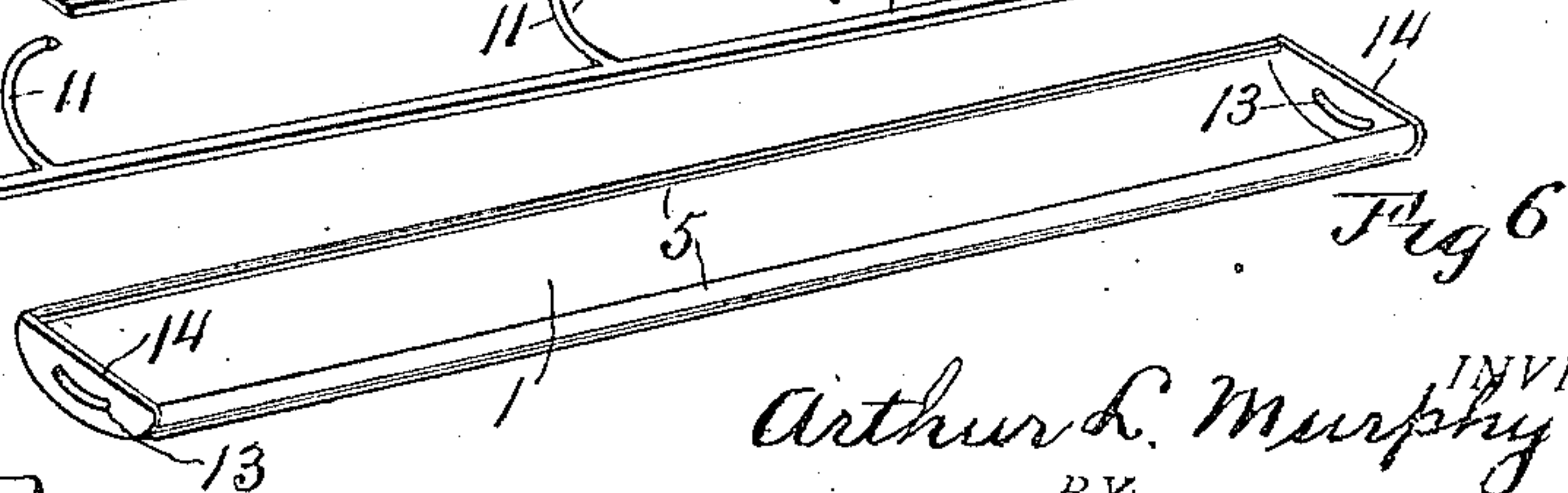
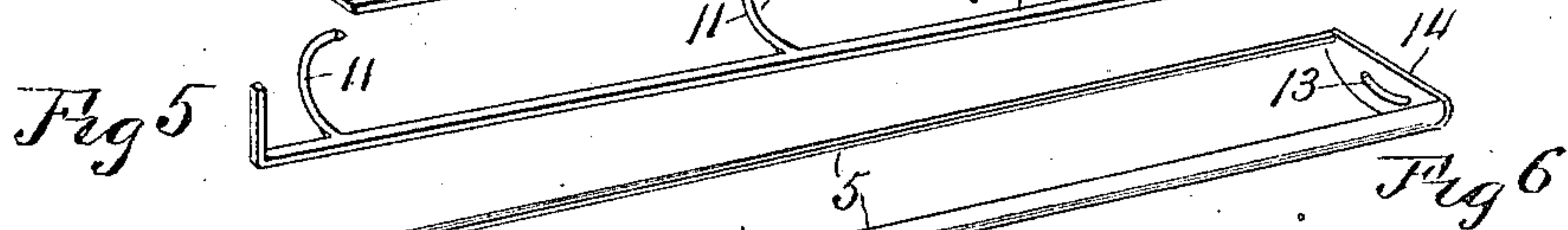
