

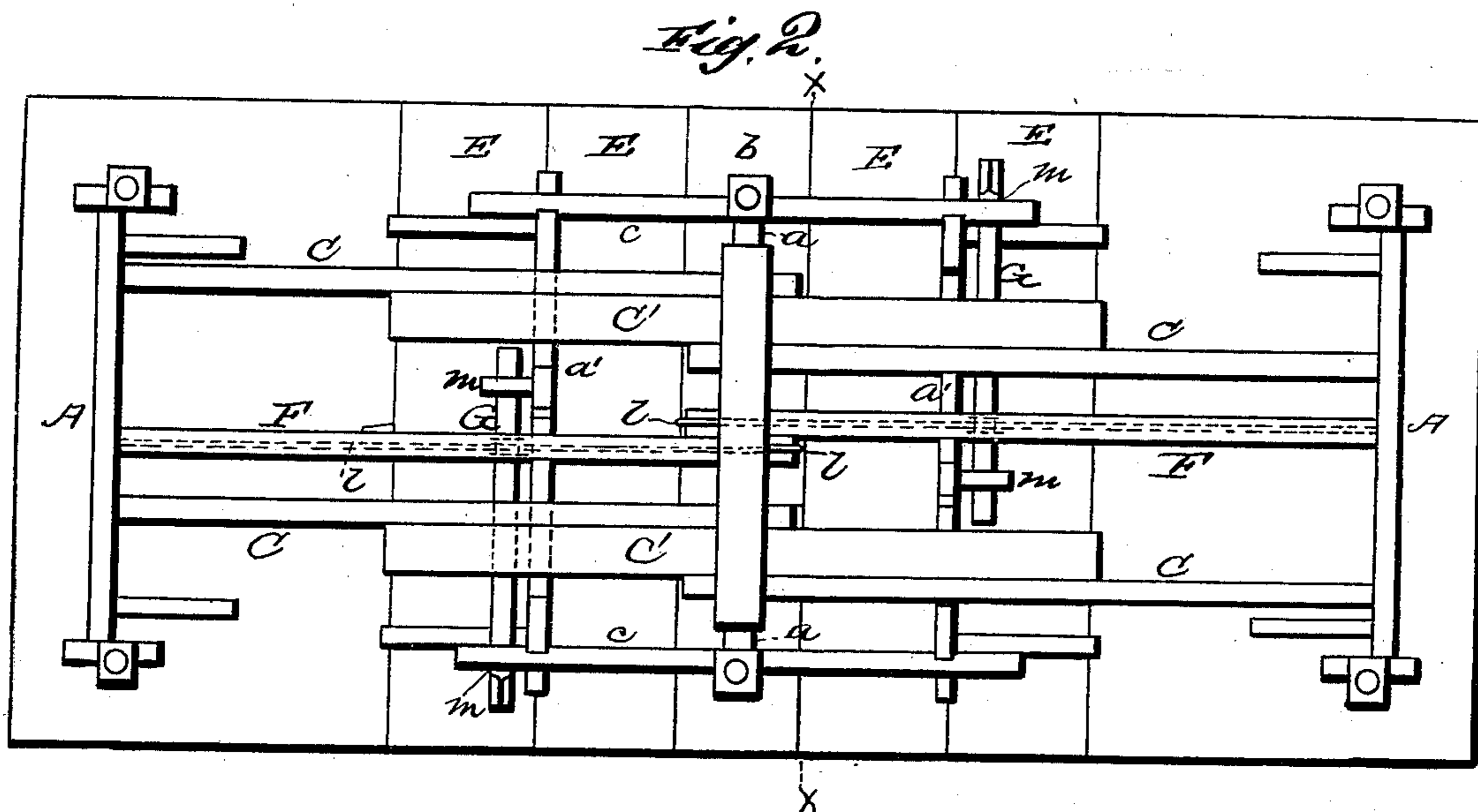
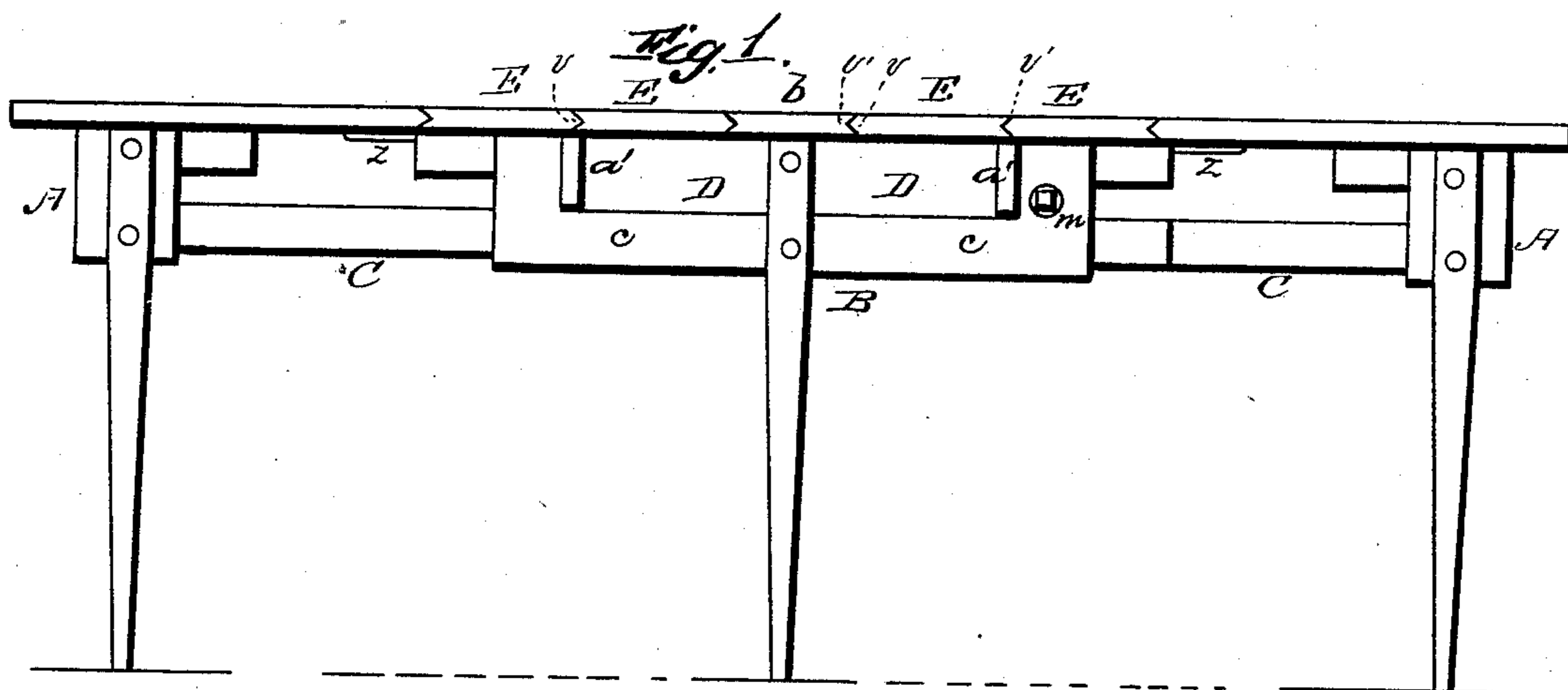
(Model.)

