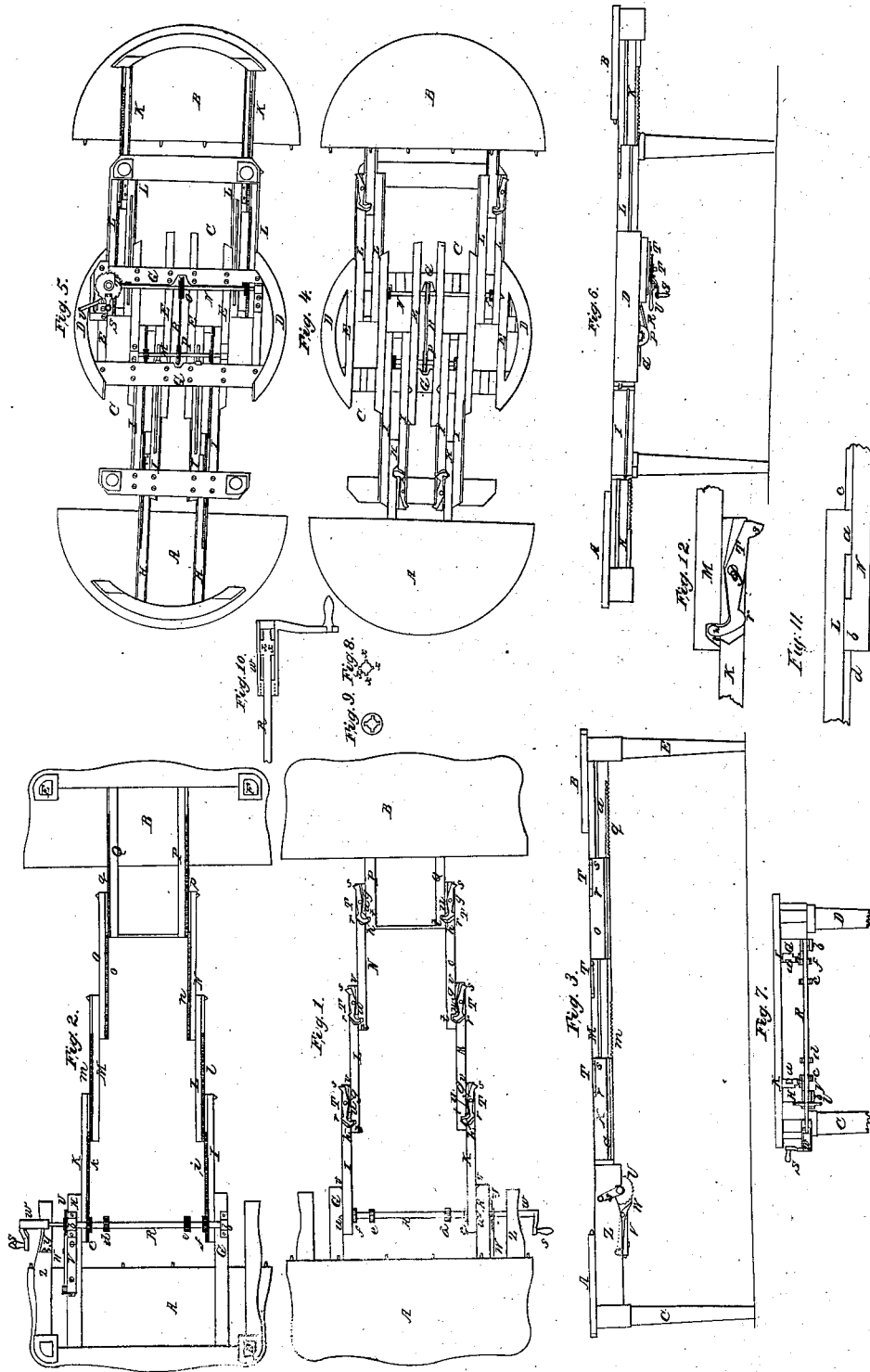


*G. Pratt,
Extension Table,*

Nº 5,905.

Patented Nov. 7, 1848.



UNITED STATES PATENT OFFICE.

GEORGE PRATT, OF BOSTON, MASSACHUSETTS.

EXTENSION-TABLE.

Specification of Letters Patent No. 5,905, dated November 7, 1848.

To all whom it may concern:

Be it known that I, GEORGE PRATT, of Boston, in the county of Suffolk and State of Massachusetts, a subject of Great Britain, but having resided the year past in the United States of America and made oath of intention to become a citizen of the same, have invented a new and useful Improvement in Extension-Tables; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of said drawings, Figure 1 exhibits a top view of one of my improved tables, extended, and without any of its movable filling leaves or top boards. Fig. 2 is an under-side or bottom view of the same. Fig. 3 is a side elevation of said table. Fig. 4 is a top view of a table whose two ends are made so as to be capable of being moved simultaneously and in opposite directions away from a common center. The same being made to represent the application of my improvement to such a table. Fig. 5 is a bottom or under side view of said last mentioned table. Fig. 6 is a side elevation of it.

