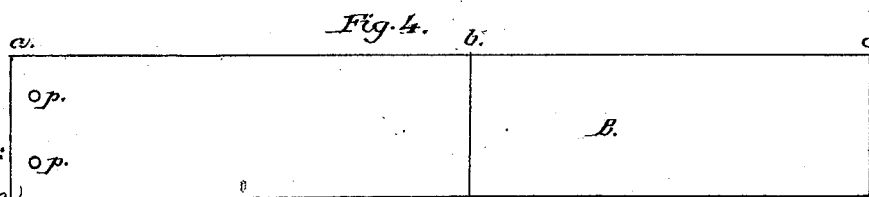
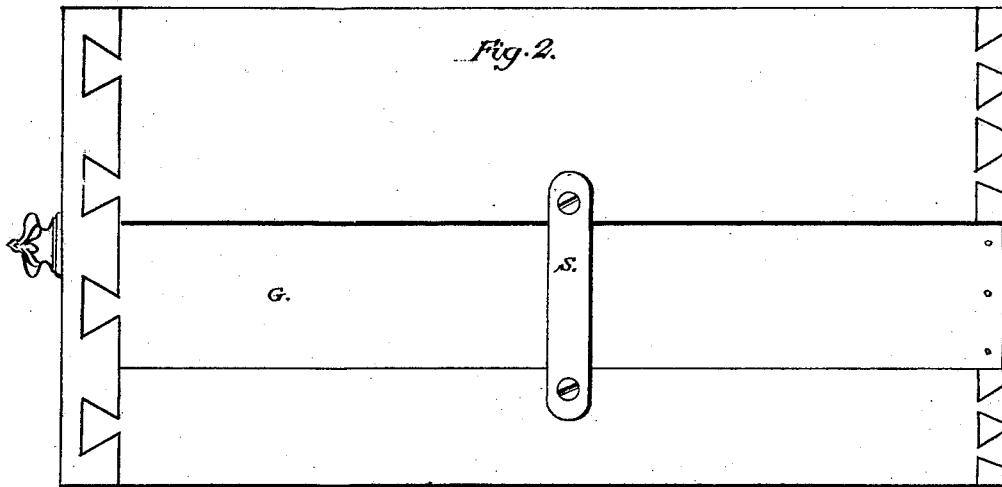
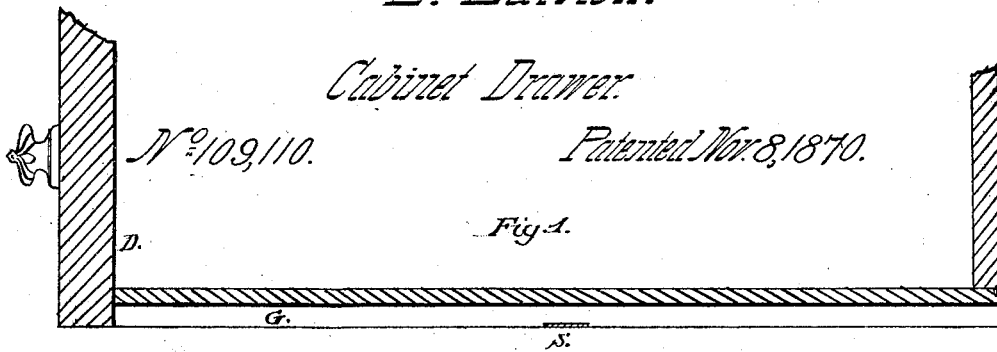


L. Burnell.

Cabinet Drawer.

N^o 109,110.

Patented Nov 8, 1870.



WITNESSES:

J. E. Weiss
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INVENTOR:

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Fig. 5.

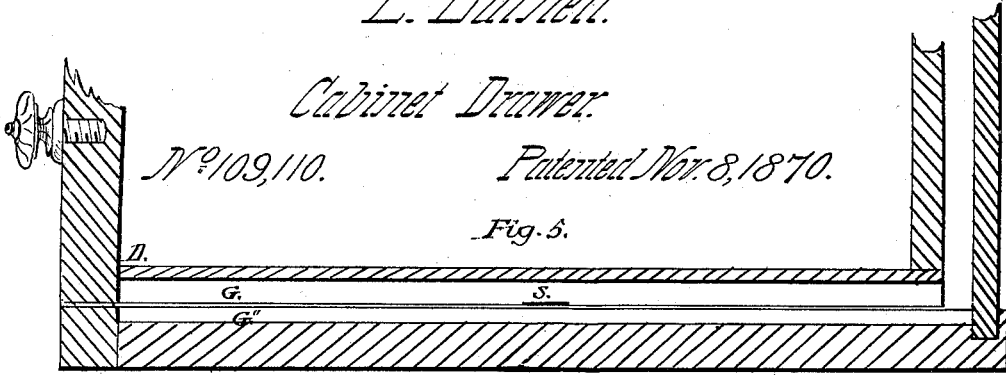


Fig. 6.

