

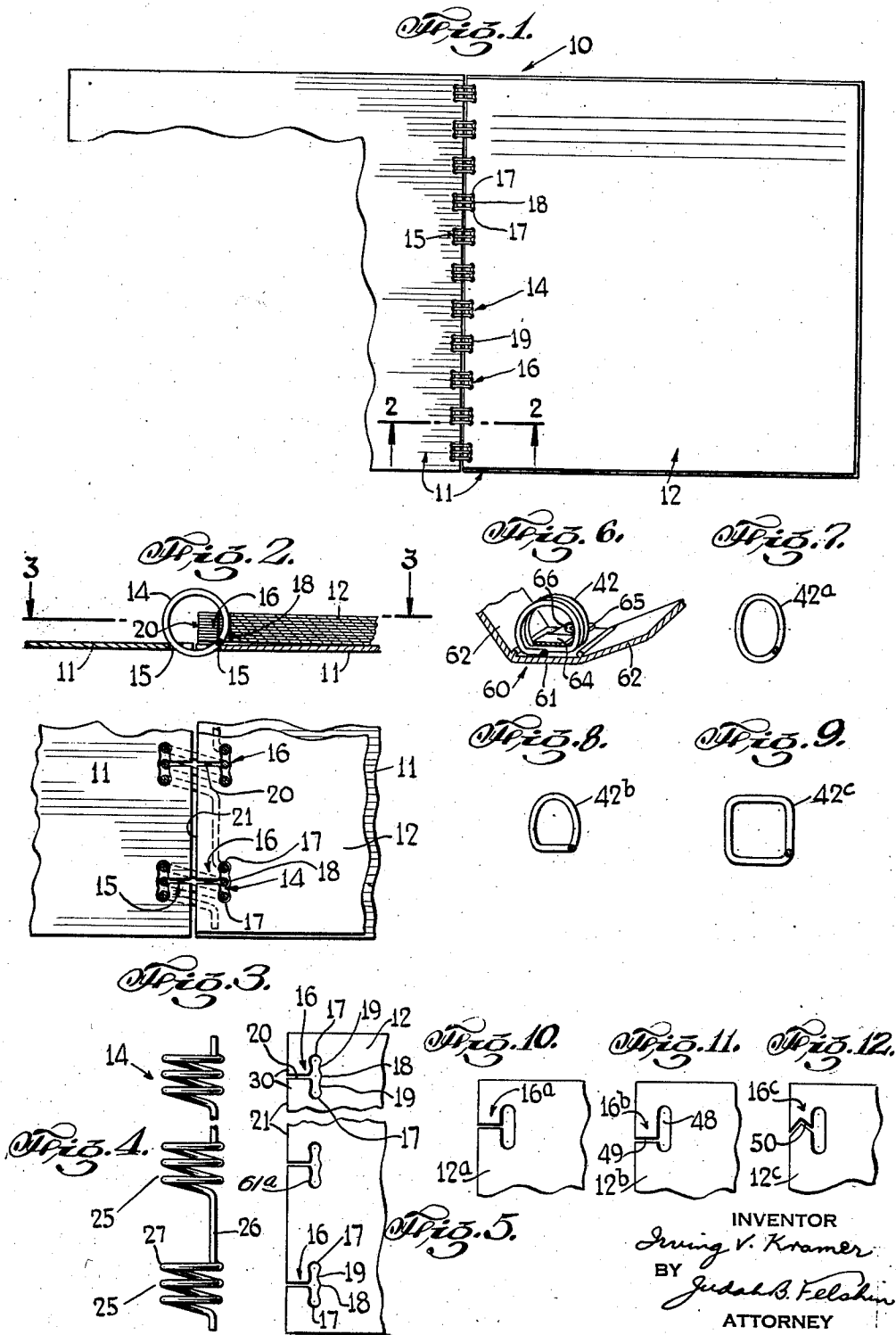
April 11, 1939.

I. V. KRAMER

2,153,575.

BOOK WITH EXCHANGEABLE LEAVES AND BINDING ELEMENT THEREFOR

Filed May 9, 1935



UNITED STATES PATENT OFFICE

2,153,575

BOOK WITH EXCHANGEABLE LEAVES AND
BINDING ELEMENT THEREFORIrving V. Kramer, Bronx, N. Y., assignor, by
mesne assignments, to Fay Kramer, New
York, N. Y.

Application May 9, 1935, Serial No. 20,543

10 Claims. (Cl. 129—18)

This invention relates to books with exchangeable leaves and binding elements therefor.

An object of this invention is to provide a book of the character described composed of leaves having T-shaped slots at the binding edge and a unitary binding element onto which the leaves are jammed, having portions received in the heads of the slots for retaining the leaves in position.

A further object of this invention is to provide in a looseleaf book of the character described a binding element having a plurality of spaced interconnected coils adapted to be received in each slot of the stacked leaves.

