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P. A. DRAKE.

ADJUSTABLE BOOK HOLDER.

No. 368,388. Patented Aug. 16, 1887.

Fig. 1

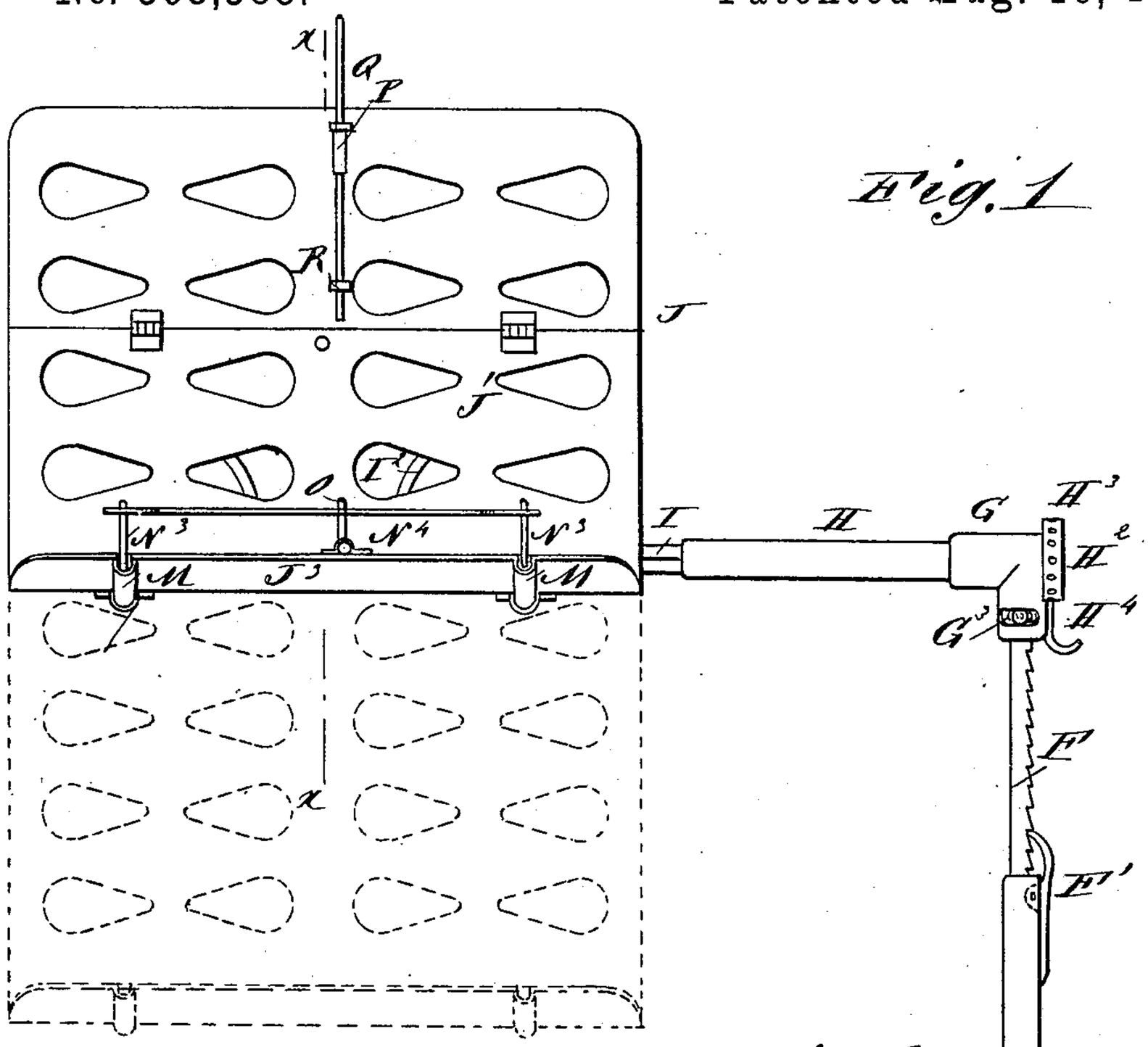

Fig. 2

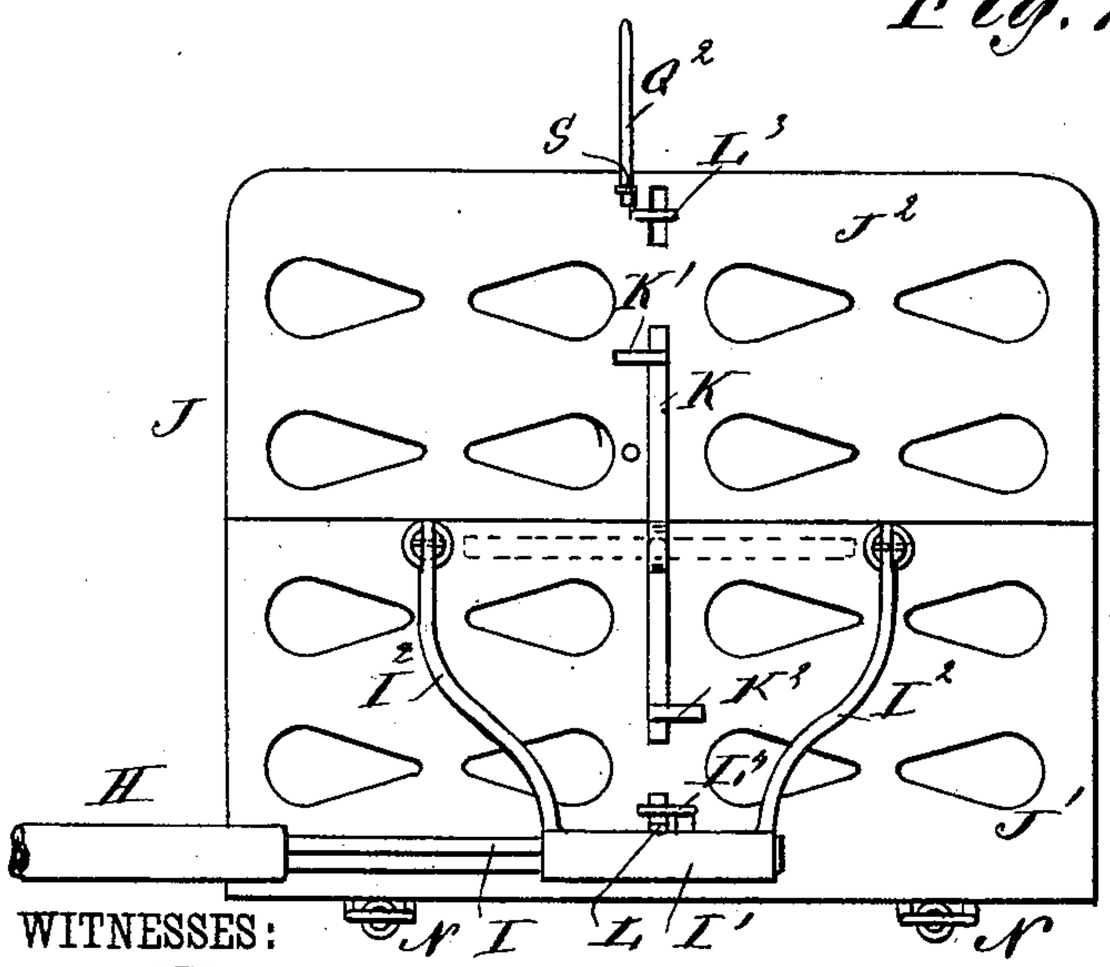

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Fig. 3

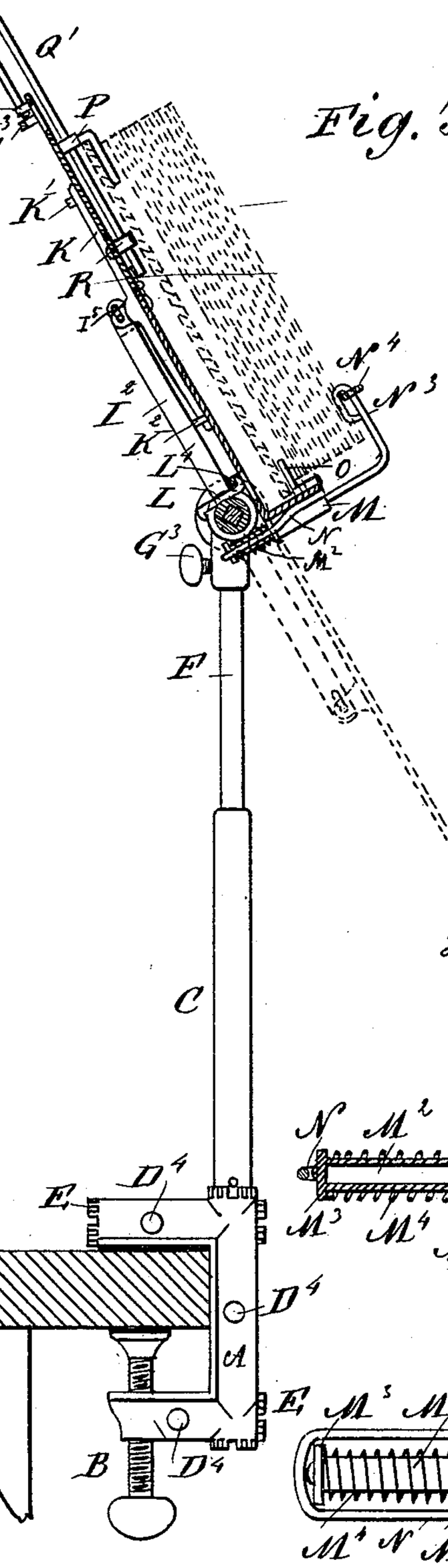


