

N. W. KELLAWAY.
ADJUSTABLE HINGE.
APPLICATION FILED JAN. 29, 1912.

1,048,545.

Patented Dec. 31, 1912.

Fig. 1.

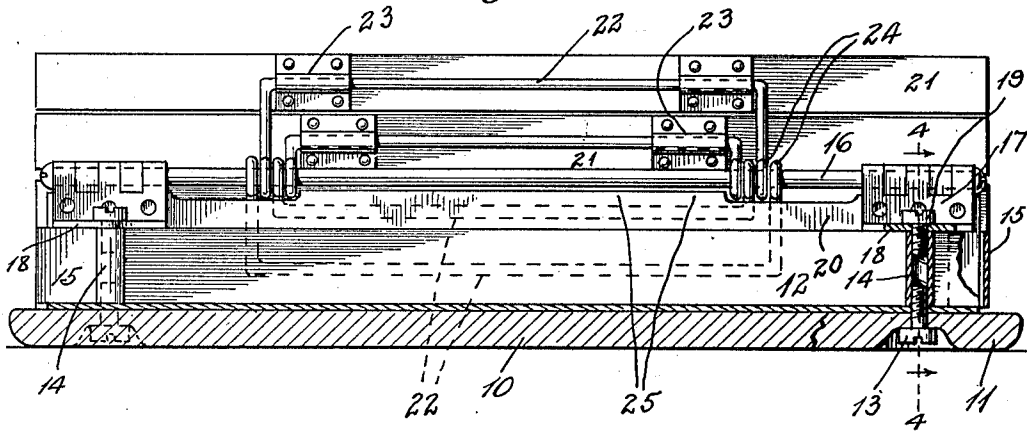


Fig. 2.

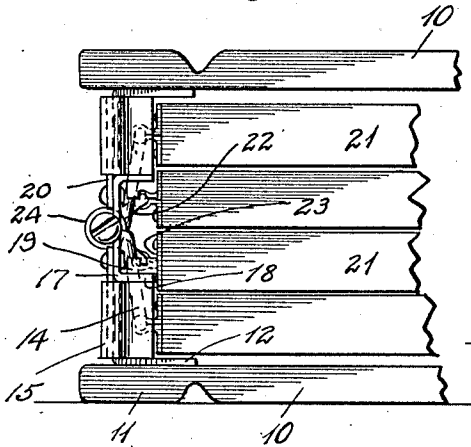


Fig. 4.

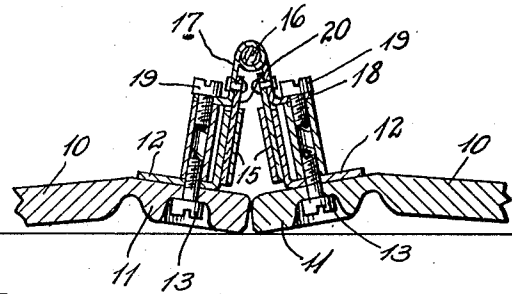
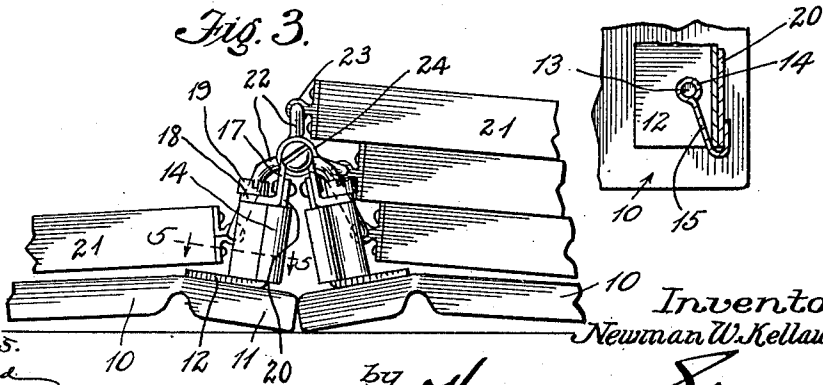


Fig. 5.

Fig. 3.



Witnesses.

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by

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UNITED STATES PATENT OFFICE.

NEWMAN W. KELLAWAY, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO RAPID SYSTEMS COMPANY OF CALIFORNIA, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

ADJUSTABLE HINGE.

1,048,545.

Specification of Letters Patent.

Patented Dec. 31, 1912.

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To all whom it may concern:

Be it known that I, NEWMAN W. KELLAWAY, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Adjustable Hinges, of which the following is a description.

This invention relates to improvements in adjustable hinges, and particularly such as are adapted for use upon binders in holding removable leaves or devices in adjustable relation to each other.

It is an object of the present invention to provide a binding means in which the device, leaves or members to be held in place are carried by a series of adjustable hinges.

It is also an object of the invention to provide a binding means for thick leaves or articles which may be adjusted to receive a greater or less number of such leaves as required and yet permit of the folding or unfolding of the device as in the case of an ordinary book.

It is a further object of the invention to provide a binder having supporting back portions and having an intermediate hinge member adapted to have telescopic adjustment with respect to portions of said backs, leaf connecting hinge portions being also connected and adjusted with respect to said intermediate hinge portion.

