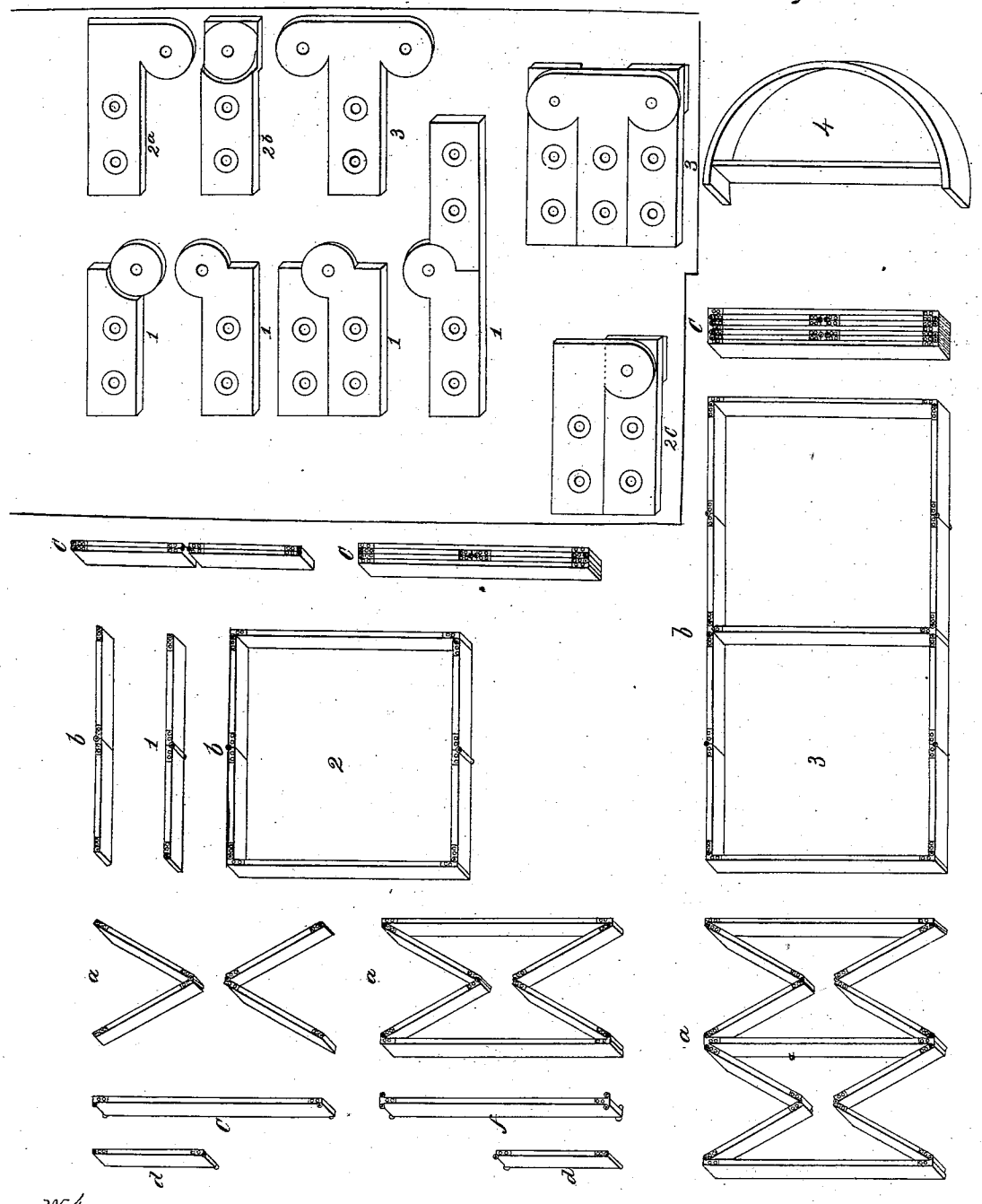
E. Richards,

Extension Table,

No. 3,050. Patented Apr. 15, 1843.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN EXTENSION-TABLES.

Specification forming part of Letters Patent No. **3,050**, dated April 15, 1843.

To all whom it may concern:

