No. 665,633. Patented Jan. 8, 1901.

G. A. FULLERTON.

MOLD FOR MANDOLIN SHELLS.

(Application filed Sept. 17, 1900.)

(No Model.) 2 Sheets—Sheet 1.

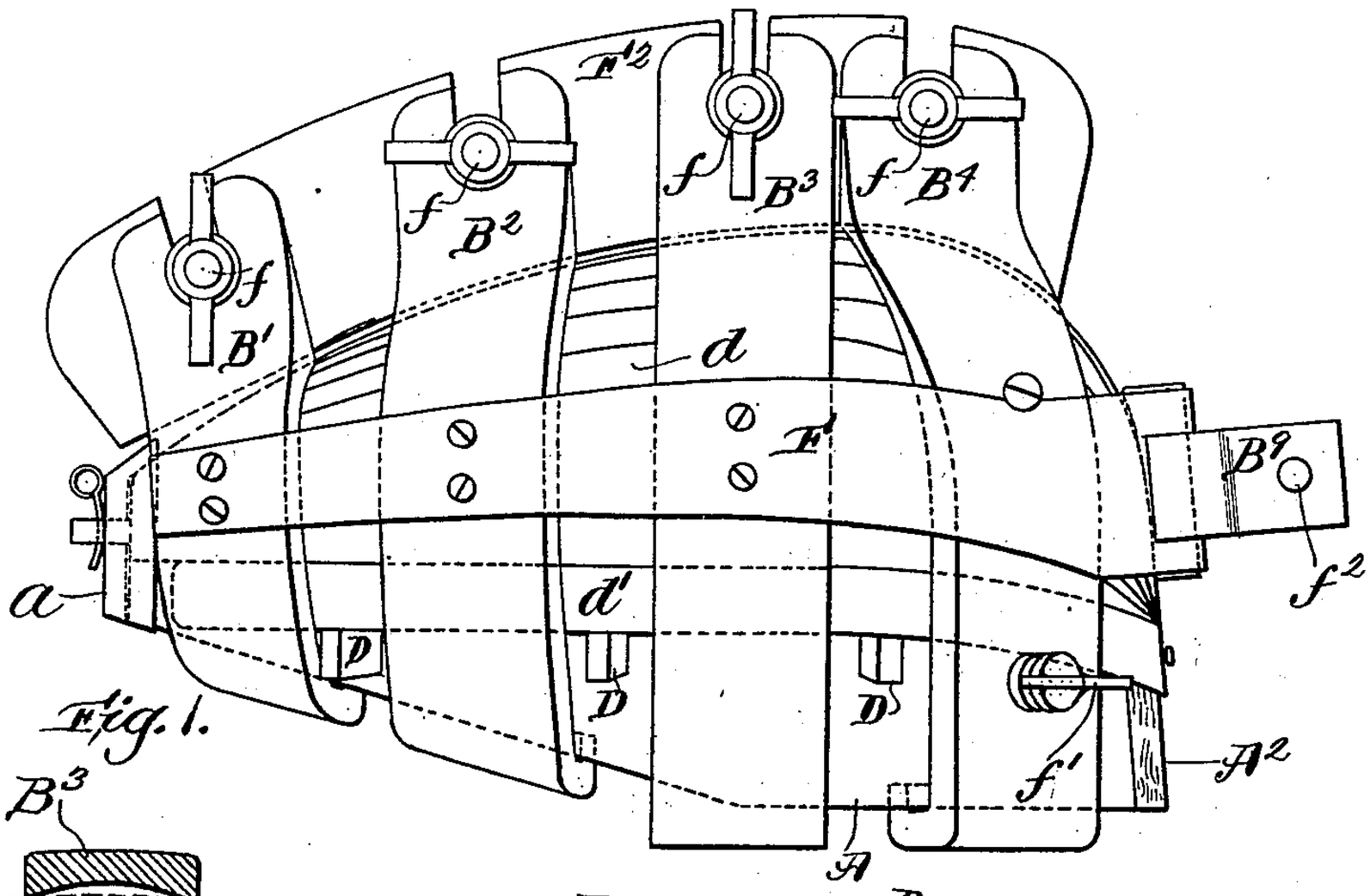

Fig. 1.

