

(No Model.)

2 Sheets—Sheet 1.

J. E. PAGE & M. A. STAFFORD.
SUSPENSION DESK.

No. 575,269.

Patented Jan. 12, 1897.

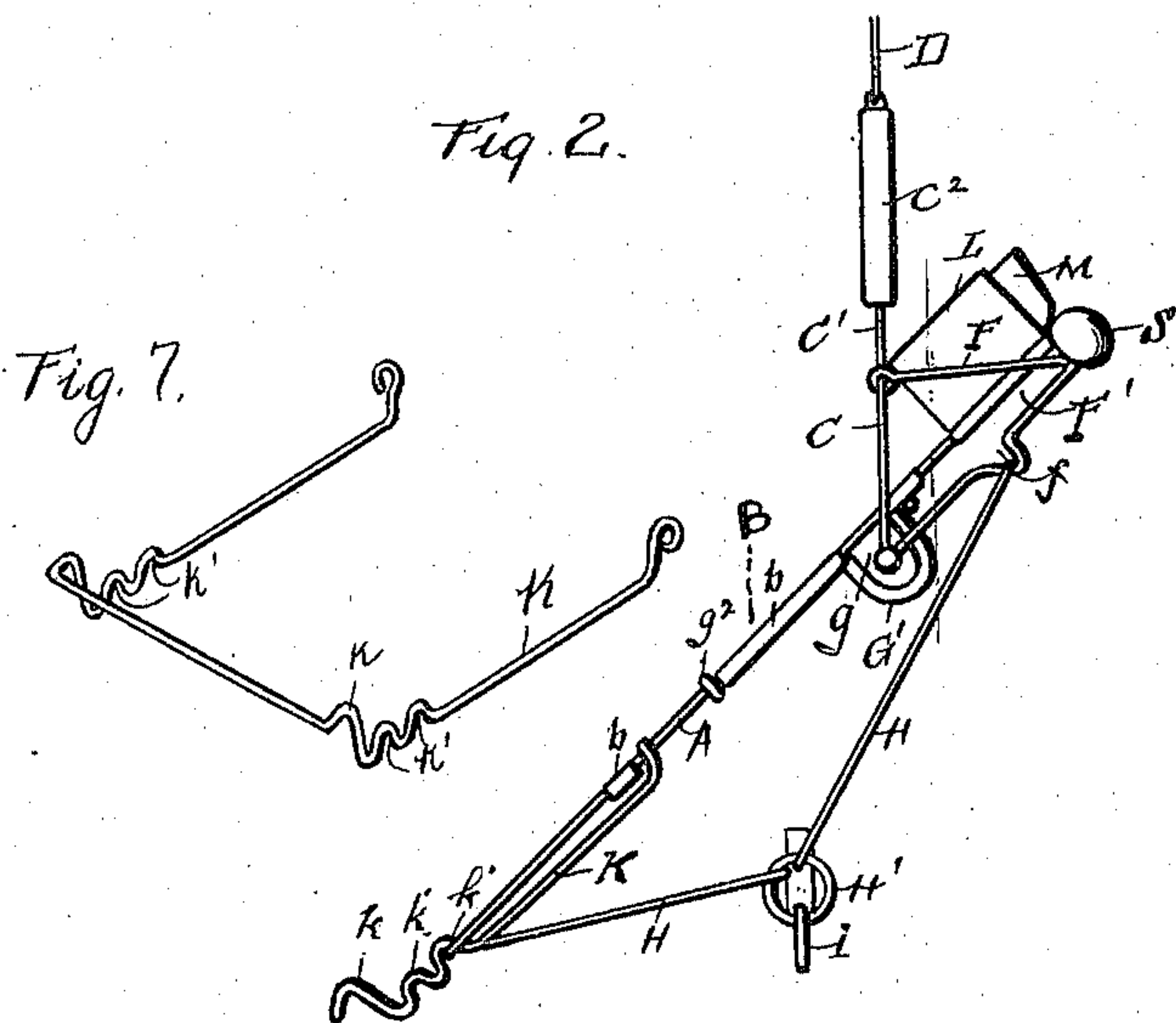
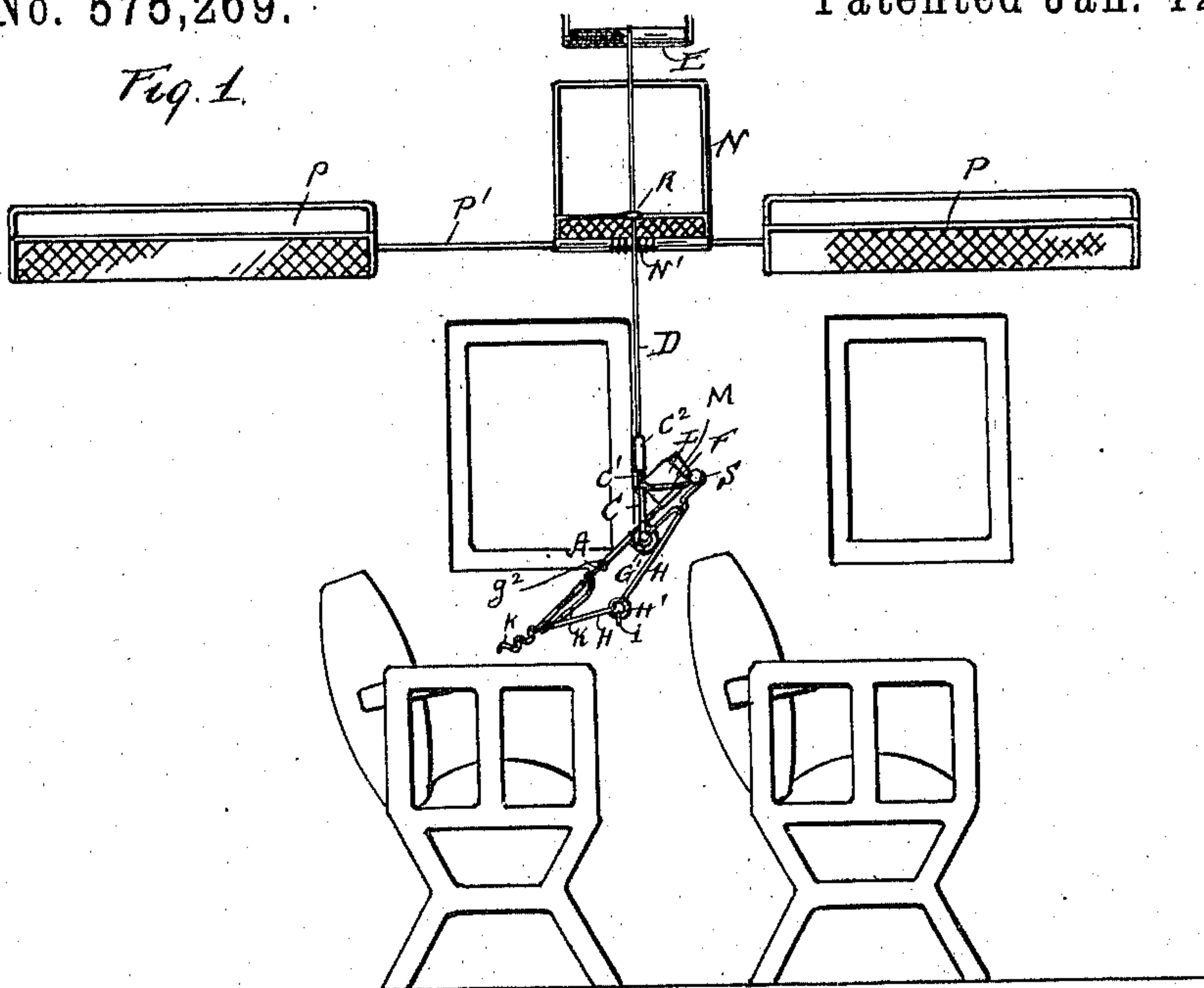
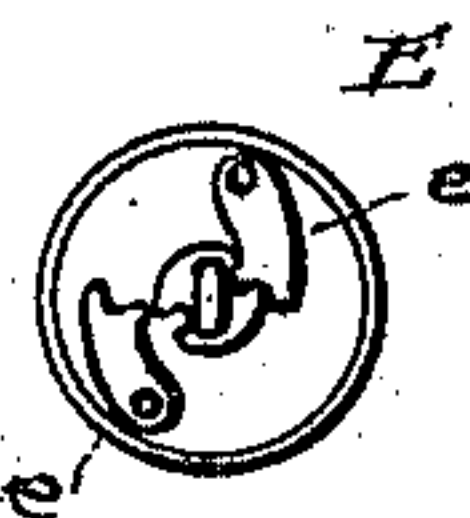


