(No Model.)

G. A. ANK.

FOLDING WALL SHELF, TABLE, OR DESK.

No. 593,828. Patented Nov. 16, 1897.

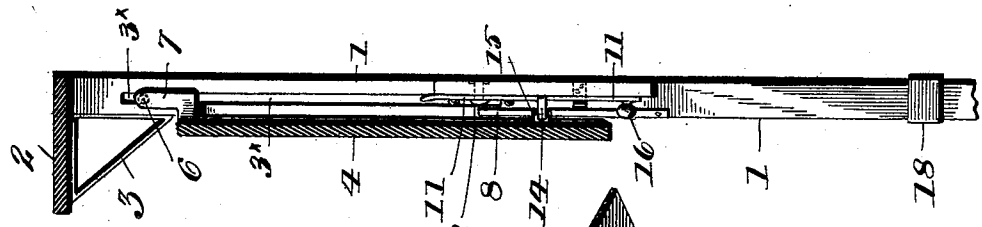

Fig. 2.

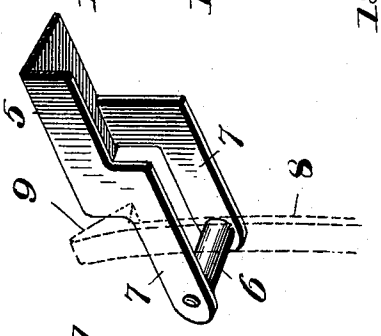

Fig. 3.

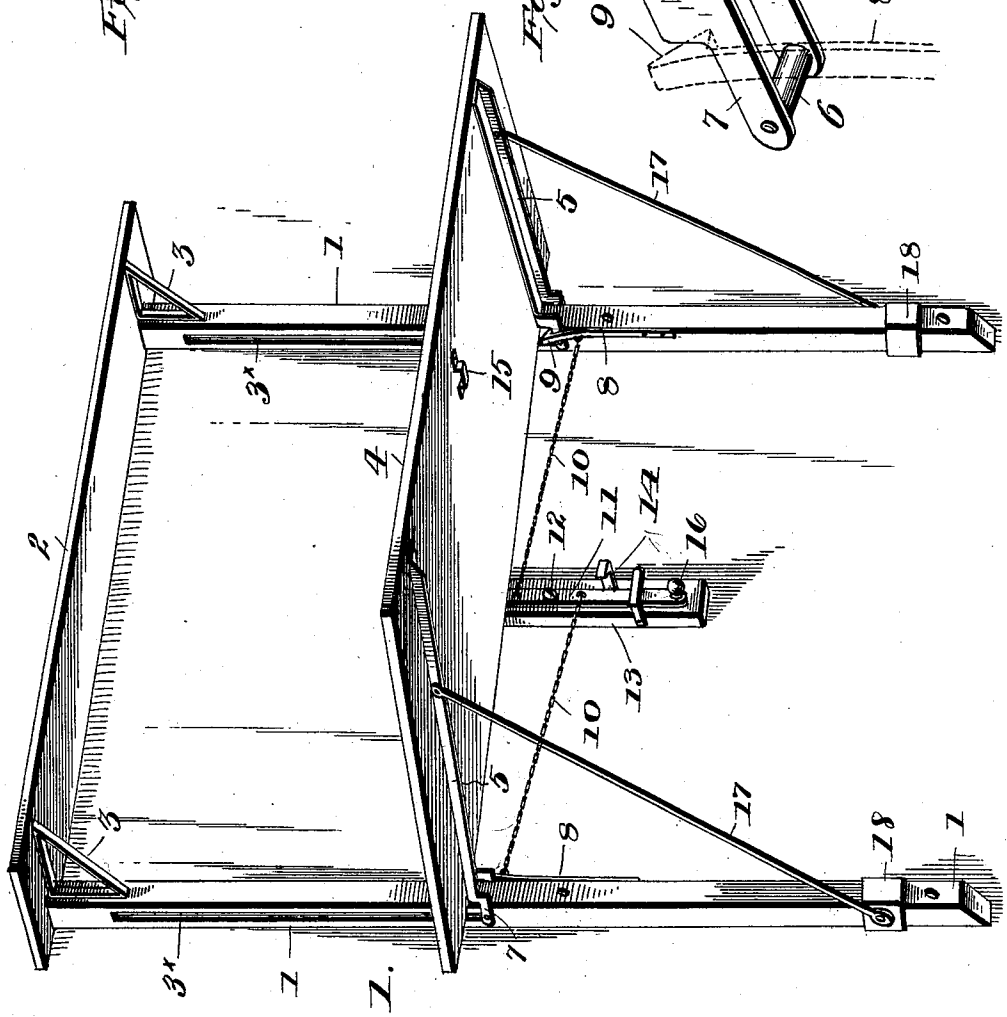

Fig. 1.

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UNITED STATES PATENT OFFICE.

GEORGE ALVIN ANK, OF MOUNT CARROLL, ILLINOIS.

FOLDING WALL SHELF, TABLE, OR DESK.

SPECIFICATION forming part of Letters Patent No. 593,828, dated November 16, 1897.

Application filed March 2, 1897. Serial No. 625,741. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ALVIN ANK, a citizen of the United States, residing at Mount Carroll, in the county of Carroll and State of Illinois, have invented certain new and useful Improvements in Folding Wall Shelves, Tables, or Desks; 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 figures of reference marked thereon, which form a part of this specification.

The invention relates to a folding table, desk, or shelf adapted to be attached to the wall or other suitable support adapted to have the leaf of the table or shelf folded into a vertical position when not in use, so as to occupy but little space, and when to be used to be dropped into a horizontal position.

