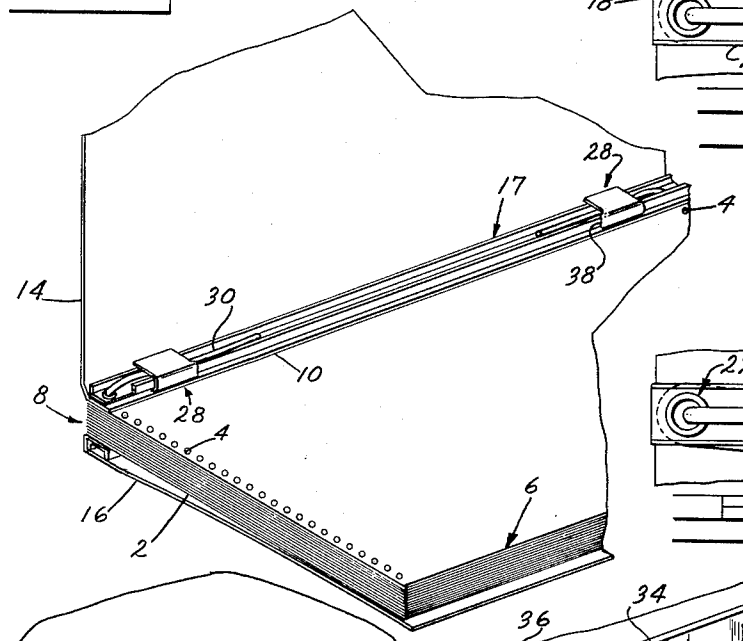
Feb. 18, 1964 F. S. SCHADE 3,121,432

EXPANDABLE LOOSE LEAF POST BINDER

Filed Nov. 29, 1962

Fig. 1.



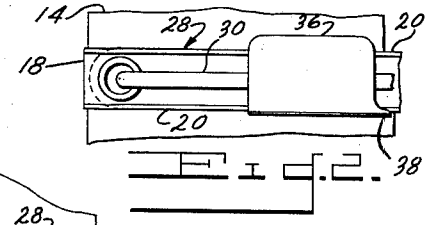


Fig. 2.

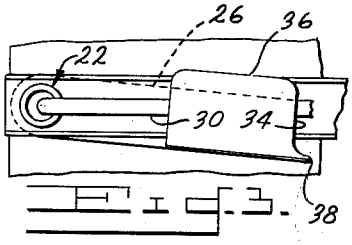


Fig. 3.

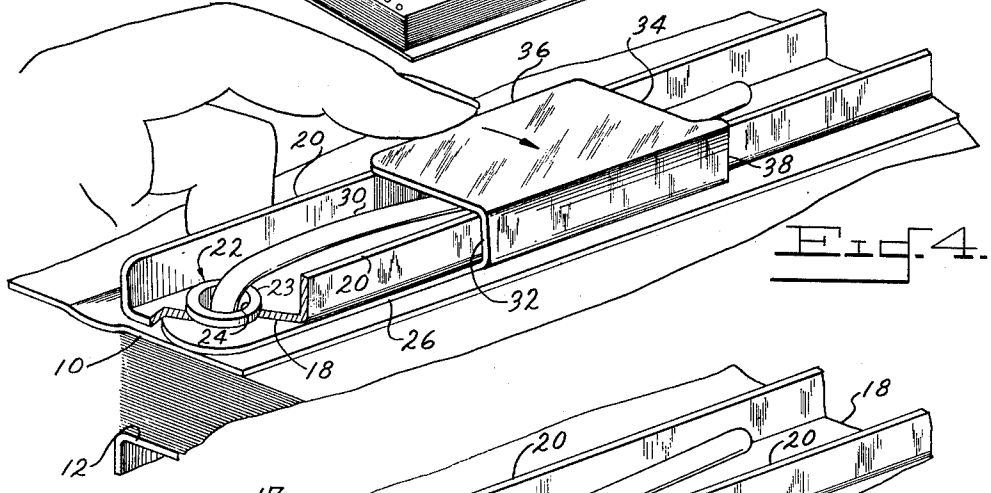


Fig. 4.

