

H. H. HILL.  
MANIFOLDING DEVICE.  
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963,556.

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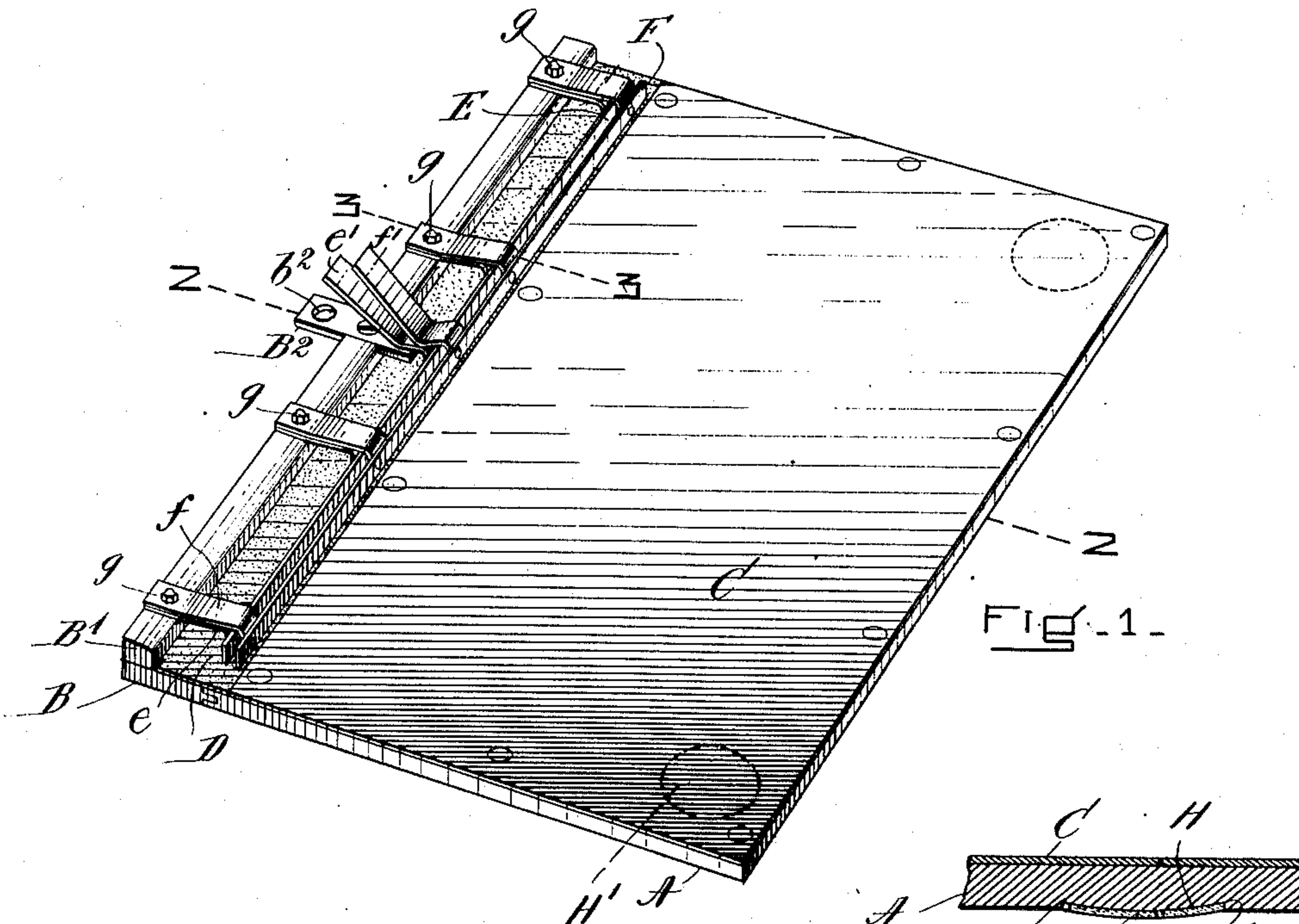


FIG. 1.