Fig. 4

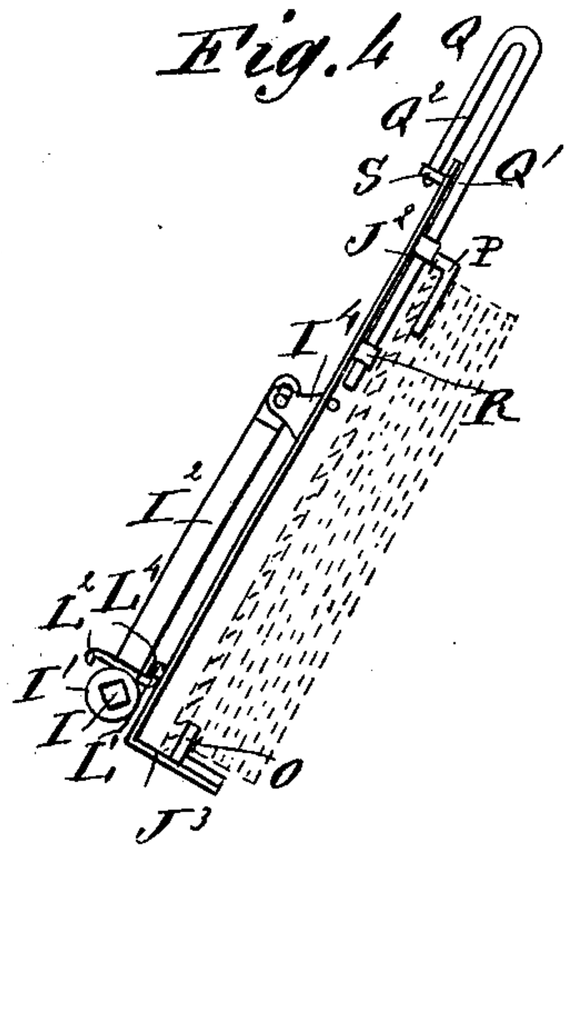


Fig. 5

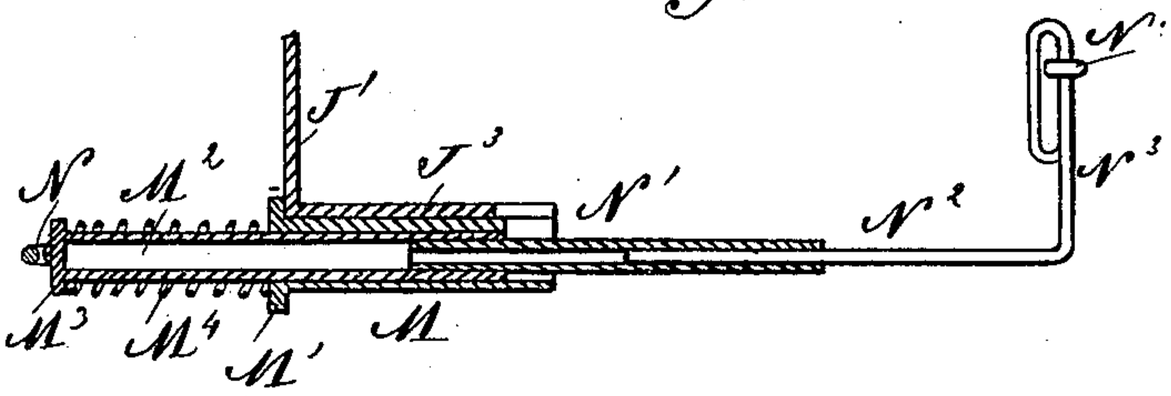
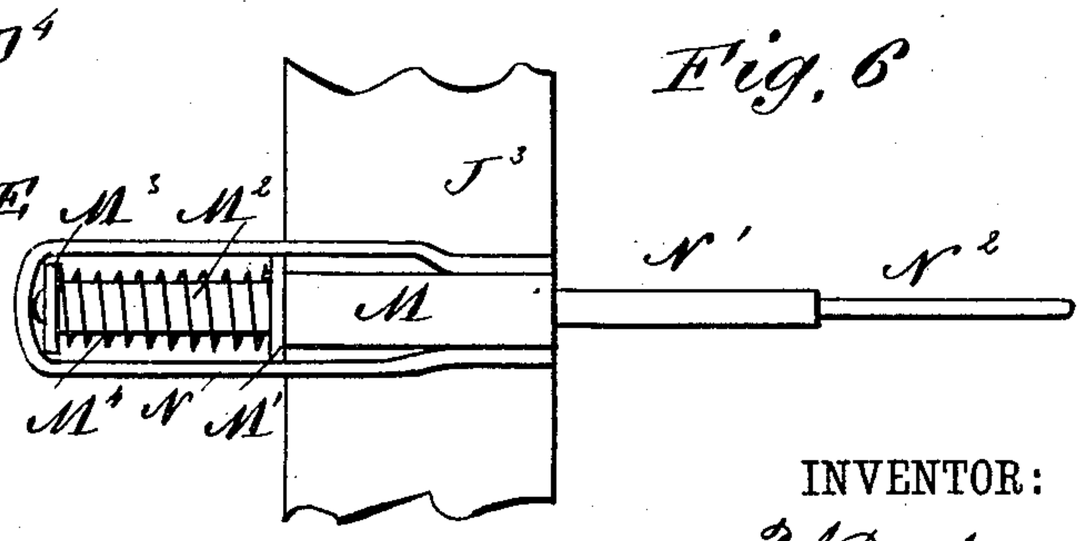


