

(No Model.)

2 Sheets—Sheet 1.

L. M. HOFFMAN.  
INVALID CHAIR.

No. 410,591.

Patented Sept. 10, 1889.

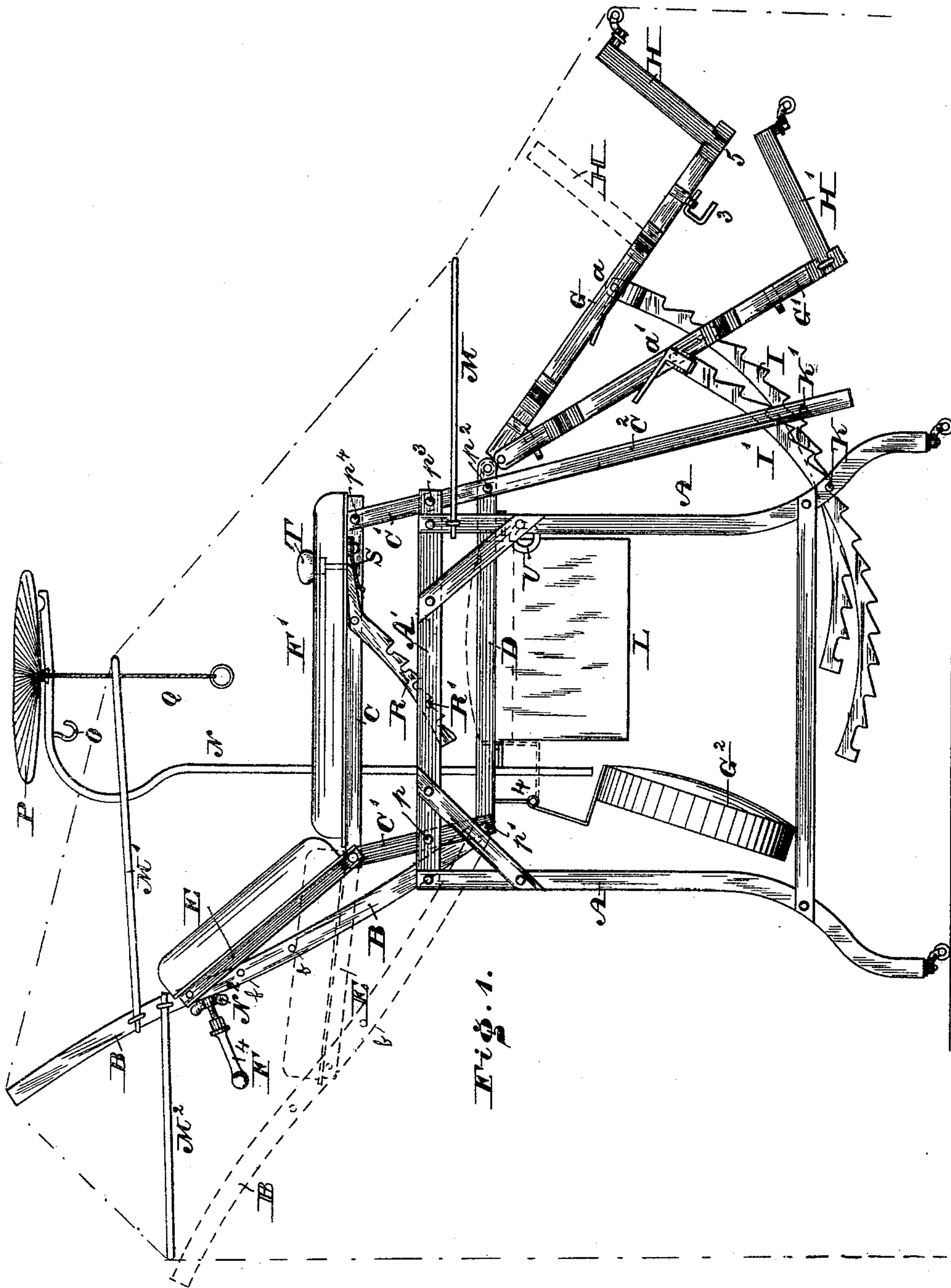


Fig. 1.

WITNESSES:

Th. Rollé  
A. P. Jennings.

INVENTOR:

Lina M. Hoffman  
BY Giederheim & Piutner

ATTORNEYS.

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Fig. 2.

