(No Model.)

J. N. WELCH & A. ERNEST.

DESK.

No. 594,505. Patented Nov. 30, 1897.

FIG. 1.

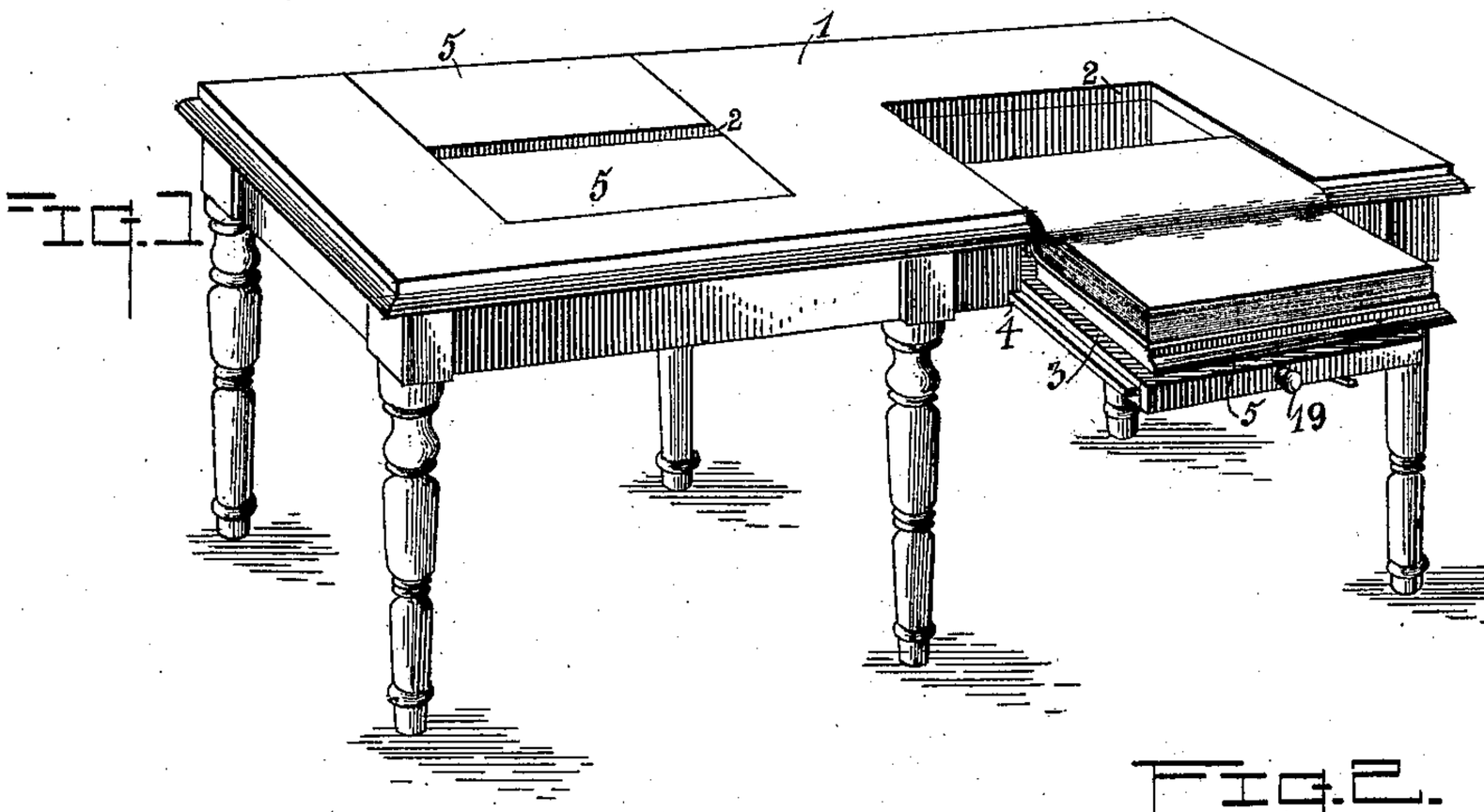


FIG. 2.

