(No Model.)

R. A. HART.

PAPER JOGGER.

No. 480,768. Patented Aug. 16, 1892.

Fig. 1.

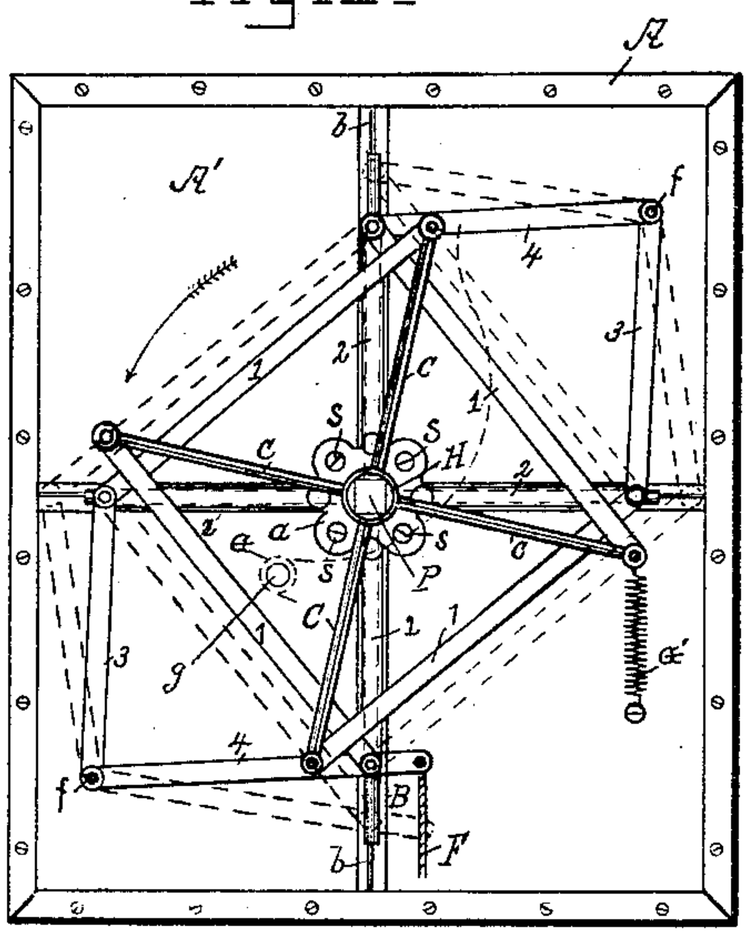


Fig. 2.

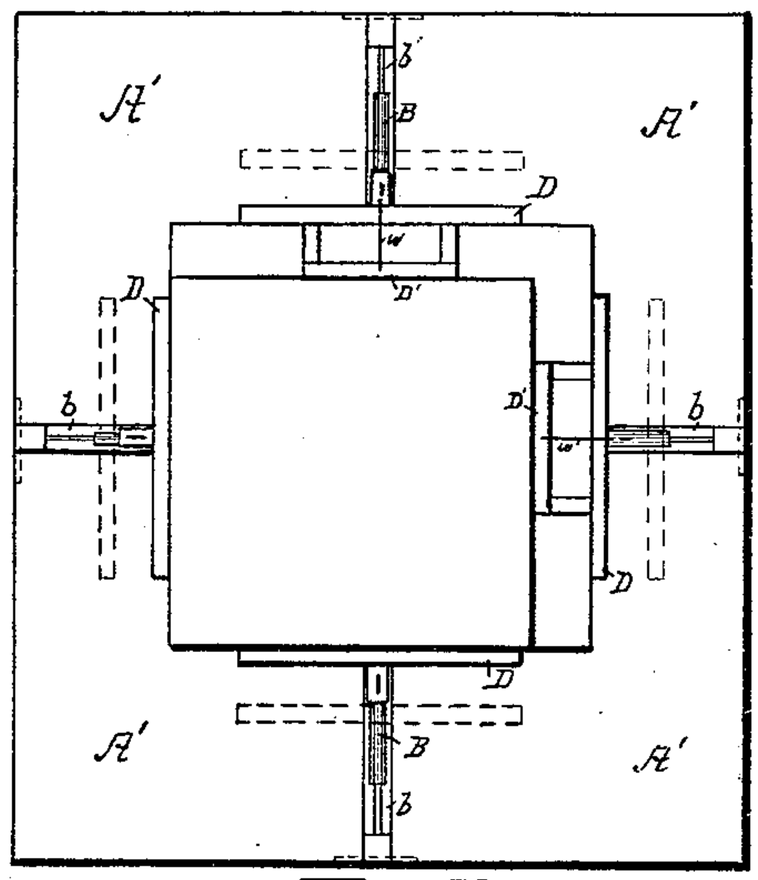


Fig. 7.

