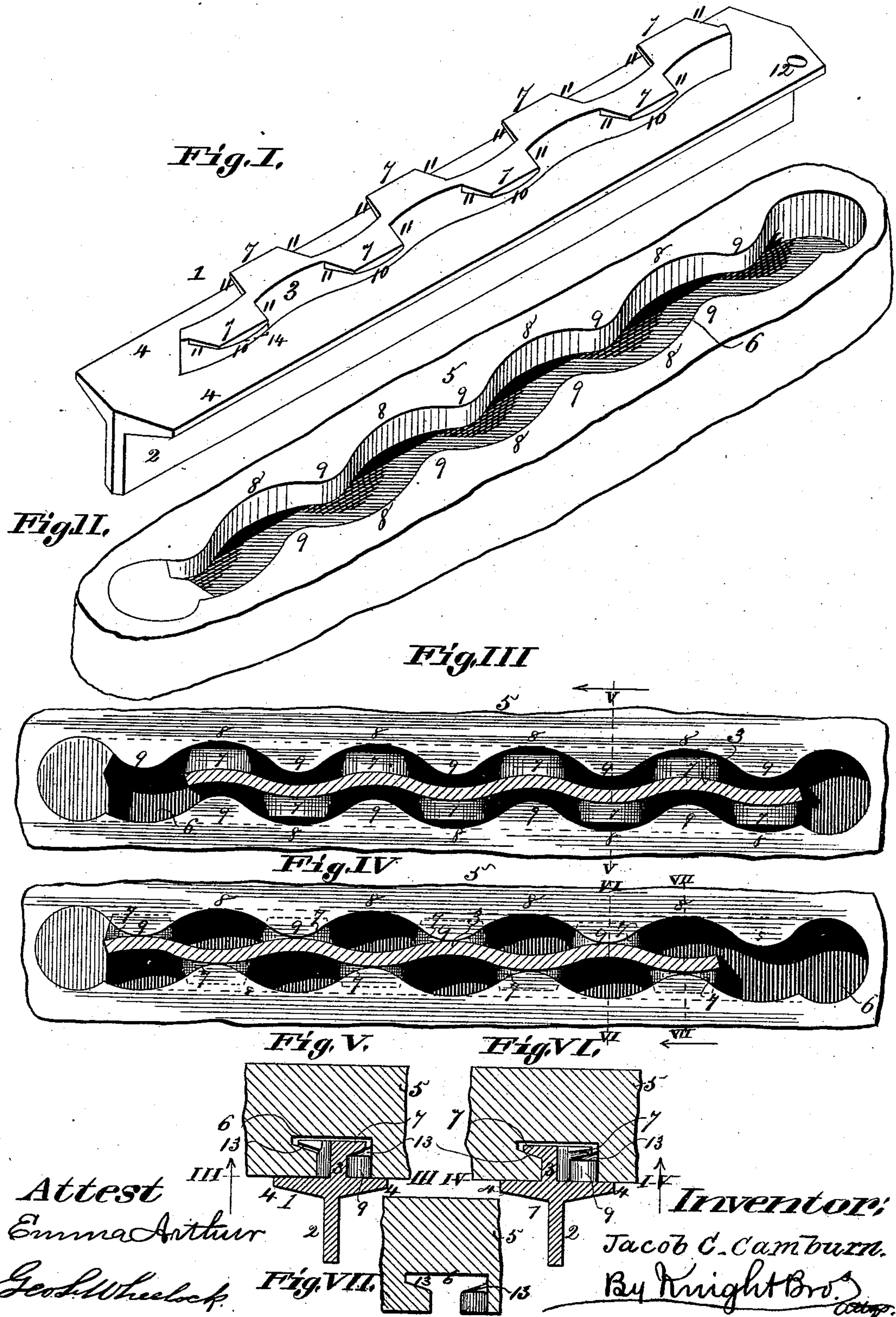


(No Model.)

J. C. CAMBURN.
SCHOOL FURNITURE.

No. 370,314.

Patented Sept. 20, 1887.



UNITED STATES PATENT OFFICE.

JACOB C. CAMBURN, OF ST. LOUIS, MISSOURI.

SCHOOL-FURNITURE.

SPECIFICATION forming part of Letters Patent No. 370,314, dated September 20, 1887.

Application filed January 7, 1887. Serial No. 223,631. (No model.)