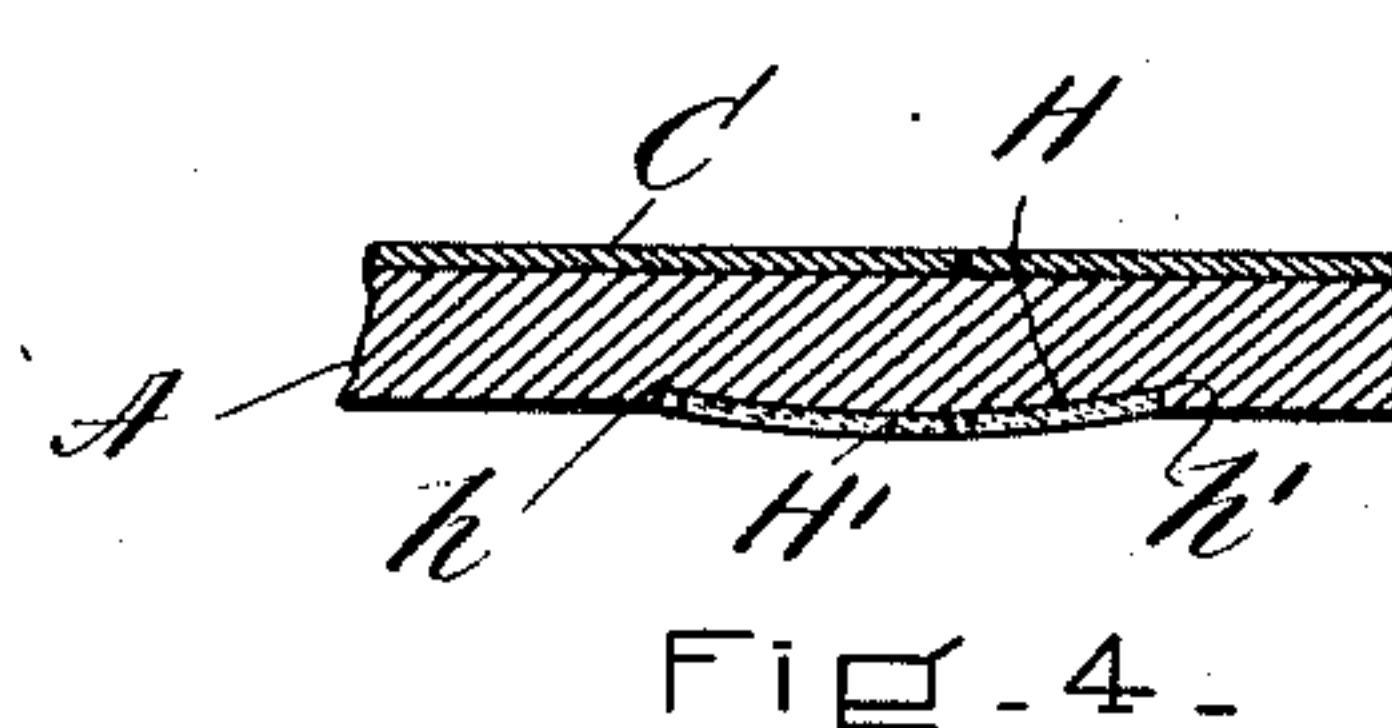


FIG. 4.