Be it known that I, EDWARD RICHARDS, of the city and State of New York, have invented a new and Improved Mode of Constructing Extensions for Tables; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in hinging pieces of wood, metal, or other solid substance together in such a manner that they will apply to the extension of tables and when extended will form a straight rail under each end of the loose leaves and be connected together by stretchers running at right angles across from one rail to the other, and when closed the pieces forming the rails will be parallel with the stretchers, thus closing in the smallest space that the length of the extension will admit of, which is constructed in the following manner, to wit: I take four pieces of wood any length I require; but suppose each two feet long, six inches wide, and one inch thick. I hinge two of the pieces together at one end with hinges on the top and bottom—that is, on the inch sides—let in flush and screwed on, (see drafts *d d*, showing two of these pieces,) said hinges acting like a rule-joint hinge, the center of the pivot on which the hinge turns being placed on the inside corner of the joint of said pieces of wood, said hinges being made with two pieces of flat iron, each about three inches long, one inch wide, and three-sixteenths of an inch thick, with a three-quarter circle on the corner of one piece placed on a plane with its inch sides in like manner with a three-quarter circle on a corner of the other piece, but three-sixteenths of an inch out of plane, and said corner cut out to receive the three-quarter circle on the first-named piece. The butts being brought together and the three-quarter circles being placed one on the other, a knuckle is formed, through the center of which knuckle is placed the pivot. (See hinge-drafts No. 1.) I then hinge my other two pieces in like manner. The pieces thus hinged together I call my "folding rails." (See draft No. 1, *a*, *b*, and *c*, *a* representing them as half-open, *b* representing them as entirely open, and *c* representing them as closed up. I next take a piece of wood four feet and one inch long, six inches wide, and one inch thick, which I call my "stretcher." (See draft E.) The inch side of each end of this stretcher is to be hinged to the top and bottom at one end of each of my folding rails, for which purpose a hinge is made of two pieces of flat iron, one piece being three inches long, one inch wide, and three-sixteenths of an inch thick, with a projection on one side on a plane with the inch sides of said piece, which projection is made by extending the line of the end half an inch and describing a three-quarter circle with a half-inch radius, one end of which three-quarter circle rests on the end of said line, the other on the side of said inch sides. (See hinge-draft No. 2, letter *a*.) The other part of the hinge is best described in two pieces. One piece is two and a half inches long, one inch wide, and three-sixteenths of an inch thick, with a half-inch radius semicircle cut out of one end, the other piece being one inch and a quarter long, one inch wide, and three-sixteenths of an inch thick, one corner being quarter-circled with a half-inch radius. The end with the semicircle being lapped three-quarters of an inch on the square end of the short piece makes a piece three inches long and of the required form. (See hinge-draft No. 2, letter *b*.) I then place the three-quarter circle of the first-named part in the semicircle of the other, center on center, with the circled corner of the last-named part inside, and put a pivot through the center upon which the hinge is to turn. (See hinge-draft No. 2, letter *c*.) The first-described part of this hinge I let in flush and screw it on the inch sides at the end of the stretcher with the projection end exactly even with the end of the stretcher. I then take one of the rails, fold it close, and with a half-inch radius quarter-circle one corner of the end and place the six-inch side of the rail directly against the six-inch side of the stretcher, with the quarter-circled corner next to the stretcher, with the top, bottom, and end all exactly even, and let in and screw on the other part of said hinge on the end of the rail, over which it will now come. Thus hinged the inch sides of the said rail and stretcher are the top and bottom of the extension, (a hinge, as above described, being reversed for the bottom side.) I then in like manner hinge the other end of the stretcher to one end of the remaining rail. I next make another stretcher, and in the above-described

manner hinge each end to the remaining ends of the rails. My folding rails thus hinged to my stretchers, when open, the ends of said rails will butt against the sides of the stretchers and the sides of the rails even with the ends of the stretchers and form an extension four feet two inches long, four feet one inch wide, and six inches deep, and when closed the rails and stretchers will be parallel and the ends even and occupy a space of four feet one inch long, six inches deep, and four inches wide. (See draft No. 2, *a*, *b*, and *c* representing the same as in No. 1.) If I want a longer length of extension, I make two more folding rails, as described above, and one stretcher and hinge one end of each rail to each end of the stretcher in the same manner as above described, and the other ends of my folding rails I hinge to a stretcher of the extension by taking off the parts of the hinges on the ends of the last-named stretcher and inserting therefor a part precisely the same, except with a three-quarter circle on each side of said part of hinge the same as described on one side of those I remove. (See hinge-drafts No. 3 and see draft-letter *f*, showing the middle stretcher.) Should I want a further extension, I add two more rails and a stretcher, as last described, and so on until I have any length I require. Then the extension when extended will be eight feet three inches long, four feet one inch wide, and six inches deep, and when closed will occupy a space of four feet one inch long, six inches deep, and seven inches wide. (See draft No. 3, *a*, *b*, and *c* representing the same as in draft No. 1, or see model.)

To apply the extension thus made, I place one of the end stretchers against the rail of a table, the ends of said stretcher being equidistant from the ends of said rail and the top of the extension exactly on a plane or level with the top of the table-frame and screw them together with any screw passing through the rail and stretcher, and thus likewise fasten the other end stretcher to the rail of another table. Thus applied it can be folded or extended at pleasure, and when extended forms a table-frame to receive the additional leaves of the table.

A table constructed expressly for this extension would be made in two parts long enough to admit the length of the stretcher inside of the end rails of the table, with the inside rail of each part far enough back from the joint of the table to receive the extension when folded, and the end stretchers of the extension attached to said rails in the manner before described. (See draft No. 4, showing the half of a circular frame.)

It is plain by framing a leg to the under side of each end of the stretchers of this extension and placing leaves upon the extension when extended it forms a table of itself.

Now what I claim in the foregoing specification as my invention is—

The application of the construction therein described to the making of extension-tables and to the extension of tables and have given it the name of the "folding-rail extension."

Now it will be easily perceived that any kind of support placed under any part of either of the rails or stretchers will become a movable and self-adjusting support, and consequently this extension can be extended to any length without diminution of strength and folded into any space not greater than the aggregate thickness, as before described, and the peculiar manner in which these self-adjusting supports adapt themselves to any part of the extension enables me to give the greatest possible strength that can be obtained from the lightest possible material, thus relieving the extension from the great encumbrance of weight and bulk which has heretofore been so fatal to all improvements of this description, and the supports which extend themselves with the extension may be so placed as to be more or less visible when extended and entirely concealed, if necessary, when folded or closed, and the table may be constructed to assume almost any required form merely by changing the comparative lengths of the rails and adapting the stretchers thereto, and the centers of each pair of hinges being directly over each other, by substituting a rod for the pivots of the hinges the extension can be taken apart and put together at pleasure.

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Witnesses:
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