Fig. 5



WITNESSES

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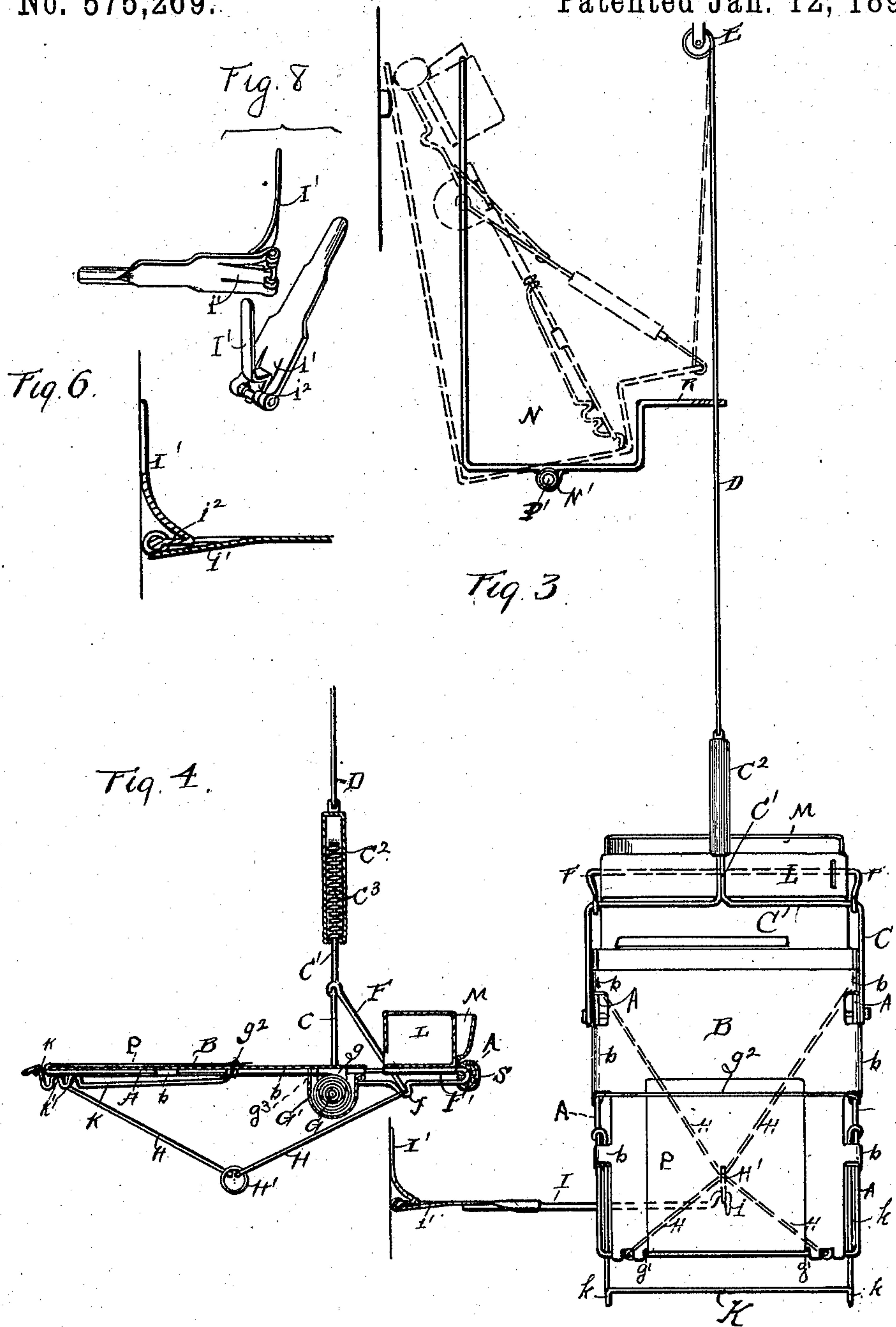
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2 Sheets—Sheet 2.