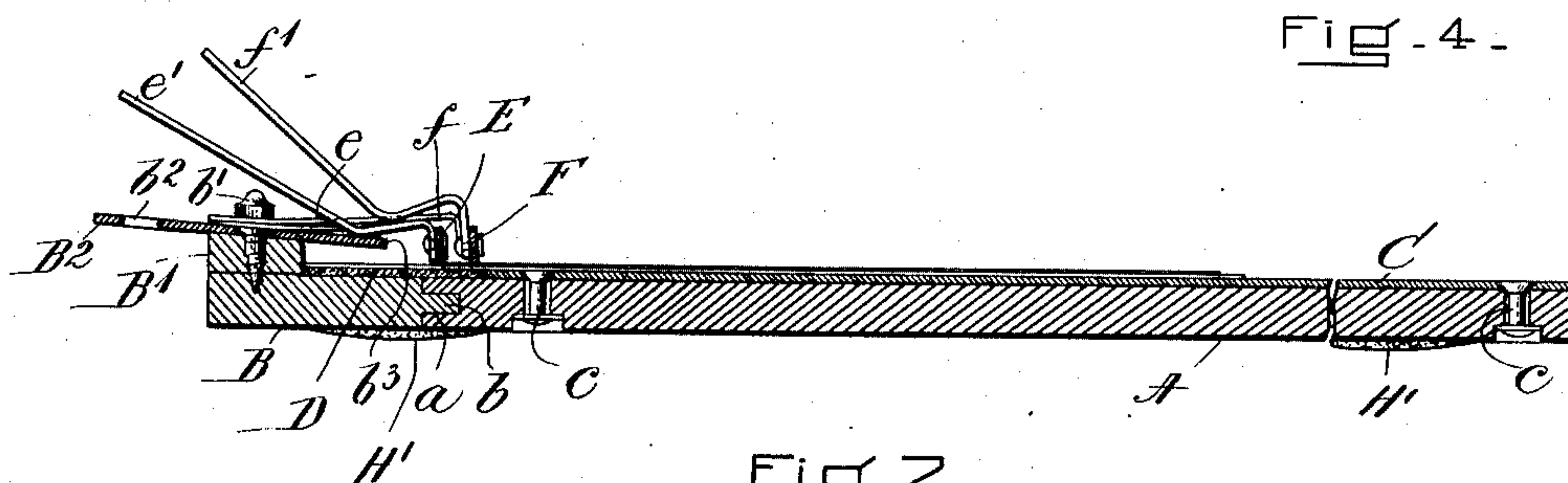


FIG. 2.

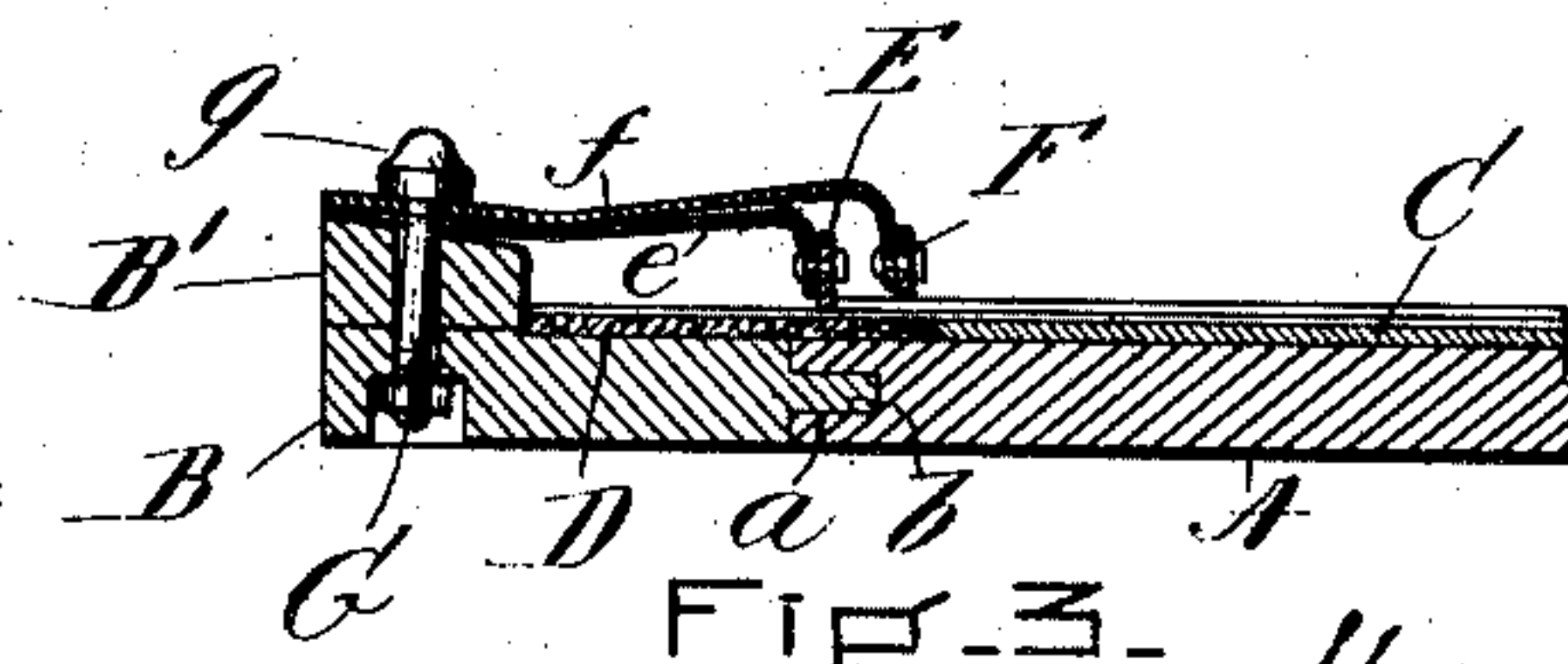


FIG. 3.

