(No Model.) 3 Sheets—Sheet 1.

F. E. WARING.

DESK.

No. 420,321. Patented Jan. 28, 1890.

Fig. 1.

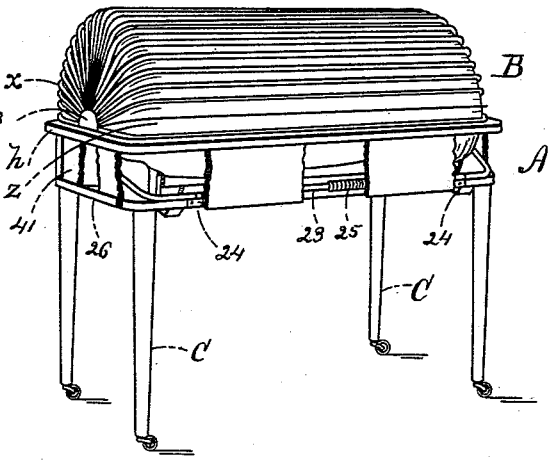


Fig. 2.

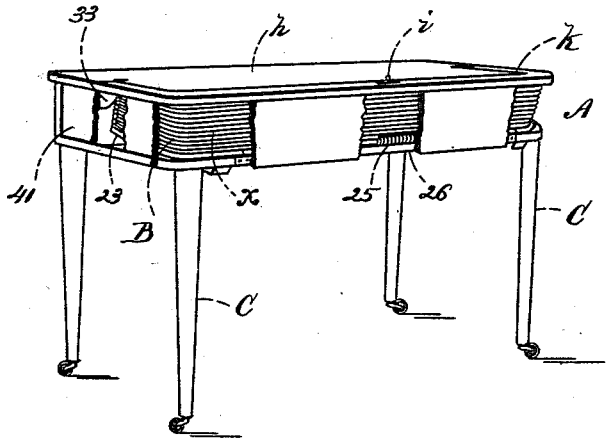
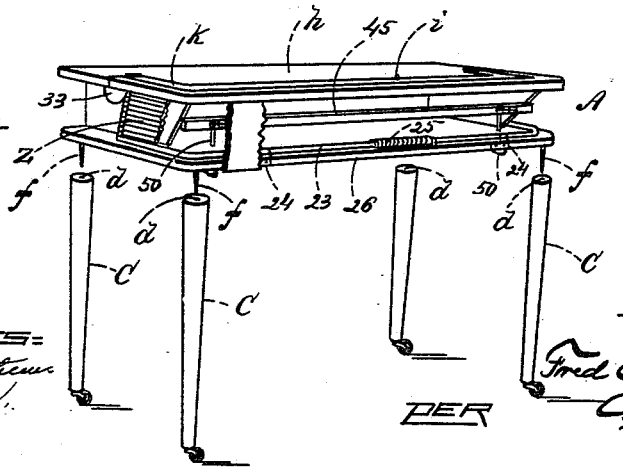


Fig. 3.



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PER

(No Model.) 3 Sheets—Sheet 2.

F. E. WARING.

DESK.

No. 420,321. Patented Jan. 28, 1890.

Fig. 5.

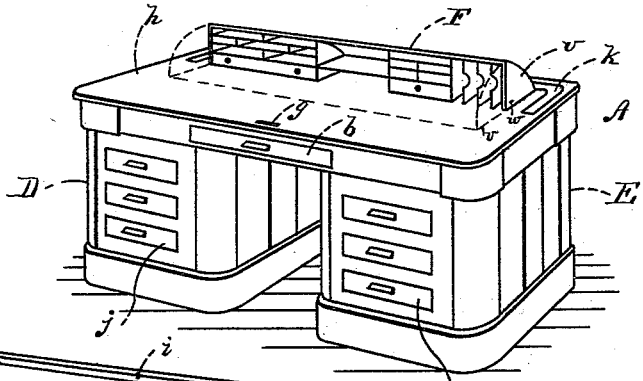
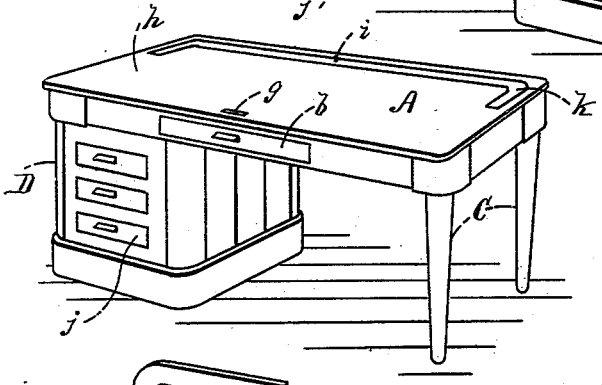


Fig. 4.



