

No. 723,835.

PATENTED MAR. 31, 1903.

R. J. COPELAND.
MANIFOLD SHEET.

APPLICATION FILED FEB. 2, 1900.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1,

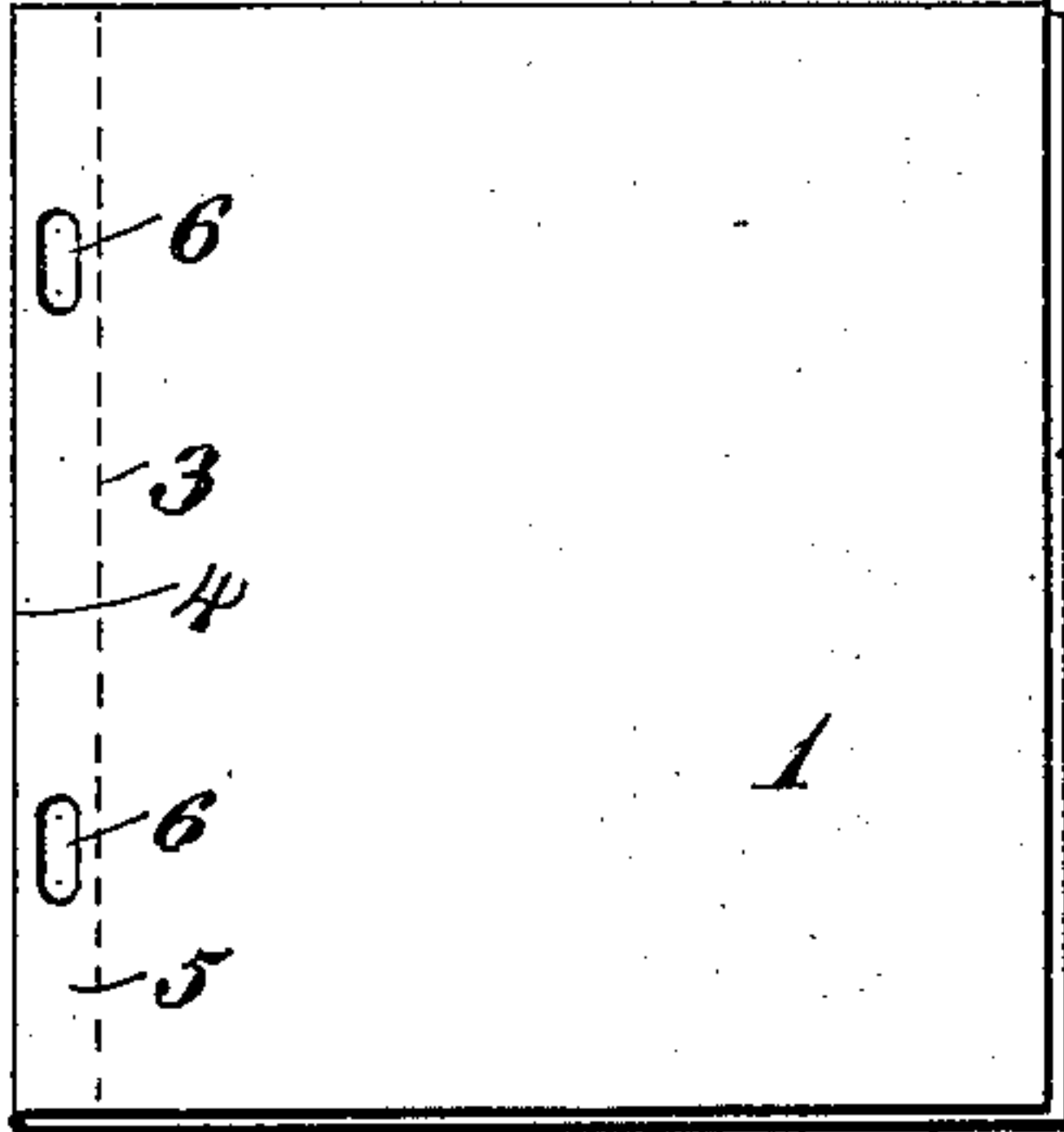


Fig. 2,

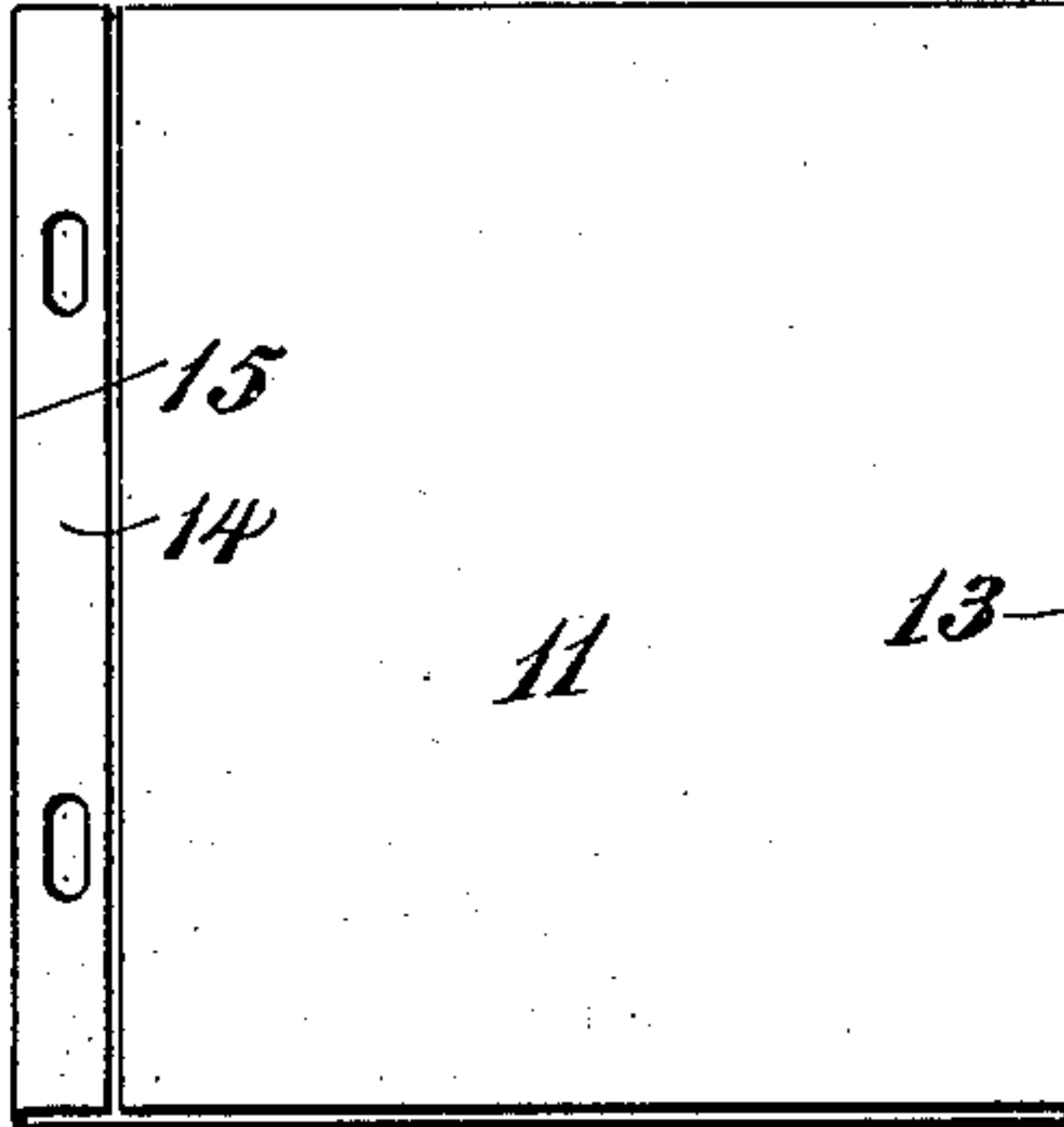


