No. 782,773. PATENTED FEB. 14, 1905.

T. W. C. BOHN.

LOOSE LEAF SYSTEM LEAF INSERTER.

APPLICATION FILED APR. 1, 1904.

3 SHEETS—SHEET 1.

Fig. 3.

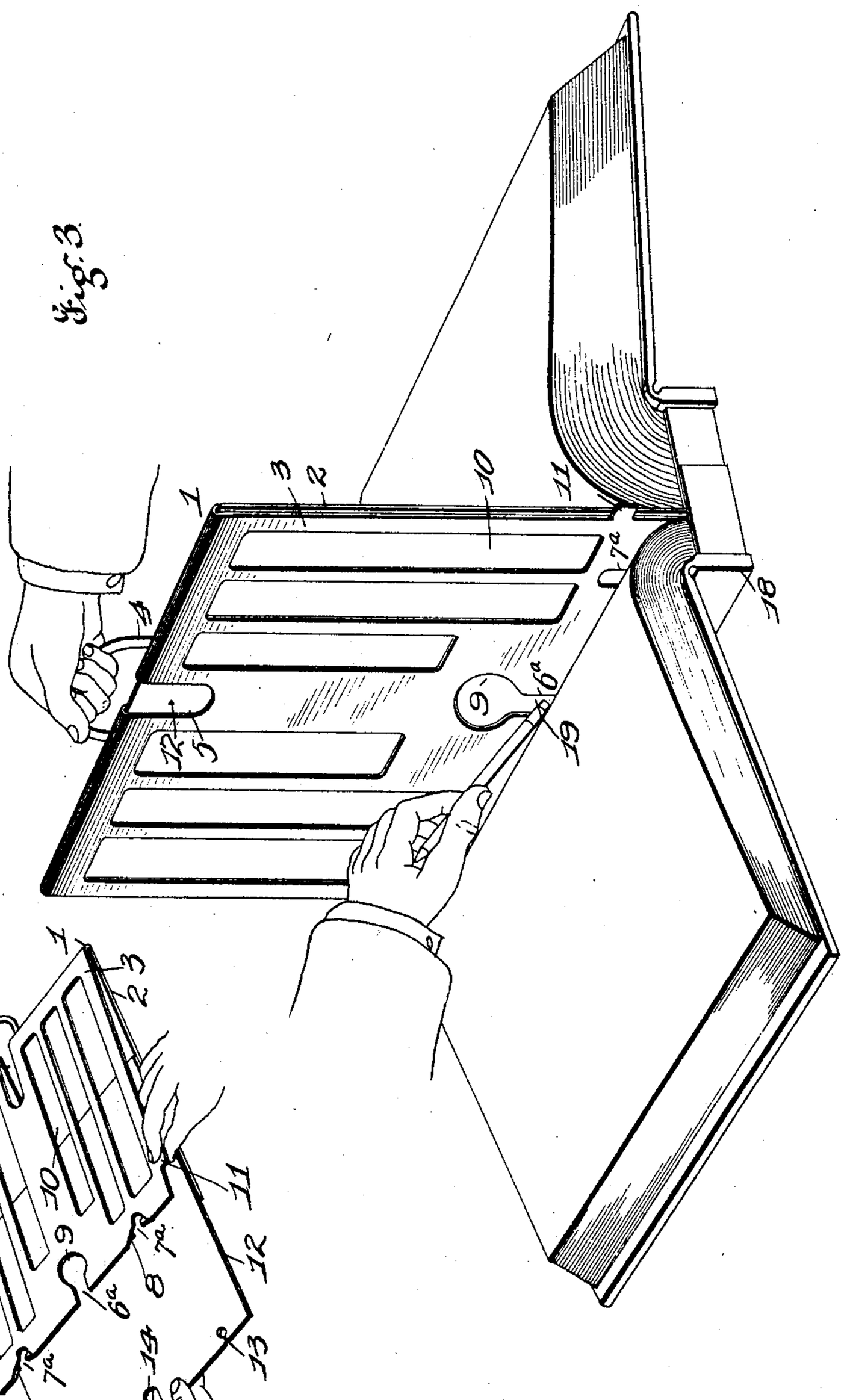

Fig. 1.