In Figs. 1, 2, 3, A, B, denote the two fixed top boards or halves of a table, each of which is suitably sustained by a set of two legs C, D, or E, F, in the usual manner. The one part A from which the other B, is to be made to depart, and advance toward, as occasion may require, in order to extend or diminish the length of the table, has two parallel bars G, H, affixed to its under side as seen in Figs. 1 and 2. In connection with said parallel bars, I make use of four or any other suitable number of sets of two parallel slide bars, I, K, L, M, N, O, P Q, the latter set of which viz, P Q, is fixed to the under side of the other half or part B. The bars I K, are arranged between the bars G, H, and connected respectively to them by a dovetailed tongue and groove, the tongue being made upon one of the two bars in contact and the groove in the other, in order that the two I, K, may be made to slide freely between, the two G, H in the manner, in which such slides usually operate. Or instead of such an arrangement of the tongues and grooves that exhibited in Fig. 4, and hereinafter described may be employed.

Fig. 7, denotes a vertical and transverse section of the upper part of the table, the

same being taken in line of the axis of the pinion shaft R. In said figure the aforementioned tongues and grooves are seen at *a, a*. The bars K, M, M, O, O Q, I L, L N, N P, are similarly adapted to slide the one against the other, the grooves and tongues of them serving to preserve their horizontal positions.

The pinion shaft R, before mentioned turns in boxes or bearings *b, b*, applied to the under side of the fixed bars G, H. It is arranged in the position as seen in the drawings, and has four toothed gears or pinions *c d e f*, affixed upon it, each of which should be in its width about double that of each toothed rack in which it is made to operate. To the under side of each of the slide bars I, K, L M, N O, P Q, a long toothed rack is applied and fixed, as seen at *i, k, l m, n o, p q*, in Fig. 2, while the pinion *c*, is placed so as to operate in the racks, *k, m*, the pinion *d*, is disposed so as to operate in the racks *o, q*, when brought into engagement. So with the other pinions *e f*, they are arranged so as at the same times to operate in the corresponding opposite racks.

By inspection of the drawings it will readily be seen that by revolving the pinion shaft, by applying the hand to the crank *s*, thereof, the two slide bars may be moved inward or toward the board A, the same taking place in consequence of the action of the two pinions *c* and *f* upon their respective racks *k, i*.

To the upper side and near one end of each of the slide bars I, K, L M, N, O, a dogging lever T, is affixed as seen in Figs. 1, 3. Said dogging lever turns horizontally on a fulcrum or screw *g*, and is shaped, that is to say it has three projections *h, r, s*, as in the drawings. Each slide bar L M, N O, P Q, has a notch *t*, made in it and near one end of it, and of a size sufficient to admit or receive the projection *h*, of the dogging lever T of the next adjacent slide bar.

Each of the bars G, H, I, K, L M, N O, has a notch *u* made in it of a size and form sufficient to receive the projection *r*, of the lever of the adjacent bar the positions of each of said notches or spaces *u*, being seen in the drawing. The inner corner of the outer end of each of the bars, G, H, I, K, L M, is rounded off as seen at *v* in Fig. 1, the object of the same being when the projection *s*, of the dogging lever T of the slide bar that slides against the bar whose corner is so rounded, is brought and moved in con-

tact with said rounded corner, to cause a movement of the dogging lever on its fulcrum, sufficient to throw the projection *h*, out of the notch *t* and the projection *r* into the notch *u*. Such a movement of the lever *T*, will disengage the slide bar to which the dogging lever is attached, from the bar which slides against it, and so as to permit the pinion or gear of the pinion shaft, and which has just become engaged with the rack of the slide bar to be drawn in, to so operate within the said rack as to propel or force backward the slide bar of the said rack.

From the above it will be seen that during the act of closing the table, each set I. K. L. M. N O. P Q. of two bars, is successively unlatched from the one which slides on the outside of it, and so as to enable its geared pinions to operate in its racks, and draw the others between it and the part B. of the table together with said part toward the part A.

In expanding the table, the pinion shaft is rotated in the opposite direction. The slides P and Q. are first forced outward by the action of their pinions, in their racks. As soon as they have advanced so far as to carry the rear ends of the dovetailed tongues of the slides N. O. in contact with the front ends of the dovetailed grooves of the slides P. Q. the said slides P. Q. will commence to draw after them the adjacent slides N. O. and will continue to so draw them, until the dogging levers of said slides N O. are moved on their fulcrum in such manner as to cause their projections *h*. to enter the notches in the slides P Q. and by so doing latch said slides to the slides N. O. The said movement of each of the said levers will be caused by the action of its projection *r*. and the notch in which it may be. The side of the said notch acting against the side of the projection in contact with it, causes the lever to turn on its fulcrum. As soon as this has been accomplished the racks of the bars P. Q. will have passed beyond or out of gear with the pinions which previously moved them; and the said pinions will operate or engage with the racks of the bars N. O. and advance them and the bars P. Q. Each succeeding set of bars will thus be moved forward and latched to the one outside of it, until the table is fully extended.