2 Sheets—Sheet 1.

H. M. RALSTON.  
EXTENSION TABLE.

No. 265,864.

Patented Oct. 10, 1882.



WITNESSES  
*E. H. Bates*  
*Philip L. Masi*

INVENTOR  
*H. M. Ralston*  
*by Andrew Smith*  
*his* ATTORNEYS

(Model.)

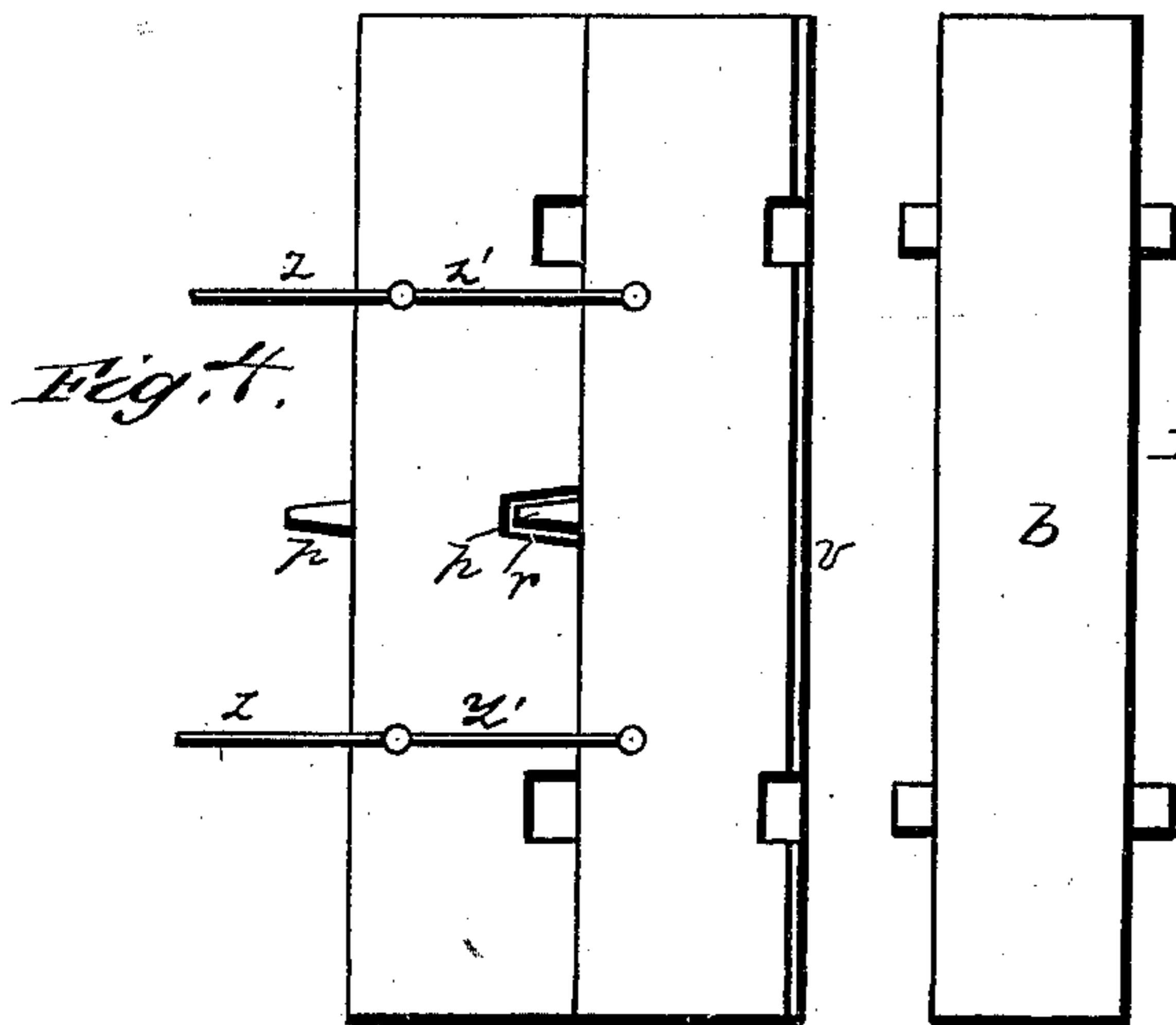
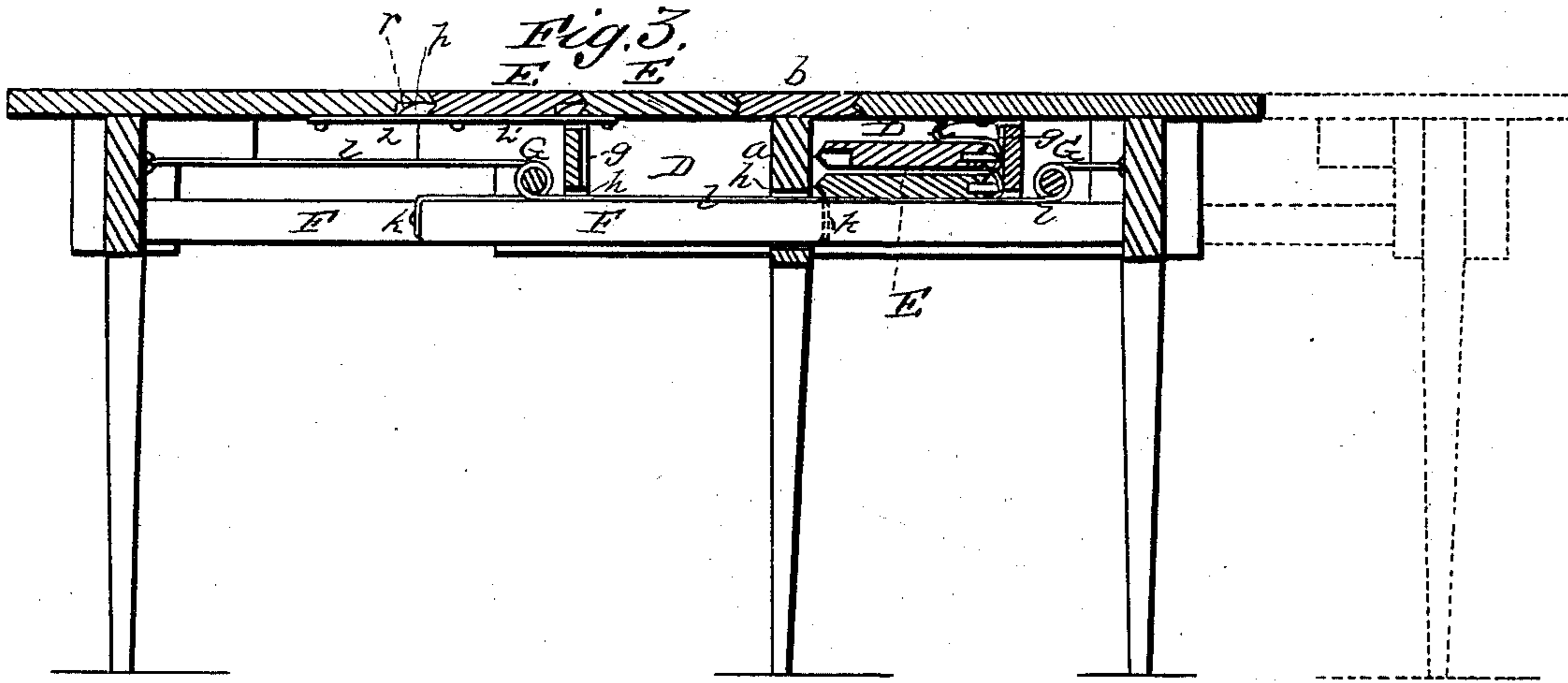
2 Sheets—Sheet 2.