To all whom it may concern:

Be it known that I, JACOB C. CAMBURN, of the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in School-Furniture, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

- 10 Figure I is a perspective view of the metal bracket. Fig. II is a perspective view of a portion of a seat-board, back board, or top of a seat and desk, showing the serpentine undercut groove in which the bracket-rib is engaged.
- 15 Fig. III is a longitudinal section at III III, Fig. V, showing the rib in the groove before engagement. Fig. IV is a section at IV IV, Fig. VI, showing the rib engaged in the groove. Fig. V is a transverse section at V V, Fig. III.
- 20 Fig. VI is a transverse section at VI VI, Fig. IV. Fig. VII is a transverse section at VII VII, Fig. IV, without rib.

The bracket 1 is shown with a rib or part, 2, by which it may be connected to a stand; but ordinarily the rib or part 2 is part of a casting forming the frame of the combined desk and seat, or of either of them, the serpentine ribs 3 being in such cases cast upon the frame and forming integral parts of the frame.

- 30 4 4 are flanges which bear against the inner face of the seat, back, or top board or other part 5 at each side of the serpentine groove 6.

The body of the serpentine rib 3 extends outward from the flanges at right angles with them, and has a general wavy or serpentine form, as most clearly seen in Figs. III and IV.

- From the salient parts of the body extend lips or projections 7, which enter the undercut channels at the sides of the groove, so as to lock the board upon the rib. The lips or projections 7, being at the salient parts of the body, extend alternately from each side. The width and form of the groove is such that when the board is presented to the rib in the position shown in Fig. III the lips or projections 7 enter the out-bends 8 of the groove, and so the flanges 4 may be brought in contact with the face of the board. If, then, the board is moved endwise of the rib, the projections or lips 7 engage under the projections 9 at the edges of the grooves, and the parts are held tightly together. In order that the flanges 4 shall be

drawn very tightly against the face of the board 5, the faces 10 of the projections 7, which come in contact with the inner sides of the projections 9, are made convex in a longitudinal direction, so that while the edge 11 may freely enter beneath the projection 9 the pressure between the parts will increase as the projection 9 passes over projection 7. The shape of the projection 7 is best shown in Fig. I. When the board 5 has been moved to the locking position, it may be held in such position by a screw passing through the hole 12 in flange 4 and into the board 5.

I have described the bearing-faces of the projection 7 as convex in cases where the board is always moved in the same direction in engaging it with the projections. The projection may have a single incline to one side only, as indicated in dotted lines at 14, Fig. I. On the other hand, some situations may require the board to be moved in one direction and in other situations in the opposite direction in engaging the board to the frame, and for this reason the double incline of the bearing-face 10 has advantages over a single incline.

When the parts are in locking position, as seen in Fig. IV, the salient parts of the rib 3 and of the grooves 6 have contact with each other and prevent any transverse movement.

The utility of this device lies in the fact that by a simple adjustment of the groove-cutting machinery to make the sinuosity greater or less we can make the points 9 9 accurately fit the points 10 10, and the crowning under surfaces 10 of the lugs 7 accurately fit the under surfaces of the salient points 9 of the wood-work; while in prior methods, the under-cut—such as the dovetail and the T-head—the wood-work has to slide so far before reaching its proper position that it requires a certain looseness in order to be driven on easily, and therefore is not tight when it reaches its proper position. Another utility is that the dovetail and T-head cannot be used with a double-curved solid back or seat, while the serpentine L-head can be applied to any irregular curved back or seat, thus allowing most of the work of manufacture to be done at the factory, and comparatively little where the goods are to be set up in the buildings, as almost all school-furniture is shipped “knockdown,” and necessarily put together by unskilled workmen at

its destination, in which case this device is economical for the consumer.

I am aware that the joints of school-furniture have been constructed in various forms of undercut grooves in one member and having correspondingly flanged tongues or ribs in the other member, as shown in Patents Nos. 322,125, 164,248, 331,549, 237,176, 273,260, 331,550, and my own, No. 350,803, and these constructions I do not desire to claim in this invention.

I claim herein as my invention—

1. The combination of the board or part 5, with an undercut serpentine groove, 6, and a rib, 3, having flange 4 and projections 7 upon both sides, with their under bearing-faces, 10, inclined longitudinally of the rib, substantially as and for the purpose set forth.

2. The combination of the board or part 5,

having an undercut serpentine groove, 6, and a serpentine rib, 3, with flange 4 and side projections, 7, having their under faces inclined longitudinally of the rib and bearing beneath the salient parts 9 of the groove, substantially as set forth.

3. The combination of the board 5, having a serpentine groove, 6, whose inward bends are undercut and beveled, and the serpentine rib 3, having flanges 4 and a projection having its under bearing-face inclined longitudinally of the rib at every outward bend on both sides thereof for engaging in said under-cuts, substantially as set forth.

JACOB C. CAMBURN.

Witnesses:

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