Fig. 12. represents the dogging lever *T*. and bars K. O. M. on an enlarged scale. On the pinion shaft *I* place a ratchet wheel *U*, and *I* affix to the side of the bar *H*. or a piece of wood *V*. secured thereto, a retaining lever pawl or click *W*. the same being to prevent the pinion shaft from turning around, so as to allow of any accidental or undesirable extension of the table. When the table is being extended said click or pawl is to be raised out of gear with the teeth of the ratchet wheel.

The crank for turning the pinion shaft has a tubular socket *w*. which is placed and slides upon the pinion shaft. The end of said pinion shaft which is within the tubular socket, has a key or small projections *x. x. x. x.* made upon it as seen in Fig. 8. which denotes an end view of said part of said shaft. The inner end of the tubular socket is made as seen in Fig. 9. or so as to receive said projections in such manner as to clutch the crank, to the shaft, when the former is drawn outward to its full extent. When unlatched from the shaft the crank may be turned around on the shaft, and forced inward and turned upward into a recess *y*, made in the side board *z* of the table. It thus may be moved out of sight, when not in use, and when it is required to extend or contract the table, the said crank may be drawn outward into a convenient position to enable a person to take hold of its handle and rotate the shaft. Fig. 10, exhibits a vertical section of the crank and tubular socket, and part of the pinion shaft. When the crank is raised into its socket it may be retained there the necessary time by a spring or any other suitable contrivance properly adapted to it. So in order to keep the pawl or click out of gear with the ratchet wheel, a spring or any other proper equivalent may be used.

Fig. 11, represents a horizontal section of two of the slide bars L and N, Fig. 1, the said section being taken through the dovetailed tongues and grooves of each. *a, b*, in the said figure denote the short tongues, the former being made to project from the bar L, and to enter the dovetailed groove *c* of the bar N, while the latter (*b*) is made to extend from the bar N, and enter the groove *d*, of the other bar.

A table in which the two ends or parts A, B, are made to depart from a central or middle frame C, C, is exhibited in Figs. 4, 5 and 6. The said central frame is composed of the curved sides D, D, and six parallel bars E, E, &c., arranged between said curved pieces, the whole being kept in place by two bottom bars G, G, extending transversely across and underneath them. The several parallel bars are disposed (as seen in the drawings) so as to receive four sets of slide bars between them. One of said sets is seen at H, H, as adapted to and made to slide between, another set composed of four bars I, I, I, I, which are disposed between the four middle bars E, E, E, E, as seen in the drawings.

Another of said sets of slide bars is seen at K, K, while the fourth set is seen at L, L, L, L. The former operate between the latter, and the latter between the four outer bars E, E, the same being arranged as seen in Fig. 4. The dogging levers with their respective notches and projections are adapted to the said systems of slides and fixed

bars as seen in Fig. 4. The said slide bars, and fixed parallel bars, are united by dove-tailed or other proper tenons, and grooves, substantially like the others herein before specified. In this latter table two pinion shafts M, N, are necessary to its operation. They are arranged and have their pinions and racks disposed as seen in the drawings. On the main driving pinion shaft, I place a toothed or chain wheel O. I also affix another and similar chain wheel P, on the other shaft, and I connect them by a crossed endless chain R, made to extend around them. In this table the main pinion shaft is worked by a crank S, which is affixed to a small vertical shaft T' geared to the main pinion shaft by a set of two bevel gears, one of which is affixed upon each shaft. T denotes the ratchet wheel of said vertical shaft. U, is the spring pawl of said ratchet.

Having thus described my improvement I wish it to be understood that I do not confine it to the precise forms or arrangements of parts as above specified, but I vary the same in any manner provided I do not change the principle or feature of novelty claimed by me as new.

What I claim as my invention, is—

1. The combination of two or more sets

of parallel bars, (G, H), (I, K), (L, M), (N, O), (P, Q) the machinery for extending and contracting the slide bars thereof or moving them outward and inward and the latching and unlatching contrivances, as applied and operating substantially in manner as above described.

2. I also claim the said latching and unlatching contrivances as constructed and applied to their slide bars, and operating (when they are moved, by mechanism substantially as set forth) to connect or disconnect them, in manner essentially, as herein before explained.

3. I also claim the above described manner of adapting the crank of the pinion shaft R, to said shaft, so that said crank may be moved or drawn outward, and forced inward and turned upward into a socket, and be made to clutch or engage with, and be disengaged from the shaft, as occasion may require.

In testimony whereof I have hereto set my signature.

GEORGE PRATT.

Witnesses:

R. H. EDDY,
D. H. TILLSON.