H. M. RALSTON.

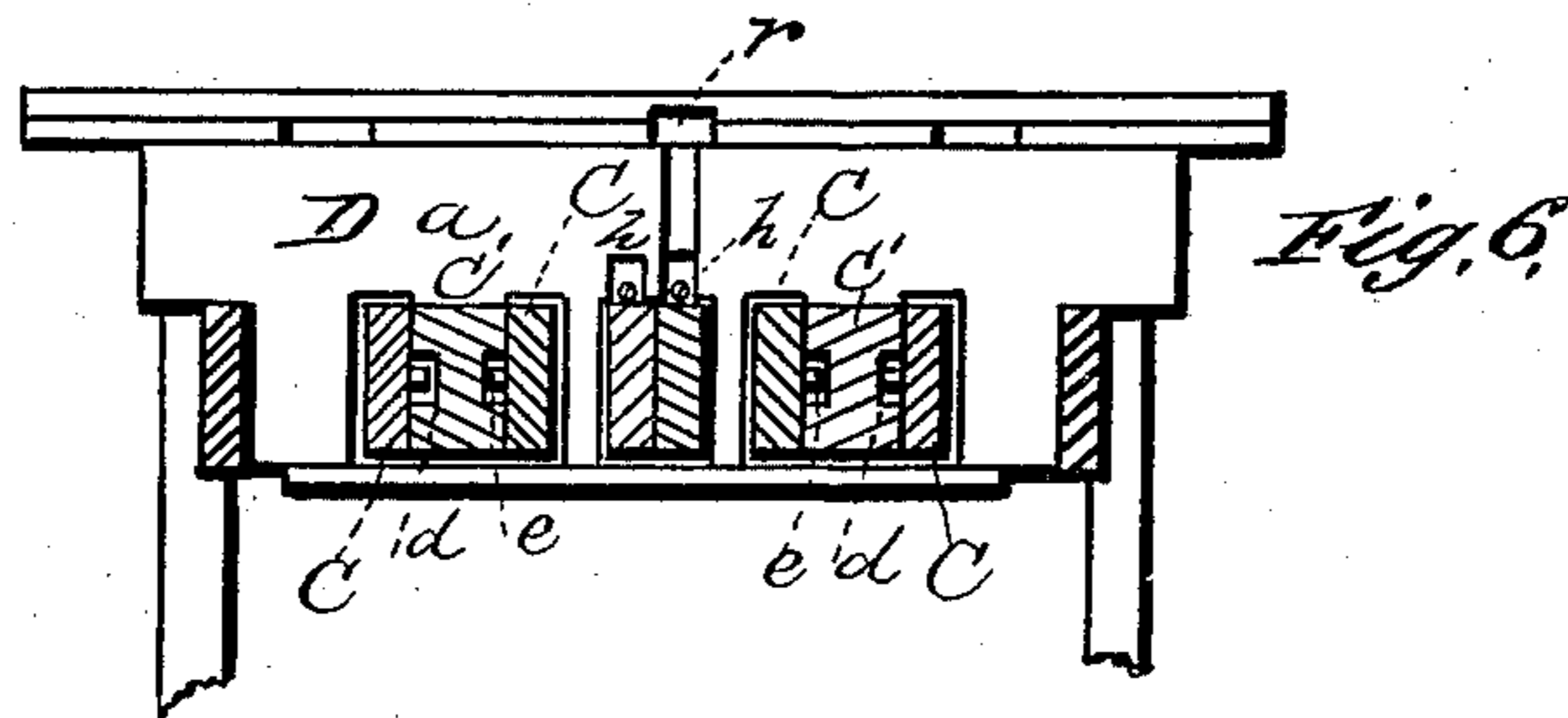
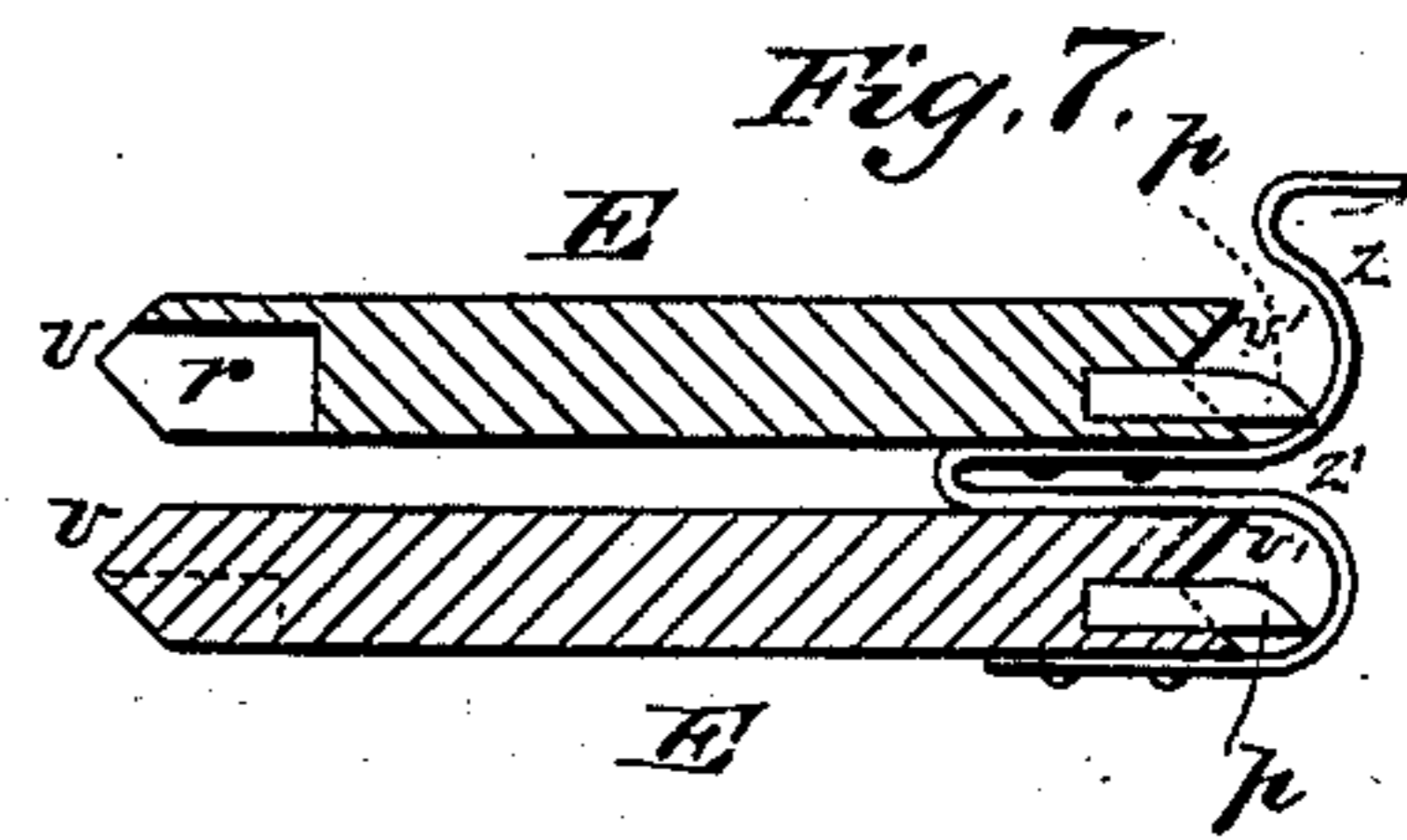
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*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

