(No Model.) 2 Sheets—Sheet 1.

N. A. HULL.

DESK.

No. 294,388. Patented Mar. 4, 1884.

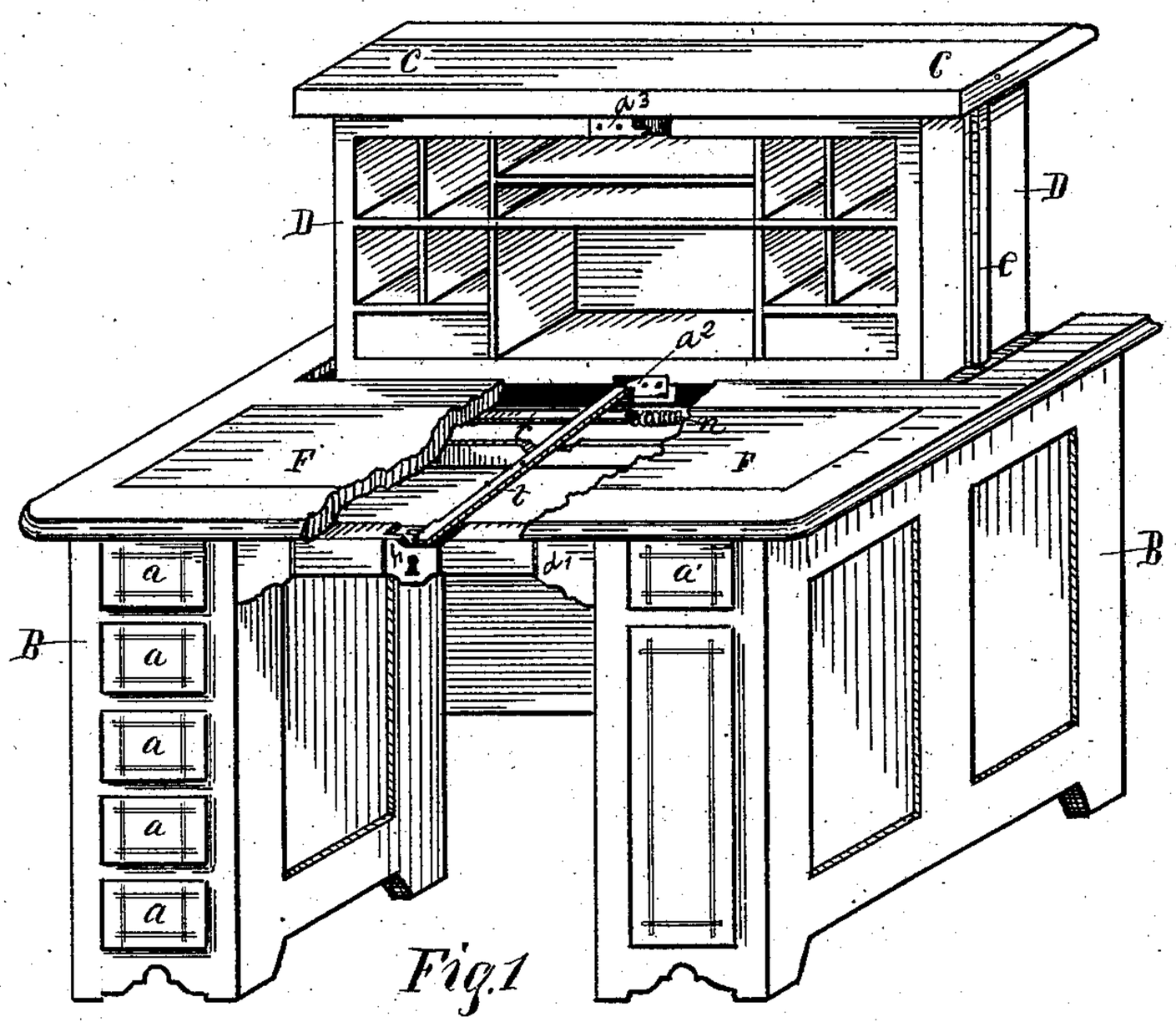

Fig. 1

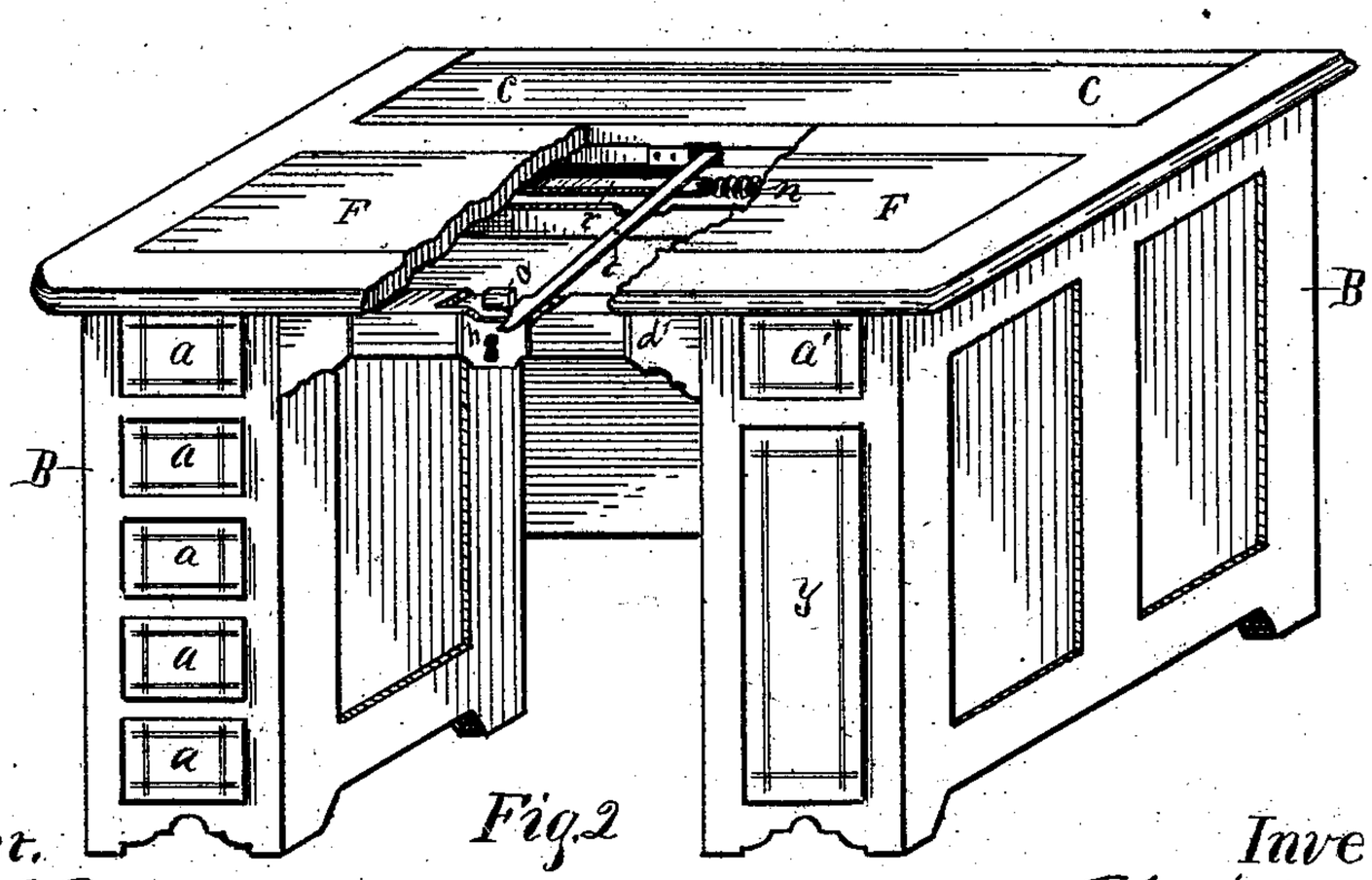

Fig. 2

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(No Model.) 2 Sheets—Sheet 2.

N. A. HULL.

DESK.

No. 294,388. Patented Mar. 4, 1884.