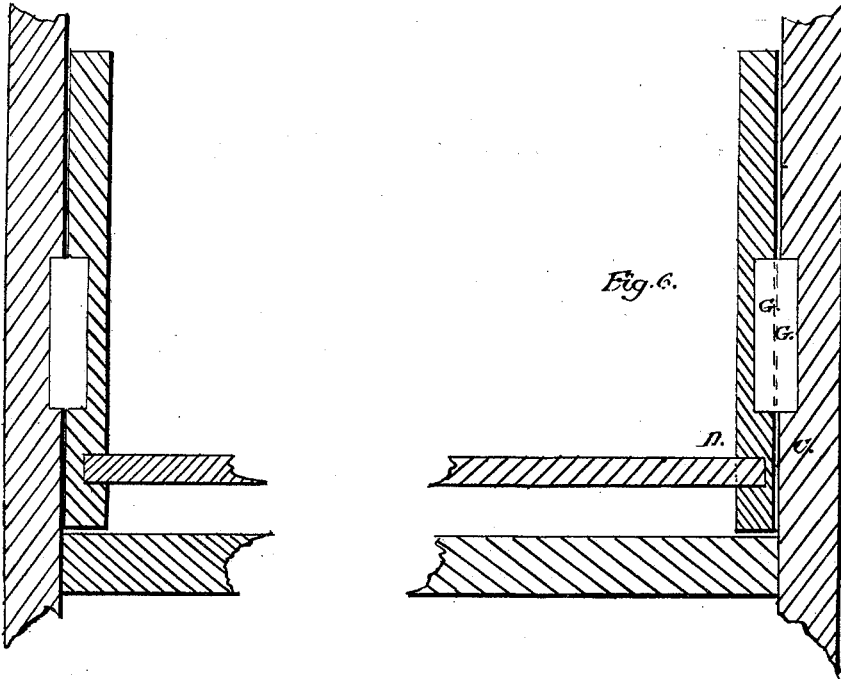
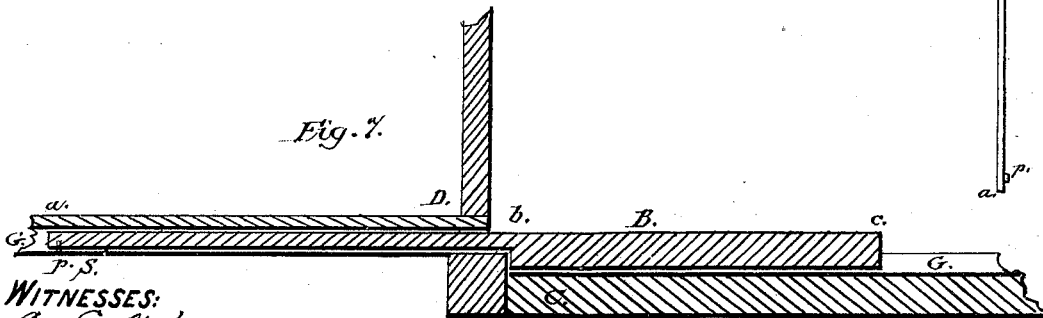


Fig. 8.



Fig. 7.



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LEVI BURNELL, OF MILWAUKEE, WISCONSIN.

Letters Patent No. 109,110, dated November 8, 1870.

IMPROVEMENT IN DRAWERS FOR CABINET FURNITURE.

The Schedule referred to in these Letters Patent and making part of the same.

I, LEVI BURNELL, of the city and county of Milwaukee, State of Wisconsin, have invented certain Improvements pertaining to Cabinet Furniture, of which the following is a specification.

My invention relates especially to drawers, its object being to sustain any drawer, however heavily laden, in a level position when fully open, and prevent that downward bearing of the same, like a lever across veneering or other front finish, so common and damaging to fine furniture.

It consists of supporting-bars, one at each end of a drawer, (the length of the said bars being about equal to the lineal measurement from front to back of the drawer,) so arranged that when the drawer is open the bars are withdrawn from the case about half their length, their forward ends in their grooves in the ends of the drawers, and the rear ends of the bars in grooves in the case.

Bars, sliding on the outer ends of drawers, for this same purpose, have previously been tried; but that arrangement, necessarily involving the diminution of the capacity of the drawer, seems not to have been regarded with favor by manufacturers.