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# UNITED STATES PATENT OFFICE

HORACE H. HILL, OF SOMERVILLE, MASSACHUSETTS.

## MANIFOLDING DEVICE.

963,556.

Specification of Letters Patent.

Patented July 5, 1910.

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*To all whom it may concern:*

Be it known that I, HORACE H. HILL, of Somerville, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Manifolded Devices, of which the following is a specification.

My improvement relates to manifolded devices for use in billing goods and for other purposes where a carbon copy of the writing is to be made, and it consists primarily in a board having two clips, one reaching beyond the other so that one will hold the copy sheet and carbon paper and the other the sheet on which the original entry or bill is to be made. In the modern systems of billing and bookkeeping I have found that there is need of a board of this character and its uses are varied so that I shall refer only in general terms to them, and I do not intend to imply by any such description of its use as I shall give that it may not be used in many other different ways.

My invention will be understood by reference to the drawings, in which—

Figure 1 is a perspective view of a manifolded device embodying my invention. Fig. 2 is a section on line 2—2 of Fig. 1. Fig. 3 is a sectional detail on line 3—3 of Fig. 1, and Fig. 4 is a sectional view showing the construction of the pads on which the board is supported.

My board in its preferred form is made of a rectangular section A, of wood, one edge of which is mortised at *a* to receive the tenon *b* of the edge piece B. These portions A, B are of such size that the completed board shall be say 17" by 13", which is a convenient size for ordinary mercantile work, and form the base to which the other features are attached.

C is a facing preferably made of a plate of sheet metal, smooth on its upper surface to form a hard bed over which to write. Such a surface is always important where manifolded is to be done. This plate may be attached to the base by bolts *c* or otherwise as convenient. The plate C extends from one side or edge of the part A toward the other side and substantially to the joint between A and B. The part B which is joined to the part A and is of the same thickness therewith is covered with a strip D of heavy paper or the like which will serve as a yielding bed so that it may co-

operate with the clips E, F, to hold the billing sheets in place. This strip D is attached to the part B by glue or in any other convenient way. The part B has a rib or straight-edge B<sup>1</sup> which is formed of a separate piece, say  $\frac{3}{8}$ " thick, which is attached to the edge of the piece B to serve as a support for the clips E and F and also as a straight edge to position the foundation sheet of the work, and its upper surface slopes from its outer edge downward toward the board for the purpose below stated.

The clips E, F are located one in advance of the other so that one of them E may be used to hold the under wider sheets in place, while the other F while it will grip both sheets is intended to hold the upper or removable sheet. For this purpose the clip F is provided with means for lifting it independent of the means used to lift clip E, although the means for lifting clip E will also lift clip F. The clips E and F are mounted on the end of spring arms *e*, *f*, which are attached to the top of the straight-edge rib B<sup>1</sup> by bolts G, the heads of which are counterbored into the under side of the edge piece B and pass up through the straight-edge rib B<sup>1</sup> and are capped by nuts *g*. Levers *e*<sup>1</sup>, *f*<sup>1</sup> are also provided to lift the clips. A hanger B<sup>2</sup> attached to the straight-edge rib B<sup>1</sup> by screws *b*<sup>1</sup> has a hole *b*<sup>2</sup> by which to hang up the board. Its end *b*<sup>3</sup> projects under the lever *e*<sup>1</sup> to serve as a bearing surface or fulcrum about which the lever *e*<sup>1</sup> may be rocked to lift the clip E against the force of the spring arms *e*. The lever *e*<sup>1</sup> acts in the same way as a bearing surface for the lever *f*<sup>1</sup> about which the lever *f*<sup>1</sup> may be rocked to lift the clip F. This construction as shown is such that upon rocking the lever *e*<sup>1</sup> to lift the clip E the clip F will also be lifted. And this is desirable because as a rule the under sheet is never removed without removing also the sheet which is held by the clip F. In practice the user lifts the clip E, then places one edge of the lower sheet against the rib B<sup>1</sup> and thereafter releases the clip E and places one edge of the upper sheet against it.

