Jan. 24, 1956 J. R. FELLABAUM 2,731,939

BINDER DEVICE

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Fig. 1

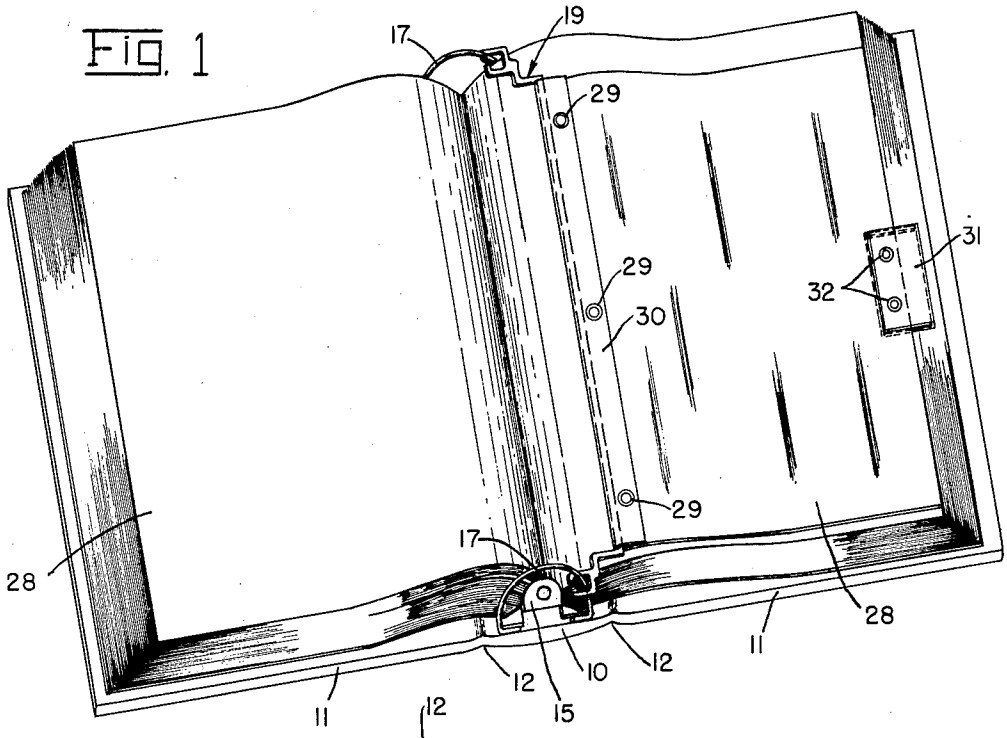
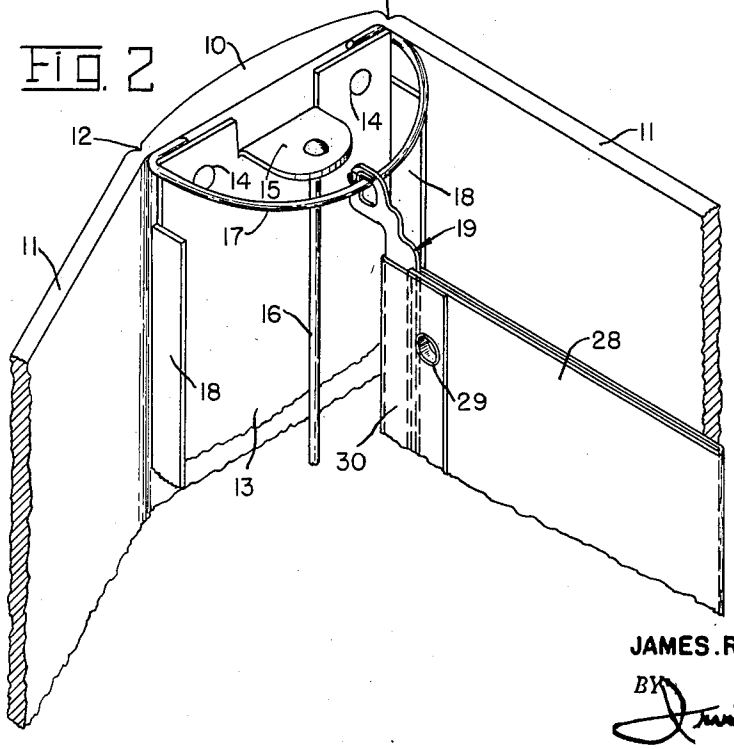