Fig. 6



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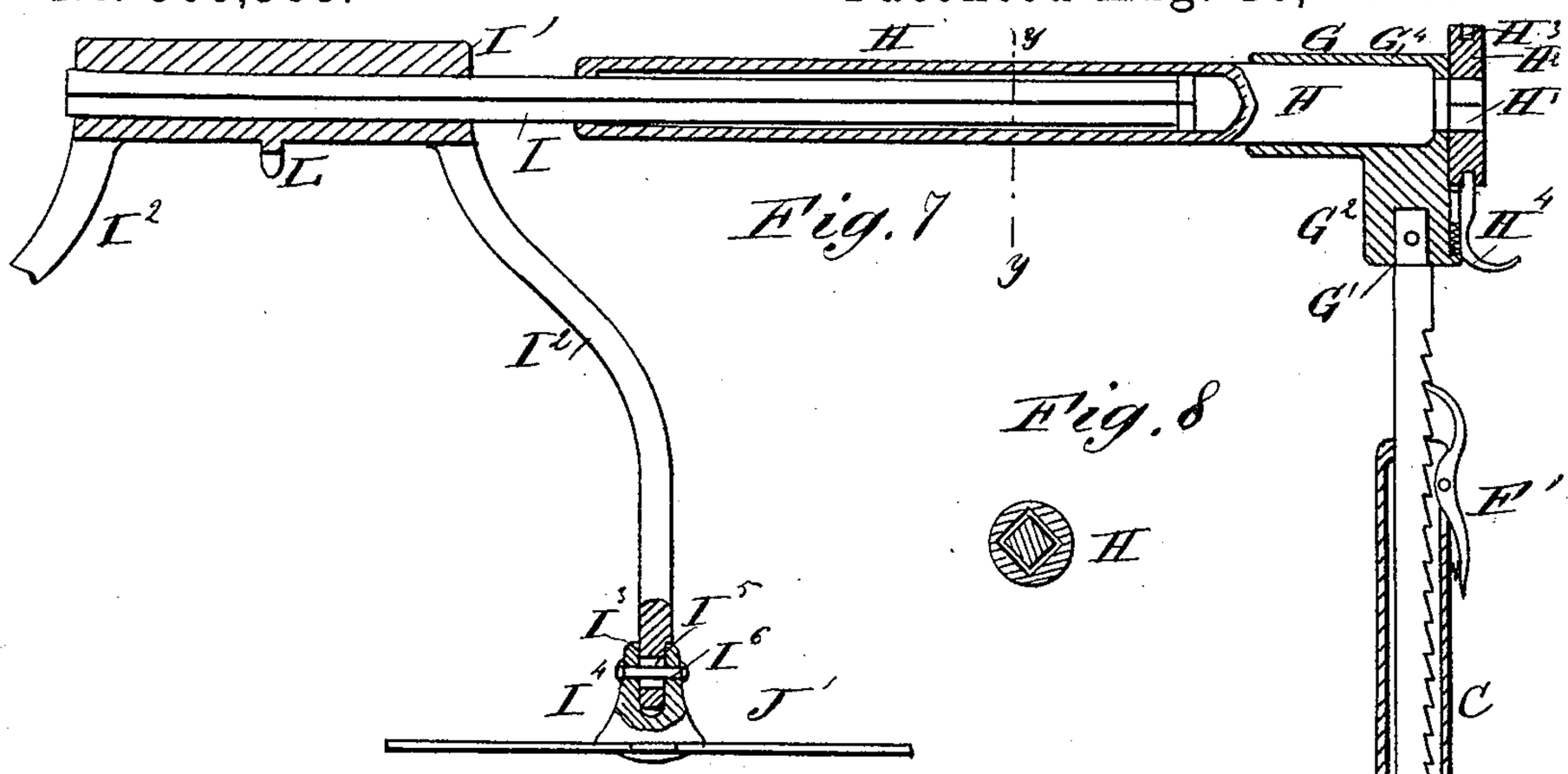