Fig. 3,

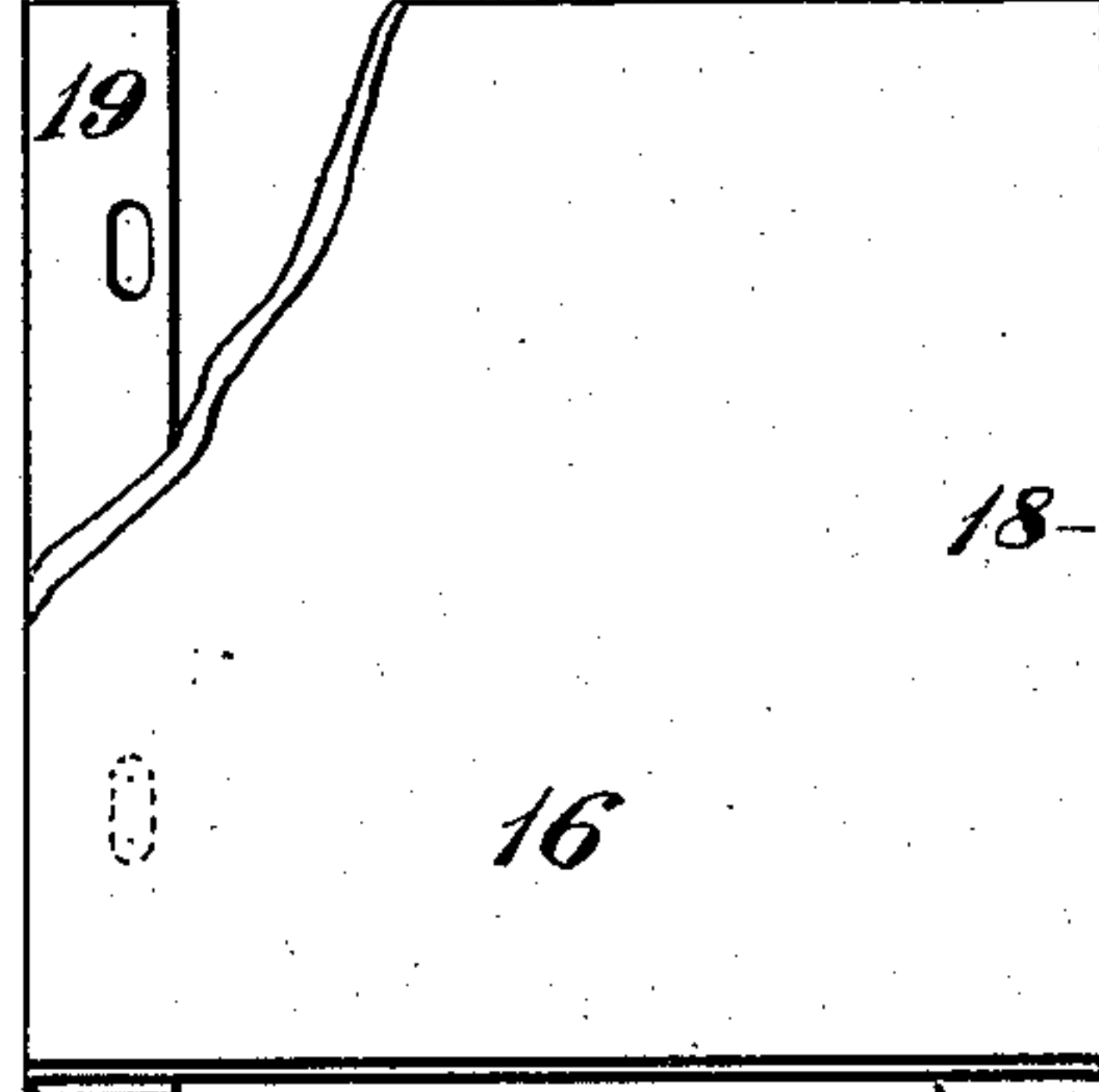


Fig. 4,

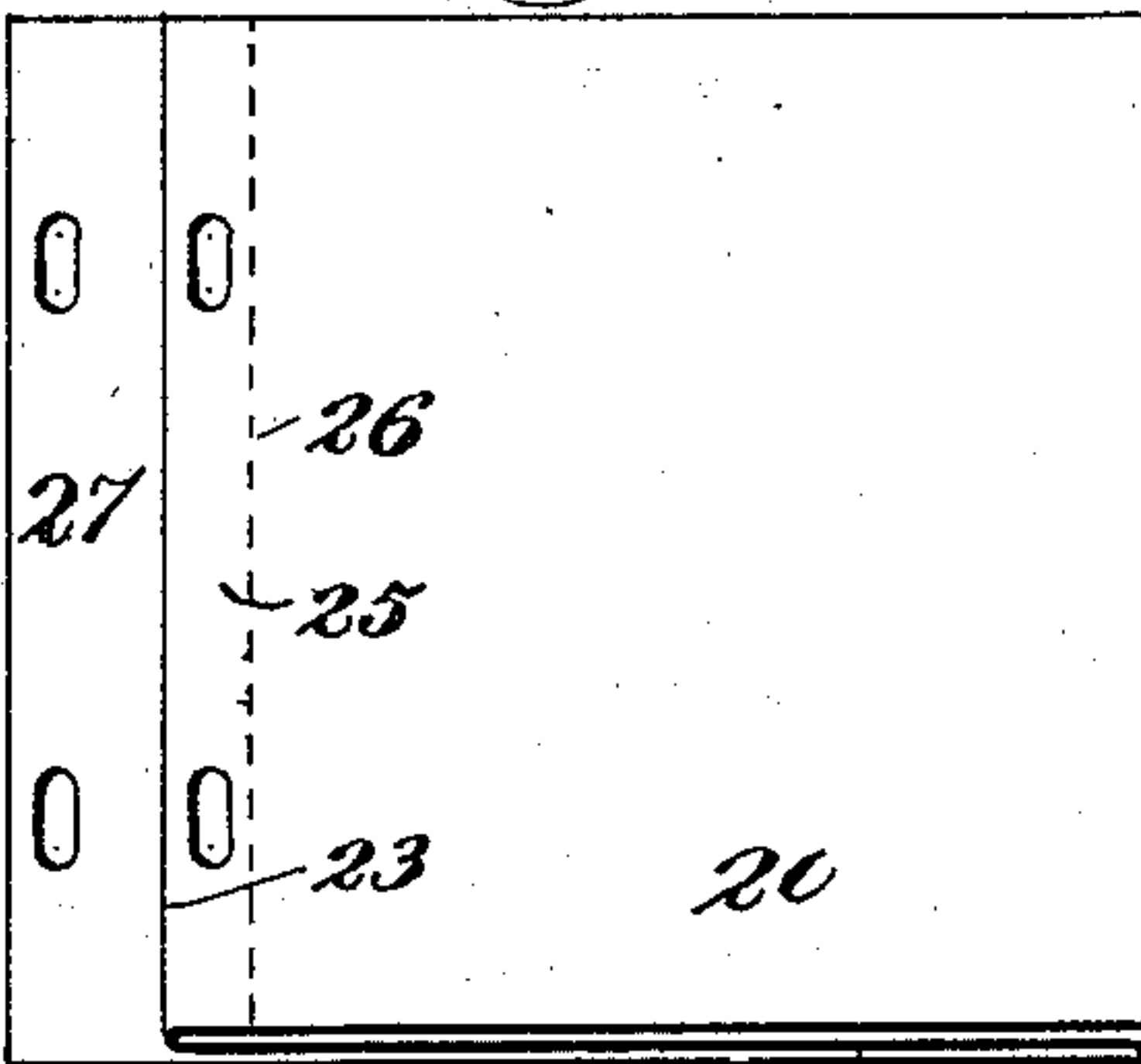


Fig. 5,