Fig. 2



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Fig. 3

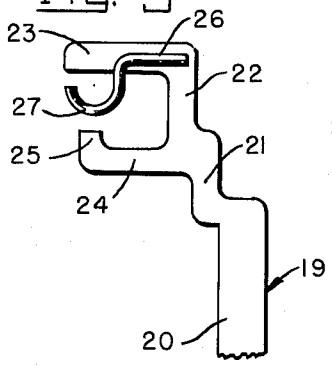


Fig. 4

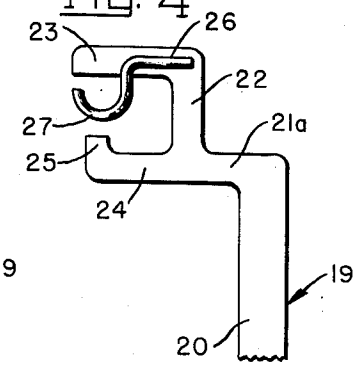


Fig. 5

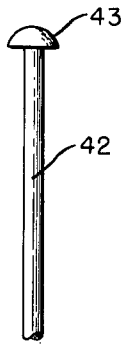


Fig. 6

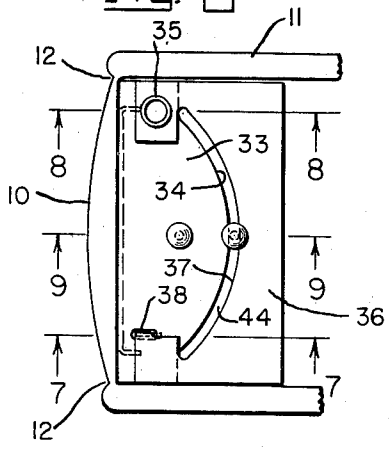


Fig. 7

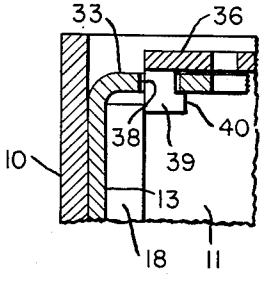


Fig. 8

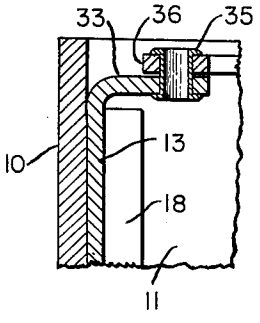
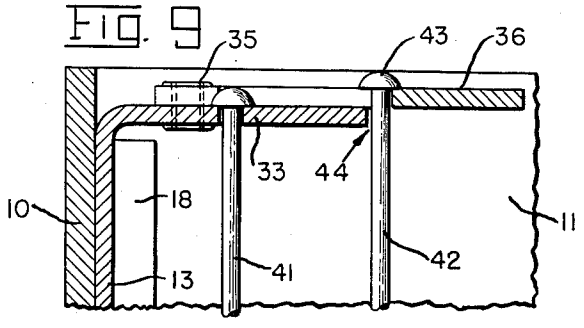


Fig. 9



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2,731,939

BINDER DEVICE

James R. Fellabaum, Vandalia, Ohio

Application September 21, 1953, Serial No. 381,423

4 Claims. (Cl. 116—119)

The present invention relates to a binder and it consists in the combinations, constructions and arrangements of parts herein described and claimed.

Generally there is provided a novel binder consisting of a back piece and a pair of covers hinged thereto. Affixed to the inner side of the back piece is a back panel formed of metal and which is provided in one form of the invention with an inwardly extending bowed rod at either end thereof. A plurality of binding rods is provided and each binder rod is provided at either of its ends with novel means for attaching the same to the adjacent bowed rod in such manner that the same may be quickly and easily attached to or detached from such bowed rod and, when attached to the bowed rod may slide thereon with a minimum of friction. In another form of the invention the back panel is provided at either of its ends with a novel bracket wherein conventional binder rods may be quickly mounted or dismounted.

It is accordingly an object of the invention to provide a novel binder having novel means for the quick mounting and dismounting of binder rods forming a part of the invention.

Another object of the invention is to provide, in a device of the character set forth, novel latch means for binder rods forming a part of the invention.

A further object of the invention is to provide, in a device of the character set forth, novel brackets forming a part of the invention.

Other and further objects of the invention will become apparent from a reading of the following specification taken in conjunction with the drawings, in which:

Figure 1 is a perspective view of an embodiment of the invention,

Figure 2 is an enlarged fragmentary perspective view of the device shown in Figure 1 but illustrated in greater detail,

Figure 3 is an enlarged fragmentary side elevational view of a binder rod forming a part of the invention,

Figure 4 is a view similar to Figure 3 but showing a slightly modified form thereof,

Figure 5 is an enlarged fragmentary side elevational view of another form of binder rod,

Figure 6 is a fragmentary plan view illustrating another form of the invention,

Figure 7 is an enlarged fragmentary sectional view taken along line 7—7 of Figure 6,

Figure 8 is an enlarged fragmentary sectional view taken substantially along line 8—8 of Figure 6, and

Figure 9 is an enlarged fragmentary sectional view taken along 9—9 of Figure 6.

Referring more particularly to the drawings, there is shown therein, in Figures 1 to 3, inclusive, the preferred embodiment of my invention in which there is provided a cover comprising a back piece **10** and a pair of side pieces **11** hinged thereto as indicated at **12**.

