No. 657,893. Patented Sept. 11, 1900.

F. J. LOWE.

HOME HAMMOCK MOTOR.

(Application filed Jan. 6, 1900.)

(No Model.)

Fig. II.

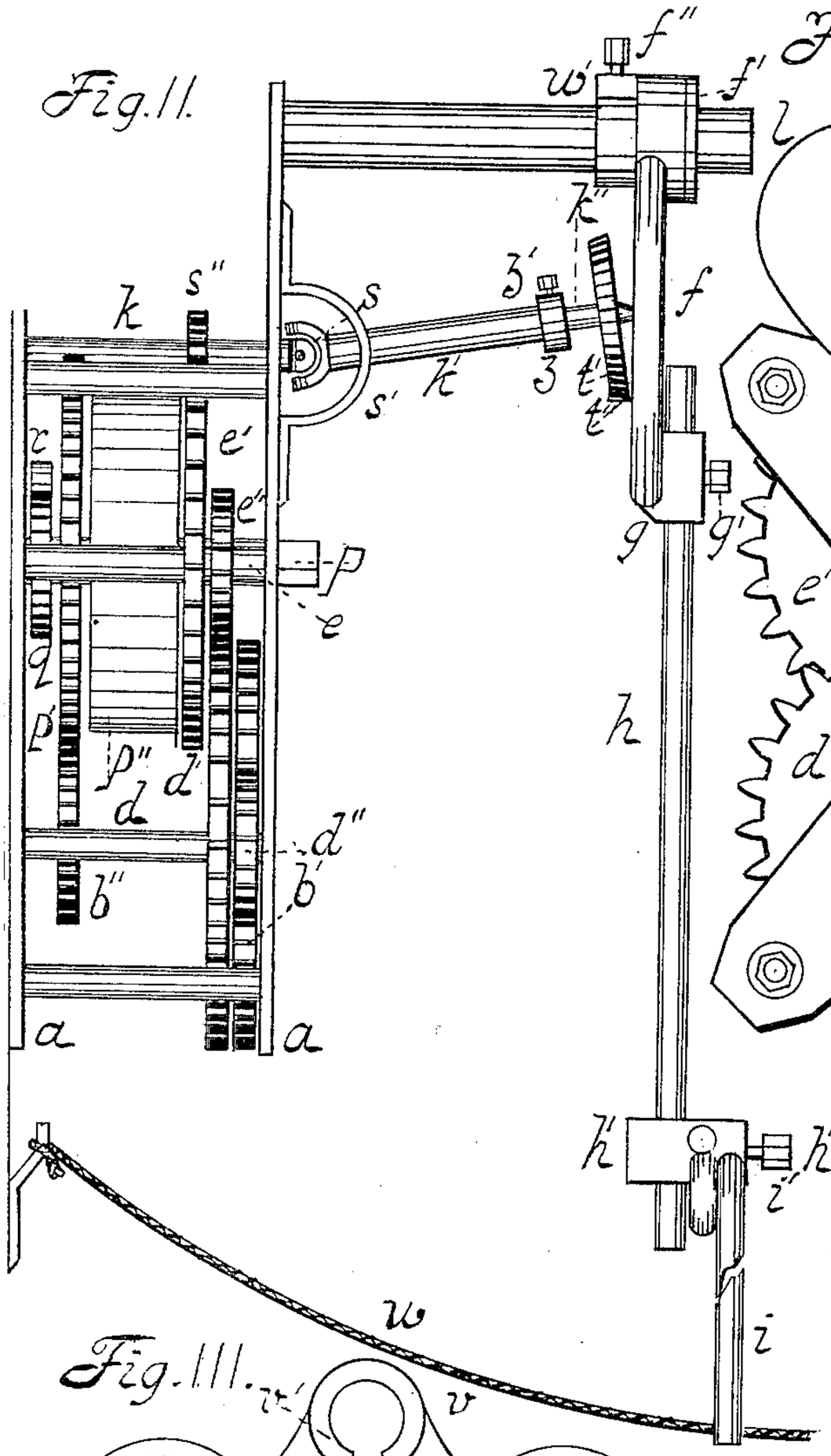


Fig. III.