In the accompanying drawing forming a part of this specification, Figure 1 is an end elevation of the binding means showing the leaves all folded in one direction, but with the back open or unfolded, the back portion itself being shown in section. Fig. 2 is an edge elevation of the binding mechanism with the hinge in position for holding the parts in closed form. Fig. 3 is a similar view but showing the device in open position, some of the leaves being folded in one direction and some in the other. Fig. 4 is a detail sectional view taken upon the line 4—4 of Fig. 1. Fig. 5 is a detail sectional view upon the line 5—5 of Fig. 3.

The details and features of the invention will now be more particularly described, reference being had to the said drawing in which—

10 indicates back covers which are adapted to be joined by an adjustable holding mechanism. Each of said back covers is

formed with a hinge carrying strip 11 which is adapted to bend with respect to the body portion of each back cover 10. Mounted upon each of the hinge supporting strips 11 is an angle bar 12, the horizontal flange of which is secured to the said hinge strip, while the vertical flange projects inwardly from the same and upon the rear edge thereof. The angle bars 12 are secured in position by means of screws 13 which pass through the same and have a threaded engagement with sockets 14 formed in spacing pieces 15. The said spacing pieces 15 are provided with angular end portions adapted to extend outwardly and around the ends of the vertical flanges of said bars 12 as clearly shown in Fig. 5 of the drawing.

A hinge rod 16 is provided for the mechanism and preferably extends approximately the full width of the cover backs. The end portions of said hinge rod 16 form the pintles of hinged leaves 17 which have laterally turned flanges 18 adapted to rest upon the upper ends of the spacing pieces 15. Screws 19 are passed through said flanges and secured into the threaded upper ends of the sockets 14 whereby the said hinges are firmly secured to the back covers of the structure. The leaves 17 of the hinges carry plates 20 which preferably extend from one hinge at one end of the hinge rod 16 to other one at the other end of said hinge rod. The said plates 20 have a telescoping movement with respect to the flanges of the angle bars 12 against which they rest. It will be observed in this connection that by the removing of the spacing pieces 15 and placing wider or narrower ones in position, that the capacity of the whole binder for receiving leaves may be increased or diminished. To make such change it is only necessary to remove the screws 13 and 19 and take out pieces 15 and then substitute other pieces of the desired height and connect the parts again by replacing the screws.

The structure above described is admirably adapted for receiving all kinds of removable leaves but is especially useful in holding leaves of thick formation, such as for instance frames or holders of various materials or articles as shown in the drawing, such frames being of such a width that they require considerable space in the binder. Each of said leaves or frames as 21 is connected

with the hinge rod 16 by means of hinged hangers 22. The said hinged hangers are pivotally connected with each leaf by means of loops or clips 23 which are riveted or otherwise secured thereto. The said hinge hangers are made of successively larger sizes from the center outwardly so as to fold one within the other when the leaves are in folded position as will be clearly understood by reference to Fig. 1 of the drawing. All of said hinge hangers are formed with eyes 24 which are journaled upon the said pivot rod 16. The hinge hangers 22 are preferably placed so as to be mounted at equal distances from the ends of the hinge pin 16 as shown in Fig. 1 and the said hangers are thus centrally positioned in the structure by means of projecting portions 25 formed upon the inner edges of the plates 20. Said projections are made of a proper length to fit between the eyes of the innermost hinge hanger and the eyes of the other hinge hangers are mounted upon the hinge rod 16 outside the same, so that all of the said hinge hangers will be properly held in central position as will be clearly understood by reference to Fig. 1.

The devices thus formed are admirably adapted for securing the leaves or frames mounted in the binder, so that they can be closed in flat condition or may be opened so as to expose the contents of any one or more of the leaves to view as may be desired, it being possible to turn the leaves in the same manner that the leaves of an ordinary book are turned. It will also be understood that the binding means may be accommodated to a less number of leaves or to a greater number thereof by changing the spacing pieces 15 for other pieces of a less or greater width as found desirable.

What I claim is:

1. A binder mechanism comprising cover backs, spacing securing means carried there-

by, and leaf carrying hinges adjustably mounted upon said securing means.

2. A binder device comprising backing leaves, spacing standards thereon, a hinge mechanism connected with said standards, and means for movably connecting leaves to said hinge mechanism.

3. A device of the class described, comprising back covers having hinge directing flanges secured thereto, hinge leaf plates held adjacent to said flanges and adjustable thereto, a hinge rod, hinge leaves on said plates connecting said hinge rods with the back covers, spacing means interposed between said hinge leaves and said back covers for controlling the capacity of the device, and hinge hangers connecting the leaves of the device with said hinge rod.

4. A device of the class described, comprising cover backs having hinge receiving strips formed thereon, said strips being adapted to bend with respect to the backs, spacing pieces mounted on said strips, screws for securing said spacing pieces thereto, hinge guides secured to said strips and held in position by said spacing pieces, hinges connected with said spacing pieces and having plates connected therewith and adapted to telescope with respect to said guides, a hinge rod supported by said hinges, leaf carrying hanger hinges having eyes journaled upon said hinge rod, the said plates having centering projections for engaging said eyes and holding the hangers centrally with respect to the binding mechanism.

In witness that I claim the foregoing I have hereunto subscribed my name this 19th day of December, 1911.

NEWMAN W. KELLAWAY.

Witnesses:

E. STAETLMAN,
EARLE R. POLLARD.