Fig. 7

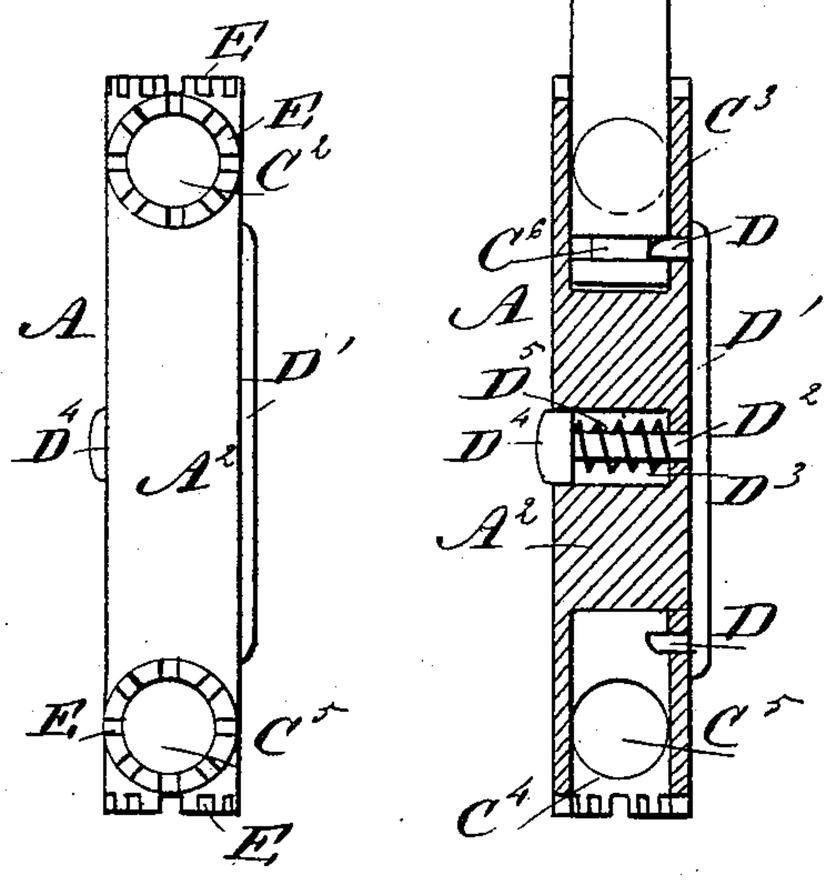
Fig. 8

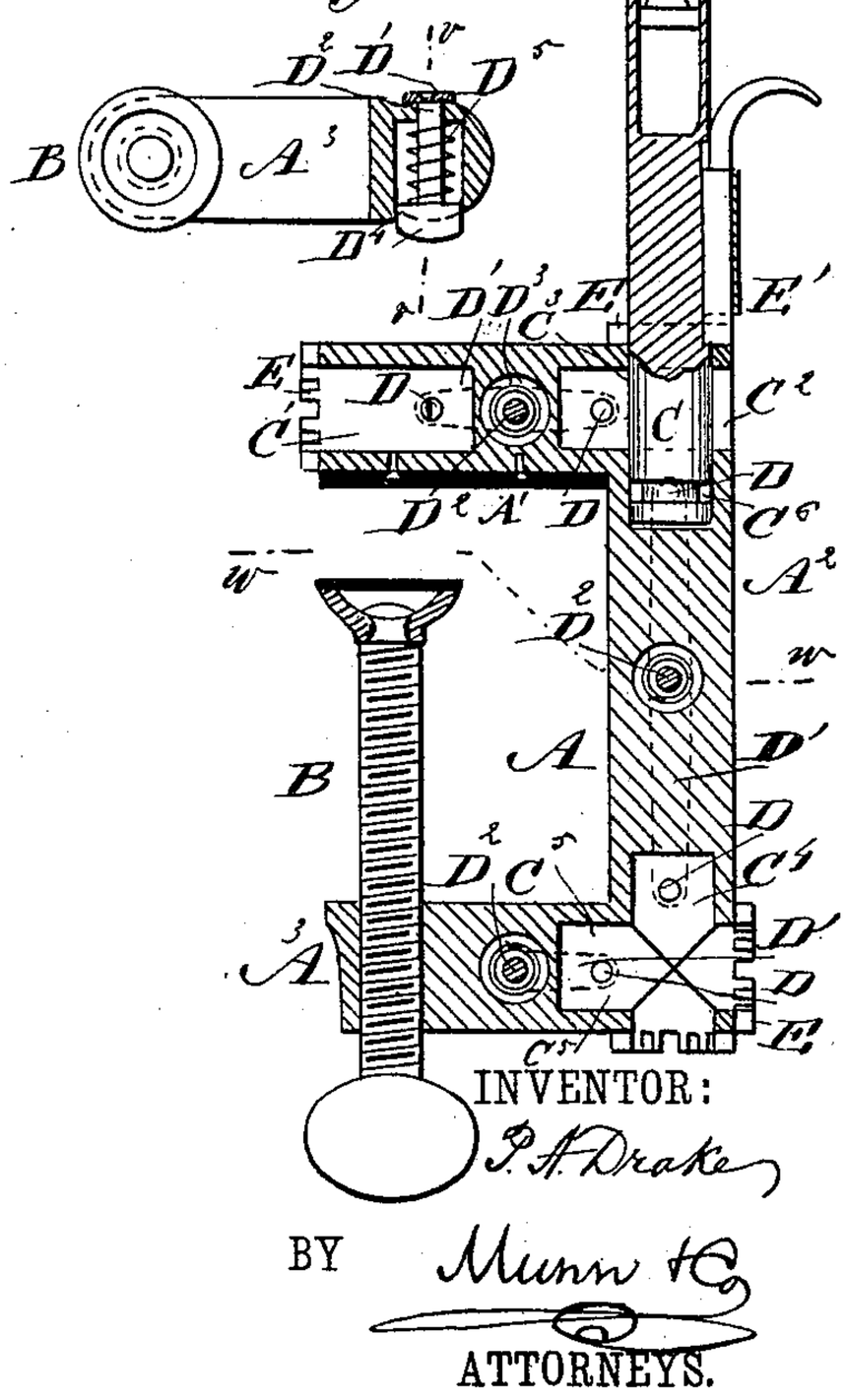
Fig. 9

Fig. 10

Fig. 11

Fig. 12





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UNITED STATES PATENT OFFICE.

PETER A. DRAKE, OF SHELL LAKE, WISCONSIN.

ADJUSTABLE BOOK-HOLDER.

SPECIFICATION forming part of Letters Patent No. 368,388, dated August 16, 1887.

Application filed May 3, 1887. Serial No. 236,958. (No model.)

To all whom it may concern:

Be it known that I, PETER A. DRAKE, of Shell Lake, in the county of Washburn and State of Wisconsin, have invented a new and Improved Adjustable Book-Holder, of which the following is a full, clear, and exact description.

My invention relates to the class of book-holders which are adjustable to accommodate books of varying dimensions and to suit various positions of the reader, and which, when not in use, can be folded up into a small compass.

The invention has for its object to increase the range and convenience in adjustment and to strengthen and otherwise improve the construction of such holders, so that the book-holder can be safely and advantageously used by a person even when lying in a recumbent position; and to this end the invention consists in certain novel features of construction and combinations of parts, as hereinafter clearly described, and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 illustrates, in front elevation, my improved book-holder applied to a vertical support. Fig. 2 is a rear view showing the book-rack detached. Fig. 3 is a vertical section on the line *x x*, Fig. 1, showing, however, the holder attached to a horizontal support. Fig. 4 is a side view showing the detached book-rack inclined forward to suit a recumbent reader. Fig. 5 is a longitudinal section through one of the extensible leaf-catches. Fig. 6 is an inverted plan of the same. Fig. 7 is a vertical section through the holder, showing part of the book-rack hanging free. Fig. 8 is a section on the line *y y*, Fig. 7. Fig. 9 is a section on line *z z*, Fig. 7. Fig. 10 is a sectional plan view of the socketed clamp-body, taken on the line *w w*, Fig. 7. Fig. 11 is a sectional elevation of the same on the line *v v*, Fig. 10. Fig. 12 is a rear view of the socketed clamp-body.

The base-clamp A is of the ordinary U pattern, is provided with a thumb-screw, B, and is padded, together with the screw, so as not to injure the support to which it is applied.