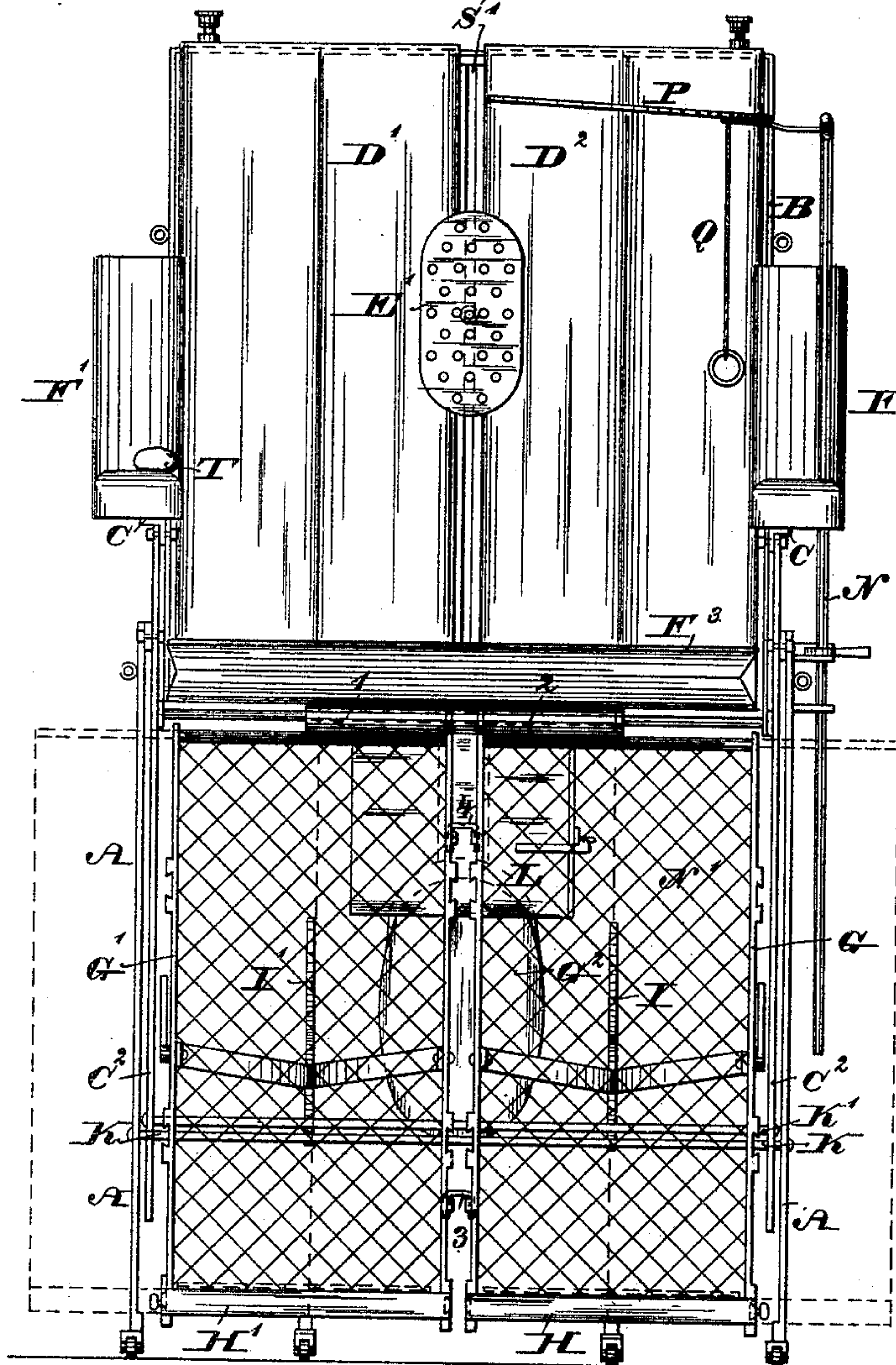
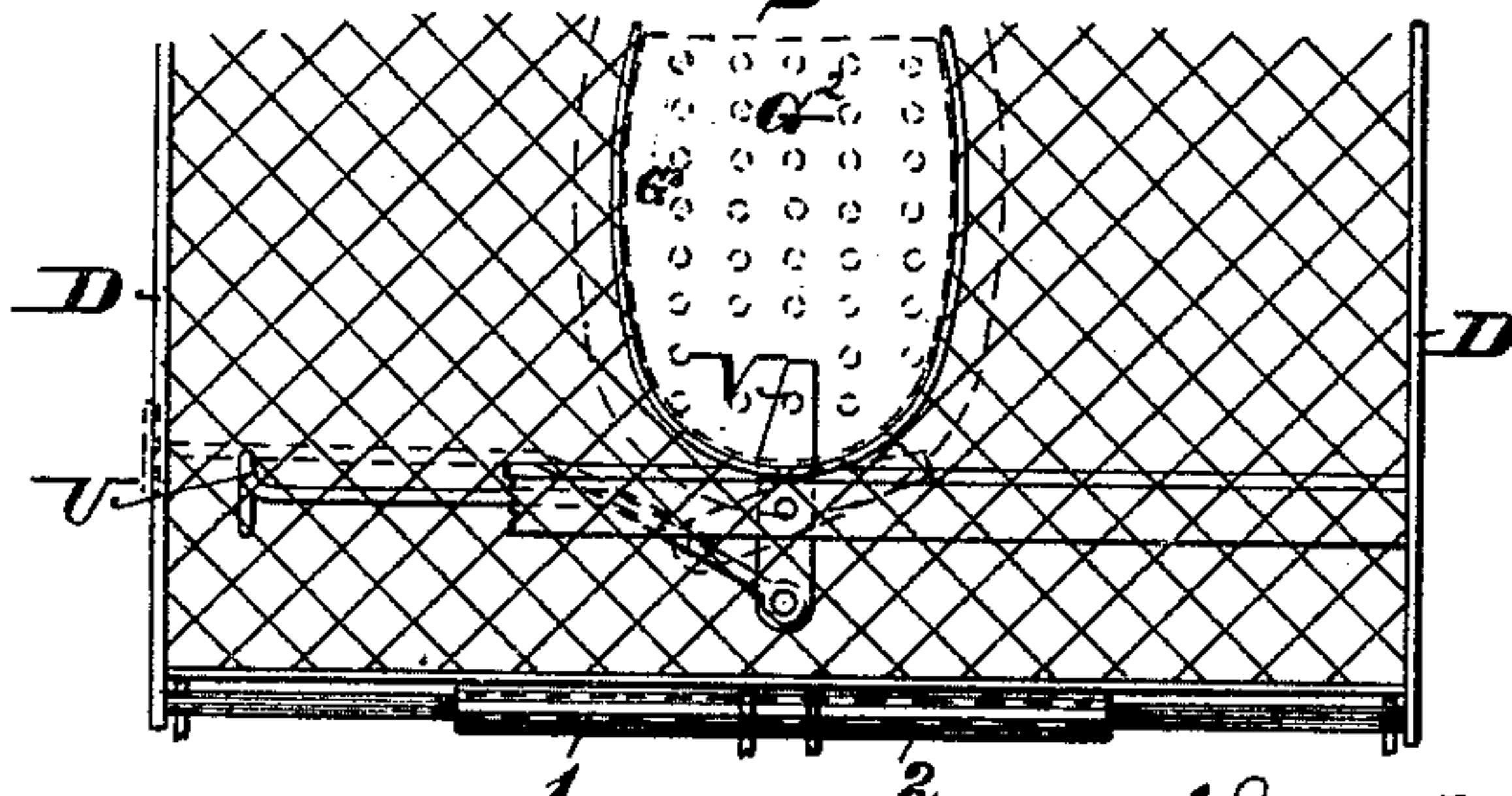


