Aug. 2, 1966 R. F. LINDGREN ETAL 3,263,689

POST BINDER AND COMPRESSION MECHANISM THEREFOR

Filed May 25, 1964 2 Sheets-Sheet 1

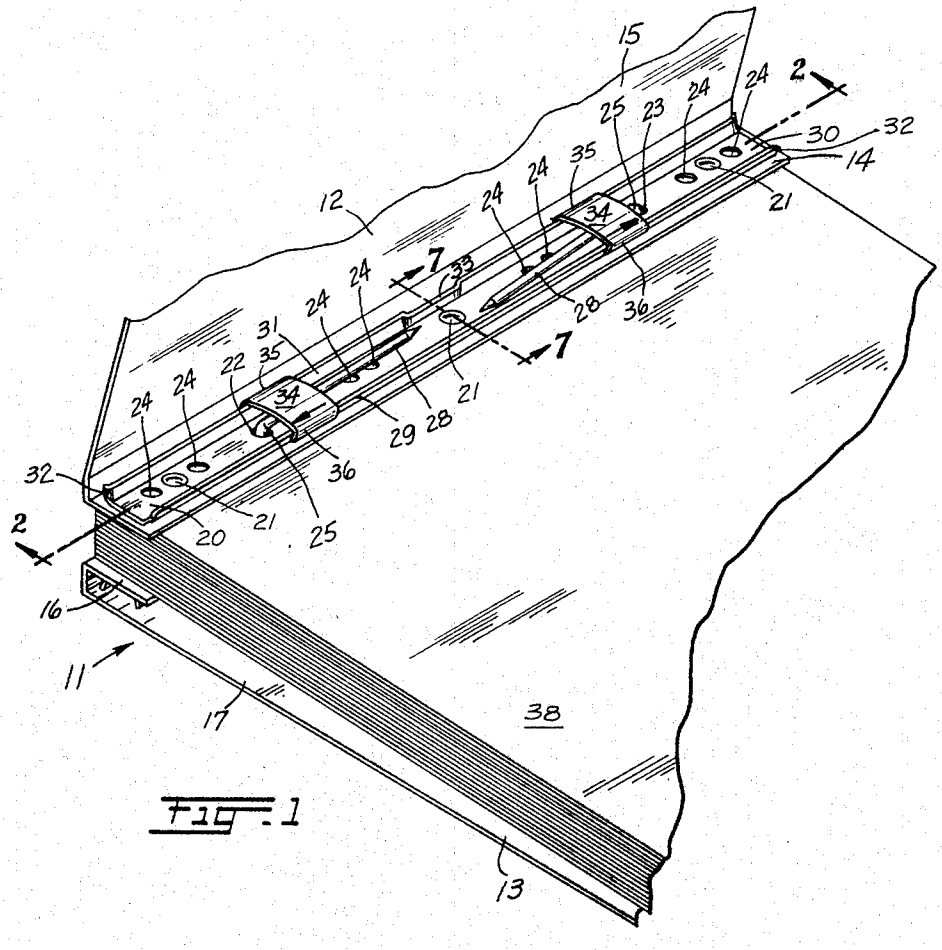


Fig. 1

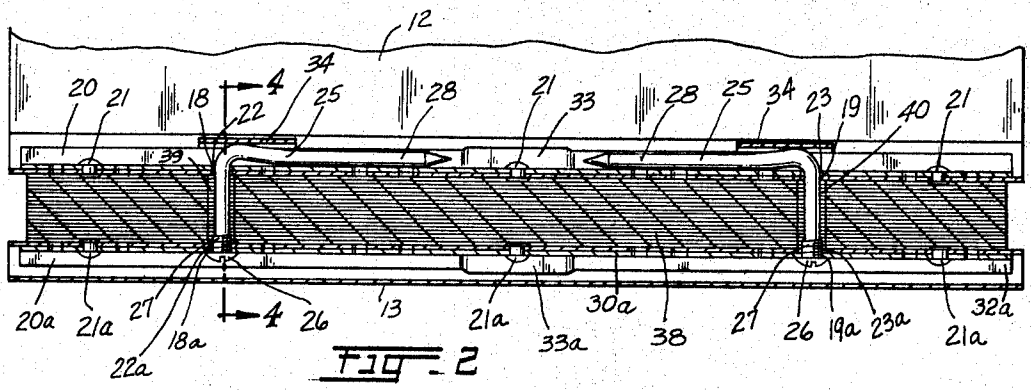


Fig. 2

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POST BINDER AND COMPRESSION MECHANISM THEREFOR

Filed May 25, 1964 2 Sheets-Sheet 2

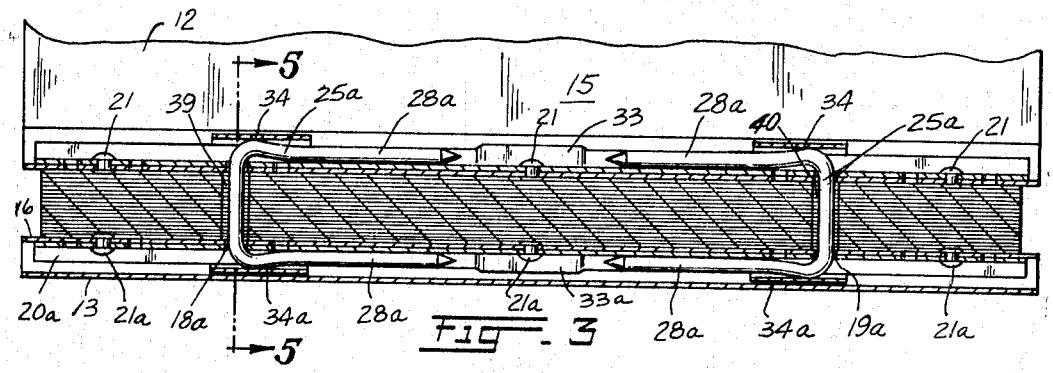


Fig. 3

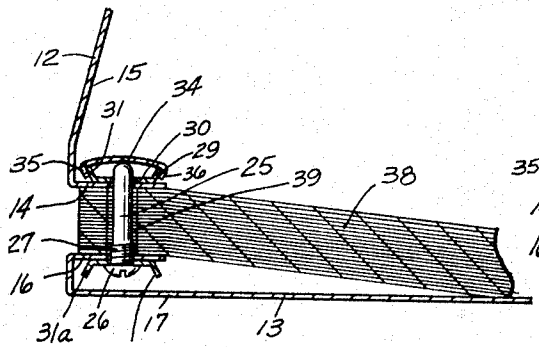


Fig. 4

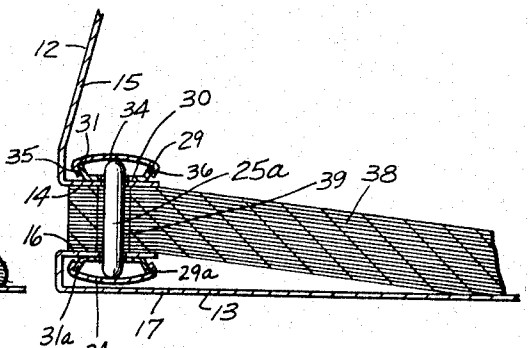


Fig. 5

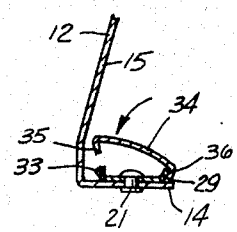


Fig. 6

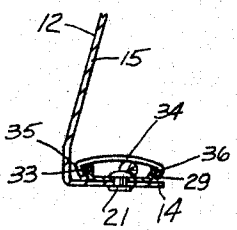


Fig. 7

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United States Patent Office 3,263,689 Patented August 2, 1966

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POST BINDER AND COMPRESSION MECHANISM THEREFOR

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Filed May 25, 1964, Ser. No. 369,875
1 Claim. (Cl. 129—25)

This invention relates to a post binder and to a compression mechanism therefor. The structure of this invention is simple and relatively inexpensive to manufacture. The compressor members of the compression mechanism are simply and easily removable from the remainder of the structure for simple replacement if required. Also the structure is adapted to produce, with extreme ease, either a single mechanism binder which is loaded from one side, or a double mechanism binder which can be loaded from both sides.

The above sets forth a brief description of the instant invention and some of the objects and advantages thereof; various other advantages and objects will become apparent as the description proceeds.

The invention will be further described by reference to the accompanying drawings which are made a part of this specification.

FIG. 1 is a fragmentary top perspective view of one form of a binder made in accordance with this invention with the top cover in partially open position. In this form of the invention a headed post is used and only the top compression mechanism is operative.

FIG. 2 is a sectional view of the binder shown in FIG. 1 taken along lines 2—2 of FIG. 1.