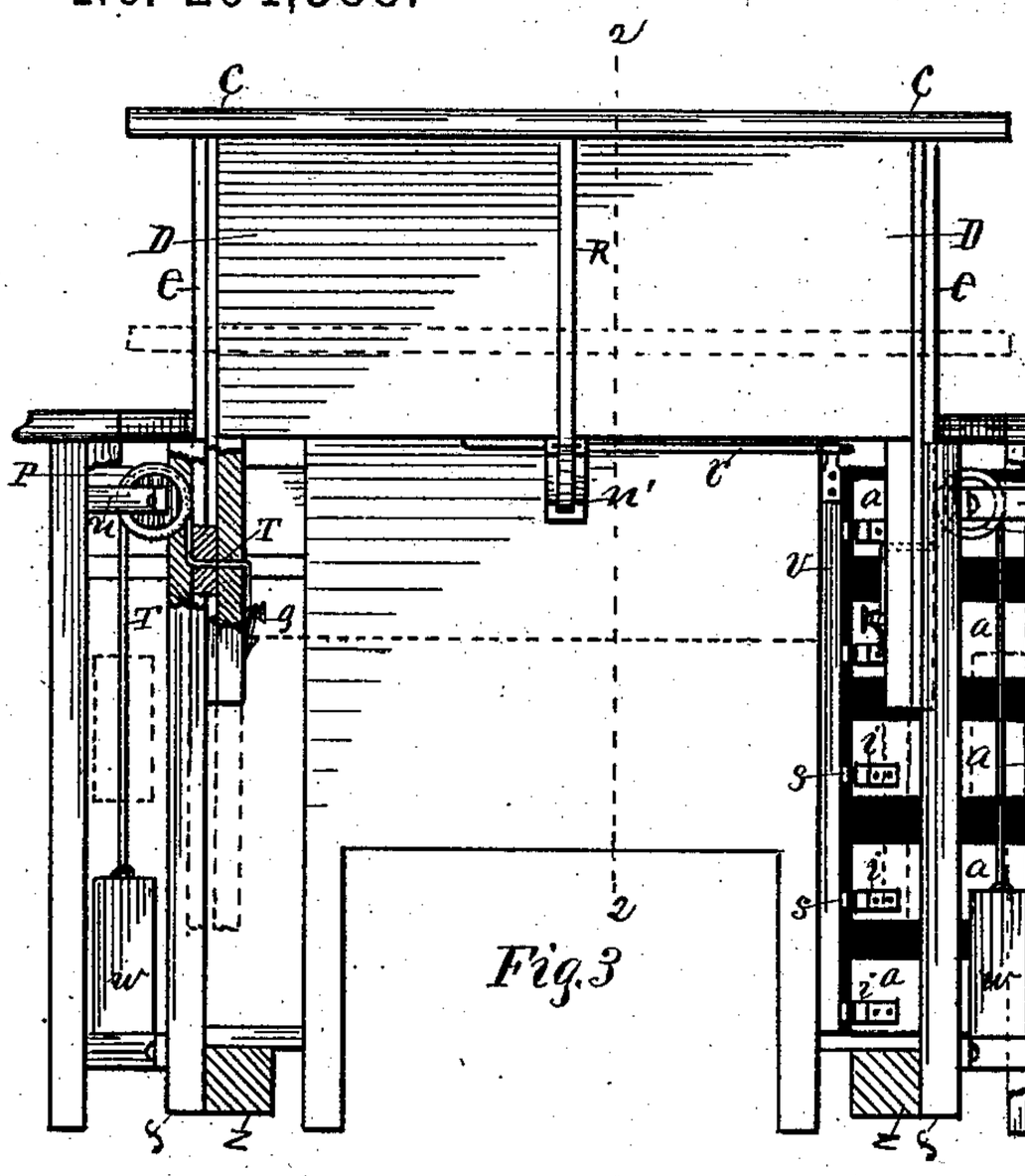

Fig. 3

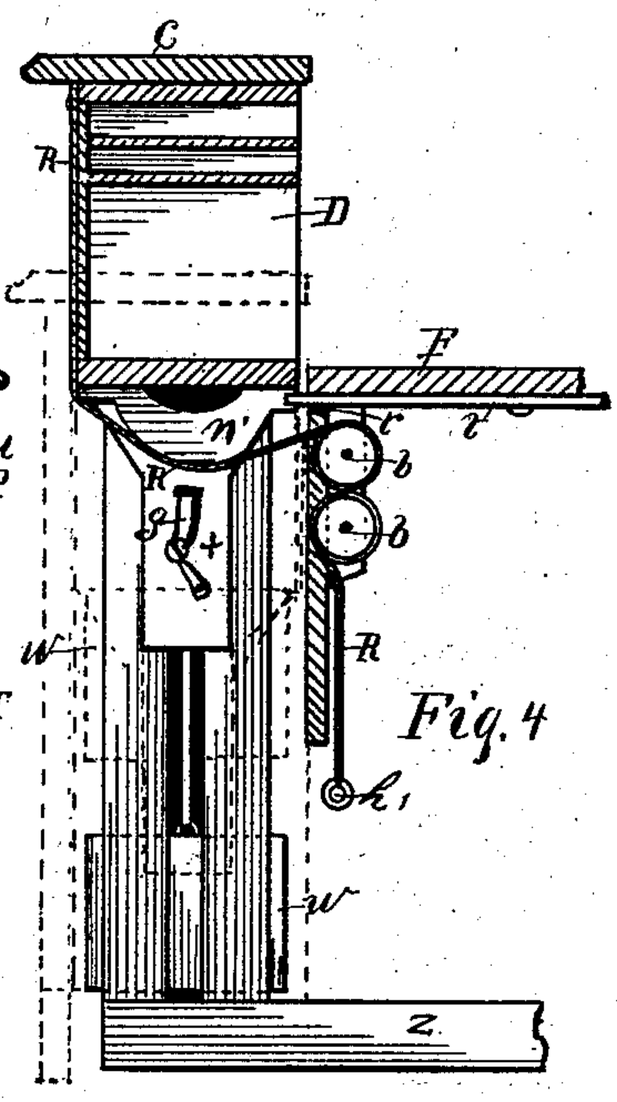

Fig. 4

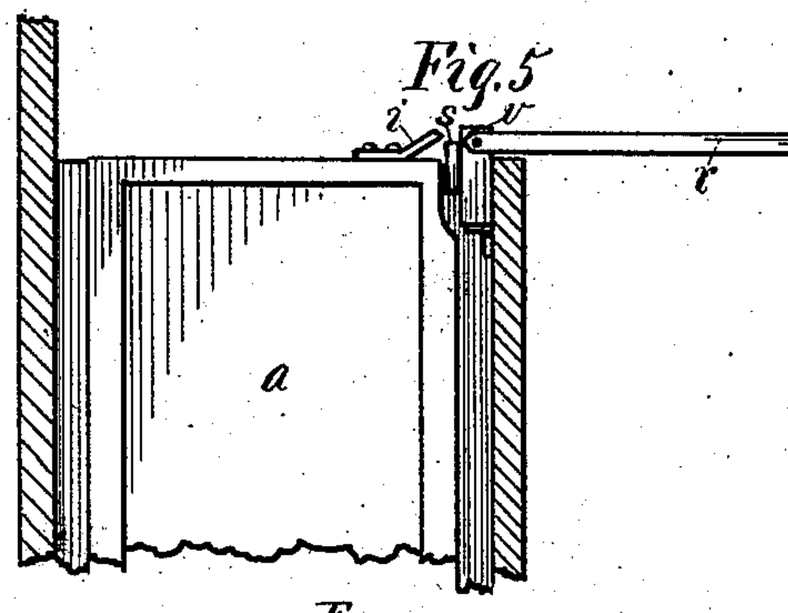

Fig. 5