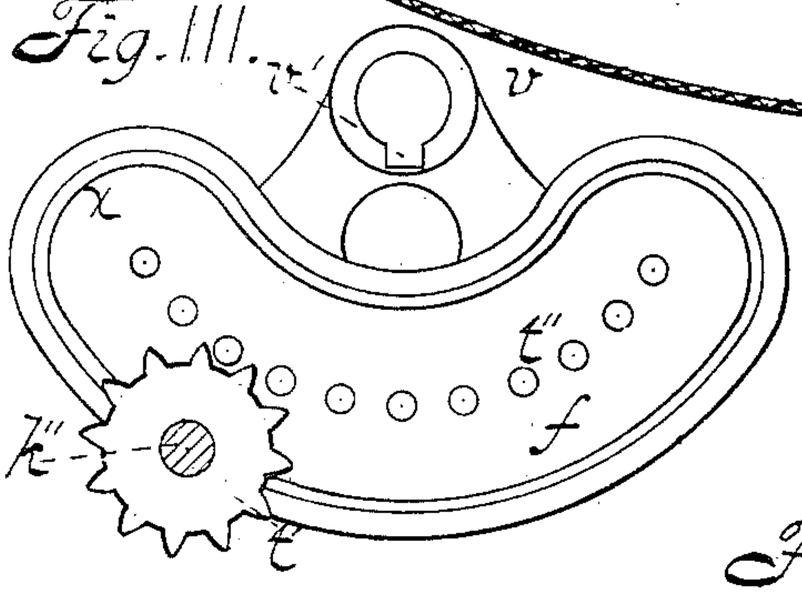


Fig. I.

