

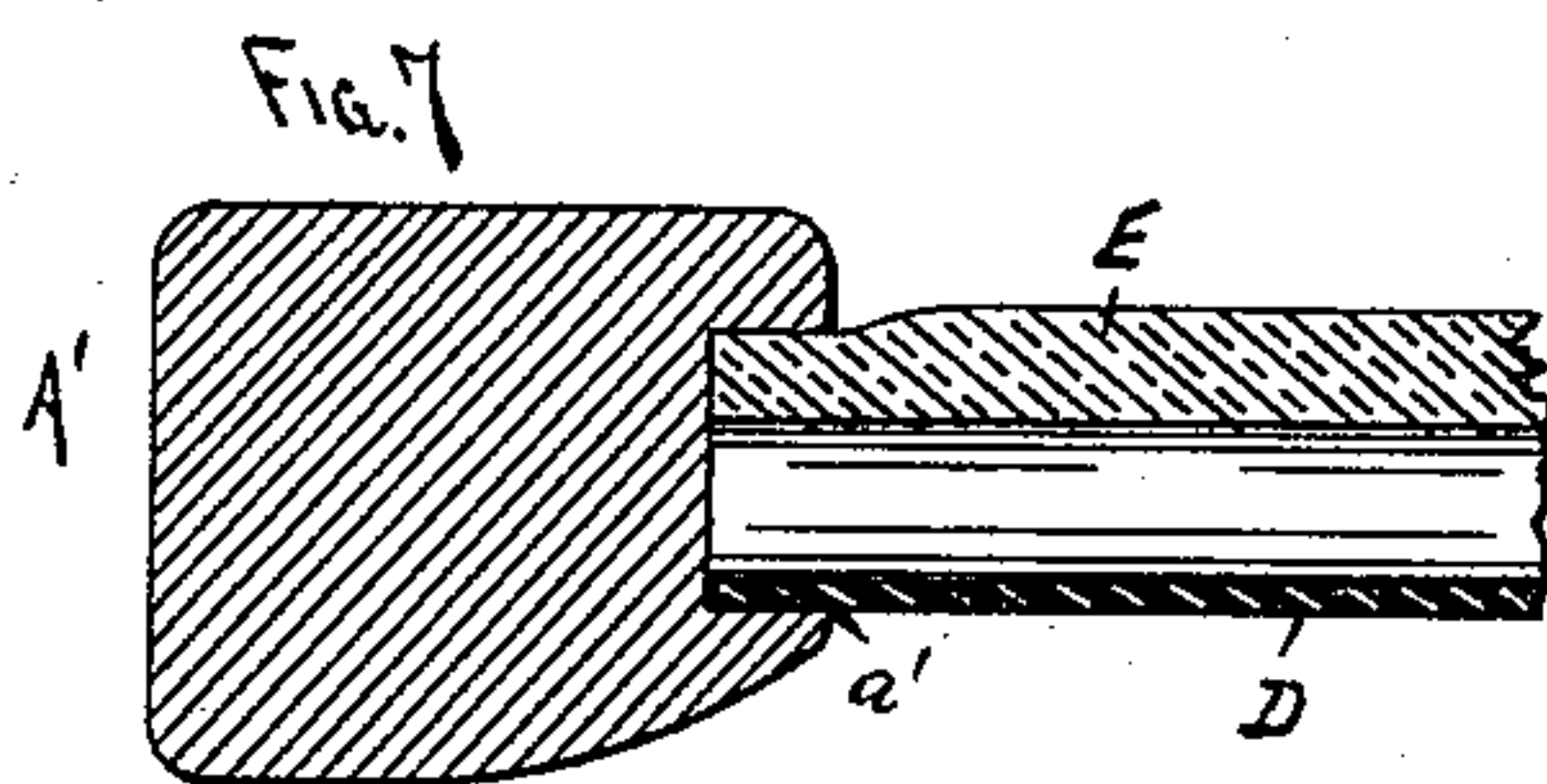
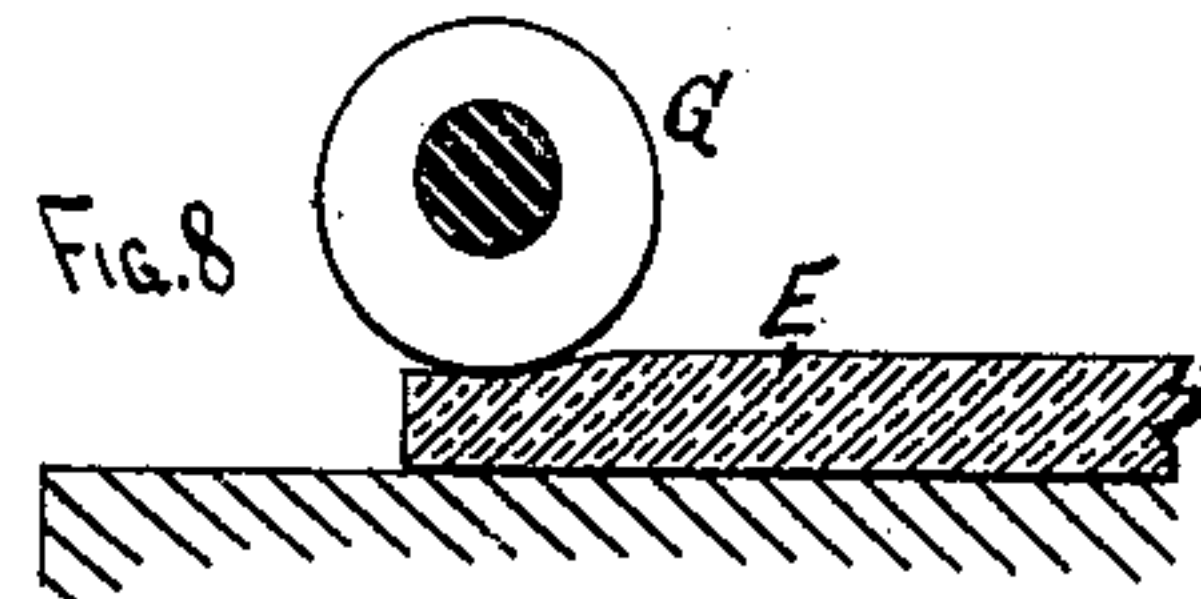