Aiming at simplicity of construction, and also the greatest possible economy of cost, I propose no change in the size nor manner of constructing bureau and other furniture drawers, except a shallow groove in certain pieces of the lumber of which the ends of the drawers are to be made, and that of such a character as will neither injure nor mar the drawer whether my improvement shall thereafter be adopted or not.

Drawing.

Figure 1 is a plan of a portion of one end of a drawer, understood, of course, to represent both, as do also the succeeding illustrations. Outside the drawer, in each of its upright ends, is a groove, G. This groove, in a common-sized bureau-drawer, may be plowed five-sixteenths of an inch deep.

Figure 2 is a vertical view of the same, showing the relative breadth of the groove, preferably, (in an eight-inch upright drawer,) say, two and one-half inches wide and two inches from the bottom of the drawer. See also in this, (as in fig. 1, not before mentioned,) at letter S, a strap four inches long, three-fourths of an inch wide, made from hoop-iron one-sixteenth of an inch thick, held in place by a screw in each end. The ends of this strap being sunk to the depth of its thickness into the wood at the sides of the groove, will leave one-fourth of an inch space behind it for the bar (B, fig. 3,) to slide in. The face of the strap may be flush with, but not project forward of, the face of the wood; countersink the screw-holes so that the heads of the screws project not above the face of the strap. The object of this strap is two-fold, viz.: first,

to keep the forward end of the supporting-bar in its groove, and, second, by catching against a projection, as pins *p p*, fig. 4, will, by the drawer's outward movement, slide the bar forward to its proper place for duty.

Figure 3 is a plan of the supporting-bar, assumed, as in the case supposed, to be about fifteen inches long by two and one-half inches vertical breadth. Its forward portion, (about eight inches of its length,) from letter *a* to its shoulder at letter *b*, is one-fourth of an inch thick, and remainder, (about seven inches of its length,) from its shoulder at letter *b* to its extremity at letter *c*, is five-sixteenths of an inch thick.

Figure 4 is a vertical view of the same. *p p* are pins, the location of which near the forward end of the bar must be determined by the place of the strap S, which spans the groove about midway between the front and back side of the drawer. The projection of these pins must not exceed the thickness of the strap S. Incidentally they serve the very excellent purpose of preventing the drawer from ever being drawn further than fully open, never entirely out.

Figure 5, D is the same as fig. 1. C is a plan of a case for the drawer D, with its groove G' corresponding with groove G in the drawer D. The breadth of groove G' is the same as that of groove G; their length also may be equal; but while one-fourth of an inch horizontal depth for groove G' in the case is sufficient, the depth of groove G, in the end of the drawer corresponding thereto, must be five-sixteenths of an inch deep in order to afford one-fourth of an inch space for the supporting-bar to slide behind the strap S.

Figure 6 is a vertical transverse section of same parts shown in fig. 5, G and G' being grooves for the supporting-bar.

Figure 7 is a plan of a drawer, D, and case C, showing the relation of each to the other, and also the relation of both to the supporting-bar, together with strap S and pins *p p*, when the drawer is fully open, the forward half of the length of the supporting-bar appearing in its groove in the upright end of the drawer, and the appropriate portion of the opposite end of the bar in the groove designed for it inside the case.

When a drawer-case has pilasters, as bureaus commonly have, also when a drawer is shorter than the breadth (from right to left) of the case, instead of grooves in the sides of the case, they will of course have to be made in the rails immediately contiguous to the ends of the drawers.

Although I have not discriminated between the measurements of grooves and the bars which are to slide therein, allowance is of course required to provide for the free sliding forward and back of the bars in their respective grooves.

Supporting-bars, for the purpose here contemplated,

may be made of iron or steel, to be narrower and thinner than if made of wood, though not preferably.

Such bars may be of uniform thickness from end to end, and may be conveniently enough formed from a piece of common band-iron, with angles setting off the back from the forward end about midway, as shown in fig. 8.

When a drawer is ready for its case, and the case prepared in the way described to receive it, place the supporting-bars nearly in position, their thickest part in and their thinnest portion out forward of the case; then introduce the drawer to its place in the case, allowing the forward ends of the supporting-bars to slide into their appropriate grooves in the ends of the drawers.

When the drawer is about half its extent into the case draw the supporting-bars forward, place the straps in their recesses, make them fast with their screws, and the work is done.

To take a drawer entirely out of its case relieve the straps S by removing the screws from the ends of the same, and the drawer is at liberty.

I claim as my invention—

1. The combination of the within-described supporting-bars B with furniture drawers by means of grooves G in the ends of said drawers, and opposite grooves G" in the casing of the same, substantially as and for the purpose herein set forth.

2. The combination of the embracing-straps S with the supporting-bars B and the pins p p, or their equivalent, substantially as and for the purpose herein set forth.

LEVI BURNELL.

Witnesses:

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