The invention has for its object to provide simple and efficient means for supporting the shelf and holding it in its horizontal position when in use, and simple and efficient means by which the leaf can be thrown and held into its folded position when not in use.

To the accomplishment of the foregoing and such other objects as may hereinafter appear, the invention consists in the construction and in the combination of parts hereinafter particularly described and then sought to be definitely defined by the claims, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a perspective of the table or desk with its leaf in its horizontal position. Fig. 2 is a side elevation of the same, showing the leaf in its folded position. Fig. 3 is a detail perspective of one of the leaf-supporting brackets.

In the drawings the numeral 1 designates two uprights of suitable material adapted to be secured by screws or other means to the wall or other support and connected together at their upper ends by a cross-piece 2, which may be braced in its connection to the uprights by suitable brackets 3. The uprights 1 are each formed with a slot $3^{\times}$, in the particular form illustrated, extending lengthwise of each upright and extending through from one side to the other of the uprights.

The numeral 4 designates the leaf of the table or desk, which is suitably secured to brackets 5, which may be of metal and flanged preferably on the outside, so that the bracket can be made of light material and yet be strong. This flange also constitutes an ear for hinging to it a brace-rod, hereinafter mentioned. The brackets 5 have attached thereto at the rear ends the members or rollers 6, adapted to pass through the slots 3 in the uprights 1, and to have a vertical movement therein in the operation of folding or unfolding the leaf. The preferred manner of connecting the members or rollers 6 to the brackets 5 is by journaling them in ears 7, which extend from the rear of the brackets and which lie on opposite sides of the uprights 1, and thus brace the leaf against side movement in its attachment to the uprights and permit movement of the leaf in folding and unfolding without liability of the brackets or other parts binding on the uprights. The ears 7 lie in a lower plane than the main portion of the brackets, so that the leaf can be folded flat or close to the uprights 1.

The leaf 4 is held in its horizontal position by means of spring-catches 8, which are secured to the inside faces of the uprights 1 and which have hooks 9 at their free ends, adapted to fit over the ears 7, as illustrated in Fig. 1, so as to grip the ears and prevent the roller ends of the brackets from moving upward and thus hold the leaf in its horizontal position.

The spring-catches 8 are released from the ears 7, when it is desired to move the leaf, by meams of suitable connections, such as chains 10, which are connected at one end to the spring-catches and at the other end to a lever 11, which is fulcrumed by a pivot 12 to a bracket 13, which may be secured to the wall or other support by suitable means. When it is desired to release the catches, the lever 11 is turned so as to pull on the flexible connections 10, which action withdraws the catches from engagement with the ears of the brackets and leaves the leaf free to be turned and to be moved upward, carrying the rollers 6 to the upper portion of the slots 3 and bringing the leaf to the vertical position illustrated in Fig. 2 of the drawings.

When the leaf is in its folded position, the

pawl or catch 14, attached to the lever 11, engages a keeper or catch 15, attached to the under side of the leaf 4 near its front edge, and thus locks the leaf in its folded position. When the table is to be moved into its horizontal position, the lever 11 is moved on its pivot by grasping a knob 16 on that lever, so as to bring the pawl or catch 14 out of engagement with the keeper 16 and thus permit the forward end of the leaf to be moved outward and the rear end of the leaf to be brought down by the rollers 6, moving in the slots 3, until the table assumes its horizontal position, when the hooks of the spring-catches 8 again engage the rear of the brackets 5 and hold the leaf in its horizontal position.

The numeral 17 designates two brace-rods which are pivotally connected at their lower ends to the lower part of the uprights 1 and pivotally connected at their upper ends to the flanges of the brackets 5. These brace-rods aid in sustaining the leaf in its horizontal position as well as assist in bracing the leaf against lateral pressure, and being pivoted at both ends, as described, will fold with the leaf as the latter is lowered and its rear end raised in bringing the leaf into its folded position.

The numeral 18 designates metal plates secured to the lower part of the uprights 1 at the points where the lower ends of the braces 17 are pivoted, so as to prevent wear on the uprights at the points where the brace-rods are pivoted thereto.

I have illustrated and described what I consider to be the preferred details of construction of the several parts; but it is obvious that changes can be made in details without departing from the spirit of the invention.

Under the construction described a very simple, strong, and efficient folding table or desk is formed. The parts are comparatively inexpensive in construction, they can be readily assembled, and are not liable to get out of order. The structure can be attached readily to the wall or other support and when necessary can be easily taken down. The parts when folded are compact and occupy the minimum of space, and the design or configuration of the structure can be such as to be ornamental and decorative, so that when the leaf is folded an ornamental or decorative panel may be in view.

Having described my invention and set forth its merits, what I claim is—

1. The combination of the slotted uprights, the leaf provided with brackets having a member movable in the slots of the uprights, and catches adapted to engage a rear portion of the brackets to sustain the leaf in a horizontal position, substantially as and for the purposes described.

2. The combination of the slotted uprights, the leaf provided with brackets having a member movable in the slots of said uprights, catches to engage a portion of said brackets, and a lever joined to said catches by suitable connections and adapted to be moved so as to withdraw the catches from engagement with the brackets to permit the leaf to be folded, substantially as and for the purposes described.

3. The combination of the slotted uprights, the leaf having brackets with a member at the rear moving in the slots of said uprights, means for supporting the leaf in a horizontal position, and a pawl or catch for securing the leaf in a vertical position when folded, substantially as and for the purposes described.

4. The combination of the slotted uprights, the leaf provided with brackets having rearwardly-extending ears to lie on opposite sides of the uprights, and a member supported by the ears of each bracket and passing through the slots of the uprights, substantially as and for the purposes described.

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

GEORGE ALVIN ANK.

Witnesses:
JOHN S. GROVE,
ALVA F. WINGERT.