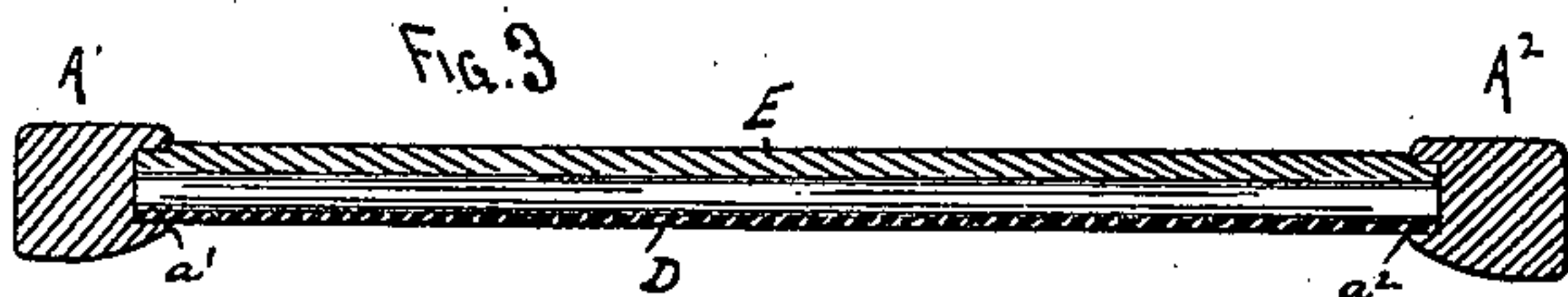
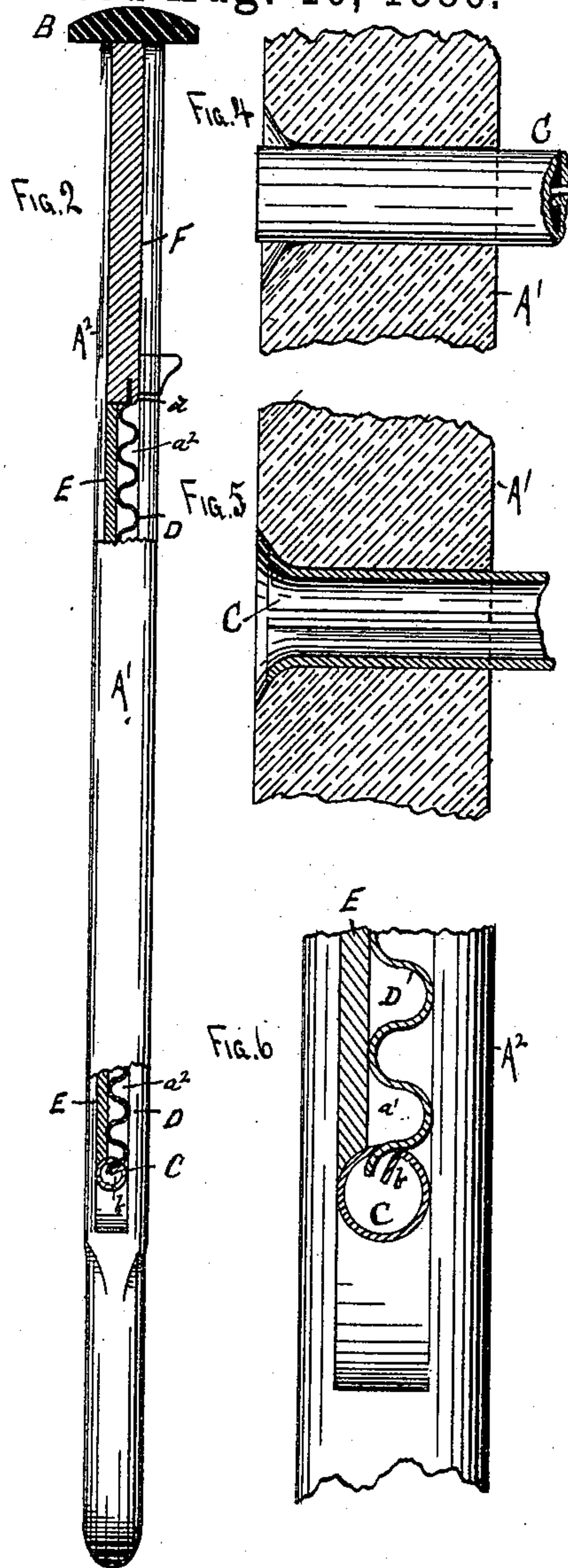