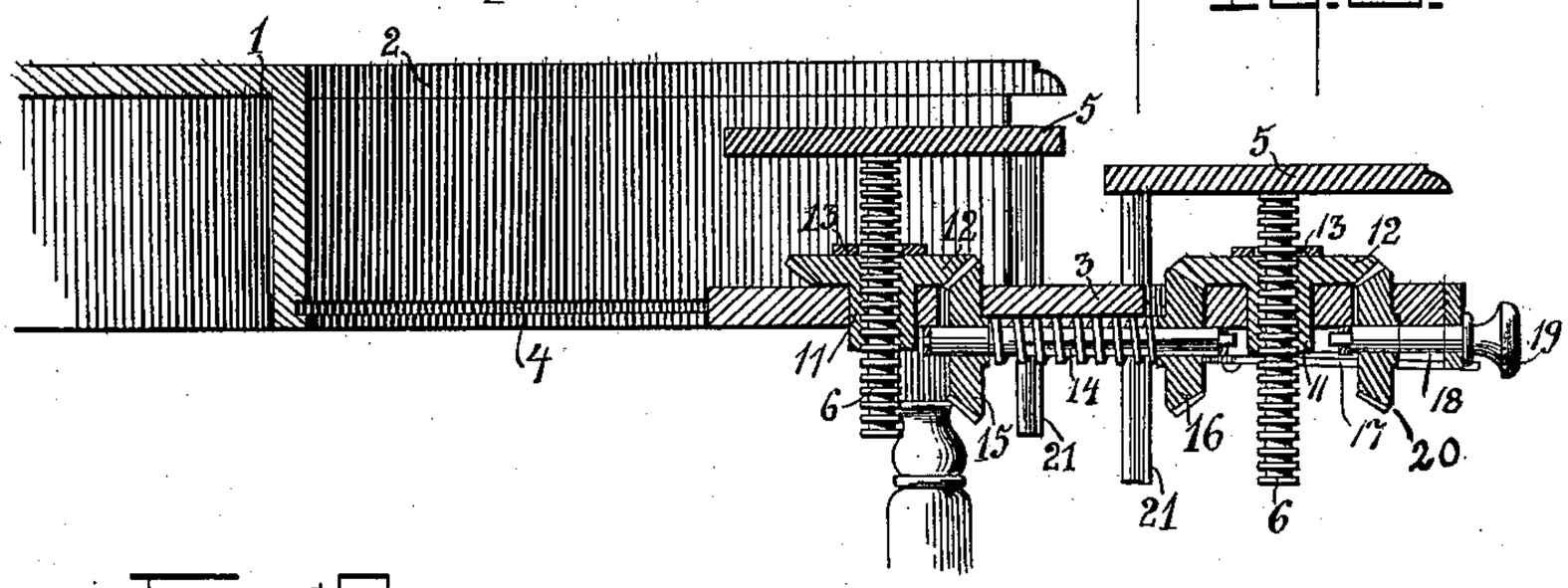


FIG. 3.