FIG. 3 is a sectional view similar to that of FIG. 2 but showing the construction employed when both compression mechanisms upon opposite covers are employed so that the binder can be loaded from either side.

FIG. 4 is a sectional view of the form of invention shown in FIG. 2 taken along lines 4—4 of FIG. 2.

FIG. 5 is a sectional view of the form of invention shown in FIG. 3 taken along lines 5—5 of FIG. 3.

FIG. 6 is a fragmentary sectional view of a compressor and associated structure showing the manner in which the compressor can be removed from the rails of the channel member or secured thereto when the indented portion is in juxtaposition with the compressor.

FIG. 7 is a fragmentary sectional view of a portion of the mechanism shown in FIG. 1 taken along lines 7—7 of FIG. 1. In this figure the compressor is in its normal operating position.

The invention will be now further described by reference to the specific forms thereof set forth in the accompanying drawings which represent the best modes known to the inventors of taking advantage of the same. In this connection, however, the reader is cautioned to note that the specific forms of this invention described in the accompanying specification are for illustrative purposes and for purposes of example only. Various changes and modifications can obviously be made within the spirit and scope of this invention and would occur to those skilled in this art.

The post binder **11** of this invention is formed with a pair of covers **12** and **13**. Cover **12** is formed with a base portion **14** and a pivotally connected openable leaf portion **15**. Cover **13** is formed with a base portion **16** and a pivotally connected openable leaf portion **17**. Base portion **14** is provided with a pair of spaced openings **18** and **19**.

A first compression mechanism **20** is secured to base portion **14** of cover **12** by means of rivets **21**. Compression mechanism **20** comprises a channel member **30** which

is provided with a pair of spaced openings **22** and **23** therewithin which are also in alignment with openings **18** and **19** respectively. Optionally additional plurality of openings **24** may be provided which can be aligned with similar openings to form additional aligned units.

Channel member **30** also carries a plurality of spaced rails **29** and **31** which are disposed on opposite sides of member **30**. Rails **29** and **31** are obtusely angularly projecting from channel member **30** and are formed with outwardly projecting opposite end portions **32**. Rail **31** is formed with an inwardly indented portion **33**.

A pair of normally spaced compressors **34** are slidably movable along rails **29–31**. Each of the compressors **34** is formed with a pair of transversely spaced acute angularly disposed side portions **35** and **36** which are normally retained respectively upon rails **31** and **29**.

Base portion **16** of cover **13** is provided with a pair of spaced openings **18***a* and **19***a*. A second compression mechanism **20***a* is secured to base portion **16** by means of rivets **21***a*. Compression mechanism **20***a* comprises a channel member **30***a* which is provided with a pair of spaced openings **22***a* and **23***a* therewithin which are also in alignment with openings **18***a* and **19***a*. Thus, in this invention, openings **22–18–18***a***–22***a* are in alignment with one another and openings **23–19–19***a***–23***a* are also in alignment with one another. Optionally additional aligned units consisting of aligned openings **24** may also be provided.

Channel member **30***a* also carries a plurality of spaced rails **29***a* and **31***a* which are disposed on opposite sides of member **30***a*. Rails **29***a* and **31***a* are obtusely angularly projecting from channel member **30***a* and are formed with outwardly projecting opposite end portions **32***a*. Rail **31***a* is formed with an inwardly indented portion **33***a*.

A pair of normally spaced compressors **34***a* are slidably movable along rails **29***a***–31***a*. Each of compressors **34***a* is formed with a pair of transversely spaced acute angularly disposed side portions **35***a* and **36***a* which are normally retained respectively upon rails **31***a* and **29***a*.

In the modification shown in FIGS. 2 and 4 a plurality of posts **25** are disposed within each of aligned openings **22–18–18***a***–22***a* and **23–19–19***a***–23***a* respectively. Each of posts **25**, in this modification, are formed with an upper portion **28**, a threaded shank portion **27** and a cap portion **26**. Shank portion **27** of each of posts **25** is disposed within openings **18***a***–22***a* and **19***a***–23***a* respectively while cap portion **26** overlies opening **22***a*. Each of compressors **34** are normally adapted to hold portion **28** of a post **25** in bent-over relationship.