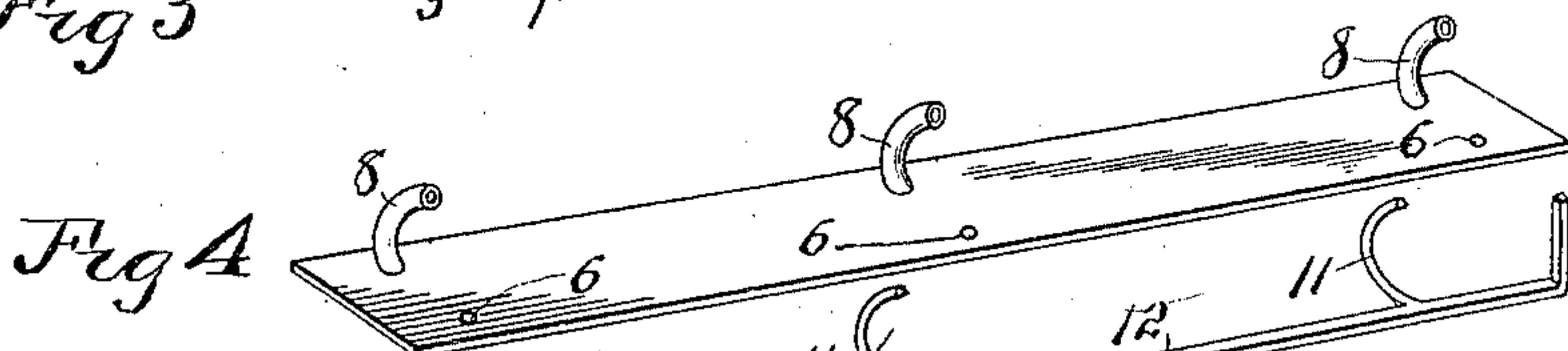
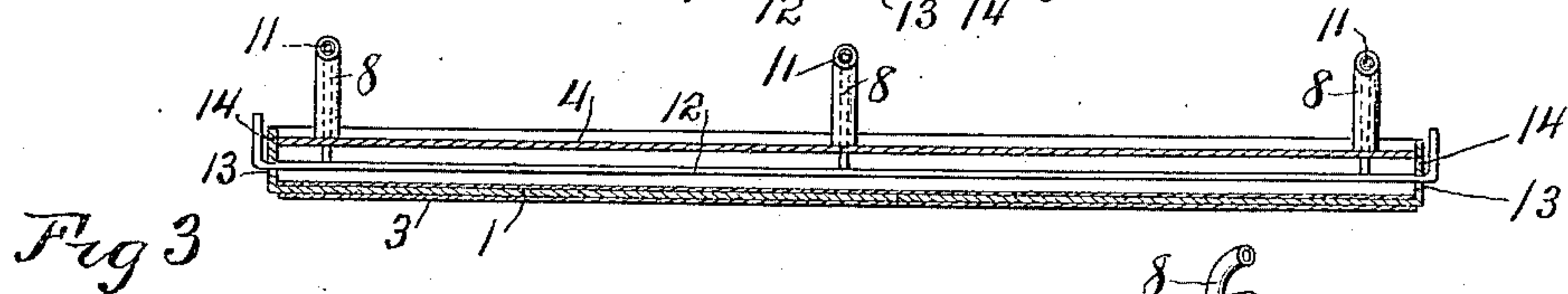