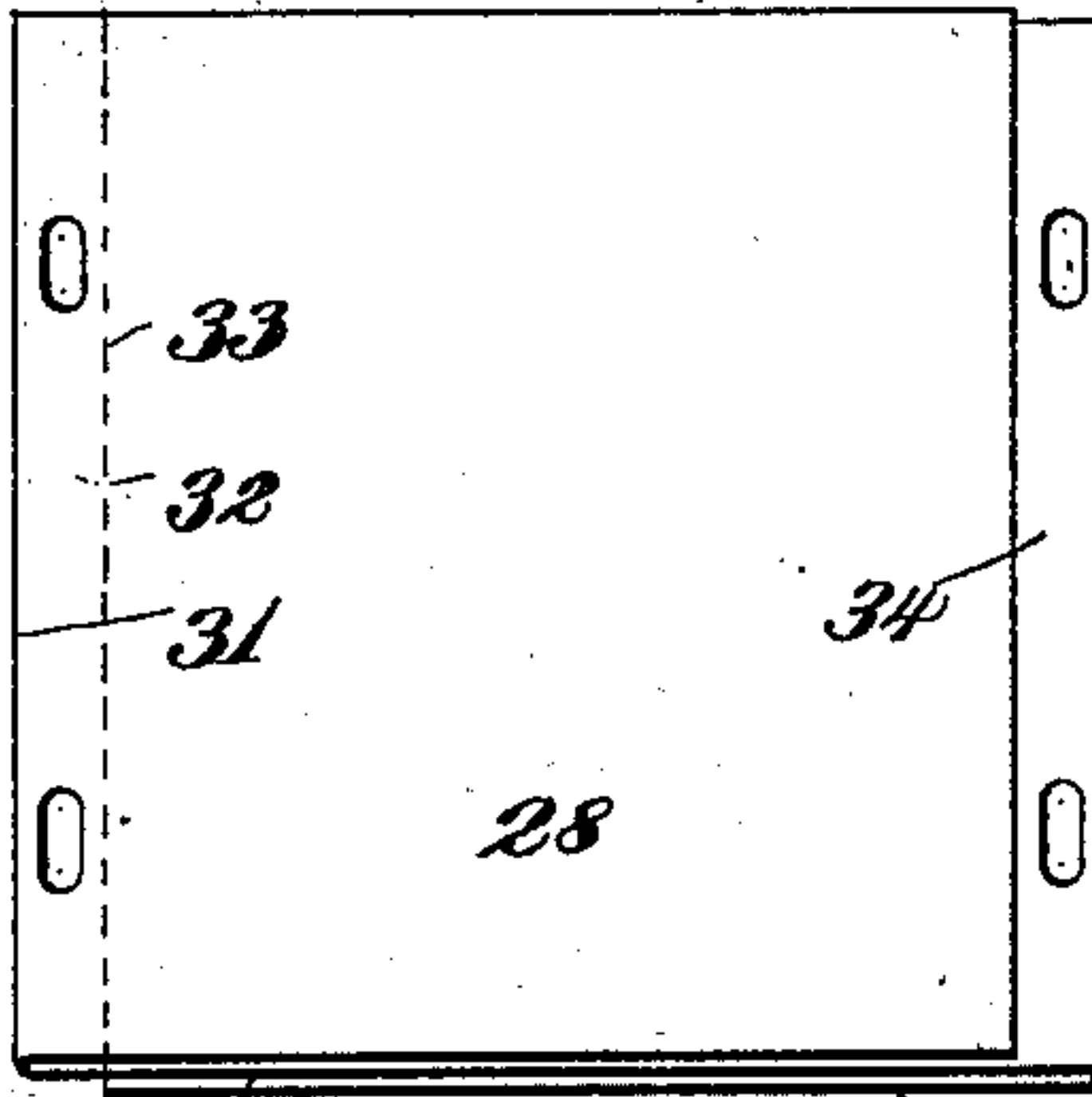


Fig. 6,

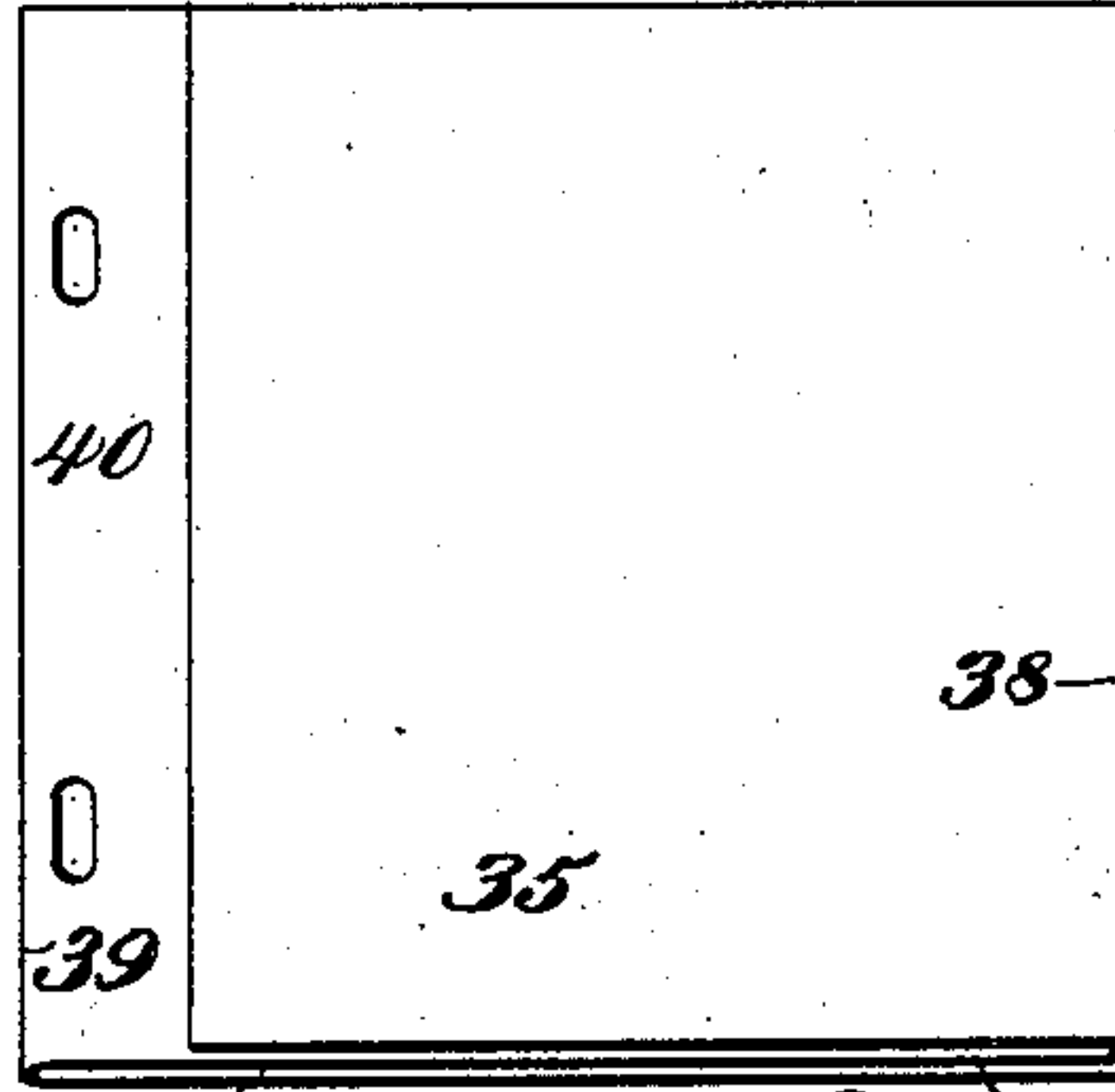


Fig. 7,