HARPER M. RALSTON, OF FAIRVIEW, WEST VIRGINIA.

## EXTENSION-TABLE.

SPECIFICATION forming part of Letters Patent No. 265,864, dated October 10, 1882.

Application filed April 8, 1882. (Model.)

*To all whom it may concern:*

Be it known that I, H. M. RALSTON, a citizen of the United States, and a resident of Fairview, in the county of Hancock and State of West Virginia, have invented a new and valuable Improvement in Extension-Tables; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 is a side view of my improved extension-table. Fig. 2 is a bottom view of the same. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a bottom view of two of the folded leaves. Fig. 5 is a top view of the middle leaf. Fig. 6 is a cross-sectional view on the line *xx* in Fig. 2, and Fig. 7 is a central cross-sectional view of two of the folding leaves.

This invention has relation to extension-tables; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

The object of this invention is to provide an extension-table of simple construction, which will, when extended, automatically adjust the movable leaves to complete the top, and when contracted will automatically fold or pile the movable leaves away in suitable recesses provided in the frame below the level of the top.

In the accompanying drawings, the letters *AA* designate the ends of the extension-table, which are provided with suitable legs or standards; and *B* indicates the middle frame of the table, which is connected to the end frames by the extension-slides *C*. The middle frame, *B*, is formed with a central transverse wall, *a*, which extends upward and supports a transverse center bar or board, *b*, which forms the middle of the table-top. Parallel transverse walls *a'* are arranged at each side of the middle wall, *a*, and are connected thereto by lateral framing bars or supports *c*. The extension-slides *C* bear in notches or openings in the lower edges or portions of these walls *a* and *a'* on each side of the slideway-bar *C'*, which is firmly attached to the middle frame, and is provided with lateral grooves *d* to engage the

pins *e* of the slides *C*. The slideways *C'* and slides *C* form partial bottoms of recesses *D* on each side of the middle wall, *a*, between said wall and the parallel walls *a'*. These recesses or receptacles in the framing are therefore between the extension-slides and the top of the table, and extend from side to side thereof. The breadth and depth of these recesses are sufficient for the ready reception of the movable leaves *E* of the table-top when piled squarely one upon another. Vertical guide-grooves *g* are provided in the walls *a'* of the recesses or receptacles *D*.