A panel **13**, preferably formed of metal, is affixed to the inner face of the back piece **10** by rivets **14** or the like and is provided at either end with an integrally formed

inwardly extending tab **15**, such tabs being interconnected by means of a vertically extending brace rod **16**.

Affixed to either end of the panel **13** is an inwardly extending bowed rod **17** and the panel **13** is provided with inwardly extending foreshortened side walls **18**.

A plurality of binder rods is provided and each is generally indicated at **19**. Each of the rods **19** is provided with an elongated vertically extending body **20**. Integrally connected to each end of the body **20** by means of a neck **21** is an enlarged head **22** from which extends an upper bar **23** and a lower bar **24**, the latter being formed at its free end with an upwardly extending projection **25**. Affixed to one side of the upper bar **23**, as indicated at **26**, is a spring having a semi-circular free end portion **27** whose convex side is opposed to the projection **25**. A leaf **28** is affixed to each of the body portions **20** by means of a plurality of rivets **29** or the like which provide a hem **30** which encompasses such body portion **20**. The leaves **28** may be provided, if desired, with index tabs **31** which may be secured thereto in any suitable manner as by rivets **32** or the like. In Figure 4 an identical form of binder post **19** is provided with the exception that the neck **21***a* extends at right angles to the body portion **20** instead of being provided with the shape shown in Figure 3, it being understood that any desirable shape may be provided for the neck portion so long as clearance is provided for the hems **30** of the leaves **28**.

In operation of this form of the invention, it will be apparent that the leaves **28** may be mounted in the binder or dismounted therefrom quickly and easily, it being apparent that the normal space between the projection **25** and the rounded portion **27** of the spring **26** is less than the diameter of the rod **17**. Hence, in order to mount the binder rods upon the bowed rods, it is only necessary to press the same against the bowed rods **17** in such a manner that the spring **27** will yield away from the projection **25** permitting the rod **17** to pass into the head **22** whereupon the posts **19** will be readily slidable upon the bowed rods **17** so that the leaves **28** may be readily turned with a minimum of friction. It will also be seen that the side walls **18** will act to prevent inward movement of the side pieces **11** beyond a right angular relation to the back piece **10**, thus keeping the side pieces in parallel relation to each other when the binder is in closed condition. The rod **16** and tabs **15** add strength to the structure of the device.

In the form of the invention illustrated in Figures 5 to 9, inclusive, each end of the panel **13** has integrally formed therewith an inwardly extending plate **33** having an arcuate inner edge as indicated at **34**. Pivotally connected as by means of a rivet **35** or the like to one side of each of the plates **33** is a lock plate **36** having a concave inner edge, as indicated at **37**.

Each of the plates **33** is provided adjacent that end thereof opposite to the end in which the rivet **35** is located with a slot **38** and the free end of the lock plate **36** is provided with a dependent lug **39** having a lateral projection **40**.

Centrally interconnecting the plates **33** is a brace rod **41**. To complete this form of the invention there is provided a plurality of binder rods **42** each provided at each of its ends with a rounded head **43**.

In the operation of this form of the invention, it will be apparent that when the plate **36** is brought into locked engagement with the plate **33** by inserting the lug **39** through the slot **38**, that the projection **40** will act to lock the same in position at which time an arcuate slot **44** may be formed between the edges **34** and **37**. Previously to closing the lock plate **36** a plurality of the binding rods **42** may be laid against the edges **34** of the plates **33** so that when the lock plate **36** is locked as aforesaid the heads **43** of the posts **42** will be upon the outer sides of the sets of plates **33** and **36** thus equally holding the rods **42** within the slots **44** while at the same time permitting the rods **42** free move-

ment within the slots 44. Of course, leaves such as the leaves 28 may be mounted upon the rods 42 previously to mounting the same in the manner above described. It will be apparent that the lug 39 will ride against a portion of the arcuate edge 34 immediately prior to latching in the slot 38, the yieldability of the metal from which the lug is formed permitting such action.

While but two forms of the invention have been shown and described herein, it will be readily apparent to those skilled in the art that many minor modifications may be made without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. A device of the character described comprising a cover having a back piece, a panel affixed to the inner face of said back piece, a plurality of binder rods, and means for detachably connecting said binder rods in spaced parallel relation to said panel, said means including an inwardly extending arcuate rod affixed to each end of said panel, and a latch carried at each end of each of said binder rods, said latches being engageable with said arcuate rods.

2. A device as defined in claim 1 wherein each of said latches comprises an upper bar, a lower bar, a spring affixed at one end of its ends to said upper bar and having a semi-circular free end, and a projection at the free end of said lower bar, said projection being in spaced relation to the convex side of said free end of said spring.

3. A device as defined in claim 2 wherein the normal distance between said projection and said spring is less than the diameter of said arcuate rod.

4. A device as defined in claim 2 wherein said bars extend radially from said binder rods in a direction toward said panel.

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