

(No Model.)

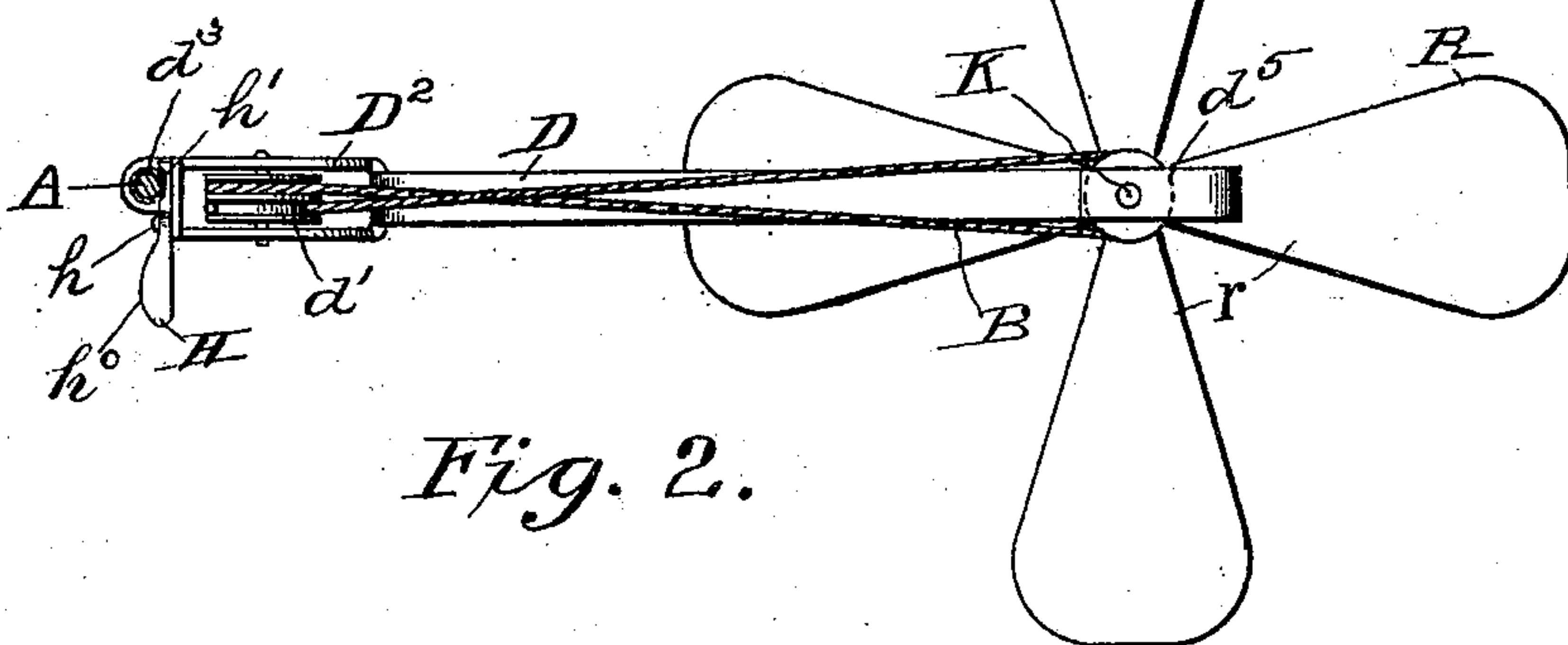
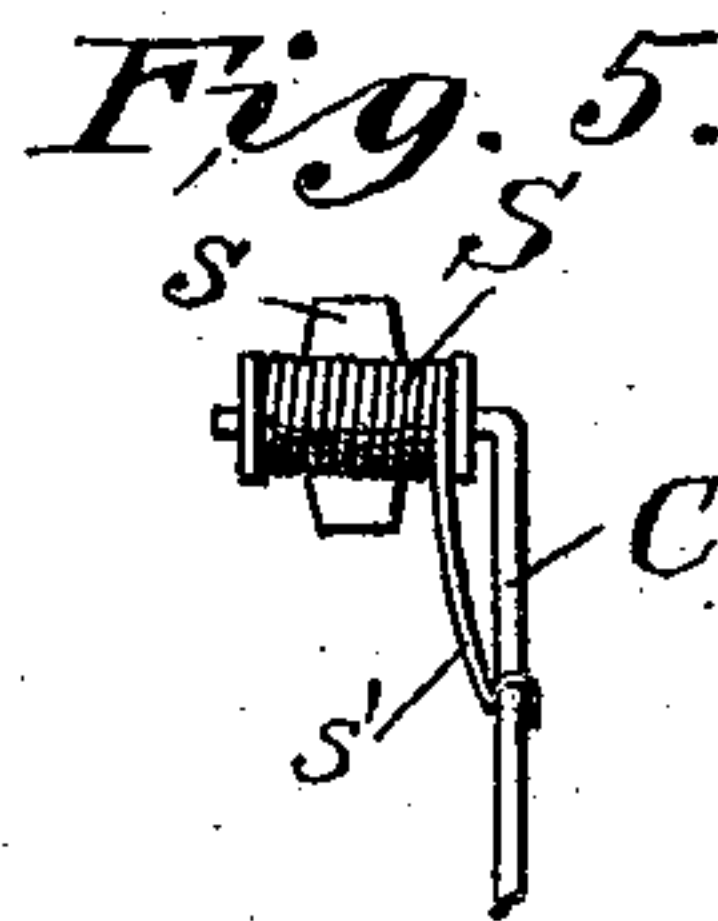
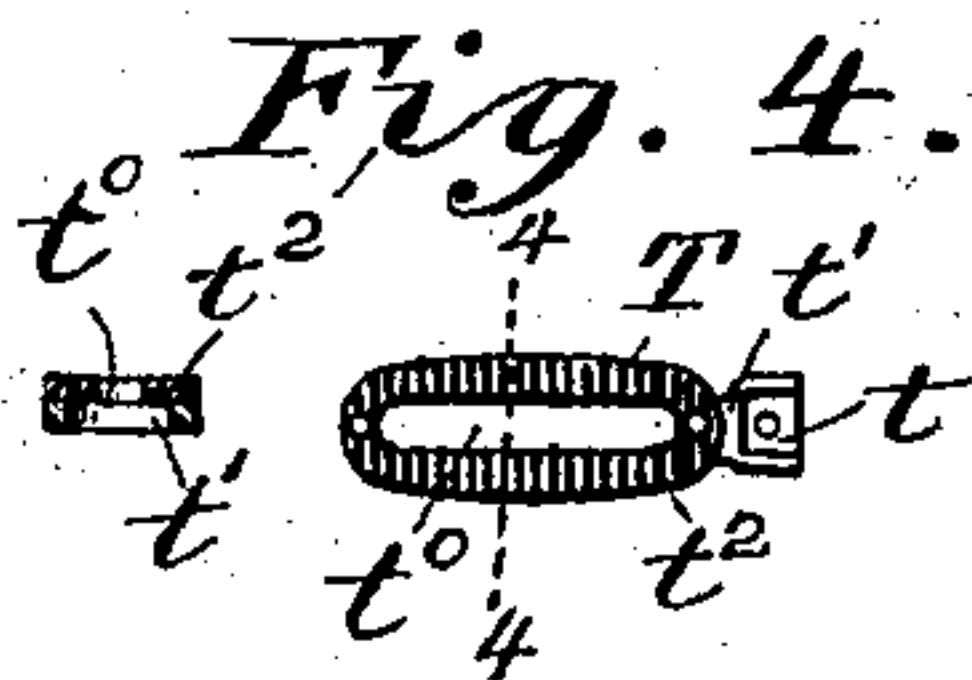
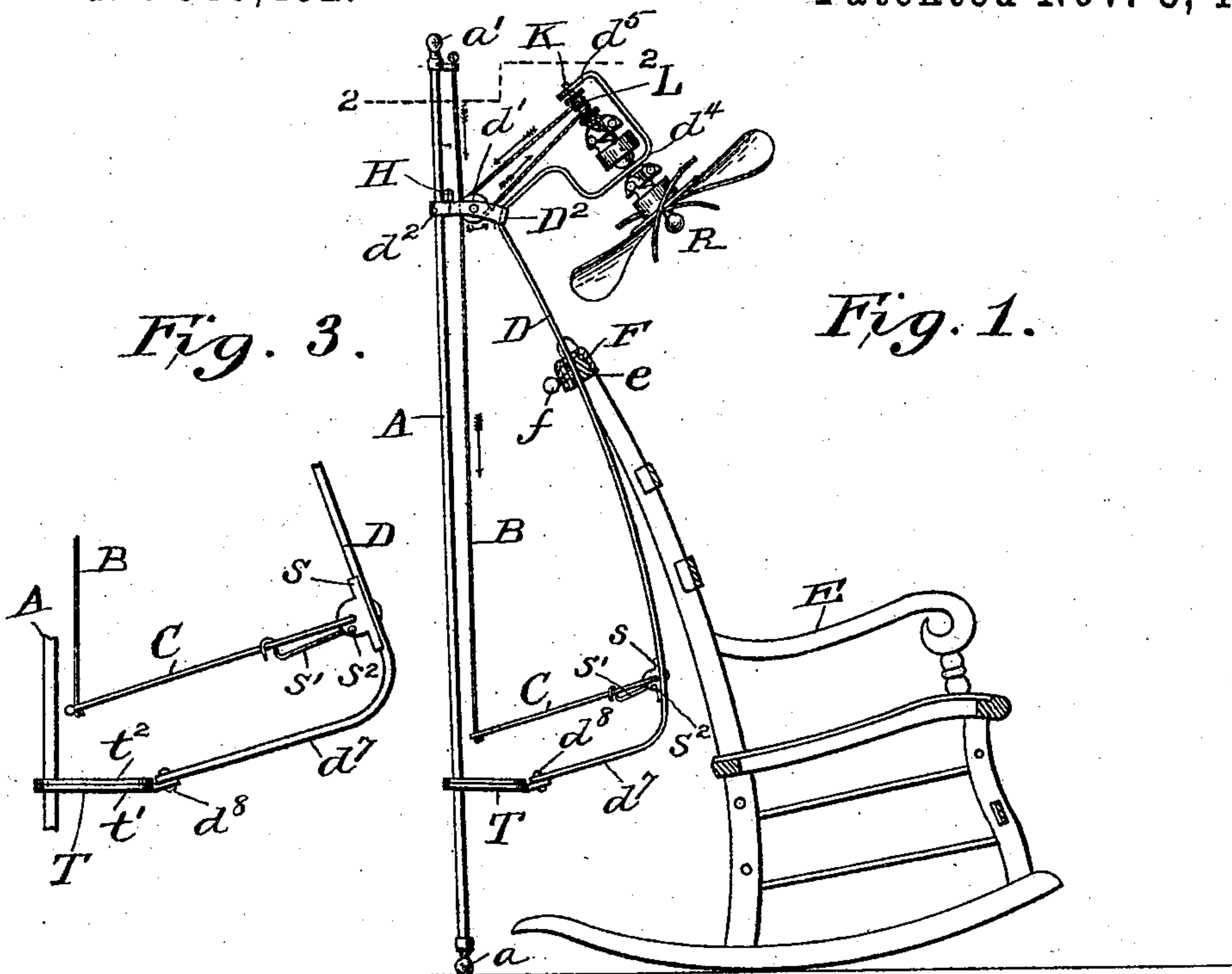
3 Sheets—Sheet 1.