Witnesses
Alfred A. Ricks.
Edw. M. Harrington

Inventor
Theodore W. C. Bohn
by Higdon & Longan & Hopkins Attys

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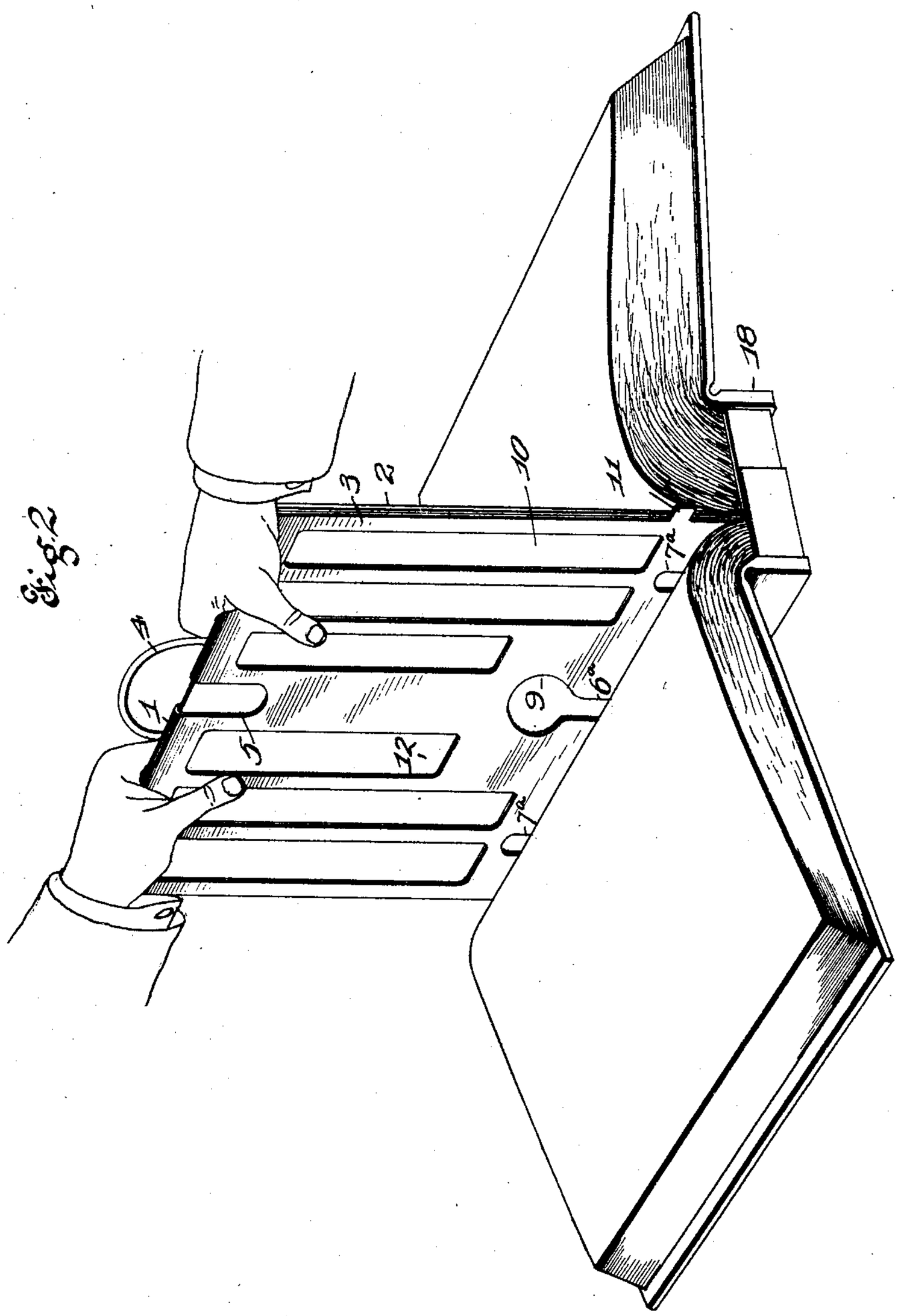
3 SHEETS—SHEET 2.