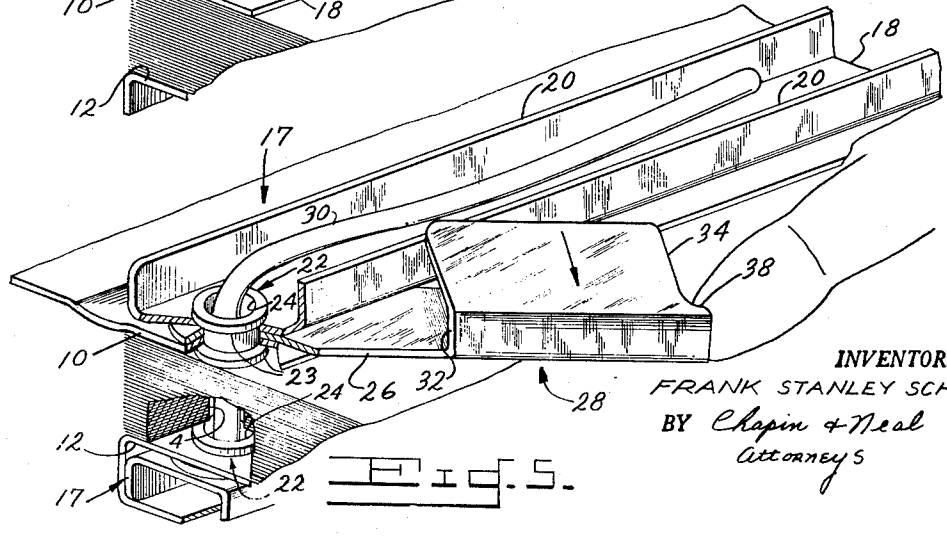


Fig. 5.

INVENTOR.
FRANK STANLEY SCHADE
BY Chapin & Neal
Attorneys

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EXPANDABLE LOOSE LEAF POST BINDER

Frank Stanley Schade, Holyoke, Mass., assignor to National Blank Book Company, Holyoke, Mass., a corporation of Massachusetts

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1 Claim. (Cl. 129—41)

This invention relates to expandable post binders for loose sheets and in particular to a binder mechanism of the type in which stiffly flexible post elements such as wire or plastic rods are employed for securing a large filler pack of sheets between the covers of a binder.

The invention is more specifically directed to an improved post binder assembly particularly adapted to hold business record sheets of the type having closely spaced perforations along the marginal side portions thereof, such marginal perforations being provided for tracking the sheets through business record-keeping machines. Sheets of this type are commonly sections of a long strip of paper which is folded and arranged in "fan-fold" fashion, the marginal perforations enabling a continuous strip operation of the business machine. A pack of such sheets, when removed from the machine, is desirably stored in a binder having a relatively large capacity. In most cases such business records are kept for occasional reference only and are destroyed when obsolete. Accordingly, it is of advantage to have an inexpensive, easily manageable yet sturdy binder, capable of expansion to a relatively large size on the order of four to six inches in thickness. The object of this invention is to provide a binder with these characteristics which is simple and sure in operation both from the standpoint of building up the contents thereof and of carrying large capacities in a secure manner.

The nature of the invention and various objects and advantages will be apparent from the following description of an embodiment thereof as shown by the accompanying drawings, in which:

FIG. 1 is a perspective view with portions cutaway of a binder embodying the invention, the top cover being raised;

FIGS. 2 and 3 are fregmentary plan views of the post retaining mechanism to illustrate the operation thereof in the assembly shown by FIG. 1; and

FIGS. 4 and 5 are fragmentary perspective views on an enlarged scale, with parts in section, of the mechanism shown by FIGS. 2 and 3 and illustrating details of construction as well as operation.

In the drawings the binder is shown by FIG. 1 with a pack of filler sheets **2** having closely spaced perforations **4** arranged along the lateral side margins of the sheets. The sheets as above noted comprise one or more series of "fan-fold" sheets, each series having been placed in the binder, as desired, after being run through a business machine in a continuous strip operation. The perforations **4** conventionally "track" the sheets through a machine and the folded ends would be located at **6** and **8** in the binder assembly. As will be appreciated the binder would, of course, also be suitable for appropriately punched single sheets.

The binder assembly includes a front marginal binding portion **10** and a back marginal portion **12** to which the front and back covers **14** and **16** are respectively hingedly related as shown.

As best seen by FIG. 1 and FIG. 5 each marginal binding portion **10** and **12** is provided with a channel member fastened thereto, each such member being generally designated by numeral **17**. Preferably, the channel member at the front is identical with that of the rear cover. Accordingly, the description of the front or top channel will apply equally to the rear channel in the assembly shown. It will be appreciated, however, that either the front or

back marginal portion may have a different post holding arrangement so long as the posts, as will be later described, extend therefrom through the perforations of the sheets into the channel assembly which will now be described.