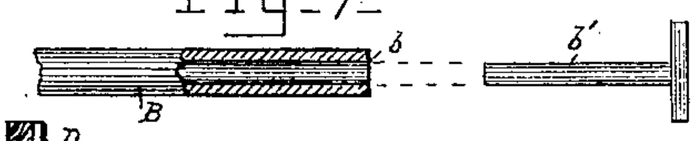


Fig. 3.

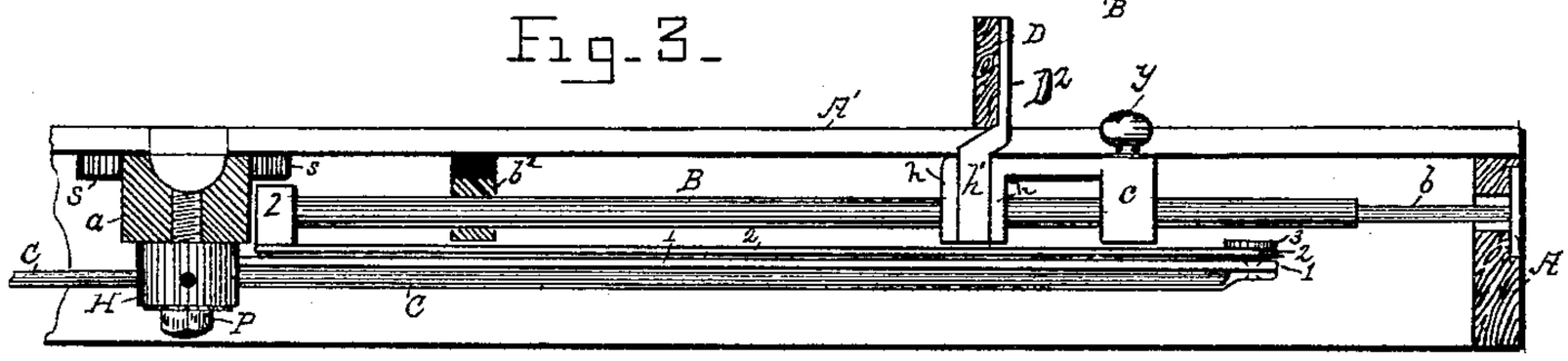


Fig. 4.

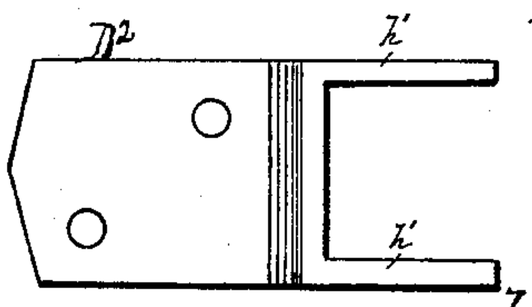


Fig. 6.

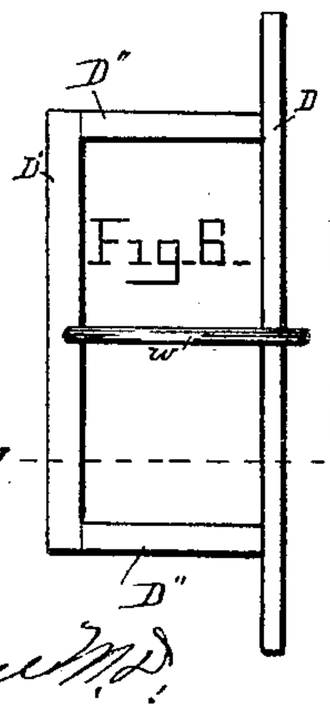


Fig. 5.

