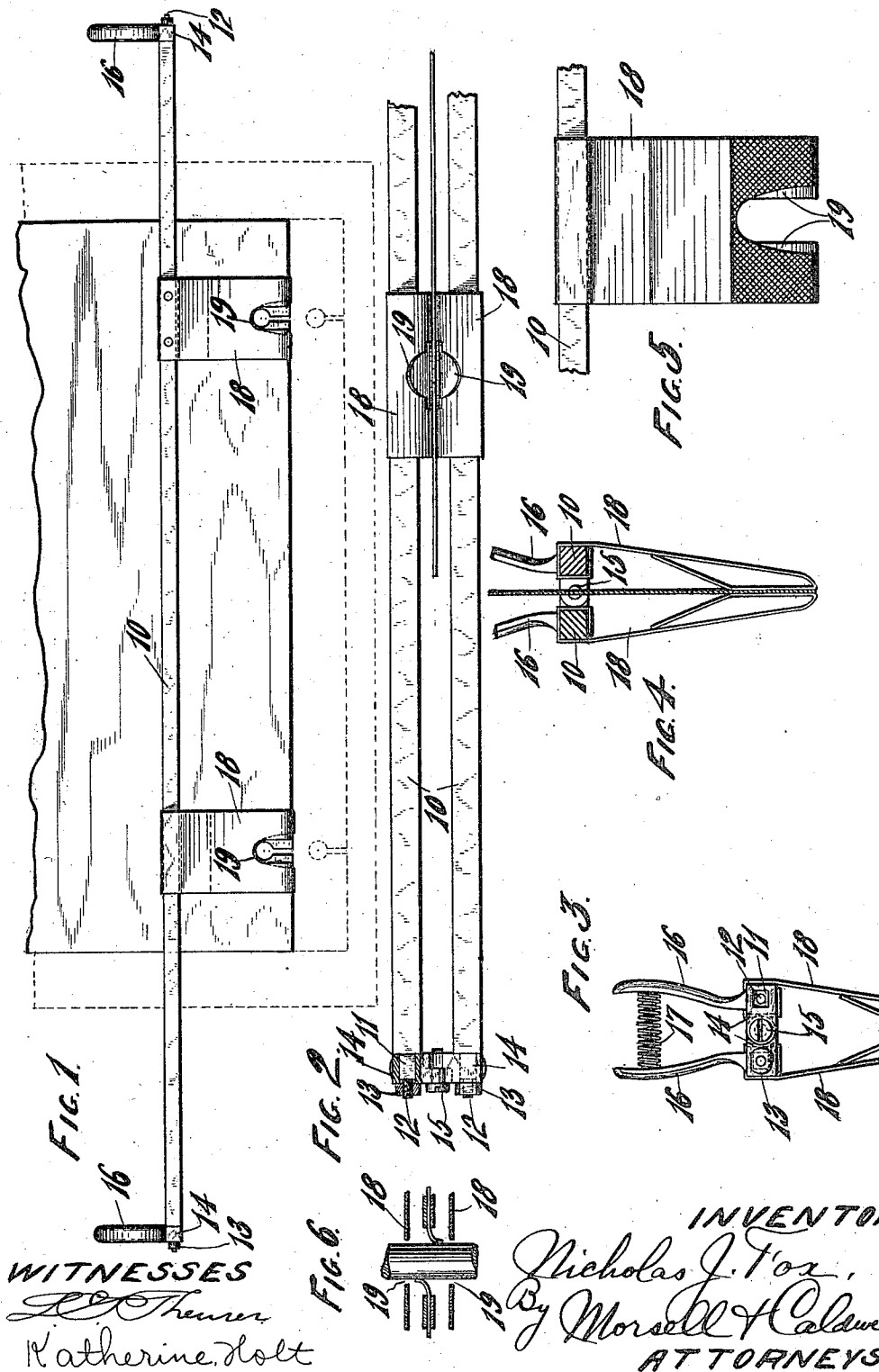


N. J. FOX.
 LOOSE LEAF INSERTER.
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Patented Apr. 29, 1913.



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LOOSE-LEAF INSERTER.

1,060,074.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, NICHOLAS J. FOX, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Loose-Leaf Inserters, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to means for inserting leaves in loose leaf binders and has for its object to facilitate the placing of one or more leaves at the desired location in a loose leaf book without disturbing the other leaves in the book.

In working with large loose leaf ledgers and the like considerable difficulty is met with in inserting new leaves owing to the fact that the leaves have to be inserted with their split perforated edges foremost, and these edges are liable to have the corners formed by the binder slots turned back on passing the binder posts. When the corners are thus turned back the leaf is not properly bound and may become loose so that it is important that they should be protected while inserting the leaf and the present invention is designed for this purpose.

With the above and other objects in view the invention consists in the loose leaf inserter as herein claimed and all equivalents.

Referring to the accompanying drawings in which like characters of reference indicate the same parts in the different views, Figure 1 is a plan view of a loose leaf inserter of this invention with the leaf held in position therein for insertion in a loose leaf book shown in dotted lines; Fig. 2 is a plan view of one end of the loose leaf inserter; Fig. 3 is an end view thereof; Fig. 4 is a transverse sectional view thereof; Fig. 5 is a detail view of one of the clamping members showing the inner face thereof; and, Fig. 6 is a detail sectional view showing the action of the edges of the binder slot of the leaves in passing over the binder posts.