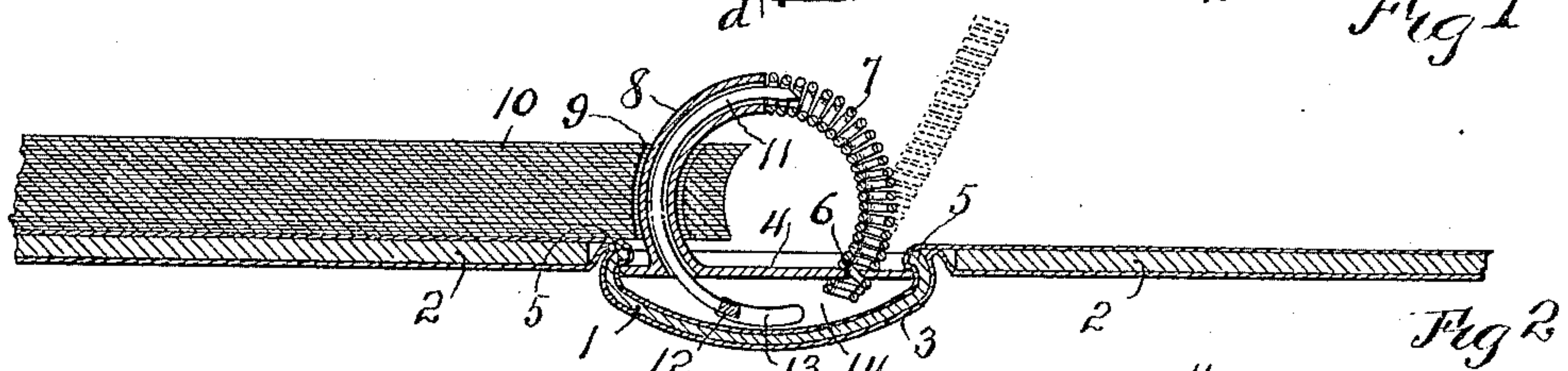
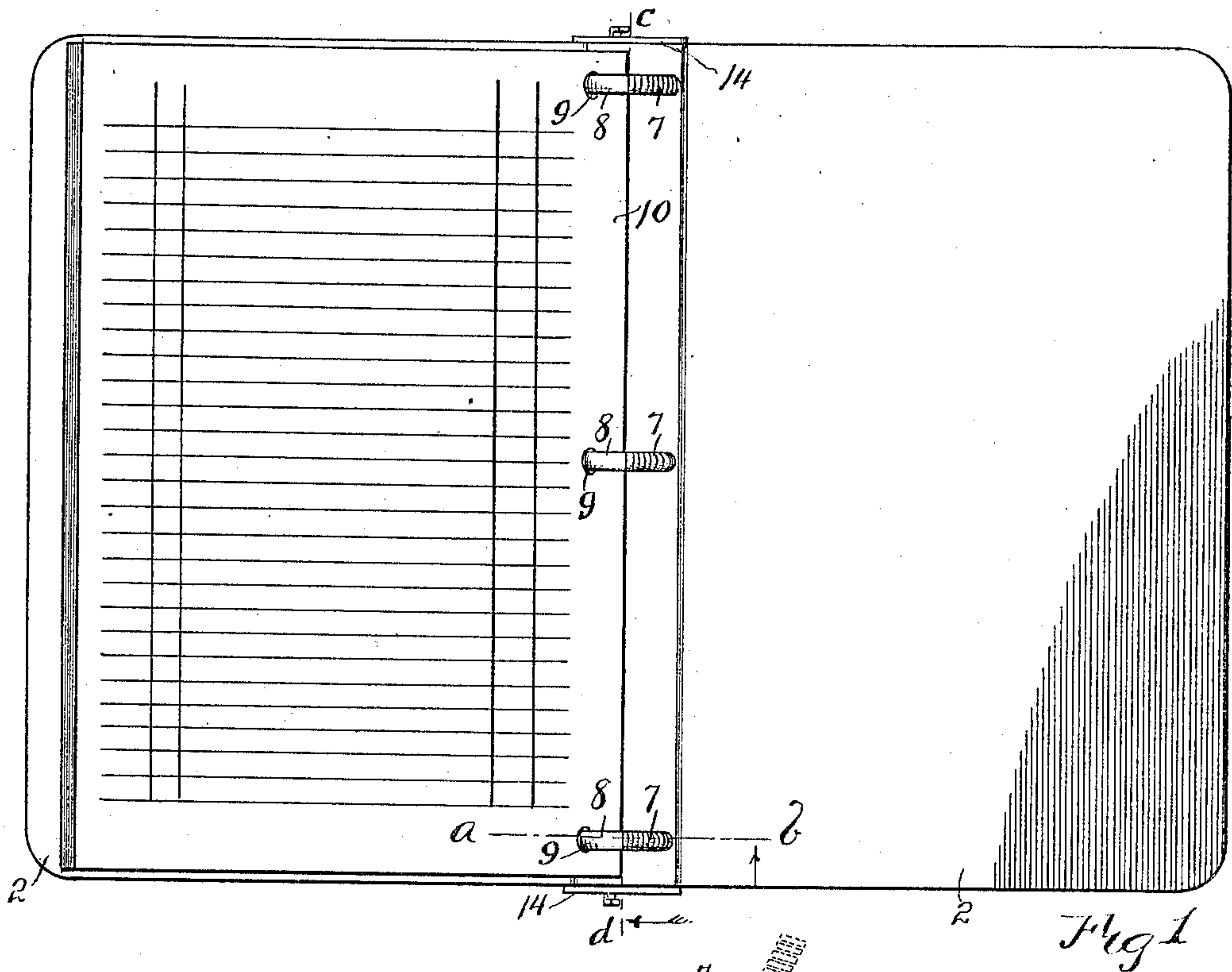