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Patented Jan. 12, 1897.



WITNESSES

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J. E. Page
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UNITED STATES PATENT OFFICE.

JUSTIN E. PAGE, OF INDEPENDENCE, AND MILES A. STAFFORD, OF SPRINGFIELD, MISSOURI.

SUSPENSION-DESK.

SPECIFICATION forming part of Letters Patent No. 575,269, dated January 12, 1897.

Application filed March 21, 1896. Serial No. 584,230. (No model.)

To all whom it may concern:

Be it known that we, JUSTIN E. PAGE, a resident of Independence, in the county of Jackson, and MILES A. STAFFORD, a resident of Springfield, in the county of Greene, State of Missouri, citizens of the United States, have invented certain new and useful Improvements in Suspension-Desks; and we do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 illustrates our invention in side elevation as applied to a railroad-car, the desk being in position for reading. Fig. 2 is an enlarged view of the desk and its attachments in side elevation with the book-holder extended. Fig. 3 is a front view of the desk with its attachments and the receptacle therefor, its position in said receptacle when not in use being shown in dotted lines. Fig. 4 is a central longitudinal section through the desk and its attachments, the desk being shown in horizontal position and the book-holder out of use. Fig. 5 is an end view of the roller E, showing its ratchet and pawl devices. Figs. 6 and 8 are detail views of the bracket I' and its arm. Fig. 7 is a perspective view of the book-holder detached.

This invention has relation to suspension reading and writing desks; and it consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

The invention, while well adapted for use in the home or office, is more especially designed for use on railway-trains or on steam or other boats where the jar or motion is such that the operation of reading or writing is attended with great difficulty, if not rendered impossible; and to this end the invention is designed to provide means whereby the desk may be suspended in such a manner that it will not be subject to motion or jar of the car or boat.

The invention is also designed to provide a convenient desk or book-holder of novel character.

In the accompanying drawings we have shown the invention as applied to a railway-car, but its application to other vehicles or to the house will be readily understood.

In the drawings the letter A designates the frame of the desk, which is preferably of oblong rectangular form, which is shown as being constructed of a piece of heavy wire or of rods, although any suitable material may be employed.

B designates the table of the desk, which is shown as being secured within the said frame by means of lugs or loops b.

C designates a supporting-bail whose lateral arms are loosely connected to opposite sides of the desk at points a short distance above its center. The transverse arm of this bail has an upwardly-projecting arm C', around which is placed a loose tubular casing C², the upper end of said arm C' being connected to the casing C² by means of a spring C³, which is seated upon a flange at the lower end of the casing. Connected to the upper end of said casing is a strong elastic cord D, whose upper end portion is attached to a spring-roller E, which is journaled in suitable bracket-bearings secured to the roof of the car. This roller is similar in its action to a shade-roller, but it is provided with a much stronger spring. The journals of this roller, or one of them, is usually provided with a ratchet-and-pawl device e, whereby it may be prevented from rotating under the action of its spring, if desired.