A still further object of this invention is to provide a highly improved looseleaf book of the character described which shall comprise comparatively few and simple parts, be relatively inexpensive to manufacture, simple to assemble, and withal practical and efficient to a high degree.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

In the accompanying drawing, in which is shown various possible embodiments of this invention,

Fig. 1 is a top plan view of a looseleaf book embodying the invention with the cover open;

Fig. 2 is a cross-sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a cross-sectional view taken on line 3—3 of Fig. 2;

Fig. 4 is a side elevational view of the binding element shown in Fig. 1;

Fig. 5 is a partial plan view of an edge of one of the sheets illustrating the slots which receive the binding element;

Figs. 6, 7, 8, and 9 illustrate binding elements having coils of different peripheral shape; and

Figs. 10, 11 and 12 illustrate modified forms of slots for the leaves of the book.

Referring now in detail to the drawing, 10 designates a looseleaf book embodying the invention comprising a pair of cover members 11, a plurality of loose leaves 12 between the covers, and a binding element 14 for attaching together the adjacent edges of the cover 11 and the leaves 12. The adjacent edges of the covers 11 are formed with a plurality of spaced T-shaped slots 15. The leaves 12 are also formed adjacent the inner edges thereof with spaced T-shaped slots

16 registering with slots 15. The slots 16 have head portions 16a positioned laterally of the edge of the sheet and portions 20 extending from said portions 16a to said edge. The portions 16a of the slots are preferably rounded at the ends, as at 17, and at the middle, as at 18, and narrower, as at 19, between said portions 17 and 18. The leg portion 20 of the slot may be narrower than the head portion thereof.

The binding element 14 may be made of a single piece of resilient round wire stock and comprises a plurality of coil portions 25 interconnected by longitudinal portions 26. Each coil portion 25 may comprise a plurality of helical convolutions 27 out of contact with one another. For the purpose of illustration only, the drawing shows three convolutions although said coils may have any suitable number of convolutions. The coil portions 25 pass through the slot portions 20 of the slots 16 and into the head portions 16a of said slots. The outer convolutions 27 of each coil portions 25 are received within the end portions 17 of the slots, and the central convolution is received within the central portion 18 thereof. The width of the slot portions 19 is preferably substantially equal to the diameter of the wire stock of which the element 14 is made. The leaves may be applied to the binding element by squeezing together the convolutions of each coil section and jamming the leaves onto the coils, the tabs 30 formed on opposite sides of the slot portions 20 spreading somewhat to admit the convolutions 27 into the head portions of the slots. The covers may be similarly assembled with the binding element. After the coil portions 25 are in the slots, the convolutions will spring apart when released due to the resiliency of the wire.

Although the element 14 is shown in the drawing as being made of round wire, it will be understood that it may be made of wire of different cross section or of flat metal strips or any other suitable material, for example, Celluloid, "Bakelite" or the like material.

Figs. 6, 7, 8 and 9 illustrate binding elements 42, 42a, 42b and 42c wherein the coils are round with straight bottoms, oval, oval with straight bottoms, and square, respectively.

In Fig. 10 is shown a sheet 12a having a slot 16a, the head of which is of substantially uniform width. In Fig. 11 the leaf 12b has a slot 16b having a head portion 48 and a leg portion 49 adjacent one end of the head portion, instead of at the middle, as in the slot 16a. In Fig. 12 the sheet or leaf 12c has a slot 16c the leg portion 50 whereof is zigzag shaped.

It will be understood that the binding elements may be used in conjunction with covers such as shown in Fig. 6. In Fig. 6 the cover 60 has a back portion 61 and side portions 62. The binding element 42 has the flat bottom portion thereof contacting the back portion 61 of the cover. Said binding element may be attached to the cover by an elongated strip 64 extending through the binding element and holding the flat portions thereof against the back of the cover. The end portions 65 of the member 64 may be attached to the back of the cover by rivets 66, staples or in any other suitable manner.

The coils 25 of unit 14 may be separately connected to the covers, in any suitable manner, instead of being interconnected in a continuous binding element.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments set forth, it is to be understood that all matter herein set forth, or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a looseleaf book, the combination of a plurality of stacked leaves having spaced similar registering T-shaped open slots at adjacent edges thereof, and a binding element for said leaves made of a single piece of resilient wire and having coil portions disposed within the head portions of said slots, and longitudinal portions interconnecting said coil portions, each coil portion comprising a plurality of convolutions, said convolutions being normally out of contact and adapted to be pressed together to insert the same into said slots, and the heads of said slots being of such length as to permit said convolutions to spring apart after insertion into the heads of said slots, the end convolutions of said coil portions being disposed adjacent the ends of the heads of said slots.

