

T. C. Ellison,

Extension Table.

No. 110,220.

Patented Dec. 20, 1870.

Fig 1.

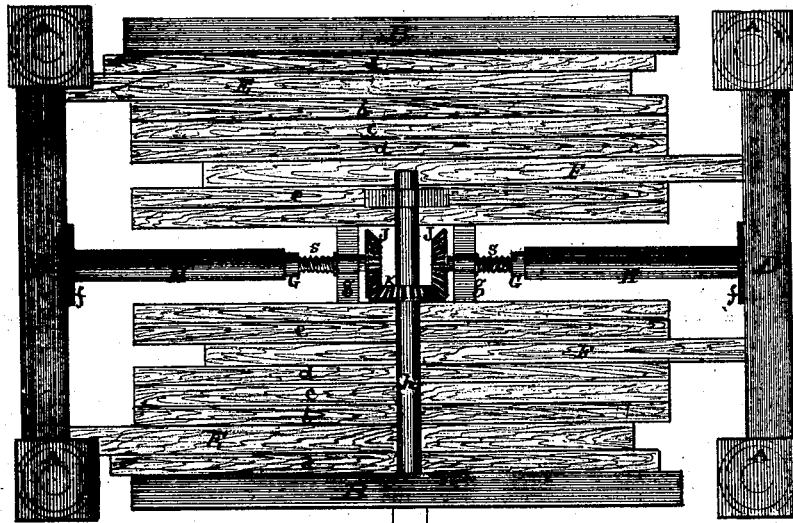


Fig 2.

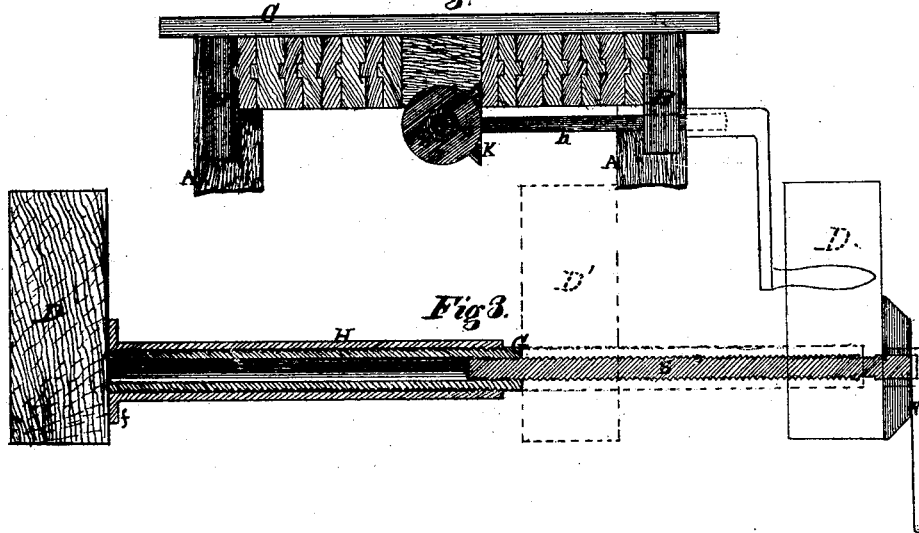


Fig 3.

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THOMAS C. ELLISON, OF ALBANY, NEW YORK.

Letters Patent No. 110,220, dated December 20, 1870.

IMPROVEMENT IN EXTENSION TABLES.

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

To all whom it may concern:

Be it known that I, THOMAS C. ELLISON, of the city and county of Albany, State of New York, have invented certain new and useful Improvements in "Extension Tables;" and I do hereby declare that the following is a description thereof, reference being had to the accompanying drawing, in which—

Figure 1 represents a vertical view of a table, from beneath, embodying the improvements in this invention.

Figure 2 is a cross-section of the same through line No. 1 in fig. 1.

Figure 3 is a longitudinal sectional view of the operating-screws.

The nature of my invention consists in combining with an extension table one or more screws, working into sleeves, in such a manner that the said screws, when operated, will be capable of extending or contracting the length of the table; the object of this invention being to render an extension table capable of being extended or contracted in its length by a single person with ease and accuracy of the several parts.

To enable others skilled in the art to make and use my invention, I will proceed to describe it in reference to the drawing and the letters of reference marked thereon, the same letters indicating like parts.

In the drawing—

A represents the legs.

B B are the side rails.

C is a portion of the table-top secured to the said side rails B B.

D D are the end pieces, each of which connect the legs A in pairs.

E E are sliding rails, connected with one pair of legs on their connecting-piece D.