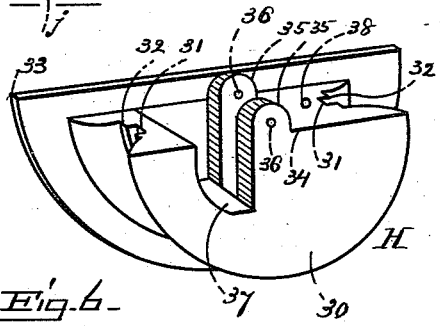


Fig. 6.

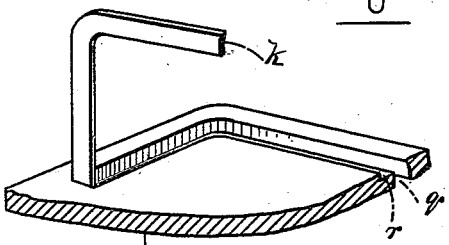


Fig. 10.

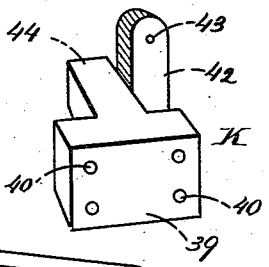


Fig. 7.

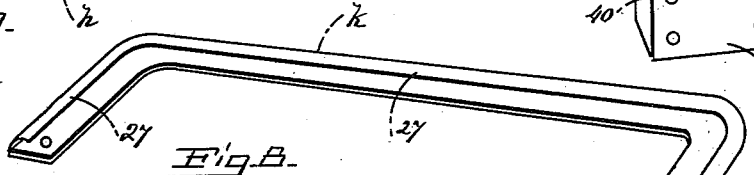


Fig. 8.

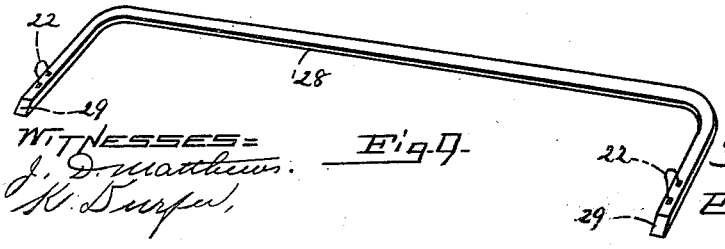


Fig. 9.

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(No Model.) 3 Sheets—Sheet 3.

F. E. WARING.

DESK.

No. 420,321. Patented Jan. 28, 1890.

Fig. 11.

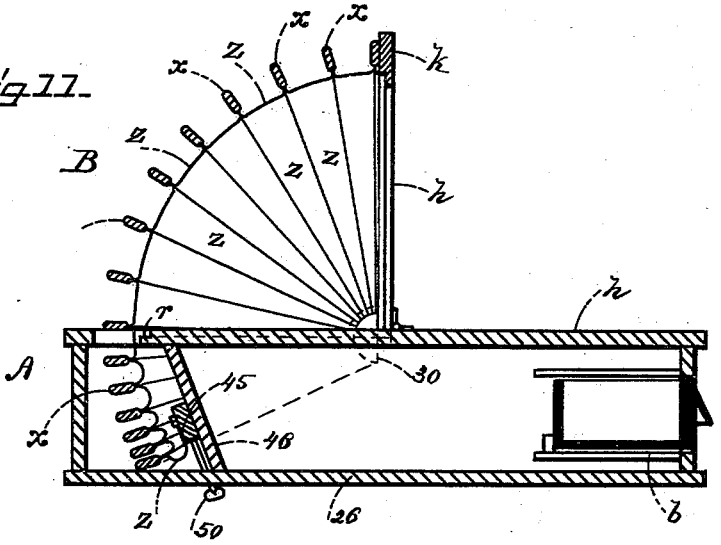


Fig. 13.