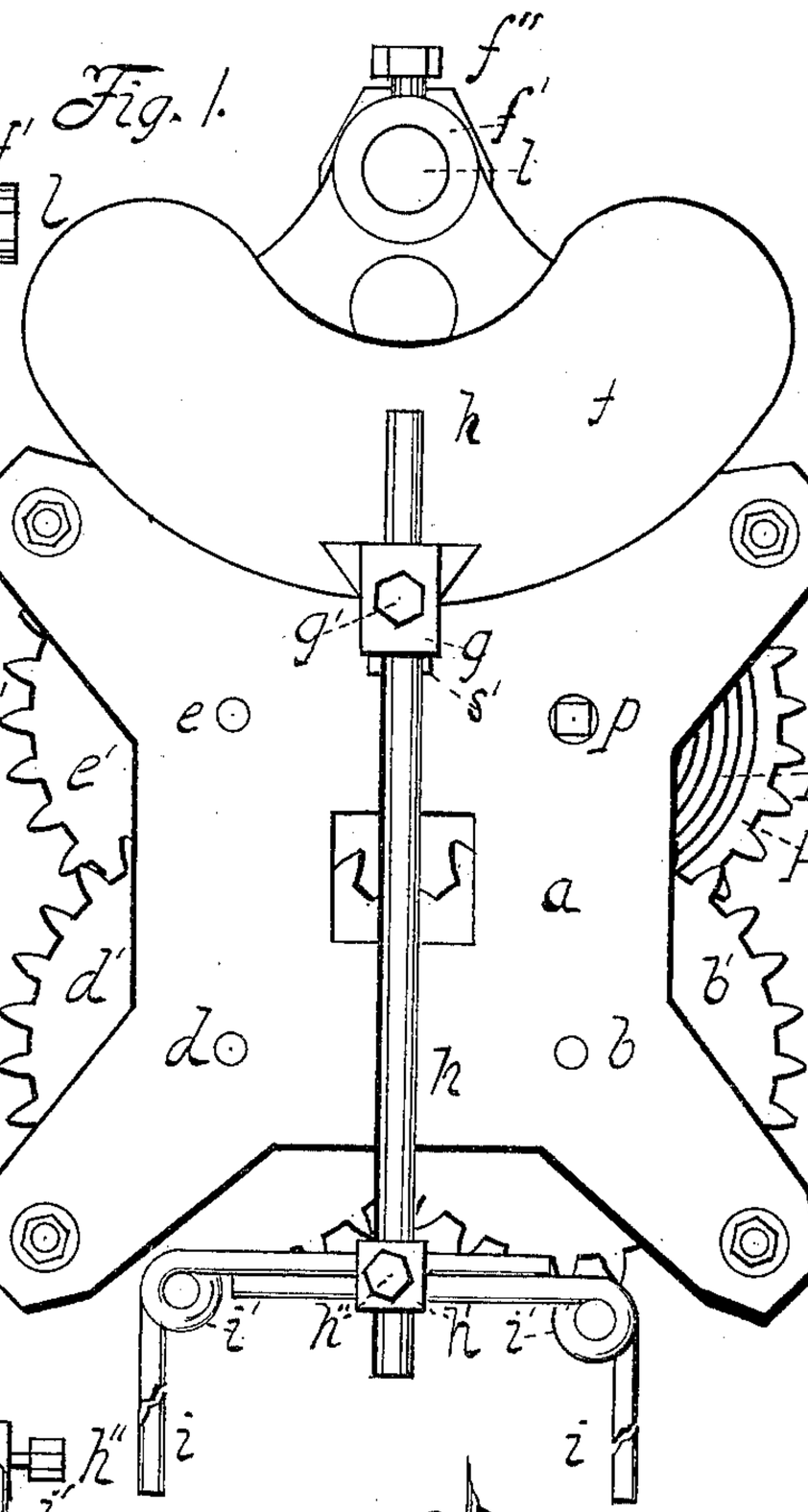


Fig. V.

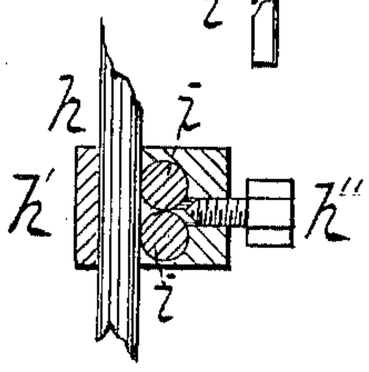


Fig. VI.

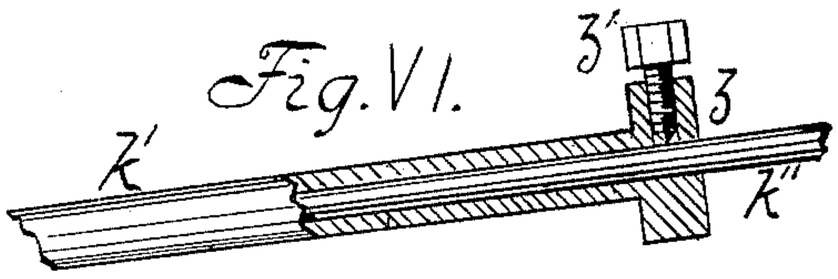
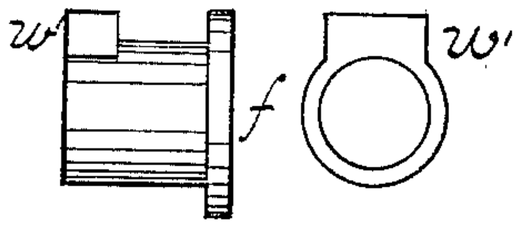


Fig. IV.



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FRANCIS J. LOWE, OF NEW YORK, N. Y.

HOME-HAMMOCK MOTOR.

SPECIFICATION forming part of Letters Patent No. 657,893, dated September 11, 1900.

Application filed January 6, 1900. Serial No. 640. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS J. LOWE, a citizen of the United States, residing at the city of New York, (Coffee Exchange Building,) in the county of New York and State of New York, have invented a new and useful Improvement in Hammock-Swings, of which the following is a specification.

The nature and object of the invention will be fully understood from the following general description and the annexed drawings and will be subsequently pointed out in the claims.

Figure I is a side view of my newly-invented hammock-swing. Fig. II is an edge view of the same. Figs. III, IV, V, and VI are detail views of various parts more fully hereinafter described.