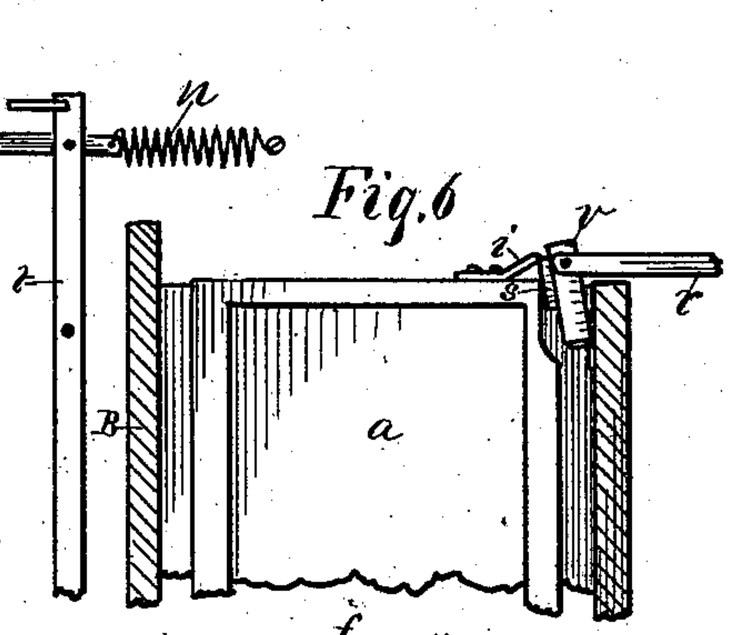

Fig. 6

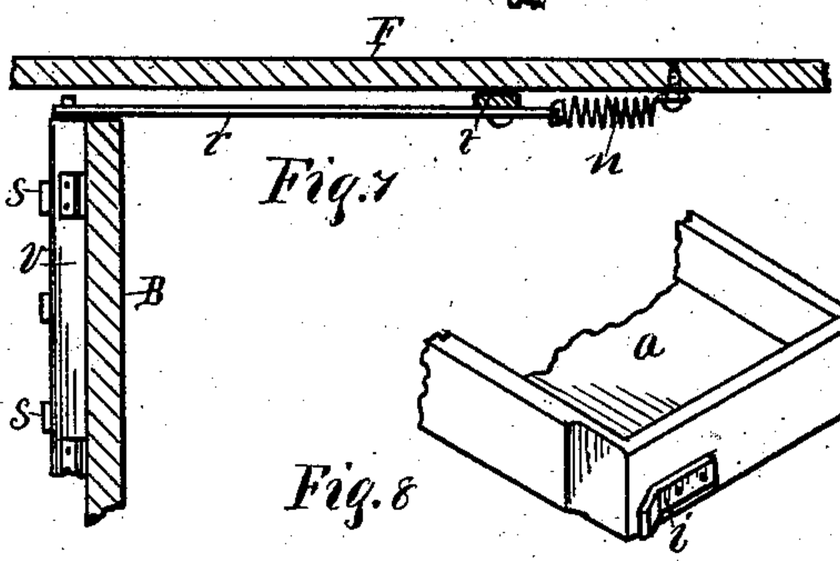

Fig. 7

Fig. 8

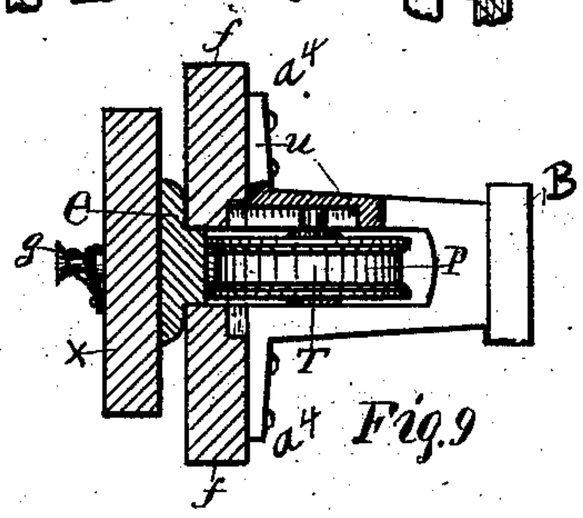

Fig. 9

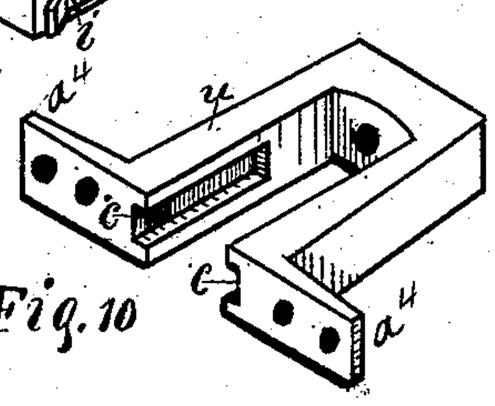

Fig. 10

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UNITED STATES PATENT OFFICE.