W. H. BOFINGER & A. O. TANNENBERG.

FAN ATTACHMENT FOR ROCKING CHAIRS.

No. 549,432.

Patented Nov. 5, 1895.



Witnesses:

Joseph Blackwood  
Maurice J. Piusa.

Inventors:

W. H. Bofinger &  
A. O. Tannenberg,  
by Whitman & Wilkinson  
Attorneys.

(No Model.)

3 Sheets—Sheet 2.

W. H. BOFINGER & A. O. TANNENBERG.

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Fig. 6.

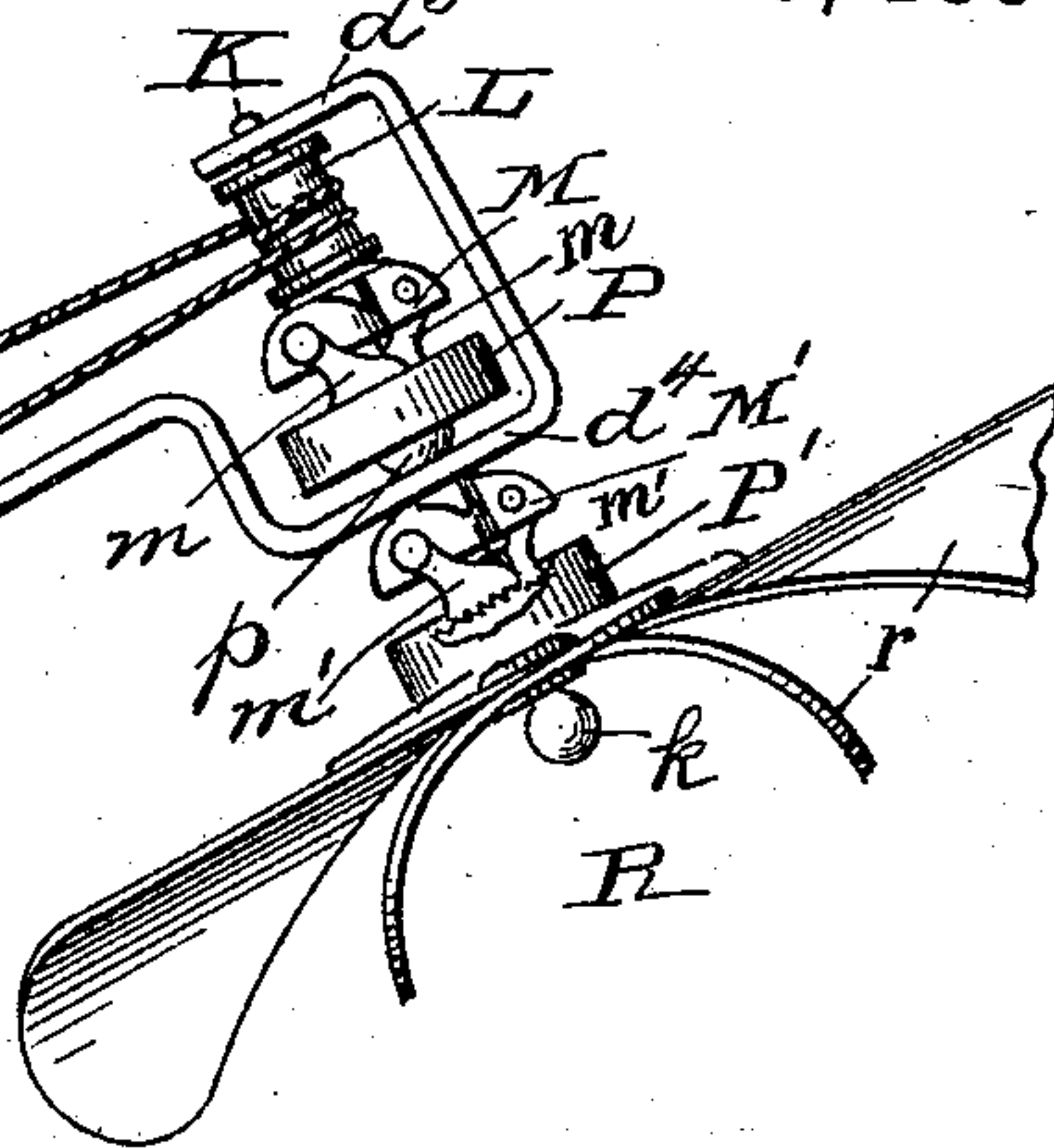


Fig. 9.