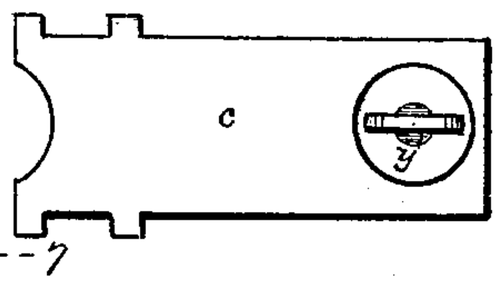
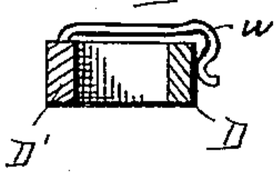


Fig. 8.



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PAPER-JOGGER.

SPECIFICATION forming part of Letters Patent No. 480,768, dated August 16, 1892.

Application filed January 23, 1892. Serial No. 419,094. (No model.)

To all whom it may concern:

Be it known that I, RUSSELL A. HART, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Paper-Joggers; and I 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 the letters and numerals of reference marked thereon, which form a part of this specification.

The objects sought to be attained by the use of my present invention are, first, to simplify the construction and operation thereof; second, to the better adapt the device to ready and quick adjustment; third, to provide means for instantly adapting the receiving table or platform for a wider range of work than heretofore practicable; fourth, to reduce friction, noise, and wear; fifth, to limit the range and travel of the reciprocating rods to the area of the receiving-platform, so that the outermost ends shall not reach beyond the said platform-border and come in violent contact with the person of the operator or passer-by.

Other advantages accrue to the use of this invention that will become obvious to those skilled in the art to which it appertains by a mere inspection of the drawings, wherein similar letters and numerals of reference designate like parts in the several views.

Referring to the latter, Figure 1 represents the bottom surface of the receiving table or platform, showing the novel construction and arrangement of lever-arms, links, braces, and fulcra for actuating the movable parts of the jogger. Fig. 2 is a reverse view showing the top or upper surface of the same. Fig. 3 is a vertical section showing a little more than the one-half part of the jogger, enlarged, in order the more clearly to show the pivotal center of the platform and the manner of operating the levers and links with which the reciprocating rods carrying the paper-evener wings engage. Figs. 4, 5, 6, and 7 are details detached and enlarged; and Fig. 8 is a cross-section on the line 8 8 of Fig. 6, said figure being on a reduced scale.

Referring particularly to the reference numerals and letters, A is the receiving table or platform, divided into four approximately equal parts A′, constituting the top surface thereof. The four parts are firmly fixed on the same horizontal plane, corner adjacent to corner, but far enough apart to leave longitudinal and transverse channels between them, said channels radiating from the platform center, where a securing-plate *a* is fixed by screws *s*, one of which passes into each inner corner of the said four divisions A′ and on the under side of said table. The plate *a* is centrally and vertically perforated for the reception of the threaded pin P, which forms the central axis on which turns the hub H, whose four fixed radial arms or spokes C reach suitably toward the border or binding-frame of the table.

B represents the jogger-reciprocating rods, one for each of the four radial channels, the outermost extremity of which have chambers *b* longitudinally and of sufficient length for the reception of the fixed supporting-rods *b′*, whose outermost end or securing-plate is fixed flush with the outside of the table A, so that as the jogger is operated the outer ends of the reciprocating rods B shall not, as heretofore, project beyond the edge of the platform, and thus come in violent contact with the operator or passer-by. The rods B may be chambered throughout their entire length and slide telescopically on supporting-rods, or they may be solid, sliding in cylindrical end supports, or other equivalent means may be employed for the same purpose, and therefore I do not desire to confine myself to the exact construction and arrangement shown, inasmuch as the essential feature of this part of my invention consists in confining the reciprocations of the rods B to the area of the platform. Toward the inner ends of the reciprocating rods are located supports b^2, fixed to the under side of the platform, and in a suitable bearing thereof the inner portion of the rod B reciprocates, while its opposite end slides telescopically on the fixed rod *b′*, which engages within said longitudinal chamber *b* of said reciprocating rod. The extreme inner end of the rod B carries the fixed lug *l* for the pivotal engagement of links, levers, arms, and braces, the peculiar offices and arrangement whereof will appear presently, while the

central portion of said rod B carries the movable and adjustable paper-evener-supporting upright *c*, provided on its outer portion with the thumb-screw *y*. The inner portion of said upright is provided with vertical legs or projections *h h* on either side thereof for the engagement of the depending legs *h' h'* of the wing-securing plate D^2, hereinafter more particularly described.