In the form of invention shown in FIGS. 3 and 5 a post **25***a* is formed with a plurality of projecting end portions **28***a*. Each of posts **25***a* is disposed respectively within openings **22–18–18***a***–22***a* and **23–19–19***a***–23***a*. Each of compressors **34** is adapted to hold one of portions **28***a* of a post **25***a* in bent-over relationship while each of compressors **34***a* is adapted to hold the opposite portion **28***a* of each of posts **25***a* in bent-over relationship.

The operation of this invention will now be explained. In the form of invention shown in FIGS. 2 and 4 a plurality of sheets **38** are provided with a plurality of aligned openings **39** and **40** therewithin. Openings **39** are in alignment with openings **22–18–18***a***–22***a* and openings **40** are in alignment with openings **23–19–19***a***–23***a*. Sheets **38** are placed between base portions **14** and **16** of covers **12** and **13** and a post **25** passed through openings **22***a*, **18***a*, **39**, **18** and **22**. An additional post **25** is passed through openings **23***a*, **19***a*, **40**, **19** and **23** so that portion **28** of posts **25** projects therethrough. A pair of compressors **34** are then selected. Each of compressors **34** are hooked over rail **29** and thence placed in juxtaposition with indented portion **33** of rail **31** as shown in FIG. 6. Com-

pressor **34** is then hooked over rail **31** and slid therealong so as to retain portion **28** of post **25** in bent-over relationship as shown in FIGS. 1 and 2. At the same time the lower portion of post **25** is retained in position by shank portion **27** being disposed within openings **18–22***a* and **19***a***–23***a* respectively while cap portion **26** overlies opening **22***a*.

When additional sheets are to be placed within the binder compressors **34** are slidably moved along rails **29–31** in the direction shown by the arrows in FIG. 1. This causes post **25** to be free of compressors **34** and cover **12** may be lifted here. Additional sheets may then be disposed upon sheets **38** presently in the binder and the process set forth hereinabove repeated.

In the modification shown in FIGS. 3 and 5 the binder of this invention may be loaded from both sides. In this modification each of posts **25***a* are passed through openings **22***a***–18***a***–39***a***–18–22** and **23***a***–19***a***–40***a***–19–23** respectively so that each end portion **28***a* of each post **25***a* projects outwardly therefrom. Compressors **34** are placed upon rails **29** and **31** as previously discussed and are then slidably moved therealong to retain the upper portion **28***a* of each of posts **25***a* in bent-over relationship. After this is done the binder **11** is turned over and each of compressors **34***a* inserted upon rails **29***a* and **31***a* in a similar manner to the manner in which compressors **34** were inserted on rails **29** and **31**. Compressors **34***a* then retain the bottom portions **28***a* of each of posts **25***a* in bent-over relationship. It is thus obvious that, in the modification set forth in FIGS. 3 and 5, the post binder may be loaded from either side since either the upper portions **28***a* of each of posts **25***a* may be cleared from compressors **34** or each of the lower portions **28***a* of each of posts **25***a* may be cleared from compressors **34***a*.

Furthermore the construction of this invention has a further advantage in that the same associated structure can be used in connection with post **25** or post **25***a*. If the structure is utilized in connection with post **25** then the compressors **34***a* can be removed from compression mechanism **20***a* and the binder loaded merely from one side. On the other hand if posts **25***a* are substituted then the compressors **34***a* are inserted into compression mechanism **20***a* and the binder may be loaded from both sides.

The foregoing specific description sets forth the manner in which the objects of this invention are achieved.

We claim:

A compression mechanism for post binders comprising a longitudinal channel member having a substantially flat base provided with a pair of spaced openings therewithin each accommodating a flexible post member, a pair of laterally spaced outwardly extending obtusely angularly disposed upstanding rails disposed along said base, each of said rails having outwardly projecting end portions; an inwardly extending laterally disposed indented portion centrally located intermediate said end portions upon one of said rails, said indented portion being substantially perpendicular to said base; a pair of normally spaced compressors slidably movable along said rails each having transversely spaced acute angularly disposed side portions overlying said rails and normally retained thereupon, each of said compressors being no greater in length than said indented portion and being removable from said rails when said indented portion and a side portion of the respective compressor are in juxtaposition.

References Cited by the Examiner

UNITED STATES PATENTS

873,282	12/1907	Wolf	129—25
1,434,579	11/1922	Alexander	129—25
1,962,727	6/1934	Snyder	24—153
2,012,572	8/1935	Linsky	129—25 X
2,212,896	8/1940	Brennan	129—25 X
2,615,222	10/1952	Cayabyab	24—153
3,121,432	2/1964	Schade	129—25

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