A. L. MURPHY, SR.  
 LOOSE LEAF BOOK.  
 APPLICATION FILED JULY 3, 1909.

960,673.

Patented June 7, 1910.



WITNESSES:  
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 His ATTORNEY.



# UNITED STATES PATENT OFFICE.

ARTHUR L. MURPHY, SR., OF INDEPENDENCE, MISSOURI.

## LOOSE-LEAF BOOK.

960,673.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed July 3, 1909. Serial No. 505,781.

*To all whom it may concern:*

Be it known that I, ARTHUR L. MURPHY, Sr., a citizen of the United States, residing at Independence, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Loose-Leaf Books, of which the following is a specification.

My invention relates to improvements in loose leaf books.

The object of my invention is to provide a loose leaf book which is simple in construction, easily operated, not liable to get out of order, will readily permit leaves to be inserted or removed, and which will allow the leaves to be easily turned.

Hereinafter I have fully described and claimed the novel features of my invention.

In the accompanying drawings illustrative of the preferred form of my invention, Figure 1 is a plan view of a book provided with my invention and shown in the open position, the hooks being shown in the closed positions. Fig. 2 is a cross section on the dotted line *a-b* of Fig. 1. Fig. 3 is a longitudinal section on the dotted line *c-d* of Fig. 1. Fig. 4 is a perspective view of the hook plate. Fig. 5 is a perspective view of the prong carrying member. Fig. 6 is a perspective view of the back of the book.

Similar reference characters denote similar parts.

1 denotes a longitudinal plate which forms the back of the book and to which the covers 2 may be hinged in any desired manner, as by flexible binding material 3.

4 is the hook carrying member comprising preferably a flat plate disposed longitudinally in the concave side of the back plate 1 which has longitudinal flanges 5 at opposite edges for respectively embracing the opposite longitudinal edges of the plate 4. The plate 4 is provided preferably with a plurality of holes 6 in which are respectively secured one set of ends of a plurality of hooks comprising preferably coiled wires 7, preferably resilient, and capable of being flexed from a, preferably normally straight position, shown in dotted lines in Fig. 2, to a curved position shown in solid lines in said figure, and in the latter position having their free ends respectively abutting against the ends of a plurality of fixed hooks 8, which are preferably curved and tubular, so as to form with the hooks 7

ring segments adapted to extend through holes 9 provided in the loose leaves 10.

Means are provided for releasably holding the hooks 7 in the closed positions. Preferably the said holding means comprise curved prongs 11 reciprocative in the hooks 8 to and from positions in which they will project out of the hooks and into the spring hooks 7, when the latter hooks are in the closed positions. The prongs 11 are preferably provided on a longitudinal bar 12 located intermediate the plates 1 and 4 and having its ends extending respectively through curved slots 13 provided respectively in end plates 14 secured respectively in the concave side of the plate 1 adjacent respectively to the ends of said plate. The ends of the bar 12 are preferably turned at right angles so as to afford convenient means for grasping the bar to move it laterally in the slots 13 for the purpose of reciprocating the prongs 11 to and from the positions in which they are adapted to enter the free ends of the hooks 7.

To remove the leaves or to insert others, the bar 12 is moved so as to withdraw the prongs 11 from the ends of the spring hooks 7. The hooks will then assume the straight positions upon which leaves may be readily placed upon or removed from either set of hooks. The bar 12 is then moved to a position in which the prongs will project from the hooks 8, after which the spring hooks are flexed to curved positions and have their free ends placed upon the projecting ends of the prongs 11. The leaves may then be freely turned.

