Carter & Metts,

Extension Table,

No. 44,073. Patented Sep. 6, 1864.

Fig. 2

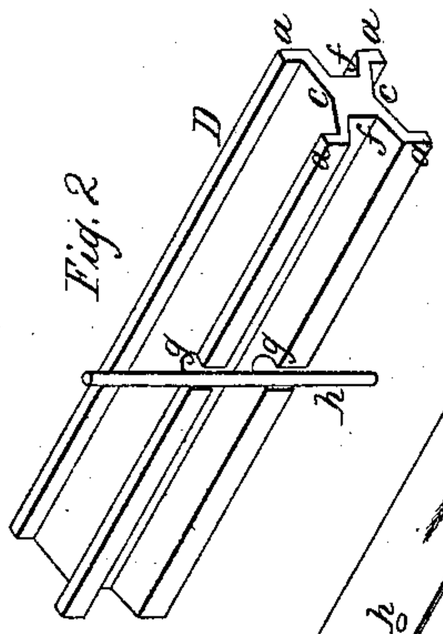

Fig. 1

Fig. 5

Fig. 4

Fig. 3

Witnesses

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UNITED STATES PATENT OFFICE.

M. E. CARTER AND ELISHA METS, OF ROCHESTER, NEW YORK.

IMPROVED SLIDE FOR EXTENSION-TABLES.

Specification forming part of Letters Patent No. **44,073**, dated September 6, 1864.

To all whom it may concern:

Be it known that we, MERRILL E. CARTER and ELISHA METS, both of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in the Slides of Extension-Tables; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a perspective view of the extension-bars of a table provided with our improved slides; Fig. 2, a perspective view of one of the slides detached, together with the pin that holds it in place in the groove of the bar; Fig. 3, a cross-section, in the plane of line *x x*, Fig. 1, of two of the extension-bars and one of the slides that connect them; Figs. 4 and 5, similar views of other devices, represented for the purpose of showing the advantage of our improvement over the same.

Like letters of reference indicate corresponding parts in all the figures.

Our invention consists in the peculiar form and construction of the slides that connect or hold together the extension-bars and the manner of securing them in place in the grooves.

As represented in the drawings, A B C are three sliding bars that support the leaf of an extension-table, the same drawing outward, as indicated by the arrows in Fig. 1. A greater or less number of bars may be employed, as may be desirable or necessary. These bars are placed side by side, and have grooves E E cut centrally in their contiguous sides, whole length, in which play slides D D. These slides are of suitable length for the purpose designed, and constitute in outline of cross-section a combined double-T and double-wedge or dovetailed form. In the drawings, the double T is shown on each side, forming plane projections or tongnes *a a*, which fit in corresponding channels, *b b*, of the groove E; and the double wedge or dovetail is shown at *c* as gradually decreasing or growing thinner from the junction with the double T to the center or the joint of the two bars, where it has the least thickness, as clearly represented in Fig. 3. This double-wedging form of the central portion of the slide forms a corresponding bevel, *d d*, of the sides of the groove E. In order to form a broad bearing of the tongues *a a*, or to separate them a considerable distance vertically, so as to unite the extension-bars firmly and still make the slide light, we prefer to cast it of skeleton form, with hollows or depressions *f f* in the sides; but, if desirable, the double T at each side may be cast plane and solid.

Two slides are secured to each extension-bar, respectively, to each end and on opposite sides. Thus when the bars are fully extended the two slides that come in contact on two connected bars form stops for each other by striking together, and thus prevent the bars from being drawn apart.

In order to secure the slides firmly to the ends of the bars, we make the tongues *a a* on one side of the slide a little thicker transversely than they are on the opposite side, so that they will drive closely into the end of the groove, in which they are designed to remain stationary. Each slide is also formed with a vertical notch, *g*, Fig. 2, in one side, in which rests a pin, *h*, passing through the bar. It will be seen that this keeps the slide from moving endwise in either direction and holds it firmly in place. The pins *h h* may be easily produced by cutting off pieces of wire of suitable length. The advantage of this means of securing the slide is obvious, for not only are the pins easily and simply produced, but much loss of labor, time, and money is saved by avoiding the drilling of the screw-holes in the slides, as in the ordinary manner of securing them in place, and in the employment of screws. However small the difference in cost may be in a single table, in the aggregate of a large manufacture the economy produced is of the greatest importance.

In a single table of ordinary construction, with three extension-bars on each side and with two slides to each bar, each bar being secured in place by two screws, as usual, it is manifest that the single item of screws alone—setting aside the labor of drilling the holes and applying the screws—would amount to a large sum to the wholesale manufacturer.

In addition to these advantages, our method of securing the slide by passing the pin *h*, resting in the notch *g*, through the bar gives a greater stiffness and rigidity to the slide than can be produced by screws, and in the latter case the slide is liable to be torn from its fastenings by the striking of the slides together, especially as it is usually merely screwed to the face of one bar, while it works in the groove

of the other. The tightness with which our slide fits in the groove, in connection with the pin, is sufficient to hold it in place under all circumstances.

In order to show more clearly the advantage of our combined double-T and dovetailed slide, we have represented in Fig. 4 a simple double-T form, and in Fig. 5 a simple double-wedge or dovetailed form. Supposing in each case that the bars B C have a tendency to spread apart in the direction of the black arrows in extending, which is always the case, then in the former case the tendency is to split or tear out the lips *i i* of the groove, and this is especially the case at the point where the slides strike each other as stops; also, in raising the side of the table a twisting or turning motion is imparted to the bars, as indicated by the red arrow, and thus brings a leverage on the lips *i i* of the groove, so as to compress the one on the one side and tear out the other on the other side. In the careless handling which a table usually receives these lips invariably become broken out in a very short time, thus rendering the tables practically useless.

In the simple dovetail form the same tendency to spread laterally in extending the bars causes the wedging sides of the dovetail to bind in the groove—there being nothing to prevent such action—so that it is difficult to operate the device.

In our arrangement these difficulties are overcome, for while the tongues *a a* prevent the wedges from binding in the lateral action of the bars the wedging shape of the dovetail *c* prevents the lips *d d* of the groove from being torn off, especially in the twisting or turning action of the bars, (indicated by the red arrow, Fig. 3,) by presenting a beveled surface, which not only strengthens said lips against lateral action, but also forms a fulcrum on one side and a resistance on the other, which are best adapted to resist the strain that is brought to bear.

We do not claim either simply a double-T form or a double-wedging or dovetailed form of slide; but

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A slide, D, combining the double-T and double-wedge or dovetailed form, the same consisting of the tongues *a a* and center *c*, arranged in combination with the groove E and bars A B C, substantially as herein set forth.

2. In combination with the slide D, arranged as above described, provided with the notch *g*, and with the groove E and bars A B C, the pin *h*, arranged and operating substantially as and for the purpose herein set forth.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

M. E. CARTER.
E. METS.

Witnesses:
R. F. OSGOOD,
JAY HYATT.