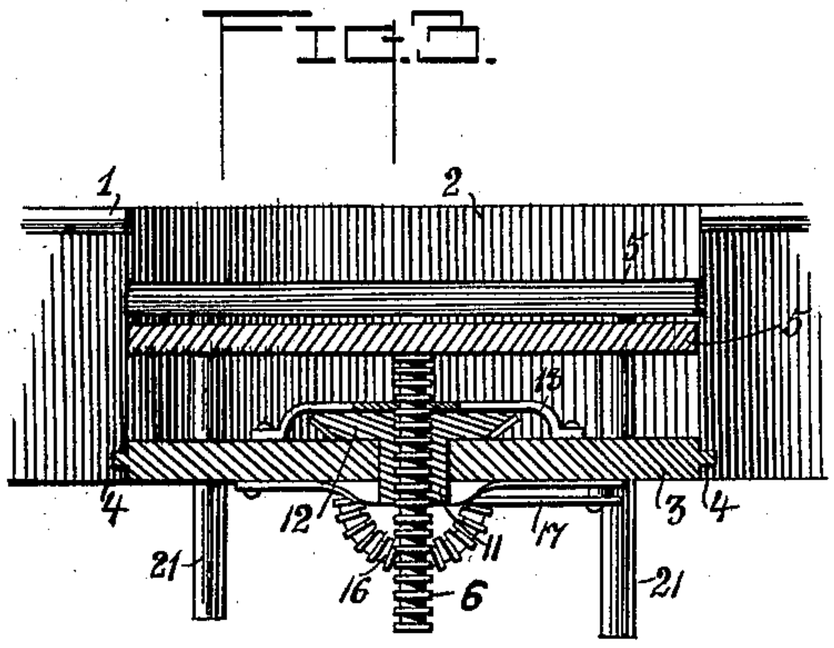
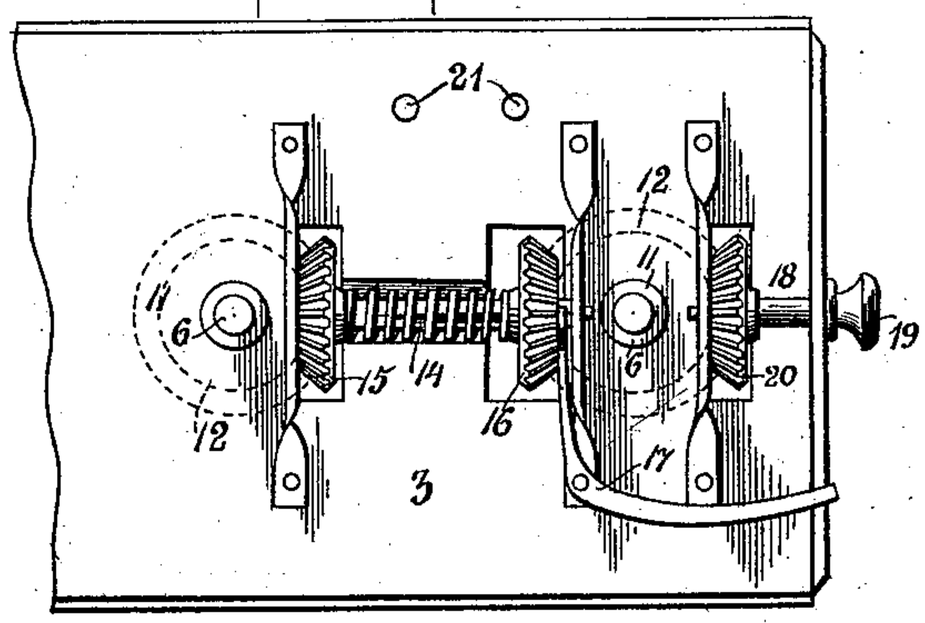


FIG. 4.



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UNITED STATES PATENT OFFICE.

JAMES N. WELCH AND ALBERT ERNEST, OF INDEPENDENCE, TEXAS.

DESK.

SPECIFICATION forming part of Letters Patent No. 594,505, dated November 30, 1897.

Application filed June 20, 1896. Serial No. 596,323. (No model.)

To all whom it may concern:

Be it known that we, JAMES N. WELCH and ALBERT ERNEST, citizens of the United States, residing at Independence, in the county of Washington and State of Texas, have invented a new and useful Desk, of which the following is a specification.

This invention relates to desks; and the object in view is to provide a desk with depressible leaves or writing-bed sections, together with means for varying and regulating the elevation of such leaves or sections with relation to each other and to the top of the desk. The leaves or sections are adjusted by positive means and are held fast in any desired position.

Other objects and advantages of the invention will appear in the course of the ensuing description.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally embodied in the claims hereto appended.

In the accompanying drawings, Figure 1 is a perspective view of a writing desk or table constructed in accordance with the present invention. Fig. 2 is a vertical transverse section through the same, showing the manner of mounting and supporting the leaves and rendering the same automatically adjustable. Fig. 3 is a vertical sectional view taken at right angles to Fig. 2. Fig. 4 is a bottom plan view of the sliding and removable shelf upon which the leaves are supported, showing the mechanism for adjusting the leaves and the lever for throwing a portion of the mechanism out of gear.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the top of a desk or table of any usual or ordinary construction. For the purpose of carrying out the present invention the desk or table is provided upon opposite sides, but at different longitudinal intervals, with recesses 2, forming depressions below the top of the desk or table, and in each of said recesses a horizontal shelf 3 is arranged to slide, said shelf having a tongue-and-groove engagement with suitable stringers or hangers 4, secured to the lower side of the table or desk top, or the shelf 3 may be supported upon cleats attached to the hangers 4, if desired.