Channel **17** is a shallow U-shaped member having a base **18** and upstanding side walls **20**. The covers and integral marginal binding portions are desirably formed of thin stiffly flexible cardboard or like material and the channel member of metal. Thus the metal of the channels acts as a stury reinforcement of the binding margins to securely hold between them the edges of the sheets of a relatively large filler pack. With the inflexible metal channels at the binding edge the covers may be of neat appearing relatively thin inexpensive material.

Adjacent each extreme end of the marginal binding portion **10** the channel base **18** is fixed thereto by a grommet-type fastener at **22**. The fastener **22**, best shown by FIGS. 4 and 5, is formed with upper and lower collared ends **23** fastening the base and binding portion together. A post hole opening **24** is shown through the fastener and an arm **26** of a post retaining member **28** is pivotally mounted between the base **18** and portion **10**.

The post hole openings **24** of the fasteners are registrable with each other and with the perforations in the edges of the sheet pack **2** and are adapted to receive stiffly flexible post members **30** passing through the perforations of the sheets as shown. The post members **30** are of any desirable length. As shown, the end portions extend beyond the fasteners and may be turned into the channel member to be retained by the pivoted latching or retaining members **28**.

Each retaining member **28** is rotatably mounted on fastener **22** by the arm **26** pivotally engaging the same. Arm **26** is frictionally movable between portion **10** and base **10** and base **18** for swinging between a releasing and a retaining position. As best shown by FIGS. 4 and 5, the arm **26** comprises a flat plate at the side edge of which an upstanding wall portion **32** extends upwardly with a retainer plate portion **34** extending from portion **32**. Member **28** is preferably integrally bent from a single metal piece, the plate portion **34** lying in a plane parallel to and overlying the plane of the channel base.

Retainer member **28** is swingable from the holding position (FIGS. 2 and 4) to the releasing position (FIG. 5). In the holding position the plate **34** bridges the channel side walls **20** inwardly adjacent the fastener and overlies the base. The upstanding wall **32** is nested against the adjacent channel wall **20**. In this position the wire or cable constituting post **30** is held in flexed position in the channel underneath plate **34** and is sufficiently sprung to resist any frictional movement in fastener openings **24**.

It will be noted that the free edge of the plate **34** as at **36** extends beyond the opposite channel wall **20** (FIGS. 2 and 4). Thus, finger pressure against the edge **36** will be effective to shift the member **28** slightly and provide finger tip engagement at the outer end of wall **32** (FIGS. 3 and 5). Member **28** can then be conveniently swung to its releasing position. It will be noted that wall **32** at its outer end extends beyond the adjacent edges of arm **26** and plates **34** and provides a lip **38** by which finger engagement can readily swing the member (FIGS. 3 and 5).

Post members **30** as described are stiffly flexible and may conveniently be made of a plastic covered wire cable or monofilament nylon strip material, for example. Being of strong resilient material it may be bent sharply while retaining its resiliency and ability to return to straight form after long continued use. It will be seen that the posts may be as long as desired. When the binder is empty or contains a relatively thin pack, the long end portions may be effectively concealed and retained in the channel along the binding section of the assembly. The retainer plates **34** are located inwardly adjacent the post

openings so as to create a sharp bend in the material of the post and thus hold the posts securely in the assembly.

Having thus described the invention, what is claimed as novel and desired to be secured by Letters Patent of the United States is:

An expandable post binder for loose sheets having perforated marginal edge portions, said binder having front and back marginal binding portions and covers hingedly related to said portions, at least one binding portion having a U-shaped channel member with a base and upstanding side walls, a grommet-type fastener adjacent each end of the base securing said channel member to said binding portion, each fastener having a post hole opening therethrough and said openings being registrable with perforations in the edges of said sheets, stiffly flexible post members secured to the other of said binding portions and passing through said perforations and having the end portions thereof extending through and beyond said post openings for flexing said end portions between said channel member side walls, and a post retaining member having an arm pivotally mounted on each grommet-type fastener under said channel member and between the channel member and said one marginal binding portion, the said arm outwardly of the fastener having an upstanding wall portion and a retainer plate portion extending from the wall portion in a plane parallel to the channel member base, said wall portion extending outwardly beyond the edges of the arm and plate and forming a finger engaging lip, said retaining member being swingable to and from a retaining position in which said retainer plate portion bridges the sides of the channel member for holding the end of a post member in the channel, said retaining member in said retaining position lying with the wall portion thereof nested flatly against a side wall of the channel member and the free edge of the retainer plate portion at the opposite side beyond the upper edge of the opposite channel side wall, whereby said free edge of the plate may be manually shifted to move said upstanding wall portion away from its said nested position and said lip is accessible for finger engagement to swing said member away from said retaining position.

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