NICHOLAS A. HULL, OF PERU, INDIANA.

DESK.

SPECIFICATION forming part of Letters Patent No. 294,388, dated March 4, 1884.

Application filed April 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS A. HULL, of Peru, county of Miami, and State of Indiana, have invented a certain new and useful Improvement in Secretary-Desks, of which the following is a specification.

This invention relates to desks which are readily convertible into secretary-desks by elevating a pigeon-holed section or compartment above the surface of the desk proper, as will be hereinafter set forth.

This invention also consists in the arrangement of parts that enables one to easily raise and lower the pigeon-holed section, and also relates to the construction of a locking mechanism, whereby the movable portion may be locked when raised or lowered, also locking and unlocking a series of drawers simultaneously with the pigeon-holed section, as and for the purposes herein set forth.

In order to aid others skilled in the art to which my invention belongs to make and use it, I will proceed to describe its construction and operation with reference to the drawings forming a part of this specification, in which—

Figure 1 is an elevated perspective of my invention, showing the pigeon-holed section C as elevated, having the center of the stationary top F broken away. Fig. 2 is a view of the same, showing the section C as lowered. Fig. 3 is a rear elevation of Fig. 1, showing the mechanism for raising and lowering the section C. Fig. 4 is a cross-section on dotted line 2 of Fig. 3, showing the construction of parts for elevating the section C at the center. Fig. 5 is a top plan of the mechanism for locking the parts. Figs. 6, 7, and 8 are detailed views of the same. Fig. 9 is a top perspective of the weighted mechanism for operating the pigeon-holed section. Fig. 10 is an enlarged perspective of the metal yoke for supporting the pulleys and weights, all of which will be hereinafter set forth.

In the drawing, Fig. 1, F represents the stationary top; C, the pigeon-holed section, capable of being raised or lowered; D, the vertical ends of the section C, having vertical guides *e*. (See, also, Figs. 3 and 9.)

a represents a series of drawers; B, the ends of the desk.

t is a bar pivoted to the under side of the top F. (See Fig. 4.)

r represents a transverse bar pivoted to the bar *t* near the inner end. (See Figs. 1, 5, and 7.) The transverse bar *r* is pivoted at the opposite end to a hinged vertical bar, *v*. (See Figs. 3, 5, and 7.)

n is a coiled spring engaging with the bar *r*, and is also attached to the under surface of the top F. (See Figs. 1 and 7.) The hinged vertical bar *v* is provided with a series of lugs, *s*. (See Figs. 3, 5, and 7.) These lugs are so placed that when turned outward they engage with the prongs *i* upon the rear end of the drawers *a*, (see Fig. 6,) and when drawn back by the spring *n* they disengage from the drawers, as in Figs. 3 and 5, thus locking and unlocking the series of drawers at once.

The inner end of the lock-bar *t* projects, so that when the section C is raised the sloping stop a^2 engages with it, thus holding the section up, and throwing the outer end of the bar *t* to the right it becomes disengaged, when the section C will descend, as in Fig. 2. When pressing the outer end of the bar again to the right, it will engage with the lug a^3, locking the section down, as in Fig. 2. At the same time the transverse bar *r* is driven endwise, rocking the vertical hinged bar *v*, having the lugs *s*, outward, thus engaging with the prongs *i* upon the series of drawers *a*, as shown in Fig. 6, thus preventing the drawers from being drawn forward. In order to hold the lock-bar *t* in this position, the central drawer, *d'*, is provided with a common lock, *h*, and by turning the lock-bolt *o* up, as shown in Fig. 2, the bar is firmly held when all the parts are locked, and by turning the bolt *o* down the spring *n* draws the bars *t* and *r* back, when the parts are all unlocked, as in Figs. 3 and 5.

The section C is provided at the ends with vertical guide-bars *e*, having a tongue portion fitting between the vertical guide-pieces *f f*. (See Figs. 3 and 9.)