Fig. 2



Witnesses
Alfred A. Ecicks
Edw. M. Harrington

Inventor
Theodore W. C. Bohn
by Kidon & Longan & Hopkins Attys

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3 SHEETS—SHEET 3.

Fig. 4

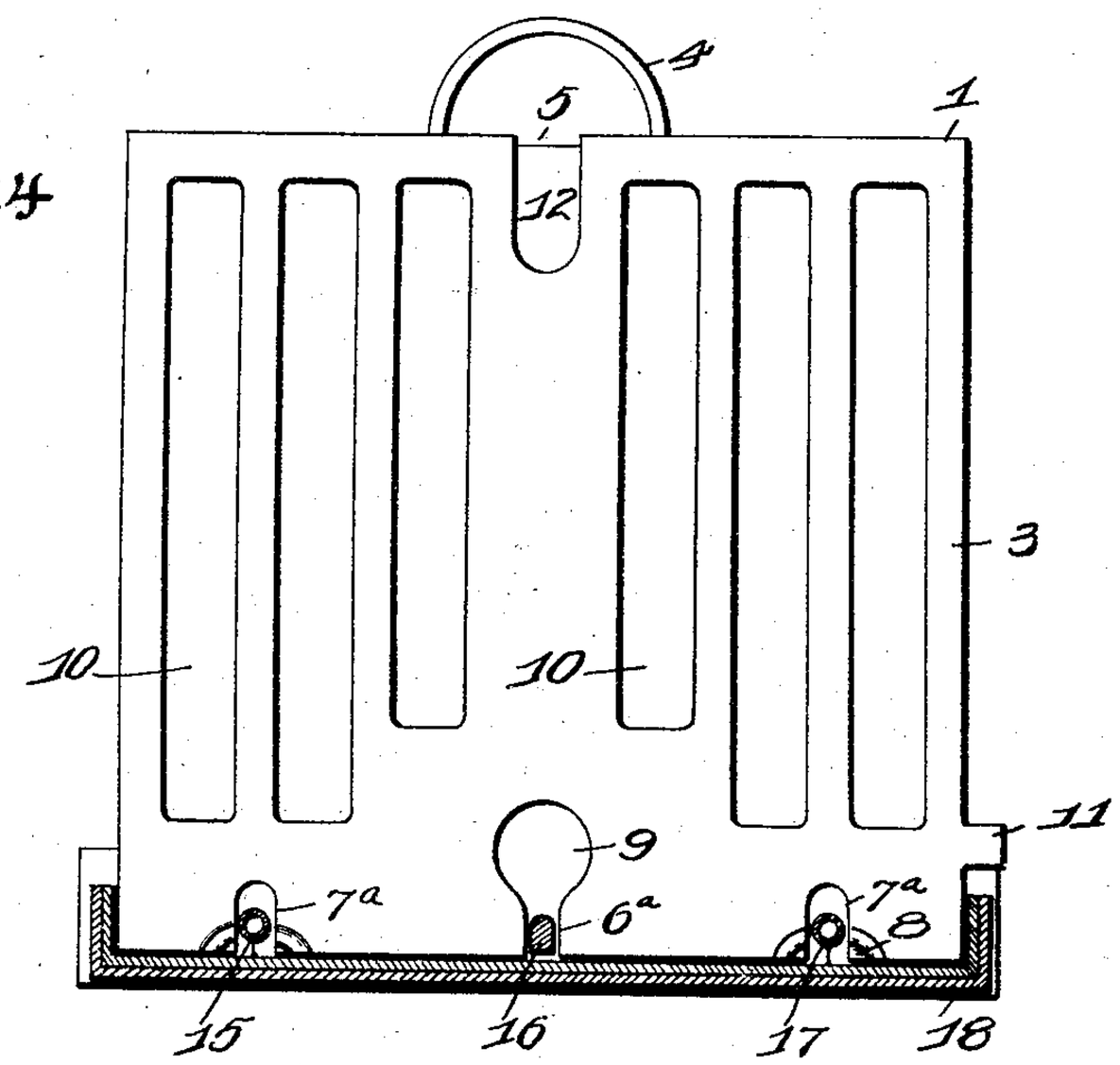


Fig. 5

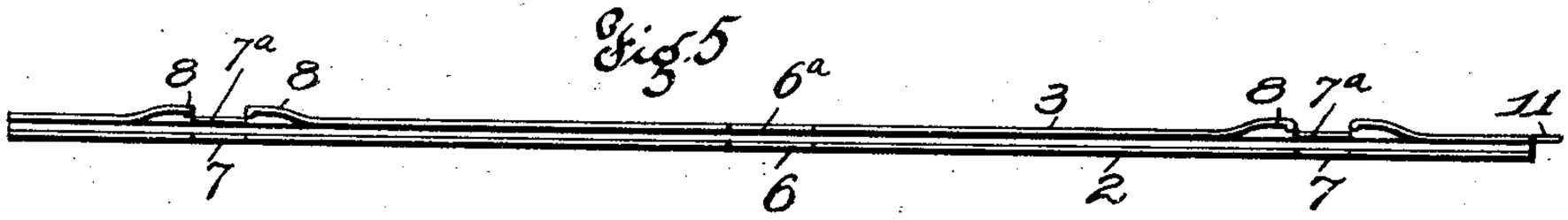
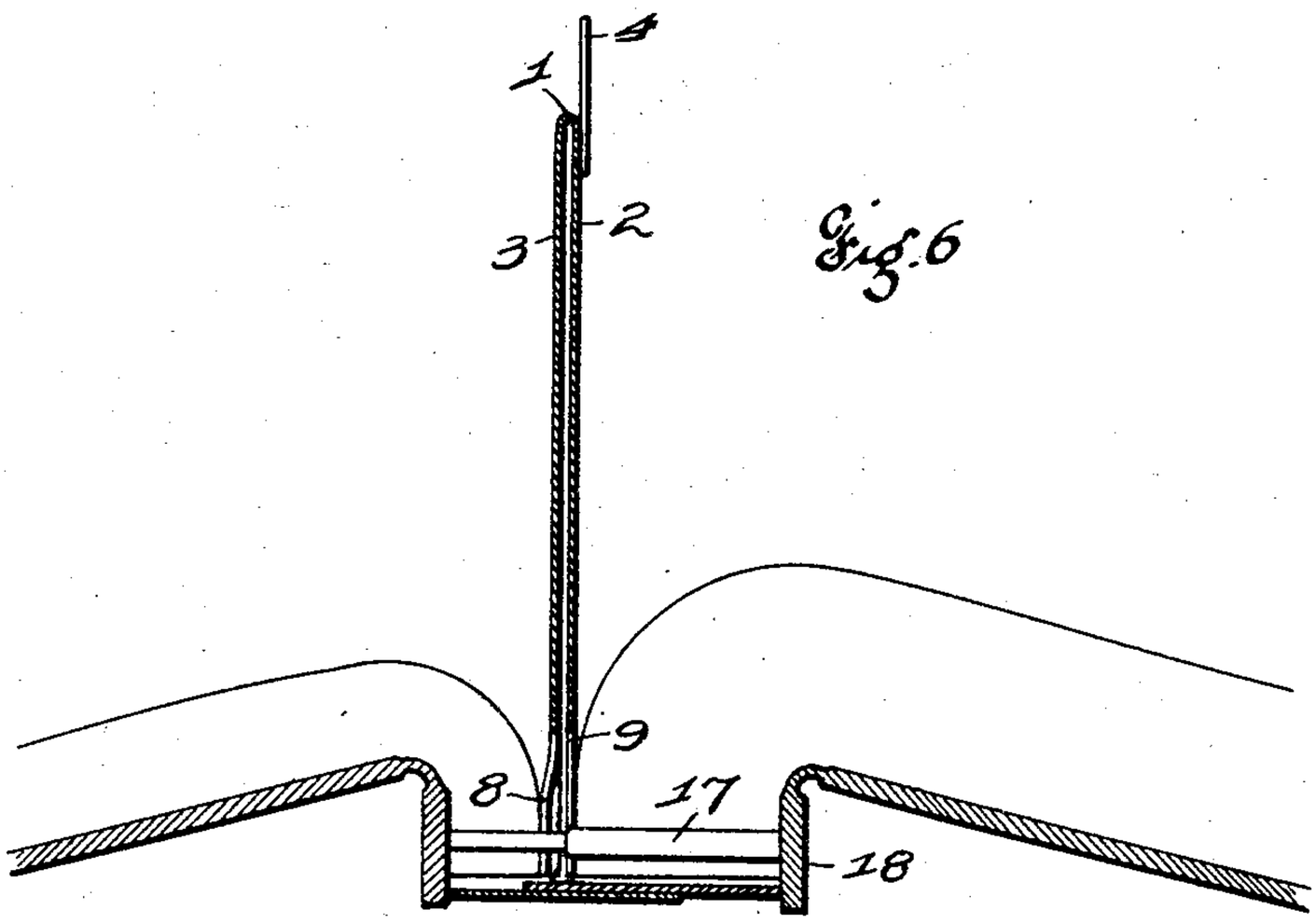