Various modifications of my invention, within the scope of the appended claims, may be made without departing from its spirit.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. In a loose leaf book, the combination with a supporting member having a fixed tubular hook, of a flexible hook secured at one end to said member and flexible to and from a position in which its free end will abut against the end of the tubular hook, and a device reciprocative in said tubular hook to and from a position in which it will releasably hold the flexible hook in the closed position.

2. In a loose leaf book, the combination



with a supporting member having a fixed tubular hook, of a resilient hook secured at one end to said member and flexible to and from a position in which its free end will abut  
5 against the fixed hook, and a device reciprocative in said tubular hook to and from a position in which it will engage and hold the flexible hook in the closed position.

3. In a loose leaf book, the combination  
10 with a supporting member having a fixed tubular hook, of a hook comprising a coil spring secured at one end to said member and flexible to and from a position in which its free end will abut against the fixed hook,  
15 and a device reciprocative in the fixed hook to and from a position in which it will enter the free end of the coil spring.

4. In a loose leaf book, the combination with a supporting member having a fixed  
20 tubular hook, of a hook comprising a wire formed into superimposed coils and flexible to and from a position in which its free end will abut against the fixed hook, and a device reciprocative in the fixed hook to  
25 and from a position in which it will enter the free end of the coiled wire hook.

5. In a loose leaf book, the combination with a supporting member having a plu-  
30 rality of tubular fixed hooks, of a plurality of hooks secured at one set of ends to said member and flexible to and from positions in which their free ends will abut against the fixed hooks respectively, and devices re-  
35 ciprocative respectively in said fixed hooks for releasably engaging and holding the flexible hooks in the closed positions.

6. In a loose leaf book, the combination with a supporting member having a plu-  
40 rality of fixed tubular hooks, of a plurality of hooks comprising wires formed each into superimposed coils and secured at one set of ends to said member and flexible to and from positions in which the free ends of the  
45 wires will respectively abut against said fixed hooks, and devices reciprocative respectively in said fixed hooks to and from positions in which they will respectively en-  
50 gage and hold the free ends of the flexible hooks.

7. In a loose leaf book, the combination with a supporting member having a plu-  
rality of fixed tubular hooks, of a plurality

of coil springs secured at one set of ends to said member and flexible to and from  
55 positions in which their free ends will re- spectively abut against said fixed hooks, and devices reciprocative in said fixed hooks re-  
60 spectively to and from positions in which they will respectively enter and hold the free ends of said springs.

8. In a loose leaf book, the combination with a supporting member having a plu-  
rality of fixed tubular hooks, of a plurality of coil springs secured at one set of ends to  
65 said member and flexible to and from posi- tions in which their free ends will respec- tively abut against said fixed hooks, and a reciprocative member having a plurality of  
70 prongs reciprocative in said fixed hooks re- spectively to and from positions in which they will enter and respectively hold said  
free ends of said springs.

9. In a loose leaf book, the combination with a supporting member having a plural-  
ity of fixed tubular hooks, of a plurality of  
75 normally straight coil springs having one set of ends secured to said member and flexi- ble to and from a curved position in which  
80 their free ends will abut against the ends of the fixed hooks respectively, and a recipro- cative member having a plurality of prongs  
movable to and from positions in which they will respectively enter and hold the free  
ends of said springs.

10. In a loose leaf book, the combination  
85 with a supporting member having a plural- ity of curved fixed tubular hooks, of a plu- rality of coil springs secured at one set of  
90 ends to said member and flexible to and from a curved position in which their free ends will respectively abut against the ends  
of the fixed hooks, and a reciprocative mem- ber having a plurality of curved prongs re-  
95 spectively reciprocative in said fixed hooks to and from positions in which they will enter the free ends of the coil springs when  
the springs are in the curved position.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

ARTHUR L. MURPHY, SR.

Witnesses:

E. B. HOUSE,  
C. C. DEARBORN.