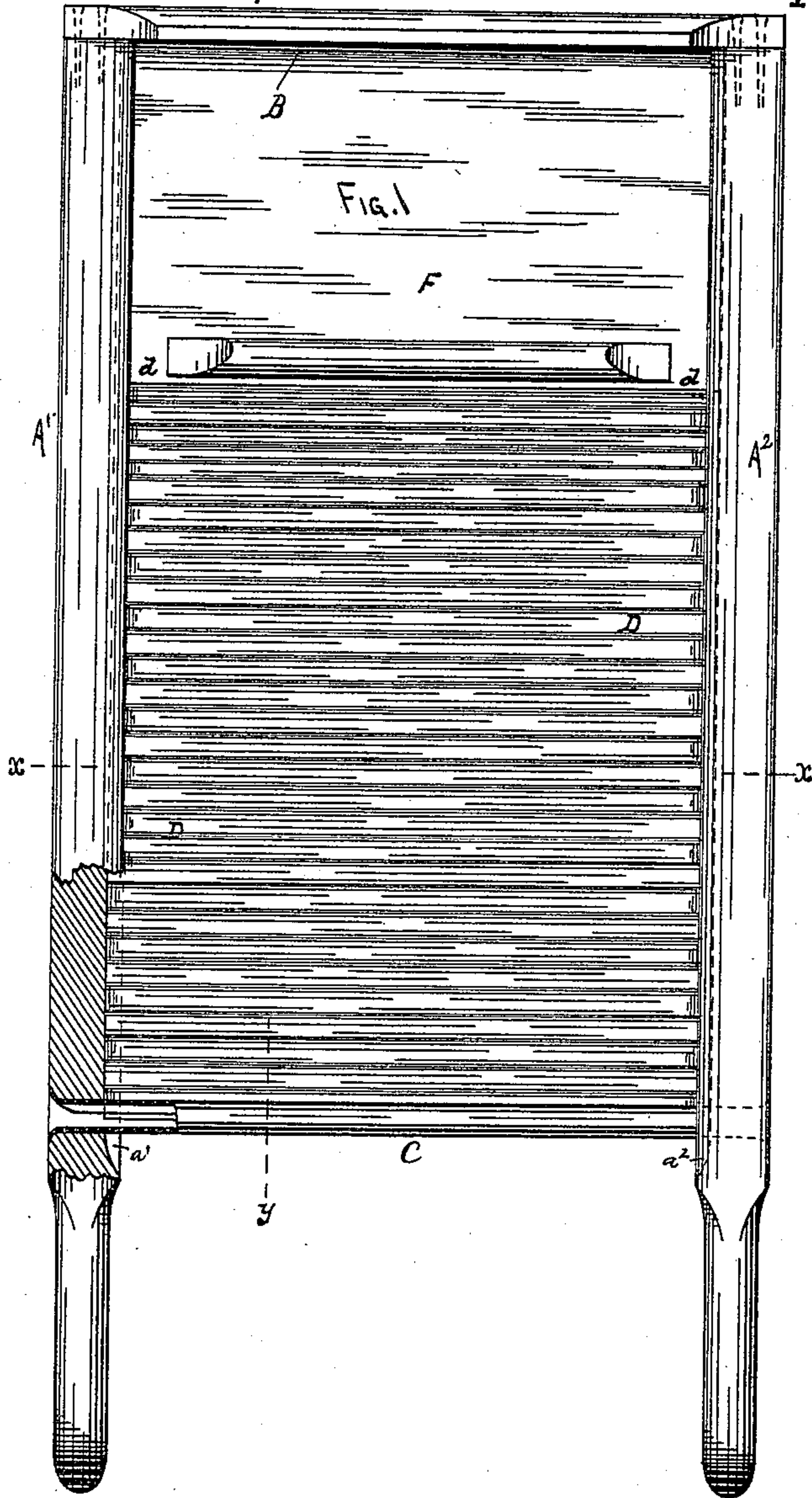
(No Model.)