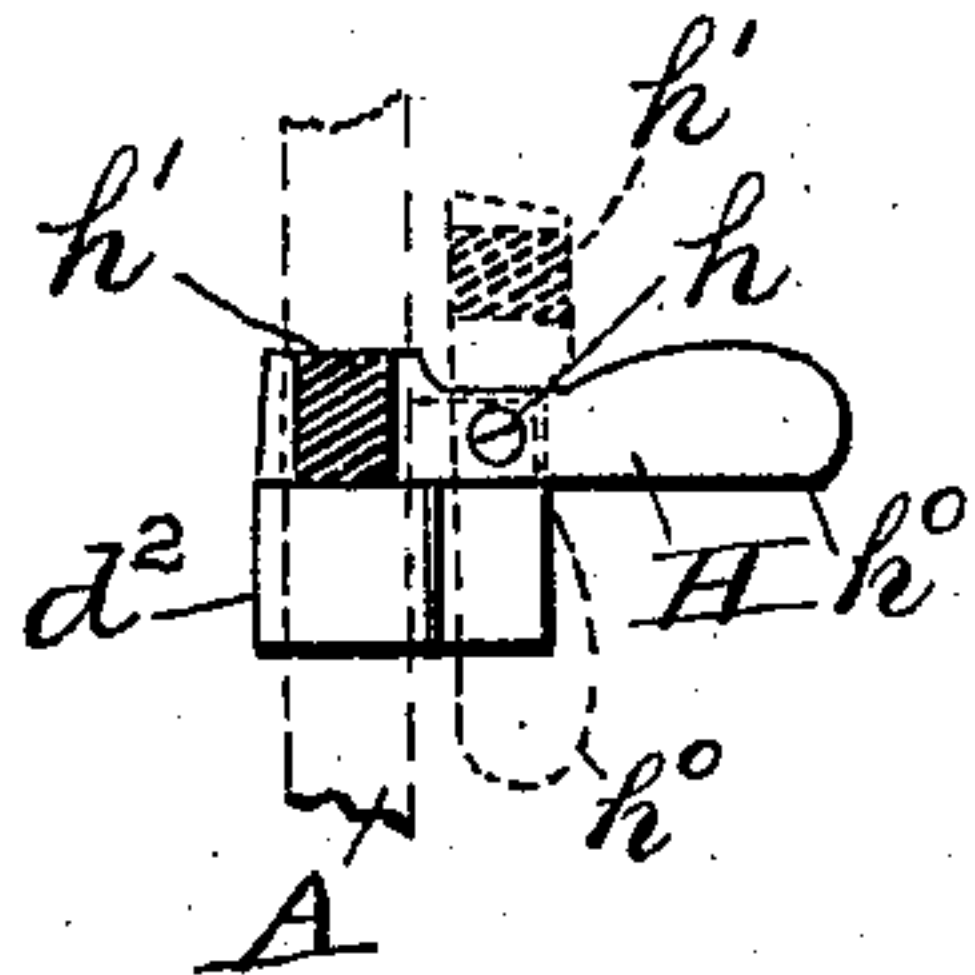


Fig. 8.

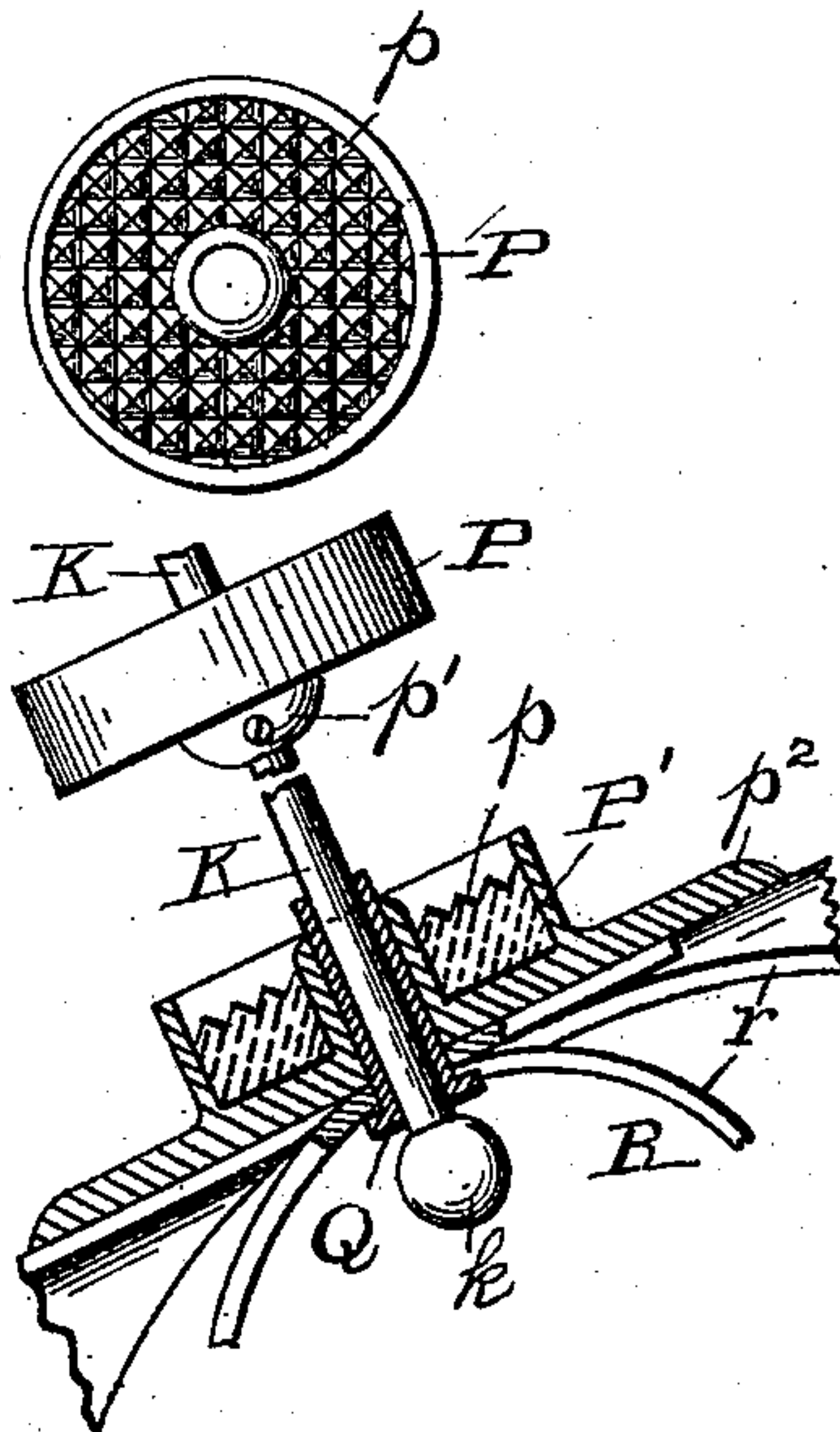


Fig. 7.

Witnesses:

J. H. Blackwood  
Maurice J. Sissone

Inventors:

W. H. Bofinger &  
A. O. Tannenberg  
by Whitman & McKinnon  
Attorneys.

(No Model.)

3 Sheets—Sheet 3.

W. H. BOFINGER & A. O. TANNENBERG.

FAN ATTACHMENT FOR ROCKING CHAIRS.

No. 549,432.

Patented Nov. 5, 1895.

