from turning under the downward pressure of the racks on the pinions.

In cases where the invalid has a fractured limb, or is obliged to remain in a horizontal position, or thereabout, I have for the bedstead a stretcher and certain appliances which I shall now proceed to describe.

Fig. 9 is a top view, Fig. 10 a side view, and Fig. 11 a longitudinal section, of the said stretcher.

It consists in part of a rectangular frame, k' , which when in use is to have extended across it a series of bands to support a person. It also has extending down from it at its middle furcated projections l' (like the forks y , hereinbefore described) to engage the frame to the upper parts of the vertical racks z by the screws a' . Racks m' , connected with the rear part of the stretcher by links n' , engage with pinions o' , fixed on a cross shaft, p' , arranged as shown in the frame. On applying a crank to this shaft and revolving it the stretcher may be forced upward, it being also forced upward by moving the racks z upward by their pinions and their shaft. Thus by the means employed for elevating the stretcher it may be so raised for the purpose

of moving the patient sufficiently above the main sacking for the removal of the mattress and bedclothes therefrom and return of them as occasion may require. With one of the pinions o' , I use a pawl or dog, b^2 , which is fulcrumed to the frame A, as shown, and is provided with a tooth to enter the space between any two teeth of the pinion, and also has at one end an eye which encompasses the upper end of a vertical slide-rod, q' , and rests on a nut screwed on said rod. Below the nut the rod is provided with a spring, r' , which serves, as shown, to keep said rod elevated and the pawl in engagement with the pinion. The rod is also provided at its foot with a pedal, s' . On said pedal being depressed by the foot of a person the dog will be allowed to fall away from the pinion. Over the pawl is a cammed lever, w' , by which the pawl may be forced and held out of action with the pinion as occasion may require.

Fig. 12 is a longitudinal section of the bedstead with the stretcher applied to it.

I do not claim in an invalid-bedstead a stretcher supported by four racks arranged at its four corners, for it will be seen that I have two racks at one end only of the stretcher, the other two being at its middle, whereby it can be tilted on them to bring it to better advantage into an inclined position.

Having thus described my improved invalid-bedstead, what I claim thereof as my invention is as follows:

1. The combination, with the supporting-frame, of the rocker-frame E, provided with segmental rack and pivoted to the supporting-frame, the shaft m , provided with gear l , the sacking B, a support for the sacking connected with the rocker-frame at one end thereof, a carrier C, pivoted to the main frame, to which the other end of the sacking is attached, and the stays n , all constructed and arranged as set forth.

2. The combination of the sacking B, its movable upper carrier, C, and a support at the other end of the sacking, with a main supporting-frame, and the auxiliary back H, pivotally connected with the supporting-frame, and resting on carrier C, as set forth.

3. The combination, with the main supporting-frame, of the two carriers C and D, pivoted thereto, the sacking B, attached to such carriers, the carrier D having a bar, e' , extending across and under said sacking, the rocker-frame E, connected to said carriers and supporting-frame, and having the rack k , the stays n , and shaft m , provided with gear l , as set forth.

4. The combination of the furcated bars v with the auxiliary seat r , and with the frame A, and the racks z , shaft b' , and pinions c' , as set forth.

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Witnesses:

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E. B. PRATT.