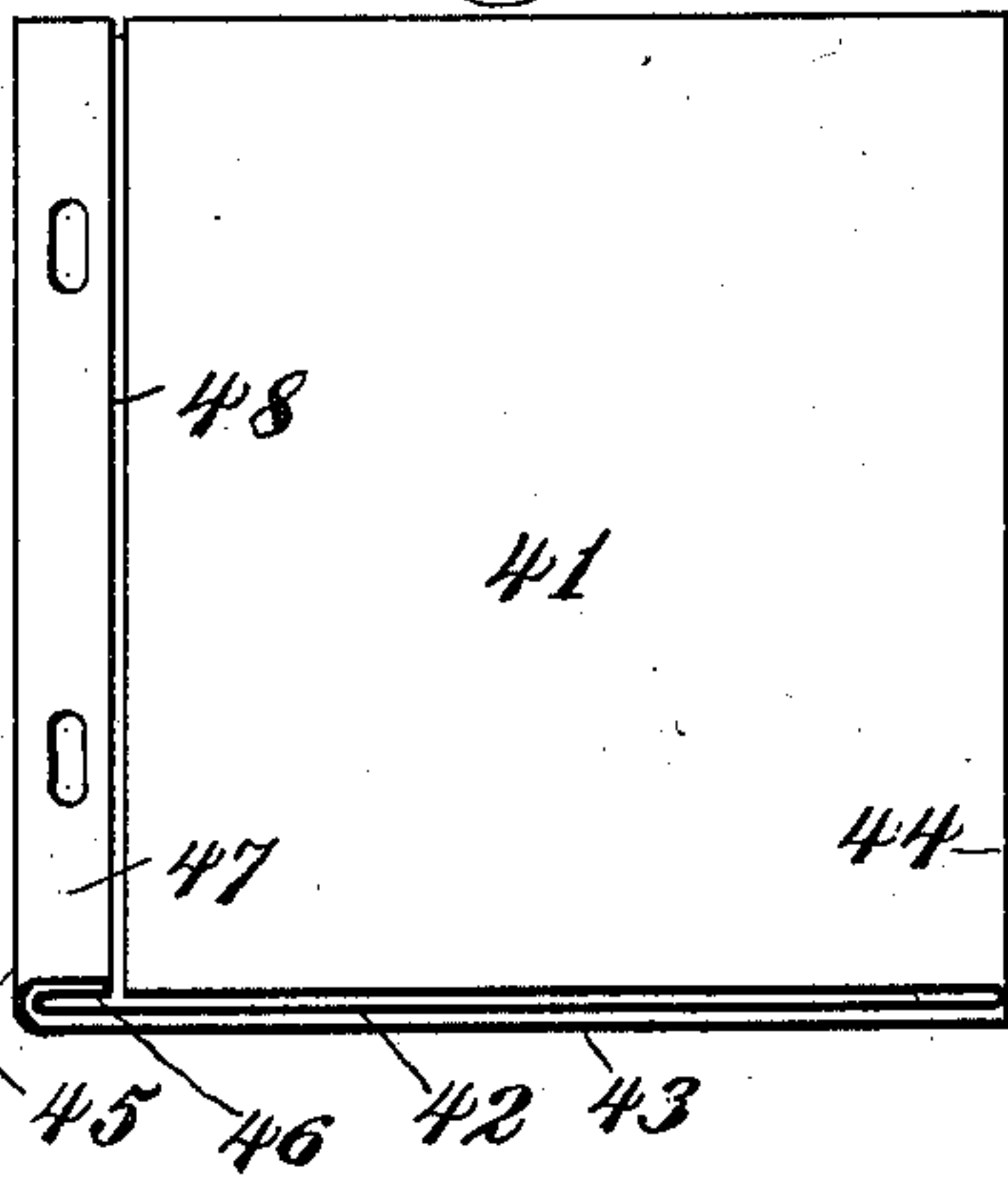


Fig. 8,

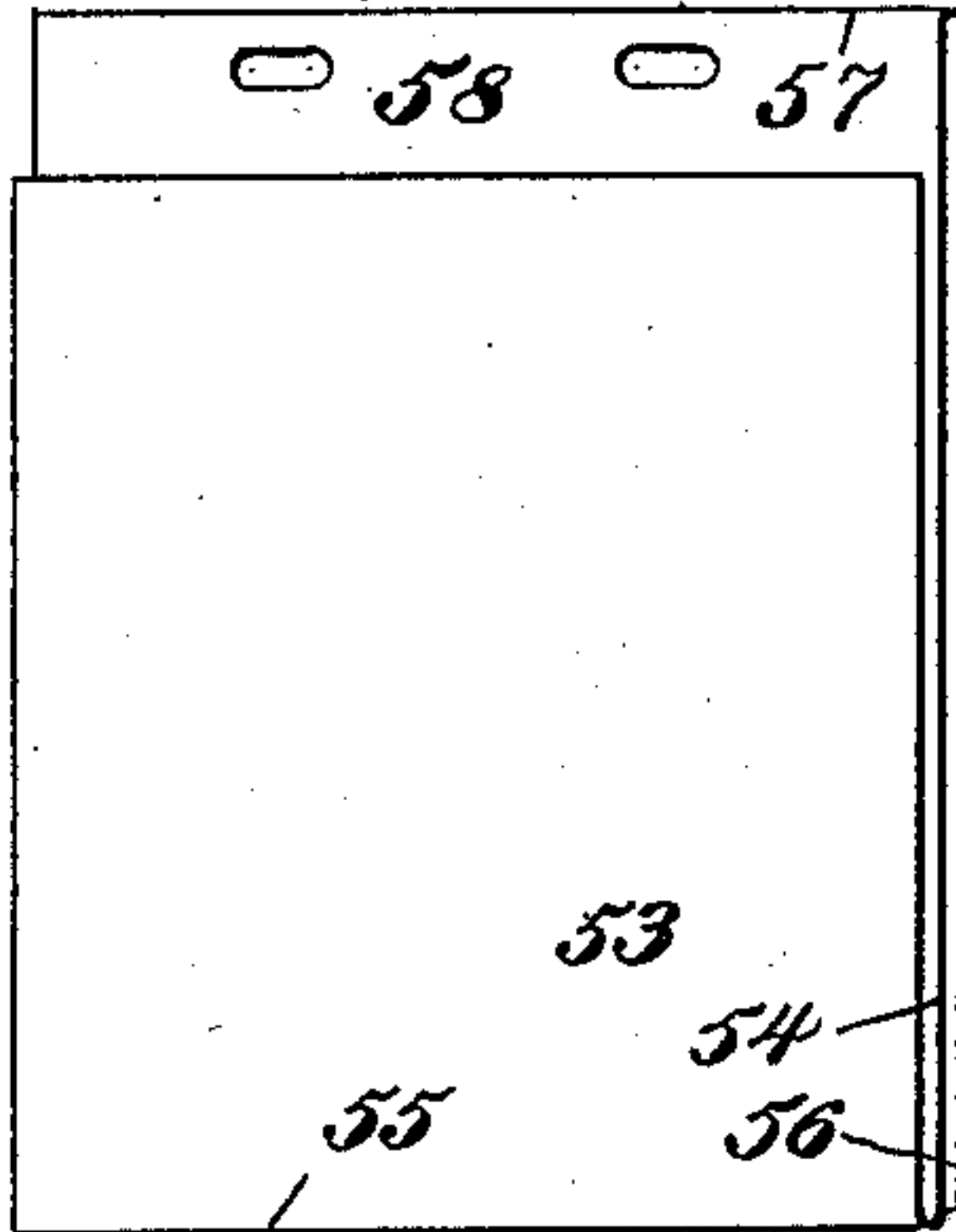
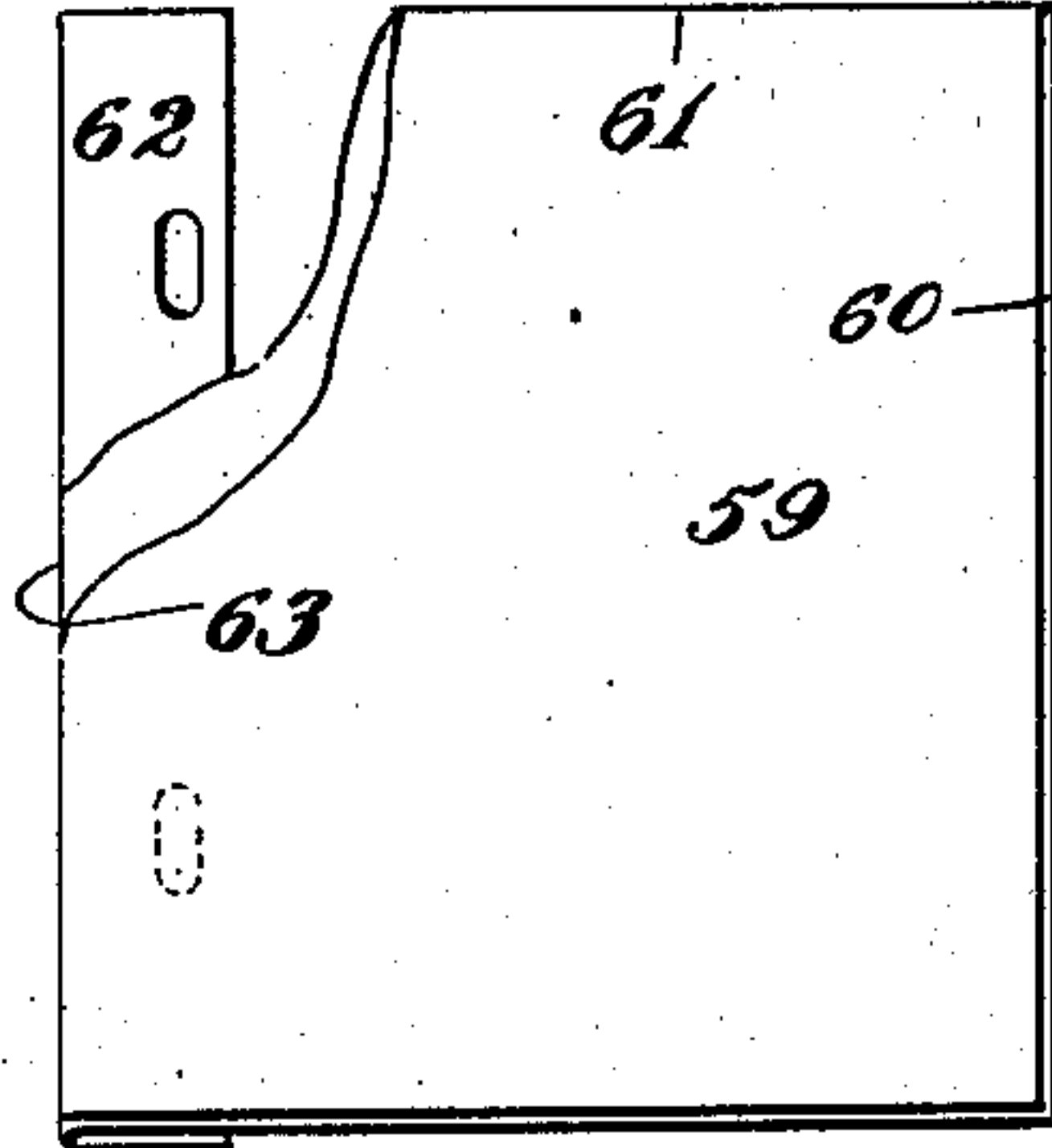