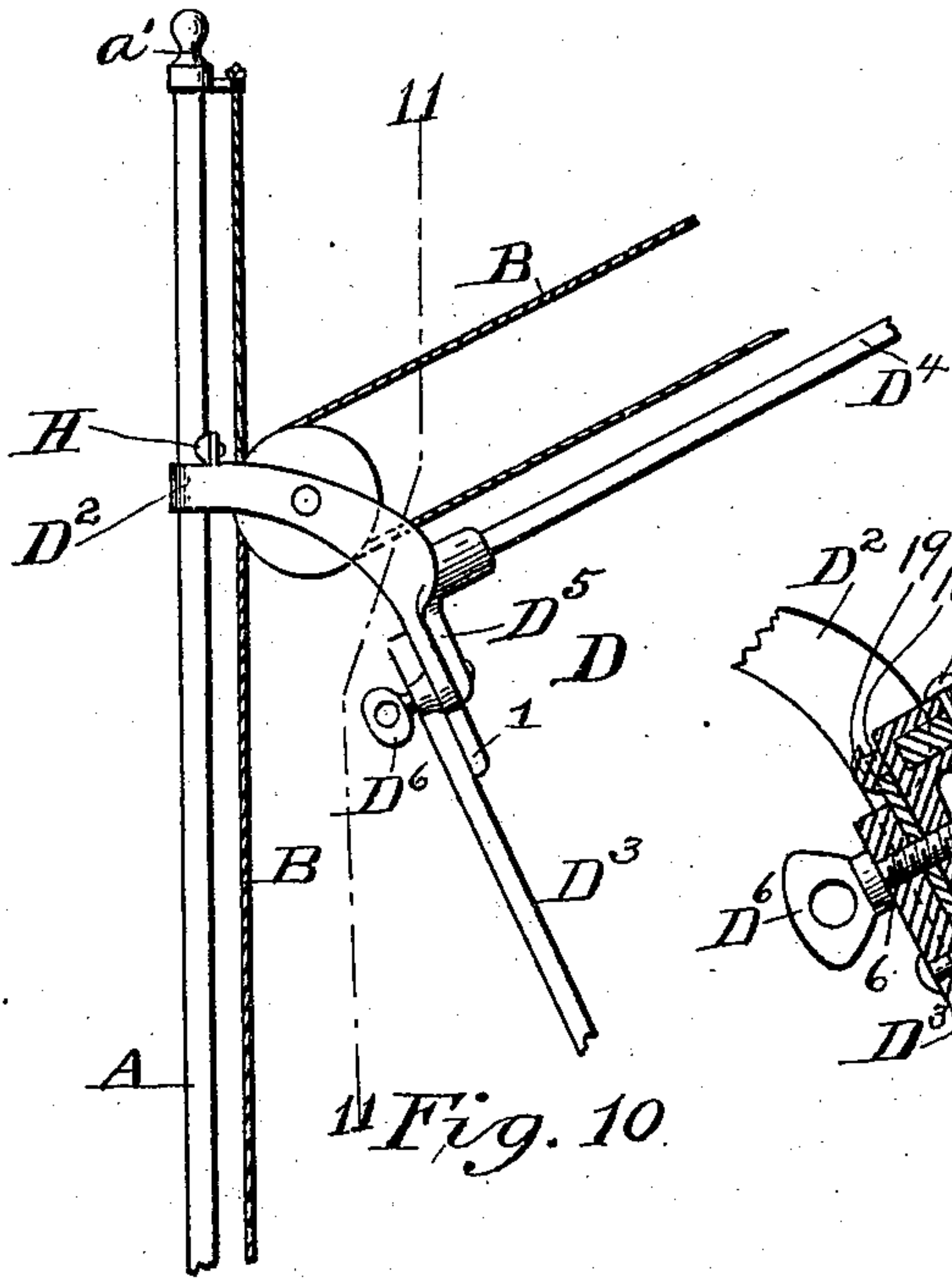


Fig. 10.

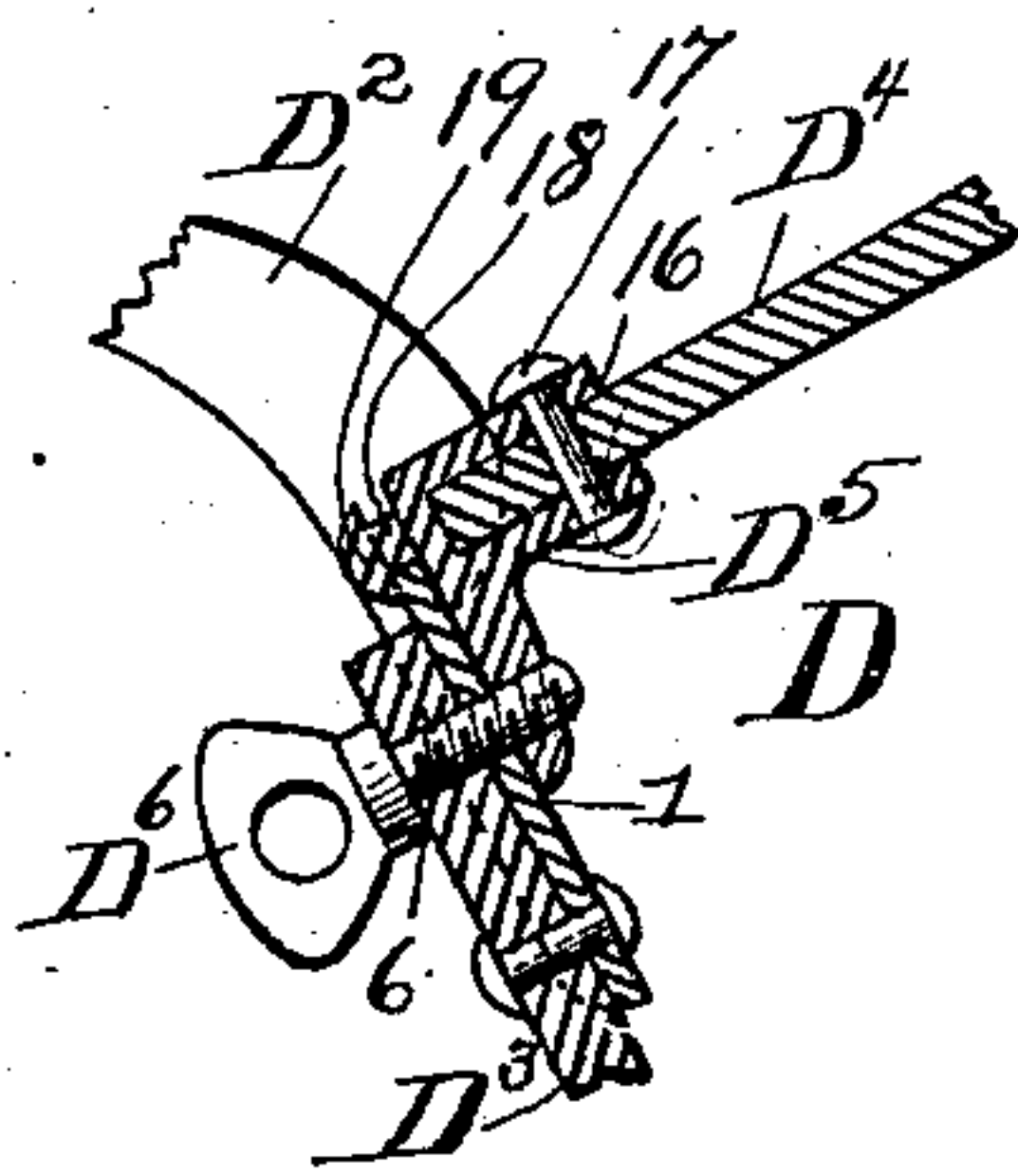


Fig. 12.