Fig. 5.

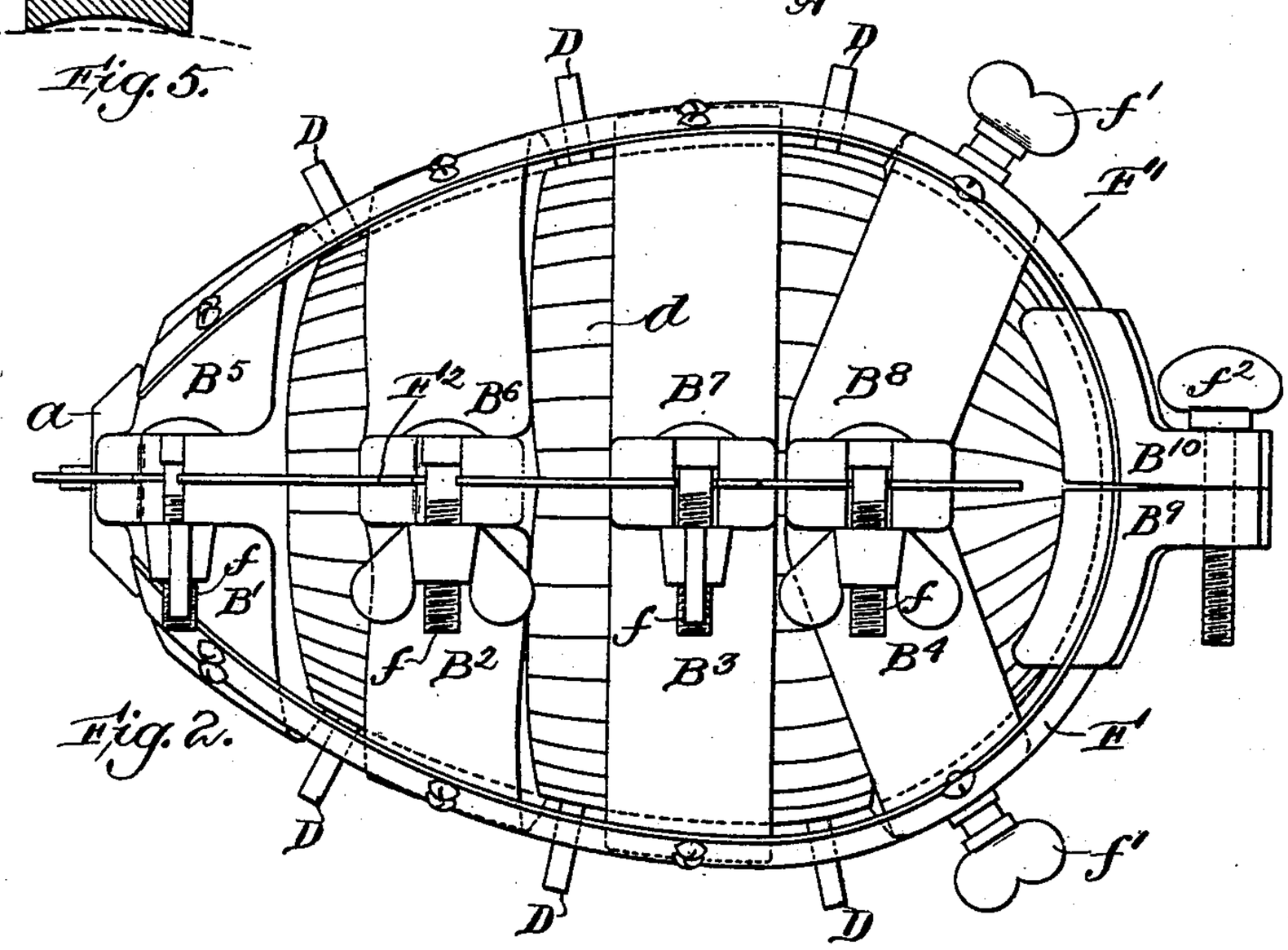

Fig. 2.

