

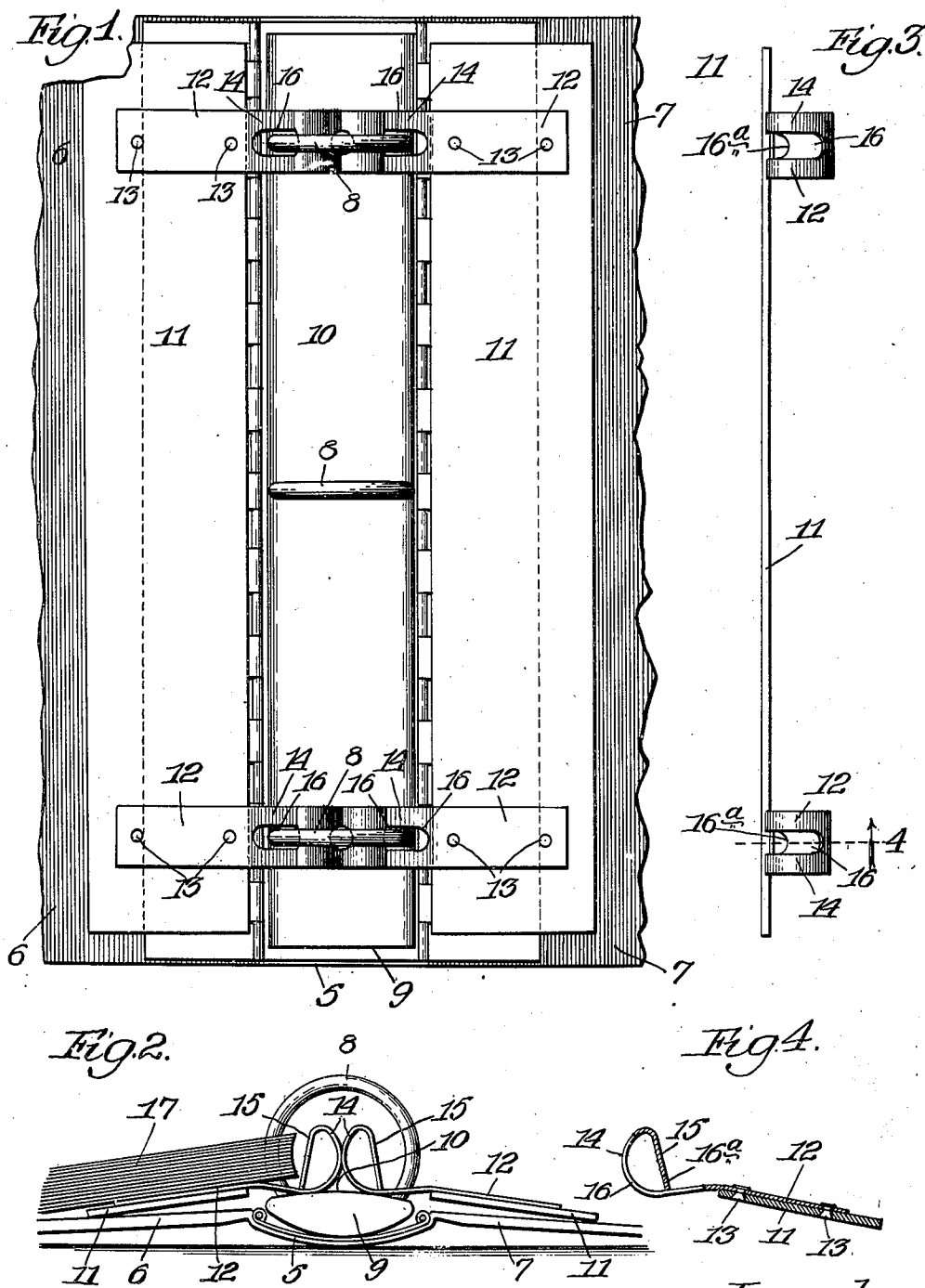
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SHEET LIFTING DEVICE FOR A LOOSE LEAF BINDER

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SHEET-LIFTING DEVICE FOR LOOSE-LEAF BINDERS

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5 Claims. (Cl. 129—4)

This invention relates to attachments for loose-leaf binders, and more particularly to devices adapted to be supported solely by the rings of a binder to lift the leaves or sheets around the lower portion of the rings when the covers of the binder are turned to closed position.