5 designates a pair of independently-movable leaves or writing-desk sections which are normally upheld with their upper surfaces flush with the top of the desk or table. These leaves are arranged side by side, and each is rigidly connected to the top of a stem 6. The stems 6 are threaded throughout their length and pass through threaded openings in a pair of nuts or sleeves 11. These nuts or sleeves are provided above the shelf 3 with bevel or miter gears 12, over which are extended suitable plates or keepers 13, perforated to receive the stems 6 and secured at their opposite ends to the top of said shelf. Mounted in bearings beneath the shelf is a horizontal shaft 14, having fast upon one end a bevel or miter gear 15, the opposite end of said shaft being squared or otherwise formed to receive slidingly another bevel or miter gear 16. The gears 15 and 16 mesh with and revolve the gears 12 simultaneously in opposite directions, and a spring is interposed between the gears 15 and 16, said spring being preferably of spiral form, surrounding the shaft 14 and serving to press the sliding gear 16 into mesh with its mate 12. An elbow-shaped lever or shipper 17, pivotally mounted beneath the shelf 3 and bearing against the gear 16, serves when vibrated to move or slide said gear out of mesh with its mate, and said lever is extended to the front end of the shelf 3, where it is in convenient position to be vibrated by persons sitting at the desk or table.

Mounted in bearings at the front end of the shelf 3 and located beneath the same is a short shaft 18, having at its front end a handle 19, by means of which it may be rotated and provided near its opposite end with a miter or bevel gear 20, fast thereon and meshing with the gear 12 of the adjacent leaf 5. By operating the handle 19 it will be seen that motion will be communicated to the train of gears above described, and that thereby one of the leaves 5 will be elevated simultaneously with the lowering of the other shelf.

By means of the lever 17 the inner leaf 5 may be thrown out of gear, thereby enabling

the outer leaf to be adjusted up or down independently.

The construction just above described is of particular value in making entries in the day-book or journal, it not being necessary to adjust the relative positions of the leaves 5 so frequently. Each of the leaves 5 is provided with an auxiliary stem 21, which extends downward through an opening in the shelf, thus forming a guide for the leaf to which it is attached and preventing such leaf from turning around its stem.

The improvement hereinabove described will be found of great convenience to book-keepers, as it brings the pages of the book upon a perfect level with the top of the desk or table, enabling the latter to be used as an arm-rest. In addition to this advantage the opposite pages of the book wherever opened are brought into the same horizontal plane, and to add to the efficiency of the device the adjacent edges of the leaves are located at a slight distance apart in order that the hinge of the book may be received between them, as shown in Fig. 1. Instead of the tongue-and-groove engagement of the shelf 3 with the table the shelf may, if desired, be mounted on rollers, so that it may be drawn out easily.

It will be understood that the invention is susceptible of changes in the form, proportion, and minor details of construction which may accordingly be resorted to without departing from the spirit or sacrificing any of the advantages thereof.

Having thus described the invention, what is claimed as new is—

1. The combination with a desk or table, of a depressible leaf having a rigidly-attached and threaded depending stem, an internally-threaded gear-wheel surrounding said stem and adapted when rotated to raise and lower said leaf, means for operating said gear-wheel, and an auxiliary stem rigidly connected to the under side of said leaf and sliding through an opening in the leaf-support, substantially as described.

2. The combination with a desk or table, of a pair of vertically-movable leaves or writing-bed sections having depending threaded stems, pinions or gears having a threaded engagement with said stems, a shaft interposed between said gears and carrying a fixed and a sliding gear meshing with the aforesaid gears, a shipping-lever for moving the sliding gear longitudinally of its shaft and into and out of engagement with its mate, and means for rotating the gear on the stem of one of the leaves, all arranged substantially as and for the purpose described.

3. The combination with a desk or table having a recess or depression opening out at one edge thereof, of a horizontally-sliding shelf arranged in said recess, vertically-movable leaves mounted side by side on said shelf and each movable up and down, and means for moving said leaves simultaneously in opposite directions to each other, substantially as described.

4. The combination with a desk or table having a recess in its top, of a pair of leaves arranged side by side and movable up and down in said recess, and means to positively move said leaves simultaneously in opposite directions to each other or one of said leaves independently of the other, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JAMES N. WELCH.
ALBERT ERNEST.

Witnesses:
A. WEAVER,
J. R. MCARDLE.