Fig. 3.



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# UNITED STATES PATENT OFFICE.

LINA M. HOFFMAN, OF PHILADELPHIA, PENNSYLVANIA.

## INVALID-CHAIR.

SPECIFICATION forming part of Letters Patent No. 410,591, dated September 10, 1889.

Application filed January 11, 1888. Renewed December 19, 1888. Serial No. 294,129. (No model.)

*To all whom it may concern:*

Be it known that I, LINA M. HOFFMAN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Invalid-Chairs, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in invalid-chairs; and to this end it consists in novel features hereinafter described, and particularly pointed out in the claims which follow this specification.

It will be fully understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 represents a side elevation of my improved chair. Fig. 2 represents a front elevation thereof. Fig. 3 represents a detail plan view of the seat and connections therewith.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A represents the frame of the chair, consisting of rigid standards with upper side bars A', braced as shown, and resting on casters.

B represents the back pivotally connected at  $p'$  to a swinging frame C C' D, which in turn is pivoted at front and rear to the standards of the frame at  $p$   $p^3$ , &c.

E is a connecting rod or link having an opening in its upper end, and is pivotally connected at its lower end to the upper portion of the frame C C' D. In the sides of the back support B are openings  $b$ , whereby the said rod E may be secured at different places on the said support, and thus adjusting its position relatively to the seat-frame.

D' D<sup>2</sup> are air-cushions for the back of the patient, and F F' are arm rests or supports. The seat has an air-cushion F<sup>3</sup>, and the leg and foot rests are similarly provided. If desired, hot water may be used instead of air for filling the several cushions.

G G' are leg-rests pivoted to the frame by sleeves 1 2, and adapted to slide laterally, as shown in dotted lines in Fig. 2, so as to permit a surgeon or attendant to separate the legs of a patient. These leg-rests have foot-rests H H', removable, as shown at 5, and are adjustable vertically to different heights by means of the semicircular notched racks I I',

pivoted at  $a$   $a'$ . As the rests are raised up, the vertical racks I I' sustain them at various angles on the cross bar or rod K. When the leg-rests G G' are in their lowest position, they rest against the cross-rod K', joining the vertical pivoted side bars C<sup>2</sup> C<sup>2</sup>, so that as the frame C C' D is tilted said leg-rests are carried forward also.