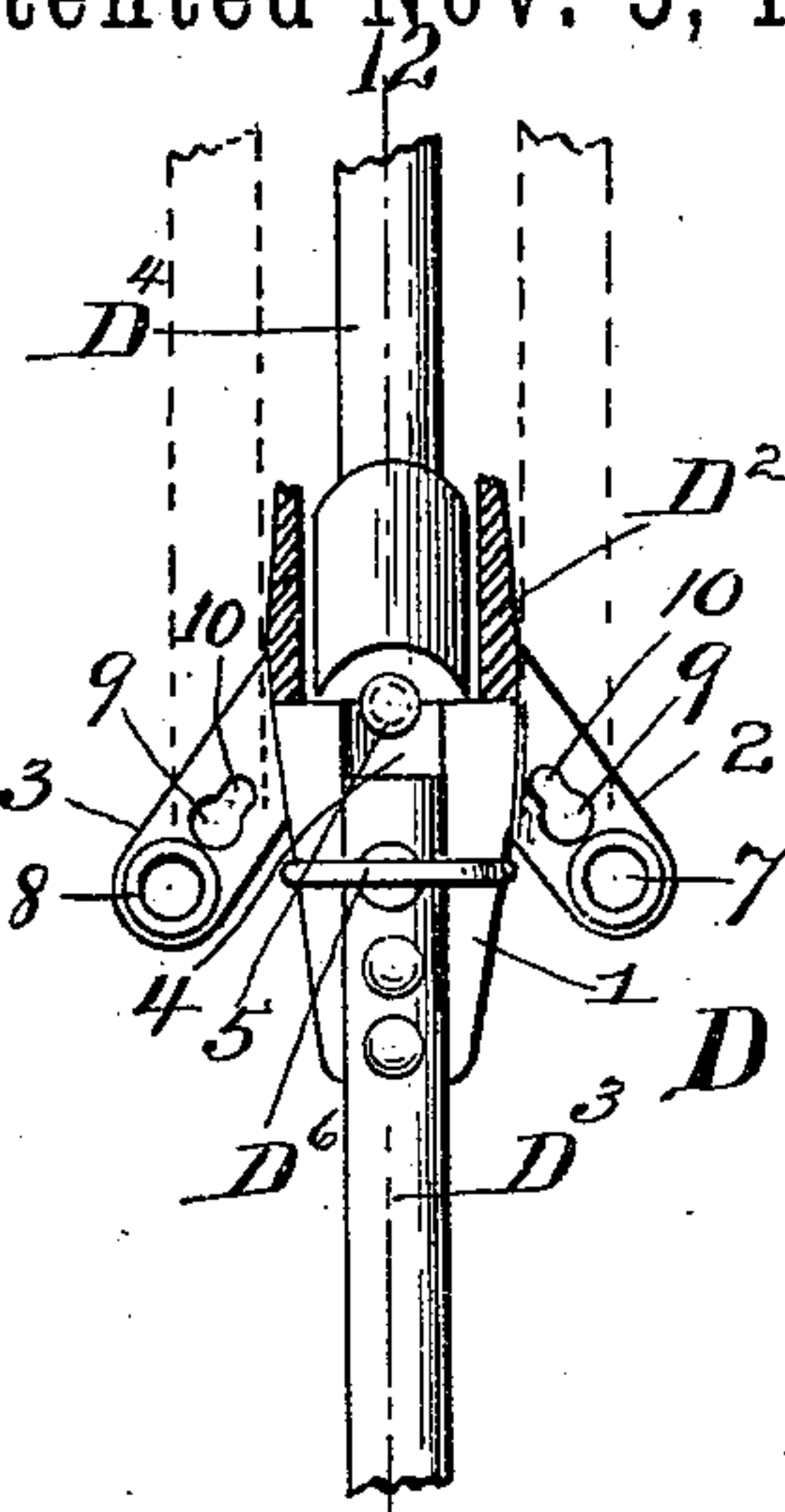


Fig. 11.

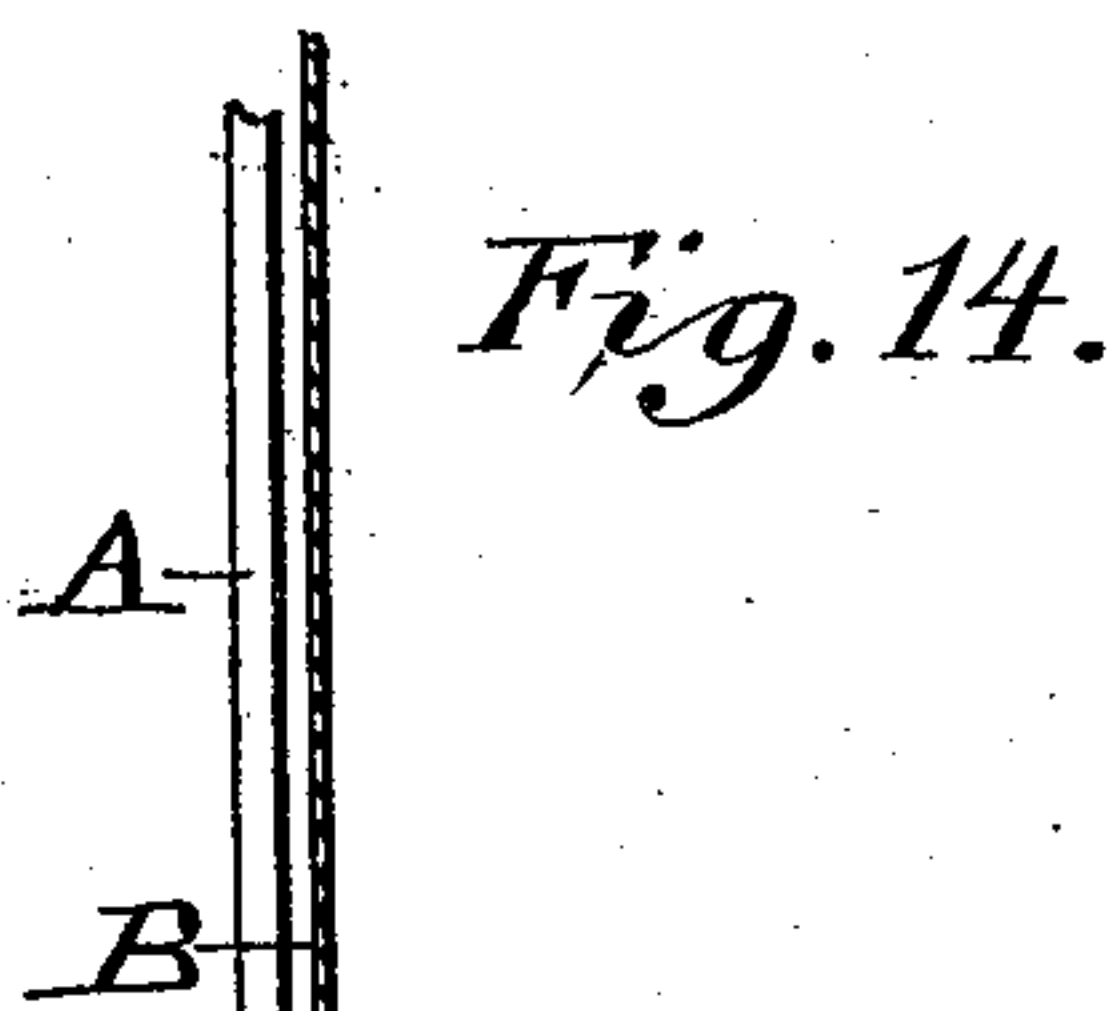


Fig. 14.

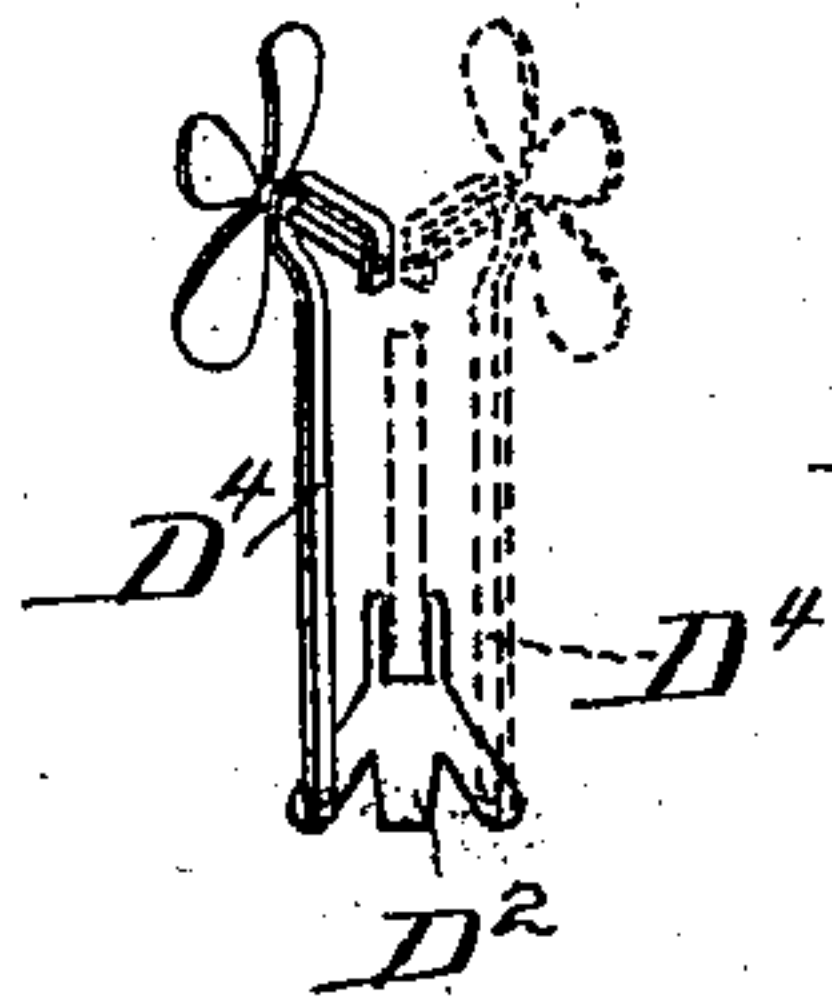


Fig. 13.