Fig. 6



Witnesses
Alfred A. Ecks
Edw. M. Harrington

Inventor
Theodore W. C. Bohn
by Kidgon & Dugan & Hopkins attys

No. 782,773. Patented February 14, 1905.

UNITED STATES PATENT OFFICE.

THEODORE W. C. BOHN, OF ST. LOUIS, MISSOURI.

LOOSE-LEAF-SYSTEM LEAF-INSERTER.

SPECIFICATION forming part of Letters Patent No. 782,773, dated February 14, 1905.

Application filed April 1, 1904. Serial No. 201,176.

To all whom it may concern:

Be it known that I, THEODORE W. C. BOHN, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Loose-Leaf-System Leaf-Inserters, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved loose-leaf-system leaf-inserter, and has for its object to provide means whereby leaves may be quickly and accurately inserted in loose-leaf binders.

In the drawings, Figure 1 is a perspective view of the device of my invention, showing a leaf being placed in position within the inserter. Fig. 2 is a perspective view of a loose-leaf binder partly filled, within which my inserter is being used to insert a sheet. Fig. 3 is a perspective view of the same, showing the leaf being held in position for the withdrawal of the inserter. Fig. 4 is a longitudinal sectional view of a binder, showing my inserter in position. Fig. 5 is a bottom view of my inserter. Fig. 6 is a transverse sectional view of the binder and my inserter, the inserter being in position to carry the leaf to its position for use.

As shown in the drawings, my invention consists of a reticulated sheet of suitable material folded upon itself at a point indicated by the numeral 1, the back of said sheet being indicated by the numeral 2 and the front by the numeral 3. Upon its upper edge the inserter is provided with a handle 4. The top of the inserter is cut away through both the sheets 2 and 3 to form the adjusting-opening 5. The lower edge of the sheet 2 is cut away to form the openings 6 and 7, while the lower edge of the sheet 3 is provided with corresponding openings 6^a and 7^a. The mouths of the openings 7^a are flared outwardly at the point indicated by the numeral 8. The openings 6 and 6^a are enlarged at their upper extremities to form the opening 9, which extends through both of the sheets 2 and 3.

The reticulations 10 are provided for the purpose of lightness and may be of any desired number, form, or shape which will not interfere with or obstruct the openings hereinbefore described.

The sheet 3 is provided with an outwardly-projecting lug 11, by which the sheet 3 is pulled away from the sheet 2 when desired for the purpose of introducing a loose leaf within the inserter, as shown in Fig. 1. The leaf 12 is thrust within the inserter until its outer edge contacts within the inner side of the top of the inserter. It is then necessary that the openings 13, with which such leaf is provided, shall be coincident with the openings 7 7^a of the inserter and that the opening 14 of the leaf shall be coincident with the opening 6 6^a of the inserter. To this end the operator will grasp the outer edge of the sheet 12, which is the upper edge, as shown in Fig. 4, by his thumb and forefinger within the opening 5, and by moving the leaf thus held in a lateral direction he will cause such coincidence to be made. When in this position, the inserter and its contained leaf are held as indicated in Fig. 2, and the inserter, carrying with it the leaf, is driven into the binder, as shown in perspective in Fig. 2, until its lower edges contact with the inner side of the back of the binder, as shown in section in Fig. 6. In the form of binder shown in the drawings there are three transverse rods 15, 16, and 17, with which the openings 13 and 14 of the leaf 12 are adapted to engage. When the inserter and the leaf carried by it are thrust in position, the operator will cause the openings in the leaf to correspond with the location of the said rods, so that when the inserter has been thrust to the position shown in the transverse section in Fig. 6 the rods 15, 16, and 17 will fit within the said openings 13 and 14. When the leaf 12 is thus fitted within the binder, (the binder being indicated in the drawings by the numeral 18,) the operator will hold the leaf 12 in place by pressing upon one side of it within one of the openings in the inserter, using for that purpose a rubber-tipped pencil or a similar article in the manner shown in Fig. 3, where the pencil is indicated and marked with the numeral 19.