2. In a looseleaf book, the combination of a plurality of stacked leaves having spaced similar registering open slots at adjacent edges, said slots having portions positioned laterally of said edges and portions interconnecting the laterally positioned portions with said edges, and a binding element for said leaves made of a single continuous member and comprising a plurality of spaced resilient interconnected coil portions, each coil portion comprising a plurality of normally non-contacting convolutions, said coil portions being disposed within said laterally positioned portions of said slots, and said convolutions being spaced apart within said laterally positioned portions of said slots, said laterally positioned portions of said slots being of sufficient length to permit said convolutions to spring apart therein after insertion thereinto, through said interconnecting portions, the end convolutions of said coil portions being disposed adjacent the ends of the laterally positioned portions of said slots.

3. A binding element for a looseleaf book made of a resilient piece of wire and comprising a plurality of helical coil portions interconnected by longitudinal portions, each coil portion comprising a plurality of convolutions, said convolutions being out of contact with one another.

4. A binding element for a looseleaf book made

of a resilient piece of wire and comprising a plurality of helical coil portions interconnected by longitudinal portions, each coil portion comprising a plurality of convolutions, said convolutions being out of contact with one another, said longitudinal portions being in alignment.

5. A binding element for a looseleaf book made of a resilient piece of wire and comprising a plurality of helical coil portions interconnected by longitudinal portions, each coil portion comprising a plurality of convolutions, said convolutions being out of contact with one another, the distance between adjacent coil portions being greater than the distance between adjacent convolutions of said coil portions.

6. In a looseleaf book, the combination of a plurality of stacked leaves having spaced, similar, registering, T-shaped open slots at adjacent edges thereof, and a binding element for said leaves made of a single piece of resilient wire and having helical coil portions disposed within the head portions of said slots, and portions interconnecting said coil portions, each coil portion comprising a plurality of convolutions, said convolutions being normally out of contact and adapted to be pressed together to insert the same into said slots and the heads of said slots being of such length as to permit said convolutions to spring apart to normal position after insertion into the heads of said slots, the end convolutions of said coil portions being disposed adjacent the ends of said slots.

7. In a looseleaf book, the combination of a plurality of stacked leaves having spaced, similar, registering T-shaped open slots at adjacent edges thereof, and a binding element for said leaves made of a single piece of resilient wire and having helical coil portions disposed within the head portions of said slots, and longitudinal portions interconnecting said coil portions, each coil portion comprising a plurality of convolutions, said convolutions being normally out of contact and adapted to be pressed together to insert the same into said slots and the heads of said slots being of such length as to permit said convolutions to spring apart to normal position after insertion into the heads of said slots, the end convolutions of said coil portions being disposed adjacent the ends of said slots, the space between adjacent coil portions being greater than the space between adjacent convolutions of said coil portions.

8. In a looseleaf book, the combination of a plurality of stacked leaves having spaced, similar, registering, T-shaped open slots at adjacent edges thereof, and a binding element for said leaves made of a single piece of resilient wire and having helical coil portions disposed within the head portions of said slots, and longitudinal portions interconnecting said coil portions, each coil portion comprising a plurality of convolutions, said convolutions being normally out of contact and adapted to be pressed together to insert the same into said slots and the heads of said slots being of such length as to permit said convolutions to spring apart after insertion into the heads of said slots, the end convolutions of said coil portions being disposed adjacent the ends of said slots, the space between adjacent coil portions being greater than the space between adjacent convolutions of said coil portions, said longitudinal portions being in alignment.

9. In a looseleaf book, the combination of a plurality of stacked leaves having spaced registering open slots at adjacent edges, said slots having portions positioned laterally of said edges

and portions interconnecting the laterally positioned portions with said edges, and a binding element for said leaves made of a single, continuous, resilient wire and comprising a plurality of spaced interconnected helical coil portions, each coil portion comprising a plurality of normally non-contacting convolutions, said coil portions being disposed within said laterally positioned portions of said slots, and said convolutions being spaced apart within said laterally positioned portions of said slots, said laterally positioned portions of said slots being of sufficient length to permit said convolutions to spring apart to normal non-contacting condition after insertion thereinto, through said interconnecting portions of said slots, the end convolutions of said coil portions being disposed on opposite sides of said interconnecting portions of said slots.

10. In a looseleaf book, a plurality of stacked leaves having spaced, similar, registering open slots at adjacent edges, said slots having elongated portions positioned parallel with said edges and portions interconnecting the parallelly positioned portions with said edges, and a binding element for said leaves made of a single, continuous elongated piece of resilient metal of uniform cross-section, and comprising a plurality of spaced interconnected coil portions, the convolutions of said coil portions being out of contact with one another and disposed within the parallelly positioned portions of said slots, the distance between adjacent coils being greater than the distance between adjacent convolutions of each coil.

IRVING V. KRAMER.