D. J. GEORGE.

WASH BOARD.

No. 346,991.

Patented Aug. 10, 1886.



WITNESSES.
H. S. Webster.
Wm. C. Brown

David Jeremiah George,
INVENTOR, BY
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UNITED STATES PATENT OFFICE.

DAVID JEREMIAH GEORGE, OF MINNEAPOLIS, MINNESOTA.

WASH-BOARD.

SPECIFICATION forming part of Letters Patent No. 346,991, dated August 10, 1886.

Application filed November 6, 1884. Serial No. 147,292. (No model.)

To all whom it may concern:

Be it known that I, DAVID JEREMIAH GEORGE, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin and the State of Minnesota, have invented certain new and useful Improvements in Wash-Boards, of which the following is a specification.

Figure 1 is a front elevation, partly in section. Fig. 2 is a side elevation, partly in section. Fig. 3 is a cross sectional view on the line $x x$ of Fig. 1. Figs. 4 and 5 are enlarged details illustrating the manner of securing the bottom tube in the side bars. Fig. 6 is an enlarged sectional detail on the line $y y$ of Fig. 1. Fig. 7 is an enlarged sectional detail on the line $x x$ of Fig. 1. Fig. 8 is a detail view illustrating one method of compressing the ends of the back boards.

$A' A^2$ are the side bars, connected together at their top ends by a head-piece, B, and near their bottom ends by a metal tube, C, the ends of the latter passing through the side bars, $A' A^2$, and secured therein by being upset or flared outward, as shown in Figs. 1 and 5.