In the front and rear ends of the free arm A′ of the clamp, in both ends of the yoke A^2, and in the rear end of the screw-carrying arm A^3 are formed the tubular sockets C′, C^2, C^3, C^4, and C^5, respectively, each of which is fitted to and adapted to receive the end of the rod C.

The selection of the proper socket for the rod C is determined by the character of the support to which the clamp is applied and the desired position of the rod C, Figs. 1 and 3 showing the arrangement when the rod C is to be held upright by a vertical support and by a horizontal support, respectively.

For holding the rod C in place, while allowing it to be turned in the socket, I provide each socket with a lateral spring-actuated beveled catch, D, arranged to engage automatically an annular groove, C^6, formed on the end of the rod when the same is introduced into the socket.

The catches D of the sockets C^3 and C^4 are both worked by a single connecting-piece, D′, from the middle of which a pin, D^2, projects into a recess, D^3, in the opposite side of the yoke A^2, and is formed with a push-button, D^4, sliding in said recess D^3, and normally pressed outward to hold the catches D in position to engage the rod C by a spring, D^5, held in the recess. In like manner the catches D of the sockets C′ and C^2 are joined by a single connecting-piece, D′, which is provided with a pin, D^2, push-button D^4, and spring D^5, arranged in a recess, D^3, as before. The catch D of the single socket C^5 in the arm A^3 of the clamp is similarly arranged, the connecting-piece D′, however, merely joining the catch to its push-pin. Thus, by operating the proper push-button D^4, the rod can be released and removed from its socket at will, the push-buttons D^4 in the arm A′ and yoke A^2 each serving as such for two catches.

Around the mouth of each socket C′ C^2 C^3 C^4 C^5 is formed a circular series of notches, E, with either of which a sliding bolt, E′, on the rod C can be engaged, so as to prevent the rod when properly adjusted from turning in the socket.

The main portion of the rod C is made tubular, and in it is mounted to slide the square ratchet-bar F, which is prevented from turning in the rod by the square opening in the upper end of the same, and is dogged by a spring-actuated lever-pawl, F′, pivoted to the

upper end of the tubular rod, the rod C and rack-bar F thus forming an extensible post, which can be adjusted and held at any length by means of the pawl F′. The upper end of the bar F is squared for reception in a corresponding socket, G′, formed in the arm G^2 of the elbow G, and the bar F may be clamped in the socket, as when the extensible post is considerably off the vertical, by means of a set-screw, G^3, working in the arm G^2. The other arm, G^4, of the elbow G forms a tubular socket to receive loosely the end of a round rod, H, the square end H′ of which projects through the rear end of the socket to receive a disk, H^2, rigidly attached thereto. The disk H^2 is formed with a series of peripheral recesses, H^3, with either of which a spring-actuated sliding bolt, H^4, mounted on the elbow-arm G^2, can be engaged, so as to prevent the rod H, when properly adjusted, from turning in its socket.

The rod H is tubular and receives somewhat stiffly the square sliding rod I, which is prevented from turning therein by the square mouth of the tubular rod H, the rods H and I thus forming an extensible arm to support the book-rack, as hereinafter described.

On the outer end of the square rod I is fixed a short bar, I′, to the ends of which are rigidly attached the diverging branches I^2. The ends of the branches I^2 are received in slots I^3, formed at right angles to the plane of said branches in the lugs I^4, which are rigidly secured to the back of the lower section, J′, of the folding skeleton frame J of the book-rack, near the upper edge of said section. The ends of the branches I^2 are formed with short longitudinal slots I^5, through which the pins I^6, by which they are pivoted to the lugs I^4, are passed, as shown in Fig. 7, so that the frame J has a slight play lengthwise on the branches I^2. The upper section, J^2, of the frame J is hinged to the lower section, J′, as shown, so that the two sections can be folded together when not in use, and to the back of the section J′, near its upper edge, is centrally pivoted the locking-bar K, which can be swung around to engage oppositely-facing hook-lugs K′ K^2, secured to the upper and lower sections, respectively, so as to hold the frame J open.

To the inner side of the short bar I′, from which the diverging branches I^2 project, is secured a cross-piece, L, having hooked ends L′ L^2, which are bent in opposite directions. Eyes L^3 L^4 project from the rear of the frame-sections J^2 J′, near the upper and lower edges, respectively, of the same, and are so arranged that when the rack is to be held in the elevated position shown in full lines in Figs. 1, 2, 3, and 4, the hook L′ can be slipped into engagement with the lower eye, L^4, the slotted connection of the frame J to the arms I^2 allowing the necessary play and the weight of the rack holding the eye L^4 engaged.