F is an adjusting-bail the upper end portions of whose lateral arms are loosely connected to the transverse arm of the bail C and whose horizontal arms are arranged to slide back and forth in slots or guideways F' at the upper lateral portions of the desk-frame A. Said slots or guideways are each formed intermediately with downwardly offsets or notches f.

When the desk is to be suspended in horizontal or nearly horizontal position, as when used for writing, the bail-arm F is engaged with these offsets or notches, as in Fig. 4; but when the desk is to be inclined to support a book said bail is moved to the upper ends of the slots or guideways, as in Fig. 2.

G designates a paper-holding roll which is journaled in lugs *g*, which depend from the under side of the table B. One of said lugs is of spring character, in order that it may be spread laterally sufficiently to permit the roll G to be removed from its bearings when its paper is exhausted and a new roll slipped in place. The paper (indicated at P, Figs. 3 and 4) of this roll is led down along the under side of the table to the lower or front end thereof, thence up through a slot *g'* and along the upper side of the table, upon which it may be held by an elastic guard *g*².

G' is a hood or guard for the paper-roll, and which is slotted, as indicated at *g*³, to permit the paper to be drawn off the roll onto the table, as above described. The paper can be readily drawn off from the roll as fast as it is required for use. Attached to the corner portions of the frame A at the under side are two diagonally-extending intercrossing elastic cords H, on which is placed a loose ring H'.

I is an arm which is hinged to a bracket I', rigidly secured to the lower portion of the side wall of the car between two adjacent seats. Said arm has a hook *i* at its outer end which is designed to engage the ring H', above described. When not in use, said arm hangs down against the side of the car. To prevent rattle, the inner end of the arm is slitted to form a spring-tongue *i'*, which engages the pin or pivot of the joint. A stop *i*² on said bracket prevents the arm from being raised above horizontal position.

K designates an extension book-holder, which consists of a bail-shaped frame which is arranged to slide on the side arms of the frame A. The transverse arm of this frame is normally adjacent to and just below the lower transverse arm of the frame A, as shown in Figs. 2 and 4.

The side arms of the frame K are each formed with a downward bend or depression *k* and with an adjacent upward bend *k'*. When the frame K is not in use, the bends *k* engage the rear side of the lower arm of the frame A and prevent the book-holding frame from sliding down or out. When said frame is to be used, its lower or outer end is raised and drawn forward, the bends *k* passing the lower bar of the frame A, while the bends *k'* are engaged with said bar. The lower arm of the frame K is then held in raised position, as shown in Fig. 2, and forms an abutment for the lower edge of the book. The frame K may, as shown, Figs. 2 and 4, have two of the bends *k'* at each side, in order that said frame may be extended to different positions to suit different sizes of books.

At the upper end of the desk, above the table B, the desk may be provided with a receptacle L for postal cards or stamped envelopes. When the desk is used in a public place, this receptacle may be provided with one of the well-known nickel-in-the-slot mechanisms, so that by the insertion of a coin of

the proper denomination a postal card or stamped envelop may be obtained. Above this receptacle is a pocket M for cards, envelopes, telegraph-blanks, or the like.

When not in use, the arm I is disengaged from the ring H', which allows the roller E to wind the cord D thereon, and raises the desk to the upper portion of the car. To receive the desk when in this position, a pocket or holder N is provided. This pocket or holder is placed between two of the hat-racks P with which railway-cars are usually provided, and is loosely sleeved upon a rod P', which connects said racks. Attached to the pocket or holder is a spring N', whose tension is such as to normally hold the pocket or holder in its upward and backward position. Attached to the pocket or holder N is a projecting arm R, having at its outer end an eye or guide opening through which passes the cord D.

When the desk is raised as above described, the pocket or holder N is pulled downward and forward with the hand, against the tension of the spring N', and the desk is placed therein. The spring N' then throws it upwardly and backwardly.