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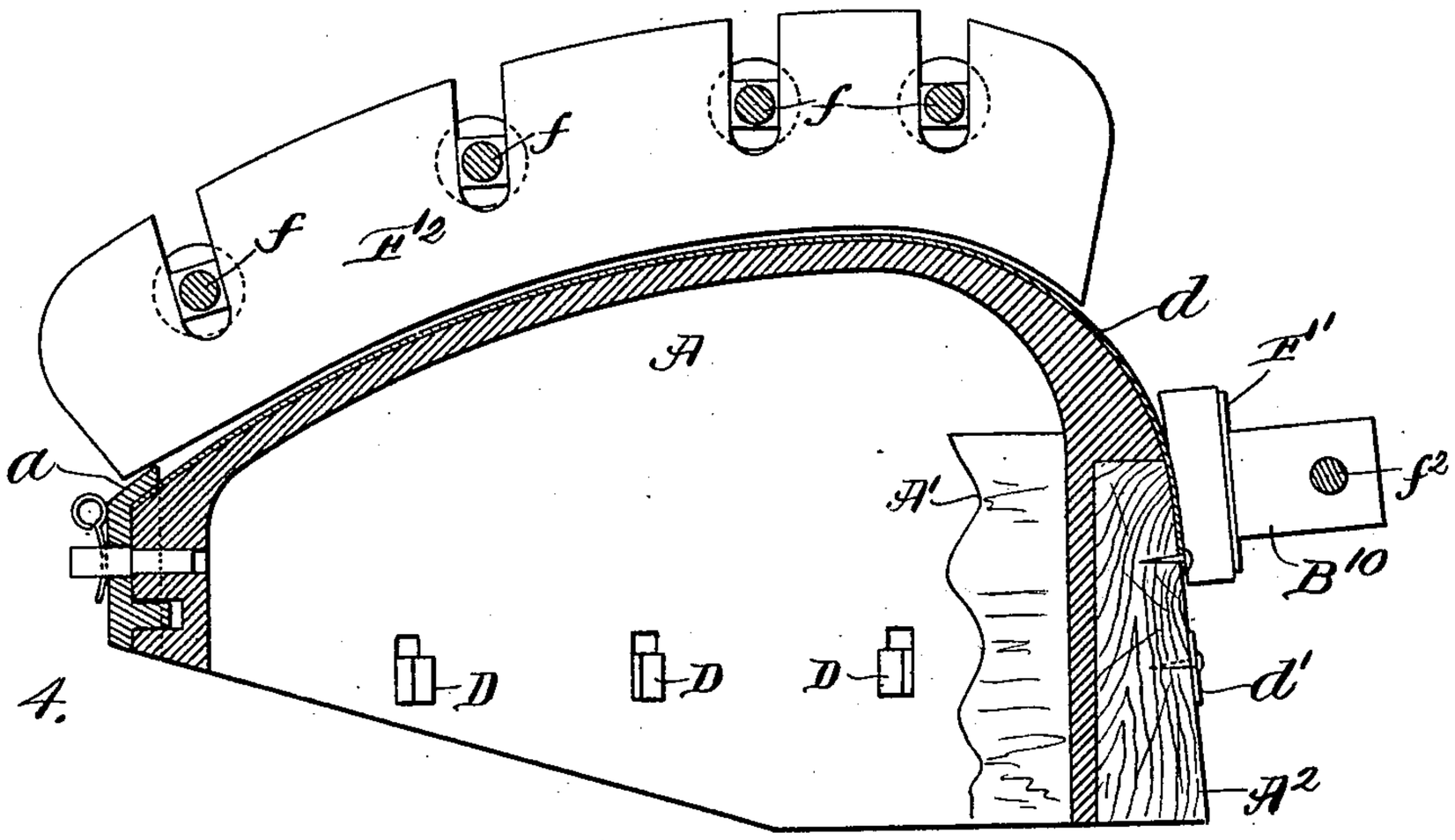

Fig. 4.