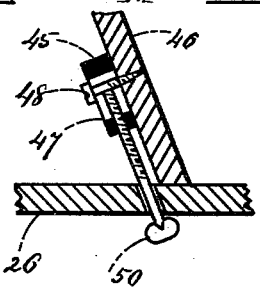


Fig. 14.

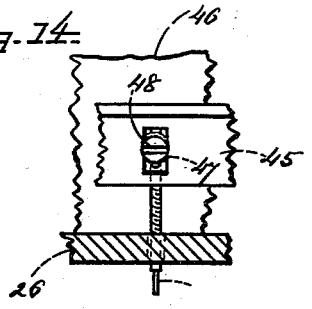


Fig. 15.

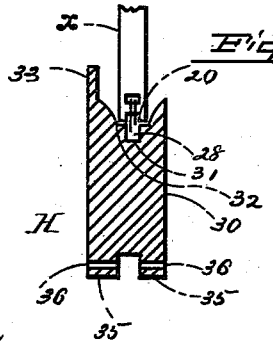


Fig. 16.

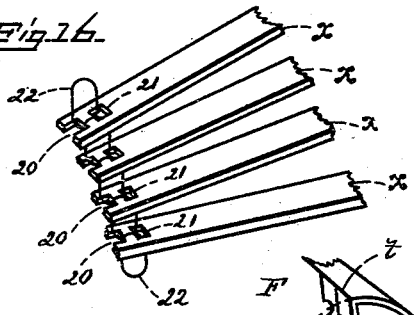


Fig. 17.

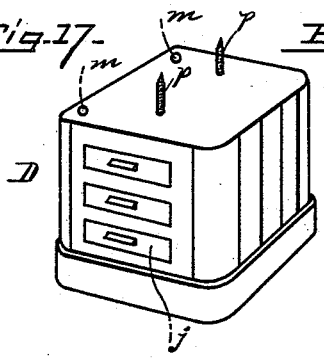
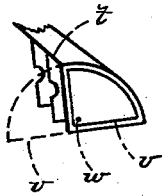


Fig. 12.

Fig. 18.



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UNITED STATES PATENT OFFICE.

FRED E. WARING, OF SARATOGA, NEW YORK.

DESK.

SPECIFICATION forming part of Letters Patent No. 420,321, dated January 28, 1890.

Application filed April 22, 1889. Serial No. 308,140. (No model.)

To all whom it may concern:

Be it known that I, FRED E. WARING, of Saratoga, in the county of Saratoga, State of New York, have invented a certain new and useful Improvement in Desks, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a rear elevation of my improved desk, showing the cover closed, a portion of the body being broken away; Fig. 2, a like view showing the cover open; Fig. 3, a similar view, the body being detached from the legs; Fig. 4, a perspective view of the desk with the cover open and one of the drawer-sections in position; Fig. 5, a like view showing both drawer-sections and the pigeon-hole case in position; Fig. 6, a perspective view, enlarged, of the carriage for the cover-ribs; Fig. 7, a like view of the carriage-hinge; Fig. 8, an enlarged view of the cover-rim detached; Fig. 9, a like view of the outer cover-ribs; Fig. 10, a sectional view of the top of the desk, showing position of the cover-rim; Fig. 11, an enlarged vertical transverse section of the body of the desk, the cover represented as partially open. Fig. 12, a perspective view of one of the drawer-sections detached; and Figs. 13, 14, 15, 16, 17, and 18, sectional views illustrating details of construction.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of desks which are constructed in detachable sections, whereby several different patterns may be formed from the same body; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a simple, cheap, and effective device of this character.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body of the desk; B, the cover considered as a whole; C, the legs; D E, the drawer-sections, and F the pigeon-hole section.

The body A is rectangular in form, (see Figs. 1 and 3,) and is provided centrally with a drawer *b*. (See Figs. 4 and 11.) The corners of the body are rounded.

The legs C are provided with casters, and in their upper ends have a socket *d*, (see Fig. 3,) to receive a screw or pin *f* at each corner of the body A, by which they are detachably secured thereto. An ordinary spring-lock *g* is disposed in the top *h* of the body near the forward edge and is adapted to receive a loop-pin *i* on the rim *k* of the cover B, hereinafter described.