In describing the use of my board it is to be supposed that for example a carbon copy of the original of certain bills or entries is to be made upon a permanent sheet of say a loose leaf sales book. This leaf is first put in place with one of its edges against the straight-edge rib B<sup>1</sup> which insures its being



absolutely straight upon the board; and upon it is placed a carbon sheet. All this is done by depressing the outer end of the lever  $e^1$  which lifts both clips E and F, and allows the sheets to be slipped into place. The lever  $e^1$  being released, the lever  $f^1$  is lifted which allows a bill or charge slip to be placed under the clip F with its side edge against the clip E which insures the placing of the slip straight in the device. The lever  $f^1$  being released the necessary entry is made which is duplicated by the carbon sheet on the ledger leaf. The slip may then be removed by again depressing the lever  $f^1$  which does not release the under sheet, and a new slip placed under the clip F as before, taking care not to place it exactly over the position which the first slip occupied, and the operation is repeated.

It is evident that the clips must have a firm hold on the paper and in order that the spring arms  $e, f$  may be adjusted from time to time if necessary I prefer to make the top of the rib  $B^1$  sloping as described and to have the nuts  $g$  of the bolts G on the upper side of the arms  $e, f$ , so that they may be screwed together from time to time if necessary.

To prevent the board from scratching the desk on which it is used and to render it noiseless I have countersunk recesses H in the under side of the board and have glued or otherwise fastened therein pieces of felt  $H^1$  which project somewhat below the under surface of the board. The edge  $h$  of the recess is preferably somewhat deeper than the middle portion so as to provide a pocket for the edge of the felt.

It is evident that this invention is not limited to the exact construction shown as modifications within the terms of the claims will occur to those skilled in the art.

I have used the expression spring arms but it is only essential to the success of my invention that the clips shall be yieldingly supported so as to allow one or both of them to be lifted to receive one or more thicknesses of paper. When released the clips will hold the paper securely in place.

What I claim as my invention is:

1. A manifolding device comprising a board having a rib at one side thereof and spring clips mounted on said rib, said spring clips normally engaging said board in different lines, one clip being in advance of the other.

2. A manifolding device comprising a

bill-board having a rib and two sets of spring arms, each set being attached to said rib and carrying a clip normally engaging said board, one of said clips engaging said board at a point farther from said rib than the other clips.

3. A manifolding device comprising a bill-board having a rib at one end thereof and two sets of spring arms, each set being attached at one end to said rib and carrying at the other end a clip normally engaging said board, and means for lifting said clips whereby a sheet may be inserted under said clips and against said rib to bring it in proper alinement and will be held in place by both of said clips when they are released.

4. A manifolding device comprising a board having a rib at one end thereof, two sets of spring arms mounted thereon each set of spring arms carrying a clip, one set of said arms overreaching the other set whereby said clips will engage said board at different distances from said rib.

5. A manifolding device comprising a board having a rib at one end thereof, two sets of spring arms mounted thereon each carrying a clip, one set of said arms and its clip overreaching the other set, and two rocking levers one mounted on each clip, said levers being located one above the other.

6. A manifolding device comprising a board having a rib at one end thereof, two sets of spring arms mounted thereon each carrying a clip, one set of said arms and its clip overreaching the other set, two rocking levers one mounted on each clip, said levers being located one above the other, the upper lever engaging the lower lever to rock thereon, and a rest located below the lower lever to serve as a fulcrum upon which it may be rocked.

7. In a manifolding device, a board provided with a rib and spring arms carrying clips adapted to hold one or more sheets of paper in place upon said board, the upper surface of said rib slanting toward the surface of said board and said arms being bolted to the upper surface of said rib in a plane substantially parallel with the plane of said board whereby they are adapted to be adjusted toward the plane of the upper surface of said rib.

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Witnesses:

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