If desired, the upper end of the cord D may be attached directly to the arm R and the spring-roller E be omitted.

When the invention is used in a house or office, the pocket or holder N may be dispensed with, since, being free from motion, the desk will hang safe from the spring-roller when the cord D is wound thereon.

When it is desired to use the device, it is drawn down and the hook-arm I is raised and engaged with the ring H', the adjusting-bail F is placed in the proper position for reading or writing, and the book-holder, if it is to be used, is properly adjusted.

Inasmuch as the upper or farther end of the desk-frame is liable to come into contact with the back of the car-seat immediately in front it is usually covered or upholstered, as indicated at S.

Inasmuch as the connections which suspend and steady the desk are of elastic character, both above and below, it is designed to be rendered entirely free from jar or vibrations, and by its use reading or writing can be carried on without difficulty. The arm C' and casing C² give the suspension devices sufficient rigidity to prevent the desk from tipping from side to side.

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

1. The combination with a writing and reading desk, of a supporting-bail pivotally connected thereto, an elastic cord connected to the said bail and to an overhead support, means for securing an elastic connection between said desk and a stationary part or object below the same, substantially as specified.

2. The combination with a reading and writing desk, of a suspension-bail pivotally con-

connected thereto, an adjustable brace or adjusting-bail pivotally engaging said suspension-bail and having a sliding connection with the desk-frame, an elastic cord connected to said suspension-bail, and to an overhead support, and means for securing an elastic detachable connection between the said desk and a fixed object below the same substantially as specified.

3. The combination of the reading and writing desk, the suspension-bail and the adjusting-bail, said suspension-bail having a projecting arm, a casing loosely seated upon said arm and connected thereto by a spring, an elastic cord connected at its lower end to said casing, and at its upper end to an overhead support, and means for steadying said desk, substantially as specified.

4. The combination of a desk, the suspension and the adjusting bails, said suspension-bail having an arm, a casing loosely seated around said arm a spring connecting said arm and casing, a cord connected to said casing and to an overhead support, and an overhead pocket or receptacle designed to receive the said desk when it is not in use, together with means for steadying said desk when in use, substantially as specified.

5. The combination of the desk, its suspension and adjusting bails, the elastic suspension-cord connected at its lower end to said suspension-bail, a spring-roller to which the upper end of said cord is connected, and means whereby said desk may be elastically and detachably connected with a fixed object below it, substantially as specified.

6. The combination of the desk, its suspension and adjusting bails, the elastic cord connected to the suspension-bail, the overhead spring-roller to which the upper end of said cord is connected, the pivoted pocket or receptacle designed to receive said desk, its spring, and its arm having a guide for the said elastic cord, substantially as specified.

7. The combination with the desk and its

suspension devices, of the intercrossed elastic cords attached to the under side of the desk the ring carried by the said cords and the hinged hook-arm secured to a fixed object below the desk, and designed to engage the said ring, substantially as specified.

8. The combination with the suspension-desk, of the extension book-holder therefor, comprising a bail-shaped frame having a sliding engagement with the lateral arms of the desk-frame, and provided with means for engagement with the desk-frame whereby it may be held in proper position, substantially as specified.

9. The combination with a writing and reading desk of an elastic suspension device connected to said desk and adapted to be connected to an overhead support, and means for securing an elastic connection between said desk and a stationary part or object below said desk, substantially as specified.

10. The combination with a writing and reading desk of a bail connected thereto, an elastic connection to the said bail and to an overhead support, means for securing an elastic connection to an upright wall or object adjacent to and below said desk, substantially as specified.

11. The combination with a combined reading and writing desk, of means for elastically suspending the same from an overhead support and means for steadying said desk to prevent it from tipping or canting while in use, substantially as specified.

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

JUSTIN E. PAGE.

MILES A. STAFFORD.

Witnesses for J. E. Page:

W. R. HALL,

A. C. WARNER.

Witnesses for M. A. Stafford:

J. A. BOAS,

T. S. YOUNG.