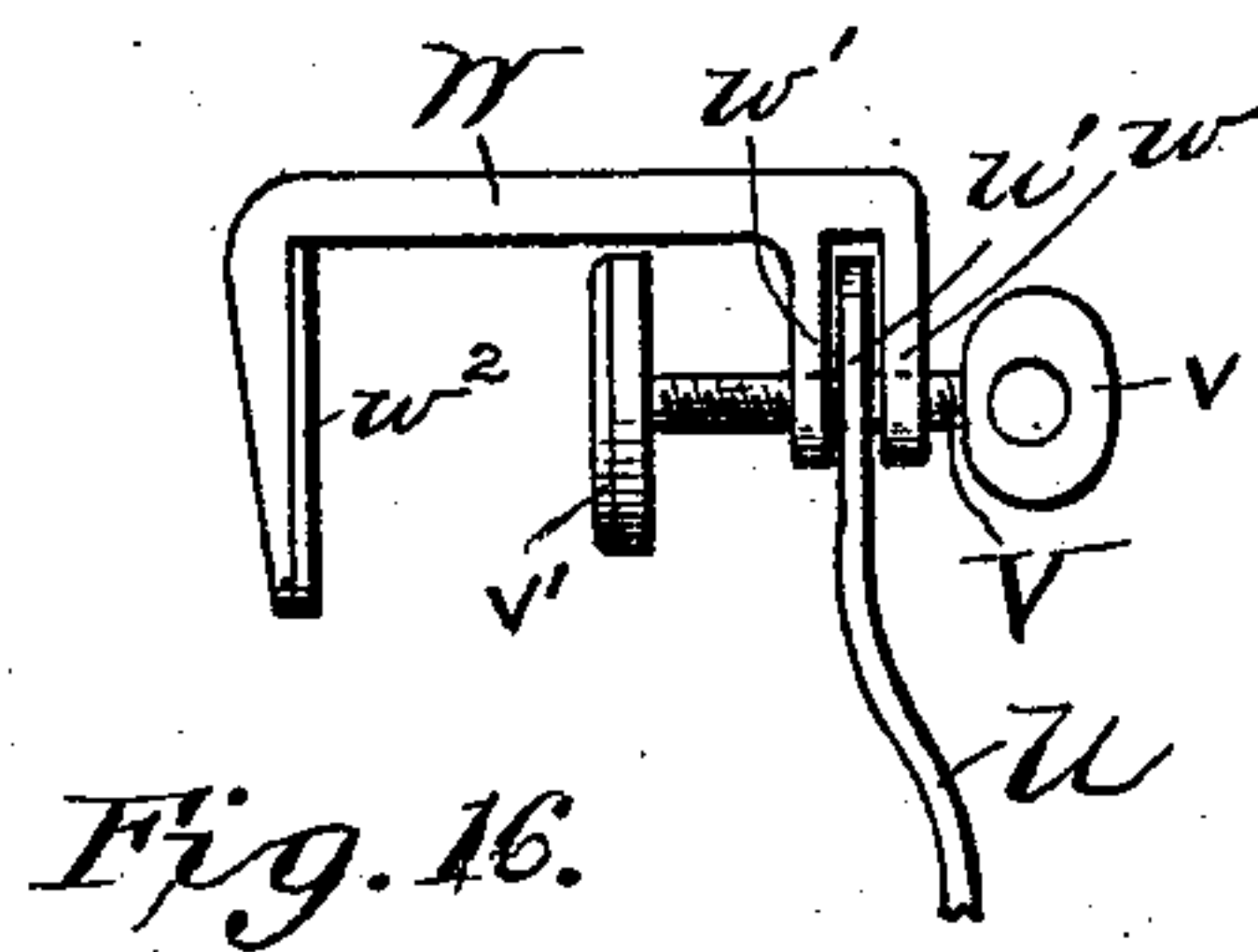


Fig. 16.

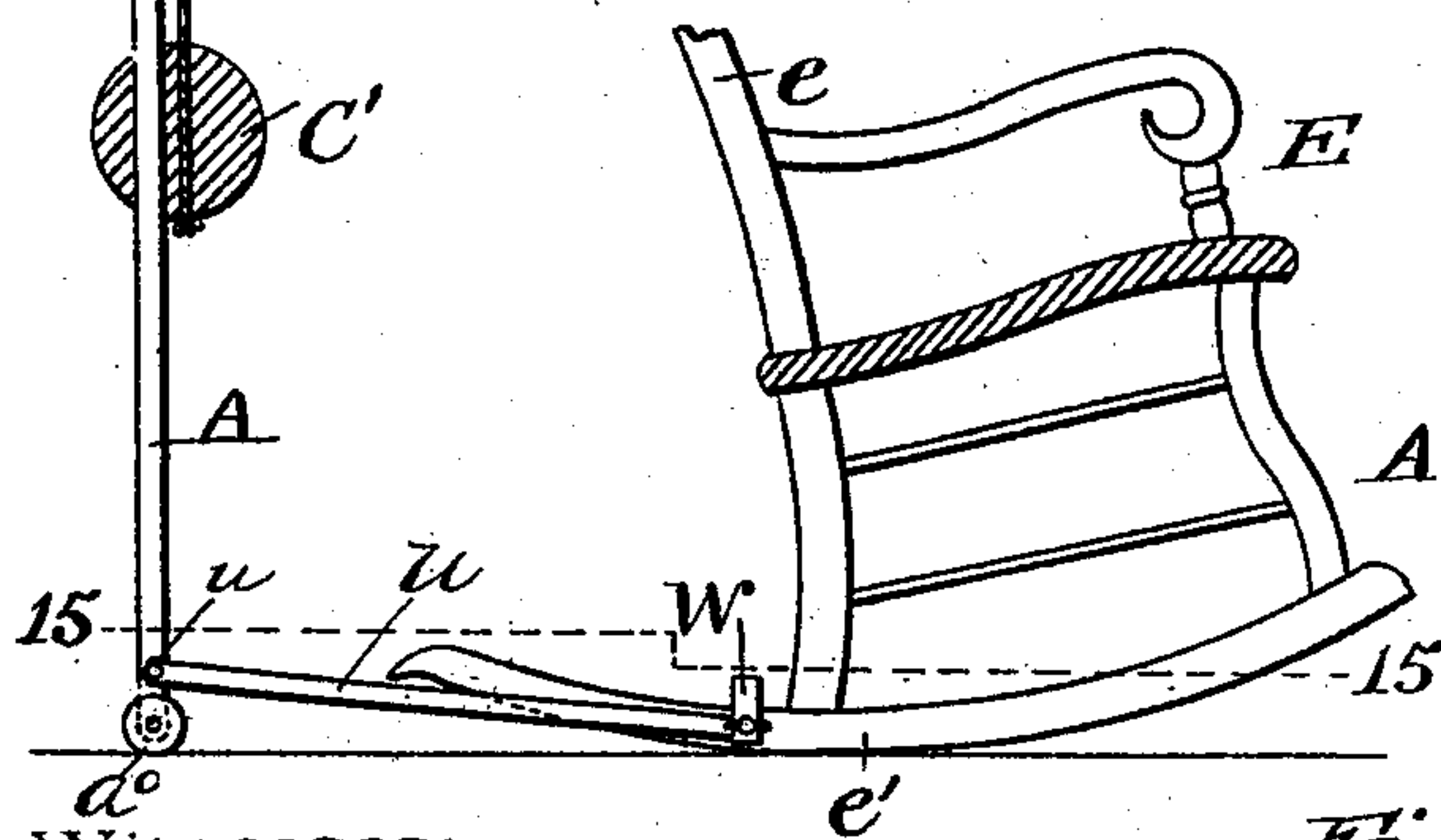
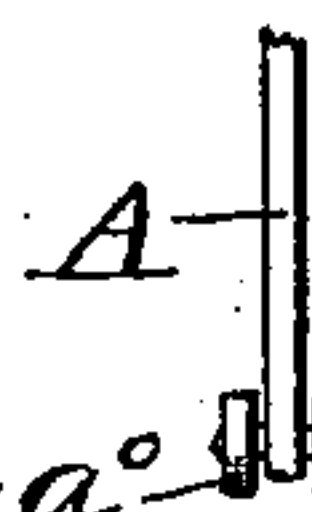


Fig. 15.

Witnesses:

Joseph H. Blackwood  
Albert B. Blackwood

Fig. 17.



W. H. Bofinger &  
A. O. Tannenberg

by Whitman & Wilkinson  
Attorneys



# UNITED STATES PATENT OFFICE.

WILLIAM H. BOFINGER AND AUGUST O. TANNENBERG, OF NEW ORLEANS,  
LOUISIANA; SAID TANNENBERG ASSIGNOR TO SAID BOFINGER.

## FAN ATTACHMENT FOR ROCKING-CHAIRS.

SPECIFICATION forming part of Letters Patent No. 549,432, dated November 5, 1895.

Application filed March 30, 1895. Serial No. 543,875. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM H. BOFINGER and AUGUST O. TANNENBERG, citizens of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Fan Attachments for Rocking-Chairs; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in fan attachments to rocking-chairs; and it consists of certain novel features hereinafter described and claimed.