The drawer-sections D E consist of inclosed cases having drawers *j*, and of such size that when the body A is in position thereon a foot-space *l* (see Fig. 5) will be left between them. Each drawer-section has two sockets or openings *m* (see Fig. 12) to receive the pins or screws *f* on the desk-body and two centrally-disposed screws *p*, whereby it is secured to said body. One or both of the drawer-sections can be attached to the body (see Figs. 4 and 5) by removing the legs C from either end thereof and inserting the pins *f* in the sockets *m* of said sections, as described. A cover-slot *q* is formed in the top *h* (see Fig. 10) and extends around the rear half thereof, the inner edge of said slot being rabbeted at *r* to receive the cover-rim *k*.

The pigeon-hole section F is of the shape of a quarter-sector in end elevation and of such size that it may be disposed on the desk-top between the ends of the cover-slot, as shown in Fig. 5. The section is divided into drawers and compartments, as desired, and is flattened at *t* on its top (see Fig. 18) to form a shelf. A sectoral leaf *v* (see Fig. 18) is pivoted at *w* at each end of the section F, so that it may be turned onto the desk-top, as shown by dotted lines in Fig. 5, and form a side piece or guard for the case. Dovetail grooves (not shown) are formed laterally in the bottom of the case F and fitted to receive dovetail blocks, (see Fig. 17,) which may be detachably secured to said top, whereby said case may be made to slide forward on said desk without being raised.

The cover B consists of a series of flat ribs

x, (see Fig. 16,) preferably composed of steel covered with cloth, rubber, or similar flexible material z. The ribs x correspond in shape to the slot q in the desk-top, and are provided with slots 20 and openings 21 at their ends, in which loops of cord or wire 22 are disposed for holding said ribs together. A rod 23, (see Figs. 1 to 3,) of the same general shape as the ribs, is hinged at 24 within the body A, its free ends being connected to the ribs by the loops 22. A coiled tension-spring 25 is disposed around the rod 23, one end being secured thereto and the other to the bottom 26 of the body, said spring acting torsionally to force the free ends of the rod downward toward said body. The rim k is adapted to fit the slot q in the desk-top and rest on the rabbet r thereof, forming a smooth surface to said top (see Figs. 2 and 3) when the cover is open. The rim k has its under edge 27 turned inward, (see Fig. 8,) forming a groove to receive the first or outer rib 28, (shown in Fig. 9,) said rib being rectangular in cross-section and having its ends sufficiently long to project beyond the ends of the rim k when in position therein. The ends of the rib 28 are beveled at 29, and said rib is connected with the succeeding ribs in the series by the loops 22.

The rib-carriage H (see Fig. 6) comprises a semicircular body portion 30, provided on its edge with a semi-annular groove 31, in which the beveled ends 29 of the first rib 28 (see Fig. 15) work. A track 32 is formed at the edge of the groove 31, on which the slotted ends 20 of the ribs x (see Fig. 15) travel. A semicircular guard plate or flange 33 is formed on the outer face of the carriage to conceal the ends of the ribs when in use. Projecting centrally from the strongest portion 34 of the body 30 are two ears or lugs 35, provided with pivot-holes 36. The body 30 is cut away vertically at one side, the ears 35 forming a socket 37. Each end of the rim k is screwed to the strongest portion 34 of the body 30 at 38.

The hinge K, Fig. 7, has a body portion 39, provided with screw-holes 40, by which it is secured to the inner face of the end walls 41 of the desk-body just below the ends of the slot q. A vertical arm 42 is formed on the hinge, adapted to be inserted between the ears 35 of the carriage H, and is provided with a hole 43, which will register with those in said ears, whereby the carriage may be pivoted to said hinge. A horizontally-arranged rectangular arm 44 is formed on the hinge-body 39, which enters the socket 37 in the carriage H when the cover is open, said carriage being then in the position shown in Fig. 6.

A tension mechanism M (see Figs. 13 and 14) for the covering z consists of a longitudinally-arranged bar 45, (see Figs. 3 and 14,) which is adjustably secured on a vertically-inclined supporting-plate 46, Fig. 11, by means of slots 47 in said bar and screws 48, passing through said slots into the support. The lower edge of the material z of the cover is secured to the bar 45, and a thumb-screw 50 passes through the bottom 26 of the desk-body into the slots 47, its point being in engagement with the screw 48.