When it is desired to lower the rack J, the lower eye, L^4, can be disengaged from the hook L′ by slightly lifting the rack, and on disengaging the bolt H^4 from the disk H^2 the rack and the branches I^2 can be swung downward to the position shown in dotted lines in Figs. 1 and 3, and the hook L^2 engaged with the upper eye, L^3, as just described in connection with the lower eye, L^4. The bottom of the lower section, J′, is provided with the usual rest, J^3, to the under side of which, near either end, are fixed tubes M, having flanges M′ on their rear ends.

Within each tube M is mounted to slide loosely a longer tube, M^2, projecting from the rear end of the same, and having a flanged head, M^3, on its rear end, between which and the flange M′ on the fixed tube M is interposed a coiled spring, M^4, which tends to project the tube M^2 from the rear of the tube M. A keeper, N, extends in a loop around the rear end of the sliding tube M^2 and limits the rearward movement of the same. A tube, N′, is received stiffly in the tube M^2, a wire, N^2, stiffly in the tube N′, and the forward end of said wire is bent upward to form an arm, N^3, which serves as a catch to hold the leaves in place. The upper ends of the arms N^3 of both of the extensible catches thus formed are looped and are connected by a rod or wire, N^4, so that both may be raised by operating either to engage the leaves on opposite sides of the book, or may be simultaneously lowered to permit the turning of a leaf. The catches having the telescopic shanks thus formed can be easily adjusted independently of each other to suit the thickness of the opposite parts of the book when open.

A hook-catch, O, is pivoted centrally to the upper side of the rest J^3, so that it may be swung upward to engage the backing of the book when necessary, and a corresponding upper hook-catch, P, for the same purpose, is pivoted to and mounted to slide on the long leg Q′ of a bent wire, Q, the lower end of said leg Q′ being held loosely in a pivoted keeper, R, on the face of the upper frame-section, J^2, and the short leg Q^2 of the wire having a reduced squared end to fit in a socket, S, projecting from the back of the upper section, J^2, at the upper edge thereof.

When the frame J is to be folded, its locking-bar K is disengaged and the bent wire Q raised from the socket S and swung around with its pivoted keeper R against the face of the upper section, J^2.

With the construction described any desired angle or position for the book may be obtained, whatever be the nature of the support to which the holder-clamp is applied, while, the several parts being separable and folding, the whole device may be readily taken apart and packed away in a small space.

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

1. The combination, in a book-holder, of a fixed tubular socket, an annularly-grooved rod adapted for insertion therein, a laterally-

working catch, D, adapted to engage the annular groove in the rod, a spring-actuated push-pin, D^2, a piece, D′, connecting the same with the catch D, and a button on the push-pin, substantially as shown and described.

2. The combination, in an adjustable book-holder, of a U-clamp having like sockets in opposite ends of its arm or yoke, either of which is adapted to receive a rod, C, a spring actuated catch, D, for each socket, a connecting-piece, D′, to which both catches D are attached, and a single push-button, D^4, for operating the connecting-piece D′, substantially as shown and described.

3. The combination, in a book-holder, of a post mounted to turn on its base, the elbow G, having its arm G^2 fixed on the end of said post and its arm G^4 made tubular, the rack-supporting arm mounted to turn in and projecting through the tubular elbow-arm G^4, a peripherally-recessed disk, H^2, fixed on the projecting end of the rack-supporting arm, and a spring-actuated sliding bolt, H^4, on the elbow-arm G^2, for engaging the recessed disk, substantially as shown and described.

4. The combination, in a book-holder, of the rack-supporting arm and its support, in which it is mounted to turn, the branches I^2, diverging from the rack-supporting arm, the rack-frame J, the pin-and-slot pivotal connections of the back of the same with the branches I^2, upper and lower eyes, L^3 L^4, projecting from the back of the frame J, and reverse hook-catches L′ and L^2, fixed to the rack-supporting arm and adapted to engage the eye L^3 or the eye L^4, respectively, substantially as shown and described.

5. An extensible and self-adjusting leaf-catch consisting of a fixed tube, M, a slide-tube, M^2, projecting from within the rear end of the same and having a flange, M^3, a spring, M^4, interposed between the flange M^3 and the rear end of the fixed tube M, and a catch, N^3, having a telescopic shank mounted to slide stiffly in and projecting from the front end of the slide-tube M^2, substantially as described.

6. An adjustable and folding hook-catch for a book-rack, consisting of a keeper, R, pivoted to the front of the book-rack, a socket, S, fixed to the back of said rack, a bent guide-wire having a leg, Q′, passed loosely through the pivotal keeper R, and a leg, Q^2, adapted to rest fixedly in the socket S, and a hook-catch, P, mounted to slide on the leg Q′ of the guide-wire, substantially as described.

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Witnesses:
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JAMES WYNNE.