Reference is had to the accompanying drawings, in which the same parts are indicated by the same letters and numerals throughout the several views.

Figure 1 represents a side elevation, partly in section, showing the rocking-chair with one form of our improved device attached thereto. Fig. 2 represents a section along the line 2 2 of Fig. 1, representing the upper part of the device on an enlarged scale. Fig. 3 represents an enlarged detail view of the lower part of the device. Fig. 4 represents in plan and in section along the line 4 4 the sliding link used to connect the base of the frame to the vertical operating-rod, and Fig. 5 represents one form of spring attached to the frame for use in keeping the operating-cord taut. Fig. 6 represents a modified form of the device in which a weight is used instead of a spring to keep the operating-cord taut. Fig. 7 represents a section through the fan, showing the different portions of the fan-shaft and connected parts. Fig. 8 represents a plan view of one of the friction-disks used in connection with the pawls, and Fig. 9 represents a detail view of the automatic clamp, by means of which the frame is clamped when desired to the operating-rod A. Fig. 10 represents an enlarged detail view of a device for adjusting the position of the fan, whereby the currents of air may be directed to either side of the chair. Fig. 11 represents a section along the line 11 11 of Fig. 10, as seen from the left of the said figure. Fig. 12 represents a section along the line 12 12

of Fig. 11. Fig. 13 represents diagrammatically the position of the fan when used to throw a current of air to either side of the chair, the full lines indicating the position of the fan when throwing the current of air to the left of the chair, and the dotted line indicating the position of the fan when throwing the current to the right and front of the chair. Fig. 14 represents a device for connecting the foot of the rod A to the rockers of the chair. Fig. 15 represents a section along the line 15 15 of Fig. 14, and looking down. Fig. 16 represents a detail view of the clamp connected to the rocker; and Fig. 17 represents the lower end of the operating-rod A, as seen from the left of Fig. 14.

A represents the vertical operating-rod, which is provided with a rounded foot, either in the shape of a ball  $a$ , as shown in Sheets 1 and 2, or of a pair of rollers  $a^0$ , as shown in Sheet 3 of the drawings, and with a cap  $a'$ , to which the operating-cord B is attached. This cord is kept taut either by the spring-operated arm C, as shown in Figs. 1, 3, and 5, or by the weight C', as shown in Figs. 6 and 14, and to be hereinafter more fully described in detail.

D represents a frame connected to the back of the rocking-chair and in which the fan is mounted. This frame is connected by means of a secondary frame  $D^2$  to the rod A, which secondary frame is provided with a double pulley  $d'$ , and with a lug  $d^2$ , provided with an annular aperture  $d^3$ , bouched with wood fiber, leather, or other material which will not rattle as the secondary frame slides up and down the rod A. In order to clamp the said secondary frame in place while the chair is being moved about the room, and yet to admit the automatic release of the rod A whenever the chair is occupied, we provide an automatic clamp H. This clamp is pivoted to the secondary frame  $D^2$ , as at  $h$ , has a weighted end  $h^0$ , and is faced in the wake of the rod A with some soft material  $h'$ , such as rubber or leather, whereby the same may be compressed against the rod A and clamp the same securely in the secondary frame  $D^2$ .

It will be seen that any tendency to lift the chair will cause the automatic clamp to hold tighter, while the moment the chair is tilted



backward the inner arm of the clamp H will be pushed upward, causing the weighted end  $h^0$  to fall downward, as shown in dotted lines in Fig. 9, and thus the frame  $D^2$  is automatically disengaged from its clamped position on the rod A.

The frame D is connected to the back of the chair  $e$  by means of a clamp F, operated by the screw  $f$ . Where wicker-back chairs are used, additional plates may be used between the members of the clamp F to protect the chair.

The upper end of the frame D is bent, as shown at  $d^4$  and  $d^5$ , to form journal-bearings for the fan-shaft K. This fan-shaft has the spool L loosely mounted thereon, and attached to or integral with the spool L are the pivots M of the pawls  $m$ , which pawls are preferably serrated, as shown in Fig. 6, to engage on the pad  $p$ , of rubber, leather, or like material let into the top of the disk P, which also is provided with a spherical base  $p'$  and is rigidly attached to the fan-shaft K. This spherical base  $p'$  bears on the portion  $d^4$  of the frame D and takes the weight of the fan, while its shape reduces friction and avoids unnecessary vibrations.

Below the bearing  $d^4$  the pivot-piece  $M'$  is provided, which is fast on the shaft K, and to which are attached the pawls  $m'$ , similar to the pawls  $m$ , already described. These pawls  $m'$  engage on the top of the pads  $p$ , let into the annular plate  $P'$ , which is flanged, as at  $p^2$ , and to which are connected the blades  $r$  of the fan R.

The fan is mounted on a sleeve Q, of wood fiber or similar non-resonant material, which is journaled loosely on the shaft K and rests on the ball  $k$  at the lower end of the shaft K.

The cord B passes from the cap  $a'$ , down over one sheave of the pulley  $d'$ , around the spool L one or more times, down over the other sheave of the pulley  $d'$ , and down to the cord-tautening device, which may be either the ball  $C'$  or the spring-operated arm C. (Shown in Figs. 1 and 6, respectively.) We preferably use the ball  $C'$ , which is made of lead, and is grooved or perforated at  $c^0$  to slide up and down on the rod A. By having the ball  $C'$  of lead or similar soft metal it does not rattle on the rod A; but should the said ball be made of iron or like hard metal the perforation  $c^0$  should preferably be bouched with some non-resonant material.

All the portions of the apparatus which tend to rub on each other should be lined or faced with some non-resonant material—such as leather, rubber, wood fiber, or similar material.

In the form of device shown in Figs. 6 and 14 the frame D can be cut off, as shown at  $d^0$  in Fig. 6; but in the form of device shown in Figs. 1 and 3 the frame is continued downward and is bent outward, as at  $d^7$ , being connected at  $d^8$  to the recess  $t$  in the end of the link T. This link is preferably made of a bottom piece of metal  $t'$ , provided with

an elongated slot therein, and a top piece of wood fiber or leather  $t^2$ , projecting over the inner edges of the lower piece  $t'$ , and thus forming a narrower slot  $t^0$ , in which the rod A vibrates.

In order to prevent the necessity for making the slot  $t^0$  too long, and thus causing excessive wear thereon, the link T should be placed as near the pivot center  $a$  as practicable.

The arm C is connected to the plate  $s$ , which is secured to the frame D and carries a spring S, provided with an arm  $s'$ , engaging the arm C, and thus holding the same down against the upward tension of the cord B. The stop  $s^2$  is provided to prevent the arm C from being carried down so far as to prevent the cord from drawing the same up properly against the tension of the spring.

In the various modifications shown on the third sheet of the drawings the parts operate in substantially the same manner as shown in the first two sheets; but Figs. 10 to 13, inclusive, represent means for diverting the current of air from the person rocking the chair to the right and front or left and front of the chair, whereby one can sit by a bed or crib and fan an invalid or infant or whereby a person in one chair may fan some one else lying on a lounge or reclining in another chair by the mere process of rocking the chair. In these figures the frame D is made of two parts  $D^3$  and  $D^4$ , which are connected together so as to be relatively movable, the one to the other. Thus the part  $D^4$  is arranged to be set at a different angle about its own axis relative to the part  $D^3$ , whereby the axis of the fan is turned to the right or the left, as shown in Fig. 13, and thus the current of air, instead of being blown directly down on the head of the occupant of the chair, is blown at an angle downward and to the left or right and also at a slight inclination forward, so that the occupant of the chair can both see and fan the person lying down, as has already been described. This relative adjustment of the part  $D^4$  may be accomplished in a great variety of ways, one of which is shown in Figs. 10 to 12, inclusive. In these figures the secondary frame  $D^2$  is provided with a heel-piece 1 and two slanting arms 2 and 3. The heel-piece is longitudinally slotted, as at 4, to receive the upper end of the bar  $D^3$ , which is riveted thereto, and thus forms a rigid joint with the secondary frame  $D^2$ .

At the upper end of the slot 4 is a score 5 and about the middle of the same is a perforation 6 through the bar  $D^3$  and the heel-piece 1, through which passes the thumb-screw  $D^6$ , which engages in screw-threads in the block  $D^5$ , attached to the base of the member  $D^4$  of the frame D.

The arms 2 and 3 are provided with cylindrical holes 7 and 8 and with elongated holes 9, provided with reduced extension 10, adapted to receive the shank 18 of the button 19, which is secured to the rear end of the block  $D^5$ .