Fig. 9,



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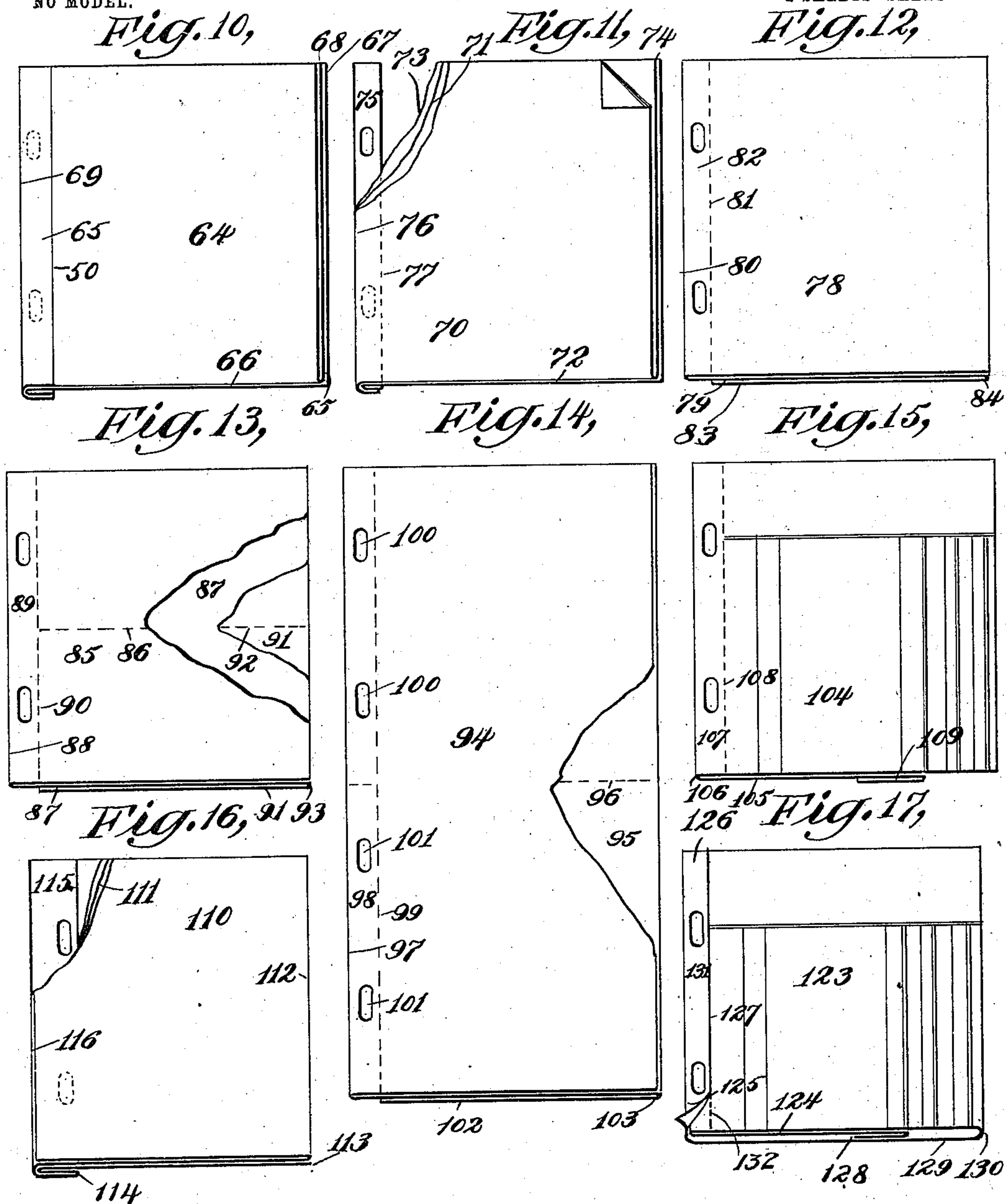
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ROBERT JAMES COPELAND, OF TORONTO, CANADA.

MANIFOLD-SHEET.

SPECIFICATION forming part of Letters Patent No. 723,835, dated March 31, 1903.

Application filed February 2, 1900. Serial No. 3,678. (No model.)

To all whom it may concern:

Be it known that I, ROBERT JAMES COPELAND, of Toronto, Canada, have invented certain new and useful Improvements in Manifold-Sheets, of which the following is a specification.

This invention relates to manifold-sheets, and more particularly to such as are designed for use in rendering accounts or bills. It seeks to provide such sheets in convenient and compact size and form, so that they may be used in a type-writer of ordinary size without unduly diminishing the size of the bill-heads; also, to provide binding margins in duplicate or triplicate leaves of manifold-sheets, such binding margins preferably having apertures whereby they may be secured in place in a loose-leaf binder when detached from the original leaf or bill-head, such margin being of sufficient width to prevent any of the matter written on the duplicate leaf from being covered up in the binder along the binding margin of the duplicate leaves.

In the sheets embodying the invention the original and duplicate leaves are connected together along a line of separation at which the leaves are intended to be detached. This line of separation will be herein termed a "score-line." The original and duplicate leaves are folded one upon another, so that when a carbon-sheet is slipped in between the two matter written on the original leaf will be duplicated on the duplicate leaf. In order that the manifold-sheet may be sufficiently narrow to pass through type-writers of ordinary width and at the same time wide enough not to require the original leaf to be narrower than the bill-heads in general use, the binding margin is generally folded along a line running medially through it. By this arrangement the sheet is gotten into the most convenient and compact size and form. When the sheet has been filled out and the original leaf is detached from the duplicate leaf, the latter is filed in the binder. For this purpose the binding margin of the duplicate leaf is provided with apertures, so that it may be filed on a loose-leaf binder having posts to engage the apertures. In some cases the manifold-sheet has two duplicates, each duplicate having a binding margin provided with apertures, and in some

cases the third leaf may be used as an original leaf or bill-head whose matter will be duplicated on the back of the middle or duplicate leaf. In this last case the binding margin will be omitted from the third leaf. In all cases the binding margin of the duplicate or duplicates is so disposed as not to cover any of the writing-space of such duplicate or duplicates.

In the accompanying drawings I have shown various forms of manifold-sheets embodying my invention.

Figures 1 to 17, inclusive, show these various sheets in perspective plan views, which in some instances are partly broken away.

Referring now more particularly to the various figures, 1 and 2, Fig. 1, are respectively the original and duplicate leaves connected together at the score-line 3, so that they may be separated at this line. The binding margin 5 of the duplicate leaf 2 is at the left of the sheet, one half of the margin lying in the plane of the leaf 1 and the other half in the plane of the leaf 2, the leaves being folded together along the line 4.

6 6 are two apertures in the binding margin, by which the duplicate may be filed when detached from the original leaf 1.

In Fig. 2 the original and duplicate leaves 11 and 12, respectively, are folded along the score-line 13. The binding margin 14 of the duplicate, however, is folded over on itself and so that its right edge meets the left edge of the original leaf. Half of the margin 14, therefore, lies in the plane of the duplicate and half in the plane of the original leaf. If desired, the binding margin 14 might be folded over on itself against the under side of the duplicate instead of against the upper side, as shown in this figure.

In Fig. 3 the original leaf 16 and duplicate leaf 17 are folded together on the score-line 18 at the right. The entire binding margin 19 of the duplicate leaf is folded under the back of the duplicate. In this case the duplicate leaf corresponds with the width of the original leaf, which may therefore be made somewhat wider than in either of the forms shown in Figs. 1 and 2.

In Fig. 4 the original leaf 20 is folded over on the duplicate leaf 21 along the line 23, which runs medially across the binding mar-

gin 25, which is connected to the original leaf by the score-line 26. A triplicate leaf 22 is connected on the right with the duplicate leaf at the score-line 24, which is also the line of fold. The triplicate leaf has a binding margin 27.