Attached to the top rail of the ends B of the desk are two metal yokes, *u*. (See Figs. 3 and 9.) These yokes are provided with arms a^4 a^4, and are bolted to the guide-pieces at the upper end, thus supporting them at a proper distance apart to admit the tongue of the guide-bars *e*, preventing the section C from rocking while being raised or lowered. The yokes are provided with horizontal channels C' C', to receive the journals of the pulleys P.

(See Figs. 3, 9, and 10.) The inner corner of the guide-pieces *f f*, meeting the yokes *u*, are cut away, to enable dropping the journals of the pulleys down into the channels C′ C′. (See Fig. 9.) Attached to and passing through the vertical arms *x* of the pigeon-holed end sections, D, and vertical guide-bars *e* are straps or cords T. (See Figs. 3, 4, and 9.) Projecting from the inner side of the arms *x* are two bolts or screws, *g g*, around which the cords or straps may be wound or unwound, to lengthen or shorten them. These straps pass over the grooved pulleys, then downward, where they are attached to the balance-weights W W, as shown in Figs. 3 and 4. It will be observed that when the weights are attached the pulleys P, turning and sliding within the horizontal channels C′ C′, are forced against the plane or tongue of the vertical guides *e*, thus preventing lateral friction against the guide-pieces *f f*, as shown in Figs. 3 and 9. The weights W W are made hollow, in order to weight them sufficiently to nearly raise or balance the pigeon-holed section C when filled with papers and the like. It will be observed from the construction of parts, as the section C is lowered, the weights W W are drawn up, as indicated by dotted lines of Figs. 3 and 4, and in raising the section the weights are lowered. In order to raise the section when lowered, as in Fig. 2, I attach across the bottom of the same, at the center, a rounded arm, *n′*. (See Fig. 4.) I attach to the vertical front, under the top F, at the center of the desk, two pulleys, *b b*, one above the other. I attach to the back of the section C a belt, R, which passes down and under the arm *n′*, over the upper pulley P, then down between the two and around the back portion of the lower pulley, terminating with a handle, *h′*, as clearly shown in Fig. 4. The operator, sitting in front, reaches under the top F, grasping the handle *h′*, pulling forward in a horizontal manner, causing the section C to rise until the lock-bar *t* engages with the stop a^2, when it will be held in position, as shown in Figs. 1 and 4, and, disengaging the lock-bar, the section C will descend, when the handle *h′* upon the strap R will be drawn up to the lower pulley P.

Having described my invention in the most exact terms that I can give, what I claim as new, and desire to secure by Letters Patent, is—

1. The desk provided with guide-pieces *f f*, in combination with movable pigeon-hole case having guide-bars *e* fitting between said guides, in combination with yokes *u*, said yokes having slotted bearings C′ C′, supporting pulleys P, with cord and weights, the said yokes *u* being attached to the guides *f f*, as described, for the purposes specified.

2. In a desk having a vertically-moving pigeon-hole part, the combination of the stationary part having guides *f f*, the yokes *u*, attached thereto, as described, said yokes having horizontal slotted bearings C′ C′, supporting pulleys P, with the movable pigeon-hole part, cords, and weights W W, the cord T passing through the arms *x* of the movable case, and secured thereto by screws or bolts *g g*, in the manner and for the purposes set forth.

3. In a desk having a movable pigeon-hole case balanced by cords and weights, the combination of the case C, having stop a^2 and lug a^3, engaging with pivoted bar *t*, said bar being pivoted to the under side of the fixed top F, the outer end of said bar engaging with the bolt *o* of the lock *h* in the drawer *d′*, substantially as and for the purposes set forth.

4. In a desk having a movable pigeon-hole case suspended by weights, cords, and pulleys, as set forth, the drawer *d′* and series of drawers *a*, in combination with the locking mechanism consisting of the pivoted bar *t*, lock *h*, transverse bar *r*, coil-spring *n*, hinged bar *v*, having lugs *s′*, engaging with the prongs *i* upon the drawers *a*, the stop a^2, and lug a^3, attached to the case C, the whole when arranged and combined for the purposes set forth.

5. In a desk having a movable pigeon-hole case balanced by weights and pulleys, as set forth, the bracket *n′*, attached to the case C, as specified, in combination with the pulleys *b b*, strap R, and handle *h′*, said strap being attached in the manner specified, for the purposes set forth.

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Witnesses:
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A. J. HUFFMAN.