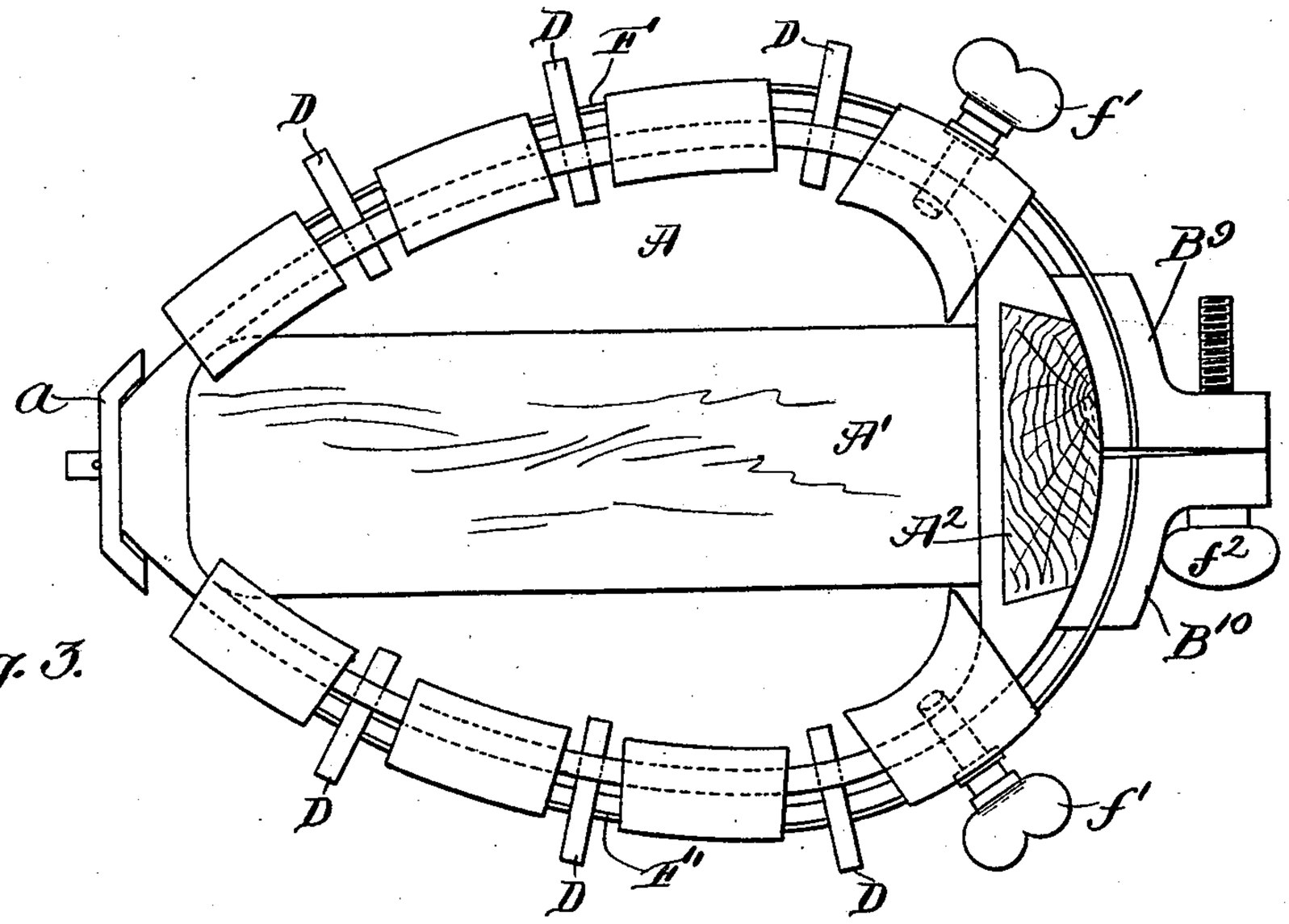

Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE ARTHUR FULLERTON, OF PEPPERELL, MASSACHUSETTS.