The leaf being thus held in position within the binder, the inserter is removed by a pull upon the handle 4, as shown in Fig. 3.

By means of the device above described I attain several desirable results and overcome several defects which are now attendant upon the use of the loose-leaf system. Heretofore it has been necessary for the bookkeeper desiring to insert additional leaves within the loose-leaf binder to force the leaves apart by the pressure and introduction of the fingers between them, first pressing them apart at the bottom and then at the top of the binder, so as to provide an opening of from three-quarters to an inch upward, dependent upon the thickness of the operator's fingers. For this reason such binders have not in practice been loaded or charged with leaves to their full capacity. By the use of my inserter any of the binders now in use could be made to contain from ten per cent. to twenty per cent. additional of leaves of the same thickness as heretofore used, and practically the entire extensible capacity of the binder may be employed. Furthermore, leaves may be inserted in place in one-half or less of the time now required to make such insertion.

In that class of loose-leaf binders known as "post-binders" my inserter obviates the necessity, which frequently arises in practice, of removing from the post all the sheets upon the upper side of the point where it is desired to insert a new leaf. In addition to these advantageous results of my invention its use prevents the leaf from being soiled during the process of insertion by the hand of the operator, soiling having heretofore been unavoidable where the hands of the operator were moist with perspiration.

In addition to the results above mentioned the tearing of the leaves around or about the perforations is avoided. To the end of avoiding the tearing of such perforations I have found in practice that where perforations of the form indicated by the numeral 13 exist their mouths or tops are very apt to be torn in the process of insertion and will almost invariably be so torn unless room is allowed for the lateral movement of such mouths during the process of insertion. It is to accommodate such lateral movement of the mouths of said openings that I have provided the opening 7^a at the lower edge of sheet 3 of my invention with the outwardly-flaring mouths 8, the form of such mouths allowing the paper beneath them to bulge upwardly and permit the mouths of the openings 13 to slide in place around the rods 15 and 17.

The word "perforations" as used in this description is intended to embrace all of the openings which are customarily used in the leaves adapted for the use of loose-leaf binders, two of the most-used forms of such openings being illustrated in connection with the leaf 12 in the drawings.

Having thus described my invention, what I claim as new, and desire to have secured to me by the grant of Letters Patent, is—

1. The loose-leaf-system leaf-inserter, comprising two sheets adapted to receive the leaf to be inserted, the sheets being provided at their lower edges with openings corresponding to the perforations upon the inner edge of the leaf, substantially as described.

2. The loose-leaf-system leaf-inserter, consisting of a single sheet of metal folded upon itself and adapted to receive and contain a leaf having perforations, the outer edges of said sheet having openings to correspond with the perforations in the leaf, substantially as described.

3. The loose-leaf-system leaf-inserter, comprising two sheets of suitable material adapted to receive between them a perforated leaf, the sheets being perforated along one of their edges with openings corresponding with the perforations in the leaf, and provided with a suitable connection at one edge whereby the sheets are normally held together to retain the leaf between them, and means whereby the sheets may be separated to receive the leaf, substantially as described.

4. The loose-leaf-system leaf-inserter, comprising two sheets of suitable material adapted to receive and hold between them a perforated leaf, the sheets being provided with openings corresponding with the perforations in the leaf and the mouths of said openings in one of said sheets being flared, substantially as described.

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

THEODORE W. C. BOHN.

Witnesses:
ALFRED A. EICKS,
F. C. CRISLER.