The member  $D^4$  preferably fits in a recess 16 in the said block and is held in place by the rivets 17; but any other means of rigidly attaching the said member to the said block may be adopted if desired.

When the fan is in the ordinary position—that is, when it is so arranged as to fan the occupant of the chair—the shank 18 rests in the groove 5 and the lower end of the block  $D^5$  is held by the thumb-screw  $D^6$ , which passes through the heel-plate 1, as shown in Figs. 11 and 12. Now, however, if it be desired to swing the fan through a sufficient angle to fan to the right or the left, as already described, the thumb-screw  $D^6$  is removed, disengaging the block  $D^5$ , and the button 19 is slipped through one of the holes 9 and up into the narrowed portion 10, which firmly holds the shank of the said button. At the same time the thumb-screw  $D^6$  is inserted through the hole 7 or 8, as the case may be, and screwed into the block  $D^5$ , as shown in Fig. 12. The bar  $D^4$  in this position has been turned through a sufficient angle to cause the axis of the fan to point at an angle to the right or left, as shown in Fig. 13.

It will be obvious that the axis of the fan will be swung about the bar  $D^4$  by turning the said bar in any other convenient way.

For convenience in moving the chair with the fan and attachments mounted thereon about the floor and for other reasons we sometimes pivotally attach the base of the bar A to the rockers or back of the chair low down, as shown in Figs. 14, 15, and 16. In these figures two bent bars U are pivoted at  $u$  to the bar A just above the rollers  $a^0$ , while the other ends of the said bars are pivotally connected to a clamp, which is either attached to the rockers, as shown, or to any portion of the back of the chair near the floor.

In the form of clamp shown in Fig. 16 the ends  $u'$  of the bent bar U are loosely attached to the clamp-screw V, which is provided with a thumb-piece  $v$  and a head  $v'$ , faced with leather or other soft material not likely to injure the chair. This screw V passes through female screw-threads in the arms  $w$  and  $w'$  of the frame W, the opposite arm  $w^2$  of which is faced with leather or other soft material, also to prevent injury to the chair. By means of this clamp the bent bars U may be readily attached to or detached from the chair.

The operation of the device is as follows: The fan attachment is clamped to the back of the chair, as shown in Fig. 1, and each time the occupant of the chair rocks backward or forward the secondary frame  $D^2$  slides up and down the rod A, causing the cord B to pass over one or the other of the sheaves  $d'$  and causing the spool L to rotate. The rotation of the spool in one direction only operates the fan; while the motion of the chair in the opposite direction will cause the pawls  $m$  or  $m'$  to slide over the pads  $p$ .

It will be seen that the motion of the shaft K is transmitted by means of the pawls  $m'$  to

the fan R, while motion is imparted to the shaft K by means of the pawls  $m$ . Now when the pawls are not in operation, as on the return motion of the chair, the fact that both pawls will be thrown out of connection at the same time will give much greater freedom of movement to the fan, and will at the same time to a large degree deaden the sound.

By rendering it possible to direct the current of air from the fan to the left or right, as desired, the herein-described attachment becomes of great value for use in nurseries or sick-rooms, where it has hitherto been the custom to supply a current of air by means of hand-fans, which require the almost exclusive attention of the attendant, while by the herein-described device the nurse is able to fan the child or patient while devoting her attention to reading, sewing, or like pursuits. Thus it will be seen that a nurse could at the same time fan a child or invalid and read to him without any inconvenience whatever.

By the herein-described construction a cheap, simple, silent-running, and effective fan attachment for rocking-chairs is provided.

The various advantages of the herein-described construction will readily suggest themselves to any practical mind.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

1. In a fan attachment for rocking chairs, the combination with a frame attached to the back of the chair, of a fan shaft journaled in said frame, a spool and a fan loose on said shaft, and a ratchet and pawl arrangement adapted to transmit the motion of said spool to said fan, a secondary frame rigidly attached to said first frame, a rod adapted to rest on the floor and passing freely through an aperture in said secondary frame, a double pulley journaled in said secondary frame, and a cord attached to said rod above said pulley leading under one sheave of said pulley, around said spool, back over the other sheave of said pulley and downward, and a weight suspended from said cord for keeping the same taut, substantially as and for the purposes described.

2. In a fan attachment for rocking chairs, the combination with a frame detachably connected to the back of the chair, of a fan shaft journaled in said frame, a spool and a fan loose on said shaft, and a ratchet and pawl arrangement adapted to transmit the motion of said spool to said fan, a secondary frame rigidly attached to said first frame, a vertical rod rounded at its base and adapted to rest on the floor and passing freely through an aperture in said secondary frame, a double pulley journaled in said secondary frame, and a cord attached to said rod above said pulley leading under one sheave of said pulley, around said spool, back over the other sheave of said pulley and downward, and a weight perforated to receive said rod and to slide up



and down thereon, secured to the end of said cord, substantially as and for the purposes described.

3. In a fan attachment for rocking chairs the combination with a frame secured to the chair, a fan mounted in said frame, a secondary frame secured to the first frame, a pulley in said secondary frame, a rod touching the floor and passing through said secondary frame, a cord connected to said rod and operating said fan, and a clamp adapted to yield to upward pressure for clamping said rod to said secondary frame, substantially as described.

4. In a fan attachment for rocking chairs, the combination with a frame secured to the chair and a fan revolubly mounted therein, a rod resting on the floor and adapted to move freely through a part of said frame, means operated by said rod and the motion of the chair for rotating said fan, and a clamp yielding automatically to upward pressure for clamping said rod to said frame, substantially as described.

5. In a fan attachment for rocking chairs, the combination with a frame secured to the chair, and a fan revolubly mounted therein, a rod resting on the floor and adapted to move freely through a part of said frame, means operated by said rod and the motion of the chair for rotating said fan, and a clamp weighted at one end, and adapted to engage the said rod near the other end, pivoted on said frame, and yielding automatically to upward pressure, for clamping said rod to said frame, substantially as described.

6. In a fan attachment for rocking chairs, the combination with a frame attached to the back of the chair, of an angularly adjustable shaft journaled in said frame, a spool and a fan loose on said shaft, and a ratchet and pawl arrangement adapted to transmit the motion of said spool to said fan, a secondary frame rigidly attached to said first frame, a rod adapted to rest on the floor and passing freely through an aperture in said secondary frame, a double pulley journaled in said secondary frame, and a cord attached to said rod above said pulley leading under one sheave of said pulley, around said spool, back over the other sheave of said pulley and downward, and a weight suspended from said cord for keeping the same taut, substantially as and for the purposes described.

7. In a fan attachment for rocking chairs, the combination with a frame attached to the

back of the chair, of an angularly adjustable fan shaft journaled in said frame, a spool and a fan loose on said shaft and a ratchet and pawl arrangement adapted to transmit the motion of said spool to said fan, a secondary frame rigidly attached to said first frame, a rod adapted to rest on the floor and to allow said secondary frame to slide up and down relative thereto, a clamp adapted to yield to upward pressure for clamping said rod and said secondary frame together, a double pulley journaled in said secondary frame, and a cord attached to said rod above said pulley leading under one sheave of said pulley, around said spool, back over the other sheave of said pulley and downward, and a device for keeping said cord taut, substantially as and for the purposes described.

8. In a fan attachment for rocking chairs, the combination with a frame secured to the chair and a fan revolubly mounted therein, with means for varying the inclination of the axis of said fan, a rod resting on the floor and adapted to move freely through a part of said frame, means operated by said rod and the motion of the chair for rotating said fan, and a clamp yielding automatically to upward pressure for clamping said rod to said frame, substantially as described.

9. In a fan attachment for rocking chairs the combination with a frame secured to the chair, a fan mounted in said frame, with means for varying the inclination of the axis of said fan, a secondary frame secured to the first frame, a pulley in said secondary frame, a rod touching the floor and passing through said secondary frame, and a cord connected to said rod and operating said fan, substantially as described.

10. In a fan attachment for rocking chairs, the combination with a frame secured to the chair and a fan revolubly mounted therein, with means for varying the inclination of the axis of said fan, a rod resting on the floor and adapted to move freely through a part of said frame, and means operated by said rod and the motion of the chair for rotating said fan, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM H. BOFINGER.  
AUGUST O. TANNENBERG.

Witnesses:

RICHARD H. LEA,  
DAVID LAMLEY.