MOLD FOR MANDOLIN-SHELLS.

SPECIFICATION forming part of Letters Patent No. 665,633, dated January 8, 1901.

Application filed September 17, 1900. Serial No. 30,217. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ARTHUR FULLERTON, a citizen of the United States, residing at Pepperell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Mold for Mandolin-Shells, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my new mold for mandolin-shells. Fig. 2 is a plan view of the mold shown in Fig. 1. Fig. 3 is an inverted plan view of the mold shown in Fig. 1. Fig. 4 is a central longitudinal sectional view of the mold shown in Fig. 1. Fig. 5 is a cross-section of one of the members of one of the clamps B′ B², &c.

Heretofore the mold or form for uniting ribs of wood edge to edge has been a block, usually called a "last," upon which the ribs of the shell were placed by hand, first the middle rib and next two side ribs, and secured by tape wound about the form and the three ribs, when the mold and the three ribs and the tape-winding were set aside until the glue uniting the ribs was set. The next step was to unwind the tape and apply two more ribs and rewind the tape, and so on, until the shell was completed. The number of ribs varies from seven to thirty or more; but, practically speaking, about fifteen is the average of all styles. In cheaper shells the ribs are simply tacked to the block or inner form and set away for the glue to set; but this is objectionable because of the many tack-holes in each rib, which must be filled and concealed as far as possible.

In my mold the last or inner form A, while much as usual, is yet preferably mainly a casting with a filling A′ of wood and a tack-holding block of wood A². The ribs *d*, glued along each edge, as usual, are rapidly put in place on the form A, the neck end of each rib *d* being gaged and held by the cap *a* and the other end of each rib being held by a single tack to the block A². After the ribs *d* of the shell are thus applied the follower-ribs *d′ d²* are applied and held each by a tack to the block A² and by the follower-wedges D, which are inserted loosely. Next the outer clamps are applied over the ribs *d* and the follower-ribs *d′ d′*, and the operator adjusts each of the clamps B′ B² B³, &c., and the band-clamps B⁹ B¹⁰ and the follower-ribs *d′ d′*, so as to force each of the shell-ribs *d* into its proper relation with the others and clamp the shell closely between the inner form A and the outer clamps B′ B², &c., and bring the follower-ribs *d′ d′* each into its proper place against the edges of the shell. This is done by adjusting the clamp-screws *f* and *f′* to adjust the upper and lower ends of the side clamps B′ to B⁸, inclusive, and the clamp-screw *f²* of the band-clamps B⁹ B¹⁰ and at the same time setting up the wedges D of the follower-ribs. After a little practice the operator readily learns this adjustment and one man can apply the shell-ribs *d*, the follower-ribs *d′*, and the outer clamps and make all the adjustments with such accuracy as to produce mandolin-shells equal in all respects to any before made and of a uniformity of perfection not hitherto attained even by the most skilful workmen. After the glue is set the outer clamps are removed and the follower-ribs *d′ d′* also removed and the shell taken off of the inner form and finished, as will be well understood without description.

For convenience the clamps B′ B², &c., are connected together by the bands F F′, which carry the clamps B⁹ B¹⁰, and also by a backbone F², as shown in the drawings. This makes it easier for the workman to handle the clamps and also to bring each clamp to place ready for its accurate adjustment.

Each clamp B′ B², &c., in cross-section is made concave, as shown in Fig. 5, so that each contacts with the ribs only along its edges, so as to distribute the pressure evenly at regular intervals throughout the length of the ribs, which is a desirable feature.

What I claim as my invention is—

1. A mold for uniting ribs to form a shell comprising an inner form, outer clamps, follower-ribs, and means for adjusting the outer clamps and follower-ribs, and thereby forcing the edges of the other ribs of the shell into their proper relations.

2. In a mold for uniting ribs to form a shell, the combination with the inner form of a cap for gaging and confining the ribs at one end of each rib, substantially as described.

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Witnesses:
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