The primary object of the invention is to provide a simple, inexpensive, and readily detachable device for a ring binder which will automatically prevent the sheets from being bound and perhaps torn by the lower portion of the rings when the binder covers are turned from opened to closed position.

A further object of the invention is to provide a pair of attachments which, although they are separate members, will be mounted in opposed relation on the rings of the binder in such a way that they will cooperate in rolling against each other in lifting the sheets to the desired closed position.

The invention is illustrated in a preferred embodiment, in the accompanying drawing, in which—

Figure 1 is a fragmentary plan view of an open loose-leaf ring binder to which a pair of sheet-lifting devices has been attached; Figure 2, a fragmentary end elevational view of the same; Figure 3, a side elevational view of one of the sheet-lifting devices; and Figure 4, a sectional view, taken as indicated at line 4 of Figure 3.

In the embodiment illustrated, the conventional loose-leaf ring binder is shown having a back 5 to which is hinged cover members 6 and 7. Conventional split rings 8, which are generally made up of semi-circular parts, are secured within a member 9 which permits them to be opened to attach leaves or sheets. While the rings shown are circular, the invention is adapted to other shapes. The mechanism 9 has a shield plate 10 which covers the ring operating mechanism.

A pair of sheet-lifting attachments are installed on the rings in opposed relation, as shown in Figures 1 and 2 and comprise a longitudinal strip 11 of relatively stiff material such as metal, a plastic, or fiber board, and each strip is provided with a pair of inwardly extending supports 12 which may be rigidly secured in position by means of rivets 13 or the like.

The supports 12 are preferably made of sheet metal and, as best shown in Figures 2 and 4, have their inner end portion curled backwardly to form a rocker portion 14 and terminating in a relatively flat abutment 15 which is in a plane

substantially perpendicular to the body of the support.

Each of the supports is provided with a longitudinal slot 16 which extends from the strip 11 substantially around the rocker 14. The slots receive the rings between the end of the abutment 15 and the strip 11, forming a lost-motion connection. The extreme inner end of the abutment 15 is provided with a small semi-circular notch 16a which is adapted to bear against a ring 8, and the slot in the rocker 14 provides additional clearance for the rings when the binder is in closed position.

It may be noted in Figure 2 that the rocker portions of the opposed supports may bear against each other when the covers are being raised to closed position. The same rocker is also rolled against the shield plate 10 as the covers approach closed position. The inner edges of the sheets or leaves 17 rest against the flat abutments 15 and are thus carried neatly into their closed position without danger of tearing the perforations on the rings.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom for some modifications will be obvious to those skilled in the art.

I claim:

1. A sheet-lifting device for use in a loose-leaf ring binder, comprising: a longitudinal strip of thin stiff material adapted to lie between the leaves and one cover of the binder, said strip having a pair of inwardly extending supports and each of said supports being slotted longitudinally to make a lost-motion connection with one of the rings, the inner end of said support being curled back on itself within the ring on a large radius to provide an abutment for the inner end of the leaves when the binder is closed.

2. A device as specified in claim 1 in which the inner end of the support is notched to receive the ring and the abutment portion is in a plane disposed substantially perpendicular to the main body portion of the support.

3. A device as specified in claim 1, in which the curled portion of the support is rounded to form a rocker adapted to rock slidably on the shield plate of the binder within the ring when the cover is being closed.

4. In a loose-leaf ring binder, a pair of sheet-lifting devices comprising: a pair of separate strips of rigid material having inwardly extending narrow supports which are slotted to receive and make lost-motion connections with the rings

of the binder, the inner ends of said supports being curled back within the rings to form loop-shaped rockers, said rockers of one strip being adapted to roll against the rockers of the opposed strip and slide on the shield plate of the binder as the covers of the binder are turned to closed position.

5. In a loose-leaf ring binder, a pair of sheet-lifting devices comprising: a pair of separate

strips of rigid material having inwardly extending narrow metal supports, said supports making lost-motion connections with the binder-rings and having their inner ends turned back to form loops within the rings of the binder and provide abutments for leaves impaled by said rings.

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