In the use of my improvement, when the cover is open, as shown in Fig. 2, it is concealed in the desk-body, the flexible covering z permitting the ribs to lie flatly against each other and the rim k entirely filling the slot q. By grasping the loop-pin i on the rim k the cover may be withdrawn from the body, the ends of its ribs x traveling on the circular track 32 of the carriage H, and said carriage at the same time being moved on the hinge K, the rim k being fastened thereto. The first rib 28, projecting into the groove 31, as described, serves as a guide for the succeeding ribs of the series. When the cover is closed, the straight edge of the carriage H rests on the top of the table, as shown in Fig. 1. Should the material z of the cover become stretched or loosened, by turning the thumb-screws 50, and thereby withdrawing the bar 45, the slack may be taken up.

It will readily be seen that by constructing the desk in sections, as described, numerous styles may be supplied by a dealer employing the same body. The pigeon-hole section may be entirely omitted, if desired, thus affording an unobstructed top for the desk.

Having thus explained my invention, what I claim is—

1. In a desk of the character described, a body provided with a cover-slot in its top, detachable legs on said body, a collapsible cover comprising ribs covered with flexible material and adapted to pass through said slot into said body, and a rim on said cover filling said slot when the cover is opened and attached to a semicircular rib-carriage hinged to said body, substantially as described.

2. In a desk, the body A, provided with the slot q, in combination with hinges K, carriages H, pivoted to said hinges, and the cover B, comprising the ribs x 28, covering z, and rim k, arranged to operate substantially as described.

3. In a desk, a body provided with a cover-slot, in combination with a collapsible cover comprising semicircular rib-carriages hinged to said body at the ends of said slot, a series of ribs covered with flexible material, and a rim secured to said carriages, said ribs being connected together and with said rim, their lower ends being fitted to work in a semi-annular track in said carriage, substantially as described.

4. In a desk, the body A, provided with the rabbeted slot q, in combination with the hinges K, carriages H, pivoted thereto and having the track 32, and the cover B, comprising the rim k, secured to said carriages, and ribs x, provided with the flexible covering z, substantially as described.

5. In a desk, the combination of a body, dovetail blocks detachably secured to the top

thereof, and a pigeon-hole case having laterally-arranged dovetail grooves in its bottom adapted to receive said blocks, a flattened portion, as *t*, and pivoted end leaves, as *v*, substantially as described.

6. In a desk, the hinge K, having the arm 42 and block 44, in combination with the carriage H, provided with the ears 35, socket 37, semi-annular groove 31, track 32, ribs *x*, and rim *k*, said ears being pivoted to said arm, substantially as and for the purpose set forth.

7. The hinge K, in combination with the carriage H, pivoted thereto, the rim *k*, having the groove 27, the rib 28, having beveled ends 29, the ribs *x*, connected with the rib 28, and the covering *z*, all being arranged to operate substantially as described.

8. In a desk, a body provided with a rabbeted cover-slot, a lock, and detachable legs, in combination with a cover comprising ribs adapted to enter said slot and a rim adapted to close the same, said rim being secured to semicircular carriages having semi-annular tracks for the cover-ribs and pivoted to hinges on said body, a flexible covering for said ribs, and a tension mechanism for said covering, substantially as described.

9. In a desk, the body A, provided with the rabbeted groove *q* and pins *f*, in combination with the legs C, the rod 23, hinged in said body, the spring 25, and the cover B, provided with the rim *k* and carriages H, pivoted to hinges K on said body, all being arranged to operate substantially as described.

10. A collapsible cover for desks of the character described, consisting of a series of semi-rectangular ribs loosely connected by cords at their ends, their tops being connected by a flexible covering, and semicircular carriages pivoted to hinges adapted to be secured to the desk, said carriages being provided with semi-annular tracks for the ends of the ribs, the upper or outer rib being secured to said carriages at the end of said tracks, substantially as described.

11. The body A, provided with the slot *q* and brace 46, in combination with the bar 45, provided with the slots 47, the screws 48 and 50, and the cover B, hinged to said body and provided with the flexible covering *z*, secured to said bar, substantially as described.

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