In the inner edges of the bars $A' A^2$ grooves $a' a^2$ are cut from their upper ends down to the point where the tube C passes through them, and into these grooves the edges of the corrugated metal rubbing-surface D, the back board, E, and the top board, F, are inserted. The tube C is formed with one edge turned inward at b , (see Fig. 6,) and its other edge not quite touching the turned-in edge, leaving a slit along its entire length, into which the lower edge of the corrugated metal plate D is inserted, as shown, while its upper edge is held at d in a groove in the lower edge of the top board, F. By this arrangement it will be seen all the parts are firmly secured together by the flaring ends of the tube C and the nails in the ends of the head-piece B. The back board, E, is made of pine or other similar soft wood, a little thicker than the space which its ends are to occupy in the grooves $a' a^2$ in the side bars, $A' A^2$, (which are of hard wood,) and its ends are compressed by any suitable means to make them thin enough to be inserted into the grooves in the rear of the corrugated metal plate. Then when the board is moistened in using, or when the wood swells again by gathering moisture

from the atmosphere, the joints become very tight and hold all the parts very firmly. This compression will also be applied to the ends of the top board, F.

Any means may be used to compress the ends of the boards E F; but I have found a simple cam, G, as shown in Fig. 8, to accomplish the work very satisfactorily. Care should be taken in compressing the wood not to destroy the fibers, but simply compress them sufficiently to enable them to be inserted into a narrower groove than they would enter without compressing.

In putting the boards together the lower edge of one of the corrugated plates D is inserted into the slit in one of the tubes C, and two of the side bars, $A' A^2$, placed over the ends of the tube, and with the edges of the corrugated plate D in the grooves $a' a^2$. The outer ends of the tube C are straight up to this point of the construction, as shown in Fig. 4. The back board, E, is then inserted into the grooves $a' a^2$ and forced down into the rear of the corrugated plate D, and then the top board, F, is inserted until the upper edge of the corrugated plate D enters the groove at d . The head-piece B is then nailed or otherwise fastened to the upper ends of the sides $A' A^2$, and the ends of the tube C flared outward, as shown in Figs. 1 and 5. The flaring of the ends of the tube may be accomplished by any suitable implement, and may be done either before or after the back E and top F are inserted. The small inwardly-turned edge b in the tube C adds stiffness to the tube, and is an important feature of my invention. By using this tube I accomplish several very useful results. The lower edge of the corrugated plate D does not require to be bent in any different form from that which it has when it leaves the corrugating-machine, as the slit in the tube C will receive it in whatever shape the machine leaves it. The slit also permits the corrugated metal sheet to be adjusted inward and outward, so that the sheets can be adjusted as to length without cutting them off or stretching them outward.

I also gain a great advantage by compressing the ends of the back and top boards before inserting them between the side bars, $A' A^2$, as the natural swelling of the wood is thereby

utilized to hold them very tightly in place without the necessity of nailing or other fastenings.

Another very important advantage gained by turning the edges *b* of the tube C inward, is that the sharp edge of the metal is thereby placed inside the tube and never can come in contact with the hands of the operator or the clothes being washed. The other edge of the slit in the tube comes beneath the corrugated plate D; hence it can never interfere with the operation of the board.

Having thus described my invention, what I claim as new is—

1. In a wash-board, the combination of a corrugated metal plate, side bars provided with grooves to receive the ends of said plate, and a tube secured in said side bars by flaring its ends, said tube being provided with a longitudinal slit, which receives and holds the lower end of said corrugated plate.

2. In a wash-board, the combination of a corrugated metal sheet, D, back board, E, of soft wood and having its ends compressed, and side bars, A' A², having grooves *a' a*², adapted to receive the ends of said corrugated sheet and the compressed ends of said backs, substantially as set forth.

3. The combination of the corrugated metal

sheet D, back board, E, side bars, A' A², having grooves *a' a*², adapted to receive the ends of said back and corrugated sheet, tube C, secured in said side bars by flaring its ends, and provided with a longitudinal slit adapted to receive the lower end of said corrugated sheet, top board, F, secured by its ends in said grooves *a' a*², and provided with a longitudinal slit in its lower edge in which the upper edge of said corrugated sheet rests, and a head-piece, B, substantially as set forth.

4. In a wash-board, the combination of a corrugated metal sheet, D, side bars, A' A², having grooves *a' a*², adapted to receive the ends of said corrugated metal sheet, tube C, secured in said bars by flared ends, and provided with a longitudinal slit through one side adapted to receive and hold the lower end of said corrugated sheet, and having one edge, *b*, turned inward toward the interior of the tube, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

DAVID JEREMIAH GEORGE.

Witnesses:

C. W. WOODWARD,
H. S. WEBSTER.