R is a similar rack-bar adapted to hold the pivoted frame in any desired position by its backward thrust upon the pin R', fixed to the frame. This rack-bar is pivotally connected to the upper part of the swinging frame C C' D, and has a knob T, accessible to the surgeon or to any one desiring to change the relative adjustment of parts. It is held normally in locking position by a leaf-spring S.

L is a box fixed detachably to the frame of the chair beneath the seat, adapted to serve as a commode.

G<sup>2</sup> is a cushioned seat, pivoted to the rigid frame at 4 and adapted to be rotated into position when the commode is not in use.

P is a fan fixed by a spring to a standard N, which in turn is adjustably fixed to the frame of the chair, as shown in Fig. 2. To this fan is attached a cord Q, in easy access of the patient for manipulating the fan.

M M' M<sup>2</sup> are rods attached to the sides of the chair for the purpose of holding a rubber covering above the patient while being treated with steam or vapor, or it may be made to hold a mosquito-netting or analogous covering over the patient.

E' is an electrode, of metal or analogous conducting material, designed to apply electricity to the back of the patient, the other electrode (not shown) being held in the patient's hand or applied to any designed part of the body. This electrode E' is adjustable vertically in a slit S' in the back of the chair and lying between the air-cushions D' D<sup>2</sup>. The electrode is held in position by a hand-rod F<sup>4</sup> and nut N<sup>2</sup>.

In Fig. 3 I have shown the means for holding the pivoted seat G<sup>2</sup> in position. V represents a locking-lever, pivoted to the frame of the chair so that its inner end when in the position shown in full lines locks the seat. It is manipulated by a rod U, accessible to the operator at the side of the chair, as shown.

N' N' is wire-netting, which constitutes the



body, seat, and leg-rest supports, thus making a light, strong, and efficient support.

3 3 are keys or links for uniting the leg-rests or supports, so that they will move as one part in vertical adjustment.

The box L is also adapted to receive the waste fluid from the syringe, which latter may be suspended from the hook O, said waste fluid dropping into the box through the opening or openings G<sup>3</sup> in the seat.

The opening in the box L may also be covered by a perforated plate acting as an electrode, as shown by the dotted lines, Fig. 3, the perforations of said plate also admitting of the passage of any vapor that may be created within said box, this being possible by means of a spirit lamp, burner, or any other vaporizer placed in the box.

The patient may rest upon a sponge placed on the perforated plate for electrical treatment when so desired.

The heat from the box L may be employed for warming a sitz-bath placed on the seat over the opening or openings G<sup>3</sup>.

Owing to the open nature of the foot-rests H H', vapor may be passed through the same to the feet of the patient, said vapor being produced by any suitable apparatus, such as the steam-pipes employed for admitting steam within the inclosure. (Shown in dotted lines, Fig. 1.) Said rests may also support electrodes, if desired, so as to electrically treat the feet and limbs of the patient. (See the dotted lines on H H' at the bottom of Fig. 2.)

I am aware that it is not new to construct an invalid-chair with a seat-frame adapted to be raised or lowered; neither is it new to provide the same with an adjustable back-support; neither is it new to provide adjustable leg-rests, and such I do not claim, broadly; but I am not aware that it is old to provide a

chair of this character with the specific construction of parts, as herein set forth and claimed, the several parts constructed as shown making a chair both durable and economical and at the same time easily operated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An invalid-chair having the frame A, with the upper side bars A', the seat-frame C C' D, consisting of the horizontal bars C and D and the connecting-bars C', pivoted to said horizontal bars and to the side bars A', the back-support D, with openings and secured to the lower portion of frame C C' D, and the link or rod E, pivotally secured to said frame C C' D and to the back-support D, said parts being combined substantially as described.

2. In an invalid-chair, the frame A, with cross-bar K, in combination with the pivoted frame C C' D, consisting of the horizontal bars C D and the pivoted connecting-bars C', the latter frame having the depending side bars C<sup>2</sup>, with pins K', the separate leg-rests G G', each having a rack-bar pivoted thereto and adapted to engage with the pins K', and cross-bar K, substantially as and for the purpose set forth.

3. An invalid-chair having a stationary frame and a vertically-adjustable seat-frame, separate foot-rests, each having a sleeve pivoted on a cross-bar of the seat-frame, a link connecting said leg-rests, and fastening devices for said rests, said parts being combined substantially as and for the purpose set forth.

LINA M. HOFFMAN.

Witnesses:

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