F F are sliding rails, connected with the connecting-piece D' of the second pair of legs.

a b c d e are the usual tongued and grooved sliding pieces, which are used in connection with pieces E E, F F, and rails B B in the ordinary manner. All of the above devices are old, and have long been used.

Tables consisting of the several parts arranged as above described require two persons to effect an extension or contraction of the length of the table, and generally more or less labor is required to effect an extension of the table in a true line of direction, especially when any of the sliding pieces are in the least warped, or work any way binding.

In my invention I use one or more screw-threaded shafts working into sleeves, which screw-shaft, when revolved by a crank in a given direction, will cause an extension of the table, and, when revolved in a contrary direction, will cause a contraction of the same.

In the drawing—

S represents a shaft cut with a screw-thread, which

shaft works into the sleeve G. The said sleeve is cut at its mouth with a screw-thread corresponding with that on the shaft S, and is capable of receiving a major portion of the shaft; and when the length of the sleeve G and the major portion of the shaft is, say, sixteen inches in length, the whole can be extended to a length of about thirty inches, and sleeves and shafts of greater or less length can be extended to a proportional length.

As it may be desired in some cases to secure an increased length of extension with a limited length of shaft S and sleeve G, I cut on the outer circumference of the sleeve a screw-thread, and also furnish a second sleeve, H, into which the first sleeve G may work in a manner similar to the shaft S.

The mouth of the second sleeve H is also furnished with a screw-thread corresponding with that cut on the sleeve G.

By this arrangement of the shaft S and the two sleeves, G and H, an extension of nearly three times the length of the said sleeves can be secured by turning first the shaft S out to its utmost limit, as shown in full shaded lines in fig. 3, and then continuing the revolving of the shaft until the sleeve G will be screwed out of the sleeve H to its limit, shown by dotted lines G'.

When one set of such sleeves G and H with a screw-shaft S is used, I would attach the outer sleeve H to one of the end-pieces D by means of the foot f, while the outer end of the screw-shaft S would be secured to the opposite end-piece D' (shown by outline in fig. 3) by any proper bearing or collar which would permit the said screw-shaft being revolved in the same, and yet keep it fixed with the said end-piece D'.

When the end pieces D and D' are brought to approach each other as D and (in dotted lines) D', the screw-shaft S is turned (by a wrench or crank W) in a proper direction, the said shaft S will be screwed out of its sleeve G, and in screwing out will cause the distance between the pieces D and D' to be extended from D and D' (in dotted lines) to D and D', (in outline,) when the shaft has been turned out to its full limit, and the turning of the said shaft is continued, the turning of the sleeve G in its sleeve H will be commenced; and the turning being continued, the said sleeve G will be screwed out of the sleeve H to near its whole length, and cause further extension of the distance between the pieces D and D'; but, in most cases, I prefer to use the said sleeves, one or more, and the screw-shaft in pairs, or duplicates, as shown in fig. 1, in which case I secure the feet f of both the outer sleeves H each to one of the end pieces D D', while each of the ends of the screw-shafts S, I would secure, by proper bearings, g g, to the framework at the center of its table.

The outer ends of the screw-shafts S S project past the bearings *g g*, and are furnished with miter-gears, J J, which gears are driven by a third gear, K, attached to the shaft *h*, and operated by a wrench or crank, W, from one side of the table, as shown in figs. 1 and 2.

By turning the crank W (which may be detachable) in a proper direction, the gear K will cause the gears J J to revolve, and cause the screw-shafts S S to turn out their sleeves G G, and effect an extension of the table to the limit of the screw-shafts S S; the turning of the crank being continued, the sleeves G G will also be turned out from their sleeves H H, and effect an extreme extension of the table, by carrying the pieces D D' out from each other to the limited distance before determined. A reverse turning of the said crank W will contract the distance before extended; and, in either case, whether the said sleeves G and H and shaft S are used singly, as shown in fig. 3, or in pairs, as in fig. 1, the result will be substantially the

same; and, by using the devices in pairs, operated by the gears J and K, as described, a more perfect movement will be secured, which is desirable.

The devices above described can be readily applied to extension tables now in use with the most advantageous results in regard to convenience for effecting an extension or contraction of the same.

The whole is simple, strong, and effective for the purpose intended, and is not liable to get out of order.

Having described my invention,

What I claim, and desire to secure by Letters Patent, is—

In combination with an extension table, the shaft *h*, gears K J J, screw-shaft S, and sleeves G and H, when arranged substantially as and for the purpose set forth.

THOMAS C. ELLISON.

Witnesses:

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CHARLES SELKIRK.