The numerals 1 designate links, four in number, each of which extends diagonally from the outer end of one of the radial arms C of the hub H across a channel of the table A and one of the divisions A' of said platform or table to a point beneath a rod B, one end of said link being pivotally secured to said radial arm C and its opposite extremity connected with the inner end of the adjacent reciprocating rod B by a link 2, the outer end of which is pivoted to the said end of the link 1, and the inner extremity of which link is pivotally secured to the under side of the lug *l* of said rod, the said link 2 being located immediately below and parallel with said reciprocating rod B.

Oscillating braces or stay-links 3 and 4 are located at diagonally-opposite fixed points of the platform A, equidistant from and in line with the axis of the hub H. The adjacent ends of these braces are pivoted together and to the platform-bottom, so that they extend to the adjacent radial channels and rods B at approximately a right angle to each other, and their opposite ends are pivoted to the respective links 2 at the points of pivotal connection of said links 2 with the said diagonally-extending link 1 first mentioned. Hence it is only necessary to provide opposite divisions A' of said table with the stay-braces 3 and 4, since their office is to oscillate as guides to and fro equal in distance to the throw of the reciprocating rods B on their fixed pivotal points *f* of the platform or table.

The office performed by the oscillating braces and pivotal connections will become more clearly apparent when it is observed that the free end of the link 4 communicates motion from the cord F, which connects with the "fly" or other source of power through the links, levers, and arm engagements described, whereby the said movable parts are carried to the position indicated by dotted lines in the direction pointed out by the arrow, until the end of the "throw" of the jogger-wings is reached, when the jogger receiving-table is said to be "open," (see Fig. 1,) whereby a very nice, noiseless, and comparatively frictionless movement thereof is secured.

The "closed" and normal position of the table is secured by means of the single coil-spring G, one end of which engages any one of the arms or links in suitable manner to throw the jogger-wings inward. The opposite end of said spring is made to coil around a stud *g*, fixed to the platform and attached thereto in any of the well-known ways. This spring-G is shown by dotted lines, Fig. 1, while another coil-spring G' (shown in full lines) is attached to the pivotal point of the outermost end of an arm C and, reaching parallel with the side of the table A and there firmly fixed to said table, serves a like purpose with spring G (shown in dotted lines) and may be substituted therefor; or two or more similar springs may be employed to guard against the failure of one, locating the same on opposite divisions A' of the platform. Still another location of a similar spring for a like purpose may be substituted near the radial rod B, reaching in the direction parallel with said rod and with one of its ends attached to the brace 4, where the cord F is seen, and its opposite extremity secured to the central plate *a* by means of one of its securing-screws *s;* or any other equivalent and well-known means for closing the jogger-table may be employed.

For the purpose of adapting the jogger to various sizes of paper, and therefore to a wider range of work than is possible with the means heretofore employed, I provide a reducing or sub wing consisting of a front plate D' and rigid braces D'', said sub-wing being removably attached to the wing D by a spring-clasp *w*, which is fixed at one end to said plate D' and has its other end suitably bent to engage the wing D. Differing sets of these sub-wings may be provided by means of which, in connection with the movability of the supporting-uprights and the instant removability of the upright wing-embracing legs of the plate D^2, the device is readily adjusted to any desired size of printed paper.

Other advantages accrue to the use of my present invention that those skilled in the art to which this device appertains will perceive at a glance at the drawings, and therefore I need not further particularize here.

Having thus fully described and illustrated my novel invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a paper-jogger, the receiving table or platform having longitudinal and transverse channels, rods reciprocating in said channels and carrying the supporting-uprights of the jogger-wings, and a fixed support sustaining the outer end of each of the rods and so limiting the range of reciprocation thereof that they shall not travel beyond the table, substantially as described, and for the purpose set forth.