In the drawings, *a* designates the supporting-frame of the machine. In this are journaled the shafts *p*, *b*, *d*, *e*, and *k*. On the shaft *p* are mounted the wheel *p'* and the spring *p''*. On the shaft *b* are mounted the wheels *b'* and *b''*. On the shaft *d* are mounted the wheels *d'* and *d''*. On the shaft *e* are mounted the wheels *e'* and *e''*. On the shaft *k* is mounted the wheel *s''*. The spring *p''* is fastened by its inner end to an arbor on the shaft *p* and by its outer end to the wheel *p'*, near the periphery thereof. The wheel *p'* is mounted loosely on the shaft *p*. The spring *p''* is wound up by applying a key or wrench to the square shank on the end of the shaft *p*. This spring is held wound up by a pawl *r*, working in the ratchet-wheel *q*, mounted on shaft *p*. Both ratchet and pawl are of common and well-known form. The wheel *p'* which is loosely mounted on the shaft *p*, meshes into and drives the wheel *b''*. The wheel *b'* on the same shaft meshes into and drives the wheel *d''* on the shaft *d*. The wheel *d'* on the same shaft meshes into and drives the wheel *e''* on the shaft *e*. The wheel *e'* on this same shaft meshes into and drives the wheel *s''* on tne shaft *k*. The shaft *k* projects beyond the supporting-frame and is provided at its outer end with a universal joint *s*, by which it is connected to the shaft *k'*. The outer end of the shaft *k'* is provided with a collar and set-screws *z z'*. The shaft *k'* is hollow, and in it is placed the shaft *k''*, which is movable lengthwise in shaft *k'* and may be held in adjustment by set-screw *z'*. Upon the outer end of the shaft *k''* is mounted the wheel *t'*. The bar *l* is fastened securely and rigidly to the supporting-frame *a*. A sleeve constructed with a collar *f'* and a lug *w'* is adapted to slip on this bar. The rocker *f* is formed with a hole *v*, having an extension *v'*, adapted to slip on the said sleeve. The rocker *f* is of the form illustrated. It is provided with a series of pins set in a segment of circle, (designated by *t''*.) These pins are all equally distant from the bar *l*, and the wheel *t'* meshes into them, as hereinafter described. The socket *g* on the rocker *f* by means of the set-screws *g'* holds the bar *h*, which reaches downward to and through the block *h'*, which is pierced with the set-screw *h''*. At right angles to the seat of the bar *h* this block *h'* is pierced by two channels which are parallel to each other and slightly intersect through their entire length. In these channels are placed the bars *i* and *i*, and the parts are so arranged that when the screw *h''* is set up it will bear on both bars *i* and *i*, and they will bear on the bar *h*, so all four—the block *h'*, the bar *h*, and the two bars *i* and *i*—are adjustably and detachably fastened by the set-screw *h''* together. At *i'* the bars *i* are bent in a loop to give them greater elasticity, as more fully hereinafter described, all the various parts of my invention to be substantially as illustrated in the drawings.

To use my invention, the back side of the supporting-frame is securely fastened to any convenient and proper support. To this same support and directly under the machine is to be fastened the cords of a hammock, (designated by *w*.) The sleeve (illustrated in Fig. IV) is put into the hole *v* of the rocker, passing the lug *w'* through extension *v'* of said hole. The sleeve is then turned so that the lug *w'* will be at the side of the hole *v* opposite the extension *v'*. The flange *f'* will then prevent the rocker from slipping one way, and the lug *w'* will prevent it from slipping the other way. The set-screw *f'''* is then put in its place in the lug *w'*. The sleeve, carrying with it the rocker *f*, is now slipped on the bar *l*, so that the rocker will hang down below the bar and the set-screw *f'''* will be above the bar. The bars *h* and *i* are adjusted so as to engage the cords of the hammock and se-