Central bearings or openings, *h*, are made in the lower portions of the walls *a* and *a'* for the slide-arms *F*, which are firmly secured to the end frames, *A*, of the table, and are provided at their ends with fastenings *k* for the cords or ropes *l*. These cords or ropes are each attached by one end to a slide-arm, *F*, and by the other end to the end frame, *A*, to which said slide-arm is secured, the cord or rope intermediately passing around a roller, *G*, which is arranged transversely in bearings *m* in the middle frame, *B*. When this roller is turned by means of a crank-handle or key applied to a key-seat on its end the end frame will be moved outward from the middle frame or back toward it, as the case may be, the direction in which the key is turned controlling the inward and outward movement.

Each movable leaf *E* is made convex or angularly convex on one edge, as at *v*, and concave or angularly concave on the other edge, as at *v'*. The concave and convex edges of the adjacent leaves fit together, so that when the leaves are joined edgewise in forming or completing the top of the table the joints will be close and the leaves will mutually brace each other.

The leaves are provided with center pins or projections, *p*, and corresponding recesses, *r*, at their meeting edges, these projections and recesses being arranged in the lower portions of the edges, and the recesses *r* being open to the lower surfaces of the leaves, as shown in the drawings. By the engagement of these recesses and projections the leaves are kept in true position, so that they cannot move toward either lateral edge of the table. The open-bottom recesses permit the ready disengagement

of the pins therefrom, as the leaves fall into the receptacles D, over which they are brought as the end frames, A, of the table close in toward the middle frame, B.

5 It is advisable that the pins or projections should extend from the concave edges of the leaves, the corresponding recesses being made in the convex edges, which are arranged innermost or toward the middle of the table, so  
10 that there will be no obstruction to the falling of each leaf after it has closed in over the outer wall,  $a'$ , of its receptacle D.

The movable leaves are arranged in sets of two, three, or more, as the case may be, each  
15 set being connected to one of the end frames A by parallel ropes, chains, or other flexible connections, as at  $z$ . The leaves of each set are also connected by means of similar parallel flexible connections,  $z$ , which are attached  
20 to each leaf nearer its outer than its inner edge, the longer branches,  $z'$ , of these connections serving to lower the leaves in succession one upon the other into the receptacles D as the end frames close toward the middle frame;  
25 and these long branches  $z'$  also serve, as the table is extended, to raise each leaf at first obliquely, then pulling it over the outer wall,  $a'$ , of the receptacle into level position, and in like manner raising the next leaf. As the leaves  
30 are piled in each receptacle D the projections  $p$  slide downward in the guide-grooves  $g$  of the walls  $a'$ , and said grooves serve, as the leaves are raised, to guide each projection so that it will engage the recess  $r$  of the preceding board  
35 or leaf. In this manner the leaves are automatically placed in position to complete the table-top as the ends of the table are moved away from the central portion, whether this be done by means of the winding-roller and its  
40 rope or by simply moving the end frames apart by hand. After the table is fully extended a

slight reverse movement of the ends toward the center engages the innermost of the movable leaves with the projections of the transverse bar or board of the middle frame, and  
45 closes all the joints in secure and braced position.

In order to prevent accidental displacement, locking-hooks may be arranged, connecting the leaves near their edges, when spread; or short  
50 slides in bearings of the middle frame may be employed.

An extension-table provided with leaves adapted to be folded automatically and piled into a receptacle below the top of the table  
55 when folded is not new, and the slats of a chair-seat provided with reciprocal concave and convex edges is old, and neither of these constructions is broadly claimed herein.

Having described this invention, what I  
60 claim, and desire to secure by Letters Patent, is—

1. In an extension-table, the self-adjusting leaves E, having reciprocal concave and convex edges  $v'$  and  $v$ , centering-pins  $p$ , and open-  
65 bottom recesses  $r$  and flexible connections  $z$ , substantially as specified.

2. In an extension-table, the combination, with the vertically-grooved walls  $a'$  of the receptacles D in the middle frame and the self-  
70 adjusting leaves E, of the projections  $p$  on the outer edges of said leaves, and the flexible connections  $z$ , attached to said leaves near said outer edges, substantially as specified.

In testimony that I claim the above I have  
75 hereunto subscribed my name in the presence of two witnesses.

HARPER M. RALSTON.

Witnesses:

LEONARD HOBBS,  
JOHN H. MELVIN.