(Model.)

G. D. LEONARD.

TRAY OR DRAWER FOR DISPLAYING SPOOLS.

No. 267,232. Patented Nov. 7, 1882.

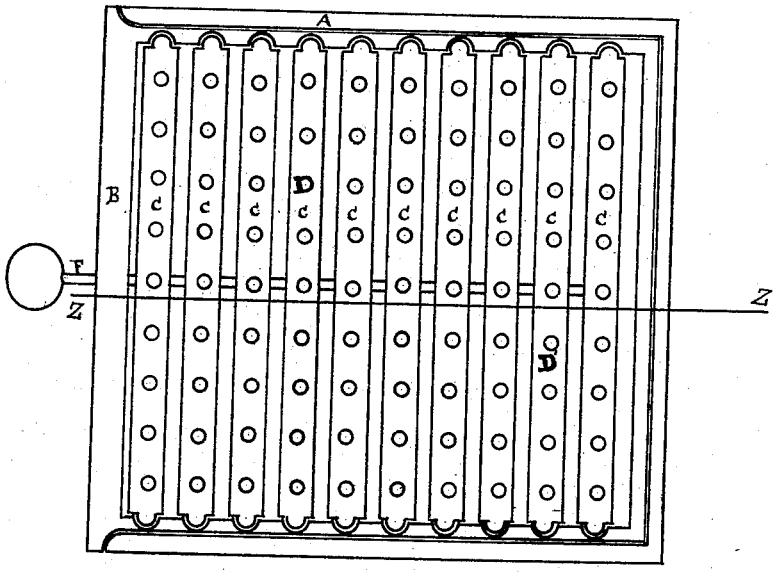

FIG. 1.

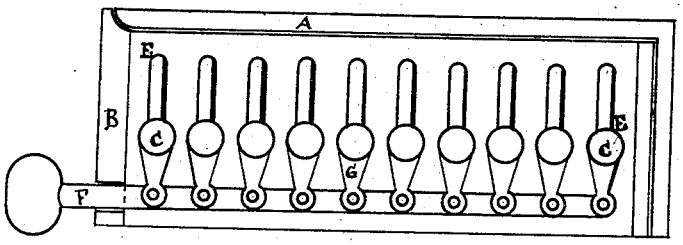

FIG. 2.

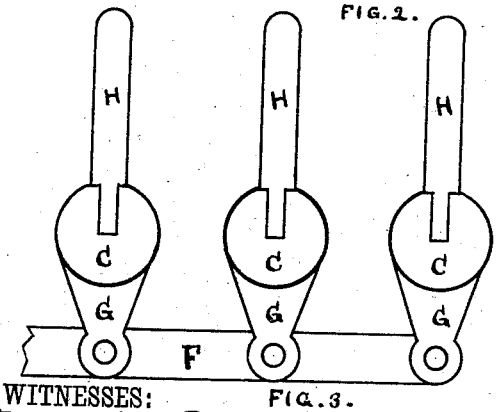

FIG. 3.

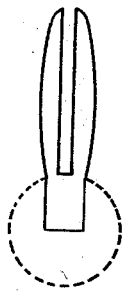

FIG. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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TRAY OR DRAWER FOR DISPLAYING SPOOLS.

SPECIFICATION forming part of Letters Patent No. 267,232, dated November 7, 1882.

Application filed April 8, 1882. (Model.)

To all whom it may concern:

Be it known that I, GEORGE D. LEONARD, of the city of New York, in the county and State of New York, have invented a new and useful improvement in trays and drawers for holding spools of silk, cotton, and other similar goods, and in the manner of operating the same, as described in the following specification.

The object of my invention is to produce a neat, substantial, and convenient case or cabinet for the purpose of holding and displaying spools of silk, cotton, and other similar goods in a manner so as to give motion to the spools to produce the desired light and shade effect required to display the above goods to the best advantage as regards fine colors.

The invention consists in the arrangement of a series of oscillating bars in the side of a drawer, the said bars or rods being provided at or near the upper side each with a row of upright pins or spindles for the reception of spools. The said bars are provided at each end with a journal, which is received by a corresponding receptacle formed in the inner side of the aforesaid drawer, whereby the bar is supported and permitted to oscillate. There being a connection made between each of the bars and a transverse connecting-rod by means of a suitable crank, all of the bars may be oscillated at the same time when the said connecting-rod is reciprocated. Hence corresponding motion is given to each of the upright pins holding the spools, and as a great number of these drawers may be employed in one case or cabinet, possessing the quality of transparency to a great degree, it is evident that hundreds of spools may appear in motion at the same time, producing a lively display of colors.

In the drawings, Figure 1 represents a longitudinal section of one of these drawers, (marked A,) located in case B, and provided with a number of oscillating bars or rods, C, which are provided with holes D for the reception of upright pins or spindles for holding spools.

Fig. 2 represents a section of one of the drawers A through the line Z, Fig. 1, located as the upper drawer would appear in case B, the bars or rods C placed in such a position as to hold the pins E in a vertical position, which position may be varied at pleasure by means of rod F, more fully described in Fig. 3, where I represent the above features on a larger scale. Here the oscillating bars C are provided at the bottom with a crank or arm, G, uniting with a reciprocating bar, F, in such a manner that when the said bars are held in a position to oscillate, as above described, they may be so oscillated by the said rod F, which may be extended or led to any desired or convenient place. In this figure, H H H represent pins or spindles, which are driven into or otherwise fastened to bars C. These pins may be made of various shapes or forms; but that which I desire to use and to particularly describe is shown in Fig. 4. Here I show an irregular-shaped pin solid at the bottom and split or sawed down to or nearly to the base or bar, to which it fits, the object of this being to render the pin sufficiently elastic to receive the bore of a spool, while the said bore is smaller than the pin when the latter is expanded or assumes its natural shape. This is designed to produce sufficient friction between the pin and the wall of the spool to prevent the said spool from sliding off by its own gravity should the pin be inverted or the drawer turned upside down, this being a matter of great importance when any case or cabinet of this nature containing spools is being transported or being cleaned or dusted; and it may here be stated that this form of pin is as applicable to all other cases or stands now in use (where pins are used for holding spools) as in the above-described case.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a tray or drawer, an oscillating bar or bars provided with upright pins or spindles for holding spools of thread for display in such manner that the angle or position of the spools may be changed at pleasure by oscillating the bar or bars, substantially as set forth.

2. The combination, in a tray or drawer, of the oscillating bar or bars C with the upright pins or spindles E, solid at the bottom or base, and being split or provided with uprights of sufficient dimensions and elasticity to receive the bore of a spool when contracted thereby,

causing sufficient friction between the wall of bore and uprights to prevent the spool from falling by its own gravity when the pin is inverted, substantially as described.

3. The combination, in a tray or drawer, of the oscillating bars C, having upright pins or spindles E for holding spools, the said bars being attached to and operated by the rod F to move all of the pins or spindles at the same time, as and for the purpose set forth.

GEO. D. LEONARD.

In presence of—
ROBT. M. FRYER,
CHARLES W. DARLING.