2. In a paper-jogger of the class described, a receiving-table provided with four radial channels, fixed rods therein, chambered rods sliding telescopically on said fixed rods, uprights on said sliding rods removably secured to the jogger-wings, fixed lugs on said sliding rods, links and levers engaging with said fixed lugs, and means, substantially as shown, illustrated, and described, for operating the same.

3. In a paper-jogger, a receiving table or platform having longitudinal and transverse

channels, chambered rods reciprocating in said channels and carrying the supporting-uprights of the jogger-wings, and fixed supports projecting from the ends of the table or frame, on which said chambered rods slide telescopically, said supports sustaining the outer ends of said rods and limiting the reciprocation thereof to within the area of the table or frame, substantially as specified.

4. In a paper-jogger, the receiving table or platform provided with longitudinal and transverse channels, rods reciprocating in said channels, adjustable uprights on said reciprocating rods, paper-evener wings on said adjustable uprights, and reducing or sub wings detachably secured to said evener-wings, substantially as described.

5. In a paper-jogger, the receiving-platform provided with radiating channels, a hub pivoted contiguous to the adjacent inner ends of said channels and provided with radial arms or spokes, and rods in said channels respectively connected to and reciprocated by said arms or spokes, said rods carrying the supporting-uprights of the jogger-wings, substantially as shown and described.

6. In a paper-jogger, the receiving table or platform provided with channels radiating from a point near the center thereof, a hub pivoted to said table or platform contiguous to the adjacent inner ends of said channels and provided with radiating spokes or arms, rods in said channels, said rods being connected to and reciprocated by said spokes or arms and carrying the supporting-uprights of the jogger-wings, and fixed supports projecting horizontally from the sides of said table or platform and having telescopic engagement with the outer ends of said rods, said supports serving to also limit the outward movement of said rods to within the area of the table or platform, substantially as specified.

7. In a paper-jogger, the table or platform divided into four approximately equal parts so located with respect to each other as to form transverse and longitudinal channels at the center of said platform, a fixed central plate secured to each of said adjacent corners, a pivotal hub provided with arms or spokes engaging in said plate, and links and levers pivotally connecting said arms or spokes with rods reciprocating in said transverse and longitudinal channels, whereby motion is communicated to the paper-jogger wings carried by said reciprocating rods, substantially in the manner and for the purposes set forth.

8. In a paper-jogger, the table consisting of four approximately equal parts so located with respect to each other as to form longitudinal and transverse channels of said table at its center, a central plate attached to each of the inner corners thereof, a pivotal hub situated centrally of said plate having a vertical axis and provided with radial arms or spokes, links and levers pivotally engaging with said arms or spokes, and stay-rods or oscillating braces, one end of which swings on a fixed point or fulcrum of said table, and the opposite ends of said braces having pivotal connection with the adjacent reciprocating rod and its radial parallel link and operating-levers, the whole arranged substantially as shown and described.

9. In a paper-jogger, a table provided with longitudinal and transverse channels, rods reciprocating and confined therein, adjustable uprights on said rods provided with vertically attachable and detachable paper-evener wings, sub-wings adapted to be detachably secured to said first-mentioned wings, suitable lugs fixed on said rods, and means connected to said lugs for operating said rods, substantially as shown, illustrated, and described.

10. The combination, with the reciprocatory rods of a table-jogger, of an upright *c*, adjustably secured on each of said rods, each of said uprights having channels on opposite sides of one of its ends, plates D^2, each having depending legs and formed with shoulders at the tops of said legs, said legs being received by said channels and said shoulders engaging the tops of the uprights adjacent to said channels, and evener-wings secured to the upper portion of said plates, substantially as shown.

11. In a paper-jogger, the receiving-table A, divided into four approximately equal parts A′, longitudinal and transverse channels provided with the reciprocating rods B, carrying the paper-evener-supporting uprights provided with lateral vertical lugs *h h*, adapted to receive the vertical legs *h′ h′* of the paper-evener wings D, and sub-wings D′, provided with spring-clasp *w*, the whole arranged in the manner and for the purpose substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

RUSSELL A. HART.

Witnesses:
W. ANDRUS,
A. T. METCALF.