In Fig. 5 the original leaf 28 is folded over on the duplicate leaf 29 along the line of fold 31, which runs medially across the margin 32 of the duplicate leaf, which is connected to the original leaf by the score-line 33. The triplicate leaf 30 has its binding margin 34 folded across the middle, the left edge of the margin 34 being connected to the right edge of the duplicate, as by a score-line which comes directly under the right edge of the original leaf.

In Fig. 6 the original leaf 35 is folded over on the duplicate leaf 36 along the score-line 38 on the right, and the duplicate leaf 36 and triplicate leaf 37 are folded, the one on the other, along the score-line 29, leaving the full binding margin of the duplicate and triplicate lying one directly upon the other and to the left of the original leaf.

In Fig. 7 the original leaf 41 is folded upon the duplicate leaf 42 along the line of fold 44, and the triplicate leaf 43 is folded under the duplicate leaf 42 at the score-line 48, the binding margins 46 and 47 of the triplicate leaf and duplicate leaf being folded over on the upper face of the duplicate, the line of fold 45 running across the middle of both binding margins. The manifold-sheet in this figure is similar to that shown in Fig. 2, except that it has a third sheet underlying the duplicate.

In Fig. 8 the original leaf 53 and the duplicate leaf 54 are folded together along the score-line 55 at the bottom, and the duplicate and the triplicate leaf 56 are folded together along the score-line 57 at the top, the full binding margin 58 on the duplicate leaf and the corresponding binding margin on the triplicate leaf extending to the upper edge of the original. This sheet is similar to that shown in Fig. 2, except that it has a third leaf. This third leaf may be used either as an original leaf, whose matter will be duplicated on the under side of the duplicate leaf, or it may be used as a true triplicate leaf.

In Fig. 9 the original leaf 59 and the duplicate leaf 60 are folded together along the score-line 61 at the top, the full binding margin 62 of the duplicate on the left being folded back under the duplicate along the line 63, which corresponds with the left edge of the original leaf.

In Fig. 10 the original leaf 64 and the duplicate leaf 65 are folded together at the bottom along the score-line 66, and the duplicate leaf and the triplicate leaf 67 are folded together along the score-line 68 at the top, the binding margin 69 on the duplicate leaf and the binding margin of the triplicate being folded over along their middle against the under side of the triplicate leaf, the original leaf extending to the line 50 on the left.

In Fig. 11 the original and duplicate leaves 70 and 71 are folded together along the score-line 72 at the bottom, and the duplicate and triplicate leaves 71 and 73 are folded together along the score-line 74 at the top. In this case all the leaves are of the same extent and all of them are folded over against the under side of the triplicate leaf along the line 76, which runs through the middle of the binding margin 75 of the triplicate leaf and the corresponding binding margin of the duplicate leaf. The portion of the original leaf to the left of the score-line 77 is torn off and thrown away, as it has no use.

In Fig. 12 the original and duplicate leaves 78 and 79, respectively, are folded together along the line 80, which runs medially through the binding margin 82 of the duplicate leaf, this binding margin being connected to the original leaf at a score-line 81. A third leaf 83 is folded under the duplicate along the score-line 84. This third leaf has no binding margin and coincides in extent with the original leaf 78. This third leaf is designed to be used as an original leaf or bill-head, the matter written thereupon being duplicated on the under side of the duplicate leaf, thus making serviceable both sides of the duplicate leaf.

In Fig. 13 the original leaf 85, duplicate leaf 87, and the third leaf 91 are folded together and arranged in the same way as in Fig. 12, the original and the duplicate leaves being connected together along the score-line 90, the duplicate and triplicate leaves being connected together along the score-line 93, and the binding margin 89 of the duplicate leaf being folded along its middle at the line 88. In this sheet, however, the original leaf 85 is divided into two halves by the score-line 86, so as to make out of the original leaf two short bill-heads. The third leaf 91 is divided by the score-line 92 in the same way and for the same purpose. The duplicate leaf not being divided by a score-line is adapted to be filed on a binder of the same uniform size as the binder for the other duplicates of the other manifold-sheets.

In Fig. 14 the original leaf 94 and the duplicate leaf 95 are folded together along the line 97, which runs medially through the binding margin 98 of the duplicate leaf, the duplicate and original leaves being connected at the score-line 99. A third leaf 102 is folded under the duplicate leaf along the score-line 103 and is designed to be used as an original leaf in the same way as the third leaf in Figs. 12 and 13. The duplicate leaf 95 is centrally divided by a score-line 96, the upper half having the apertures 100 and the lower half having the apertures 101 in the binding margin 98. By this arrangement an original leaf 94 and the third leaf 102 may be used for long bill-heads, and the duplicate leaf 95 may be separated at the score-line 96 and filed one upon the other in the binder of uniform size with the duplicates of the other sheets.

In Fig. 15 the original and duplicate leaves 104 and 105 are folded together along the line 106, which runs medially across the binding margin 107 of the duplicate leaf, which is connected with the original leaf at the score-line 108. A portion 109 at the right of the duplicate leaf is turned so that the matter written on the original leaf, including the inner column thereof, will be duplicated on the duplicate leaf; but the matter written on the original leaf in the two outer columns will not be duplicated on the duplicate leaf. In the inner column of the original leaf is entered the cost price of the various items of the bill, and in the two outer columns are extended the totals of the various items. When the entries are all made in the original leaf and the totals entered in the two outer columns, the duplicate leaf is detached and handed to another clerk, whose duty it is to enter up the totals in the two outer columns of the duplicate leaf. The work of determining and entering the totals in the duplicate leaf is done without knowing what the totals are in the original leaf, and so the independent work of each clerk in entering up the totals on the original and duplicate leaves is made to check the work of the other.

In Fig. 16 the original and duplicate leaves 110 and 111, respectively, are folded together on the right along the score-line 112 and the duplicate leaf and the triplicate leaf 113 are folded together along the score-line 114, the entire margin 115 of the triplicate leaf and the entire margin of the duplicate leaf being folded back against the under side of the triplicate leaf along the line 116 on the left, which coincides with the left edge of the original leaf.

In Fig. 17 the original leaf 123 is connected with the triplicate leaf 129 on the line of fold 130 on the right and is connected with the duplicate leaf 124 on the left at the score-line 132, which comes directly beneath the left edge 127 of the triplicate leaf. The binding margin 126 of the duplicate and the binding margin 131 of the triplicate leaf are folded over along the line 125, which runs medially across these binding margins. The lower corner of this binding margin is shown in the drawings as turned back so as to expose the score-line 132. The duplicate leaf has a portion 128 folded back in the same way and for the same purpose as the portion 109 in Fig. 15. In this sheet all the matter written on the original leaf is duplicated on the third leaf 129; but only a portion of this matter is duplicated on the duplicate leaf.

Of course any of the sheets above described could be turned around, so as to bring what is now the right side at the left or what is now the top at the bottom.

What I claim as new, and desire to secure by Letters Patent, is—

1. A manifold-sheet having an original leaf and an underlying duplicate leaf connected at a score-line, the duplicate leaf having an

apertured binding margin which makes it of greater actual area than the original leaf, the duplicate leaf having its binding margin folded over whereby when the duplicate leaf is detached its margin may be unfolded for filing.