cured in position by the set-screws h'' and g'. The set-screw f'' is now set up. Then shaft k'', carrying the wheel t', is slipped forward toward the rocker f until the conical end of the shaft k'' rests in the groove x of the rocker and the wheel t' properly engages the teeth or pins t''. The set-screw z' is then set up to secure the shaft k'' in proper position. Lastly, the spring p'' is wound up by applying a key or wrench to the square shank on the end of the shaft p. The machine is now ready to operate, and the person who is to occupy the hammock is put into it, and, lastly, the person in the hammock or an attendant must give it a start to swing. It will then be found that as the wheel t' revolves, driven by the train of wheels aforesaid, it will engage the pins t''. The conical end of the shaft k'', following the groove x of the rocker, will always keep the wheel and the pins in mesh. As the wheel cannot move laterally, but the rocker can turn on the sleeve on the bar l, the wheel will drive the rocker past it one way until the wheel has reached the end of the row of pins. Then the shaft k'' moving in the universal joint s and in the guide s' and the continued motion of the wheel t' carrying the shaft k'' forward the shaft will follow the groove x and the wheel will swing around the end pin and engage the pins on the opposite side. This will cause the rocker to move the other way, and so by the wheel working alternately above and below the pins the rocker will be swung steadily to and fro, at the same time carrying with it the bars $h\ i\ i$, and as one bar i had been adjusted on one side of the cords of the hammock and the other bar i on the other side of the cords so the bars will swing the hammock back and forth with the cords between them until the resilient force of the spring p'' is exhausted. The loops i' are bent in the bars i so that they will be elastic enough to ease any jar that may be caused by the motion. When the spring has run down, it may be rewound and the process repeated as often as may be desired When the set-screw f'' is loose, the sleeve and the rocker may be slipped to any desired place on said bar l or entirely off of it, and so the rocker can be adjusted to the size of any hammock, and on account of the shafts $k'\ k''$ being telescopic the wheel t' may be adjusted to engage the teeth t'' of the rocker in any position in which they may be placed.

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

1. The combination with a revoluble shaft, supported and actuated substantially as hereinbefore set forth, of a bar rigidly fastened to the supporting-frame in which said shaft is journaled, a sleeve upon said bar formed with flange and lug substantially as specified, a rocker, having a hole adapted to said sleeve as set forth and by means of said sleeve and its set-screw mounted adjustably and detachably upon said bar, and formed with a socket, and curving groove and pins, a bar in said socket, a set-screw to bind said bar adjustably in said socket, a block upon said bar pierced with a set-screw for securing said block, to said bar, and spring-bars in said block, said block also pierced with a channel for said bar, and two other channels for spring-bars, spring-bars in said channels adapted to engage the cords of a hammock as set forth, a universal joint on the end of said revoluble shaft, a telescopic shaft attached by said universal joint to said revoluble shaft, a guide to control the motion of said telescopic shaft, the end of said telescopic shaft engaging the groove in said rocker, and a wheel mounted on said telescopic shaft, engaging the pins of said rocker, substantially as and for the purpose set forth.

2. The combination with a train of wheels, actuated substantially as set forth, and the supporting-frame in which they are journaled of a bar rigidly fastened to said frame, a sleeve upon said bar formed with flange and lug as specified, a set-screw in said lug, adjustably and detachably attaching said sleeve to said bar, a rocker mounted on said sleeve, on said bar, having a hole formed with an extension to allow said lug to pass through, a series of pins, circular groove, and socket as specified, a bar adjustably and detachably held in said socket a set-screw to hold said bar in said socket, a block on said bar, said block being pierced with a set-screw, and formed with a channel for said bar, and two other channels for spring-bars, said block said three bars and said set-screw, all so arranged that they are all held detachably and adjustably together by said set-screw, spring-bars, held in said block, as described, bent with loops, and adapted to engage the cords of a hammock, as specified, a universal joint on the end of one of the shafts of said train of wheels, a telescopic shaft attached to said shaft by said universal joint, a guide to direct the motion of said telescopic shaft, the end of the inner member of said telescopic shaft engaging the groove in said rocker, and a wheel mounted on said inner member of said telescopic shaft and engaging the pins of said rocker, to produce a reciprocating motion in said rocker, all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have hereto signed my name, in presence of two witnesses, this 2d day of December, 1899.

FRANCIS J. LOWE.

Witnesses:
N. HILTAWSKI,
RENWICK F. HUBER.