In these drawings 10 indicates a pair of parallel rods which are preferably angular in cross section as shown and these rods are hinged together in any desirable manner at their ends. As shown the rods are reduced in size at their ends to form shouldered studs 11 square in cross section with threaded extensions 12 on which nuts 13 are turned to clamp a pair of connecting members 14

thereon. These connecting members are pivotally connected together by a screw 15 and each has a handle member 16 projecting therefrom with a coil spring 17 between the handles of the two connecting members at each end of the device. Jaw members 18 are mounted on the rods and preferably consist of strips of sheet metal each bent around one of the rods and then turned back on itself at an angle that will cause the two turned back portions of complementary jaw members to lie in parallel planes when in engagement with each other, which is their normal condition under the action of the spring 17. After forming the contacting surfaces the ends of the metal strips are bent to bear against the main portion of the strip and thus brace the bearing portion thereof. The bearing portions of the jaw members 18 have roughened bearing surfaces to enable them to firmly clasp the edge of a sheet of paper between them. The jaw members at their ends are pointed and somewhat rounded to enable them to form a wedge-like structure which will easily enter between the leaves of a book and each has a slot or opening 19 at its end to correspond with the binder slot and opening of the leaf of the book as shown in Fig. 1. The inner surface of each jaw member has the slot 19 wider than it is in the outer surface so as to permit the paper to freely bend as it passes the binder posts and thus avoid a sharp bend which would be liable to permanently crease the paper and interfere with the proper binding of the sheet. The parallel sides of the slot 19 in the outer surface of the jaw members forms a guide for the passage of the binder post, keeping it away from the edges of the engaging faces of the jaw members as shown in Fig. 6.

One set of jaw members is preferably fixed in position on the rods 10 by riveting them thereto while the other set or sets are slidably mounted on the rods to be adjustable for leaves of different sizes or leaves having a different spacing between the binder openings thereof. By removing the connecting members at one end of the rods the jaw members will be slipped on or off thereof to adapt the device for the requirements of the particular book to be dealt with.

In operation it is only necessary to press the handles 16 together at either end of the device while the leaf to be inserted in the

book is placed between the jaw members as shown in Fig. 1 and then by releasing the handles the spring action of the device causes the leaf to be securely clamped between the jaw members, the binder openings of the leaf registering with the notches of the jaw members. Now, the loose leaf inserter may be passed between the leaves of a loose leaf book at the point at which the leaf is desired to be inserted and with the binding posts loosened the inserter can be pressed rearwardly until the binder posts pass into the notches of the jaw members and through the slots of the binder openings of the leaf. In the passage of the posts between the slots of the binder openings the edges of slots are free to turn in either direction without producing a sharp bend in the paper that would be likely to produce a permanent fold and as soon as the post reaches the enlarged part of the binder opening the edges of the slots spring back to their normal position in the plane of the loose leaf to bind the leaf in place on the posts. Now, the inserter may have the handles pressed together to relieve its engagement with the leaf and it may then be withdrawn from the book leaving the leaf in place to form a part of the book when the binder posts are again tightened.

By means of this invention the leaf may be inserted without injury to it or to the other leaves in the book and the operation may be quickly and easily performed and this even when the book has nearly reached its full capacity, for a very slight extension of the binder is sufficient to permit of the insertion of a new leaf.

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

1. A loose leaf inserter, comprising a pair of parallel rods hinged together, a pair of notched jaw members on said rods, a pair of notched jaw members slidably mounted on said rods, and means for turning the rods to cause the pairs of jaw members to clasp a loose leaf between them at the locking openings thereof, the adjustment of one pair of members adapting the inserter for use with loose leaves with different distances between their locking openings.

2. A loose leaf inserter, comprising a pair of rods hinged together, handles on the rods, springs forcing the handles apart, jaw members on the rods, and jaw members slidably on the rods but keyed thereto, said

jaw members being notched to engage a loose leaf at each side of the locking openings thereof and the adjustment of the jaws adapting them for use with leaves with different distances between the locking openings.

3. A loose leaf inserter, comprising a pair of rods square in cross section and hinged together in parallel relation to each other, handles on the rods, springs for turning the rods, jaw members on the rods and other jaw members slidable on the rods, said jaw members comprising strips of sheet metal bent around the rods at their upper ends and bent back upon themselves at their lower ends and having notches in their bent lower portions to receive the binder posts, the inner portion of each jaw member having the notch formed therein wider than the notch in the outer portion of the jaw member whereby the corners of the loose leaf at the slots of the locking openings thereof are free to turn to avoid the binder posts.

4. A jaw member for loose leaf inserters, comprising a strip of sheet metal bent to form a wedge provided with a notch in its bent portion, the walls of the notch in the outer portion of the jaw member being narrower than the walls of the notch in the inner portion thereof to form a guide for the binder post to prevent the binder post creasing the edge of the loose leaf at the slots of the locking openings thereof.

5. A loose leaf inserter, comprising a pair of rods pivotally connected together in parallel relation to each other, handles on the rods, springs for turning the rods on their pivotal connection, jaw members mounted on the rods, said jaw members comprising strips of sheet metal bent back at their outer ends to form flattened loops, and having notches in their bent portions to receive the binder posts, the inner portion of each jaw member having the notches formed therein wider than the notches in the outer portions of the jaw member whereby the corners of the loose leaves at the slots of the locking openings thereof are free to turn to avoid the binder posts.

In testimony whereof, I affix my signature, in presence of two witnesses.

NICHOLAS J. FOX.

Witnesses:

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KATHERINE HOLT.