2. A manifold-sheet having an original leaf and an underlying duplicate leaf connected at a score-line, the duplicate leaf having an apertured binding margin which makes it of greater actual area than the original leaf, the duplicate leaf having its binding margin folded over along its middle whereby when the duplicate leaf is detached its margin may be unfolded for filing.

3. A manifold-sheet having an original leaf and a duplicate leaf connected together at a score-line, and folded together, the duplicate leaf having a binding margin by which it is connected to the original leaf, which makes it of greater actual area than the original leaf, the line of fold for the sheet running medially across the margin of the duplicate leaf, whereby when detached said margin of the duplicate leaf may be unfolded for filing.

4. A manifold-sheet having an original leaf and a duplicate leaf connected together at a score-line, and folded together, the duplicate leaf having an apertured binding margin by which it is connected to the original leaf, which makes it of greater actual area than the original leaf, the line of fold for the sheet running medially across the margin of the duplicate leaf, whereby when detached said margin of the duplicate leaf may be unfolded for filing.

5. A manifold-sheet having an original leaf and a duplicate leaf connected together at a score-line, and folded together, the duplicate leaf having an apertured binding margin, which makes it of greater actual area than the original leaf, the line of fold for the sheet running medially across the margin of the duplicate leaf and so that part of said binding margin lies in the plane of the original leaf and part in the plane of the duplicate leaf, whereby when detached said margin of the duplicate leaf may be unfolded for filing.

6. A manifold-sheet having an original leaf and a duplicate leaf connected together at a score-line, and folded together, the duplicate leaf having a binding margin by which it is connected to the original leaf, which makes it of greater actual area than the original leaf, the line of fold for the sheet running medially across the margin of the duplicate leaf, and so that part of said binding margin lies in the plane of the original leaf and part in the plane of the duplicate leaf, whereby when detached said margin of the duplicate leaf may be unfolded for filing.

7. A manifold-sheet having an original leaf and a duplicate leaf connected together at a score-line, and folded together, the duplicate leaf having an apertured binding margin by which it is connected to the original leaf, which makes it of greater actual area than the

original leaf, the line of fold for the sheet running medially across the margin of the duplicate leaf, and so that part of said binding margin lies in the plane of the original leaf and part in the plane of the duplicate leaf, whereby when detached said margin of the duplicate leaf may be unfolded for filing.

8. A manifold-sheet having an original leaf and a duplicate leaf connected at a score-line and folded together, the duplicate leaf having an apertured binding margin by which it is connected to the original leaf and which makes it of greater actual area than the original leaf, whereby when detached the duplicate leaf may be filed by means of its apertured margin, the manifold-sheet having also a third leaf folded under the other two leaves and which may be used as a triplicate leaf, or as an original leaf whose matter may be duplicated on the under side of the duplicate leaf.

9. A manifold-sheet having an original leaf and a duplicate leaf connected at a score-line and folded together, the duplicate leaf having an apertured binding margin by which it is connected to the original leaf and which makes it of greater actual area than the original leaf, whereby when detached the duplicate leaf may be filed by means of its apertured margin, one of the leaves being divided by a transverse score-line.

10. A manifold-sheet having an original leaf and a duplicate leaf connected together at a score-line, and folded together, the duplicate leaf having a binding margin by which it is connected to the original leaf, which makes it of greater actual area than the original leaf, the line of fold for the sheet running medially across the margin of the duplicate leaf, whereby when detached said margin of the duplicate leaf may be unfolded for filing, one of the leaves being divided by a transverse score-line.

11. A manifold-sheet having an original leaf and a duplicate leaf connected at a score-line and folded together, the line of fold for the sheet running medially across the margin of the duplicate leaf, the duplicate leaf having an apertured binding margin which makes it of greater actual area than the original leaf, whereby when detached the duplicate leaf may be filed by means of its apertured margin, the manifold-sheet having also a third leaf folded under the other two leaves and which may be used as a triplicate leaf, or as an original leaf whose matter may be duplicated on the under side of the duplicate leaf, one or more of the leaves being divided by a transverse score-line.

12. A manifold-sheet comprising two original leaves and a duplicate leaf, connected together at score-lines and folded together, the duplicate leaf being interposed between the two original leaves and having a binding margin by which it is connected to one of the original leaves, said binding margin being folded along its middle, and the duplicate leaf

being divided by a score-line so as to be separable into two parts each capable of being filed in a binder.

13. A manifold-sheet having an original leaf and an underlying duplicate leaf connected at a score-line, the duplicate leaf having an apertured binding margin which makes it of greater actual area than the original leaf, the duplicate leaf having its binding margin folded over whereby when the duplicate leaf is detached its margin may be unfolded for filing, the manifold-sheet having also a third leaf folded under the other two leaves, and which may be used as a triplicate leaf, or as an original leaf whose matter may be duplicated on the under side of the duplicate leaf.

14. A manifold-sheet having an original leaf and an underlying duplicate leaf connected at a score-line, the duplicate leaf having an apertured binding margin which makes it of greater actual area than the original leaf, the duplicate leaf having its binding-margin folded over along its middle whereby when the duplicate leaf is detached its margin may be unfolded for filing, the manifold-sheet having also a third leaf folded under the other two leaves, and which may be used as a triplicate leaf, or as an original leaf whose matter may be duplicated on the under side of the duplicate leaf.

15. A manifold-sheet having an original leaf and a duplicate leaf connected together at a score-line, and folded together, the duplicate leaf having a binding margin by which it is connected to the original leaf, which makes it of greater actual area than the original leaf, the line of fold for the sheet running medially across the margin of the duplicate leaf, whereby when detached said margin of the duplicate leaf may be unfolded for filing, the manifold-sheet having also a third leaf folded under the other two leaves, and which may be used as a triplicate leaf, or as an original leaf whose matter may be duplicated on the under side of the duplicate leaf.

16. A manifold-sheet having an original leaf and an underlying duplicate leaf connected at a score-line, the duplicate leaf having an apertured binding margin which makes it of greater actual area than the original leaf, the duplicate leaf having its binding margin folded over along its middle whereby when the duplicate leaf is detached its margin may be unfolded for filing, the manifold-sheet having also a third leaf folded under the other two leaves, and which may be used as a triplicate leaf, or as an original leaf whose matter may be duplicated on the under side of the duplicate leaf, one or more of said leaves being divided by transverse score-lines.

17. A manifold-sheet having an original leaf and a duplicate leaf connected together at a score-line, and folded together, the duplicate leaf having a binding margin by which it is connected to the original leaf, which

5 makes it of greater actual area than the original leaf, the line of fold for the sheet running medially across the margin of the duplicate leaf, whereby when detached said margin of the duplicate leaf may be unfolded for filing, the manifold-sheet having also a third leaf folded under the other two leaves, and which may be used as a triplicate leaf, or as an original leaf whose matter may be duplicated on the under side of the duplicate leaf,
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one or more of said leaves being divided by transverse score-lines.

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

ROBERT JAMES COPELAND.

Witnesses:

MAGGIE HALL,
CLIFFORD SPARLING.