G. KNECHTEL.

BOOKCASE AND DROP DOOR OPERATING MECHANISM.

APPLICATION FILED MAR. 27, 1919. RENEWED JUNE 6, 1921.

1,403,037. Patented Jan. 10, 1922.

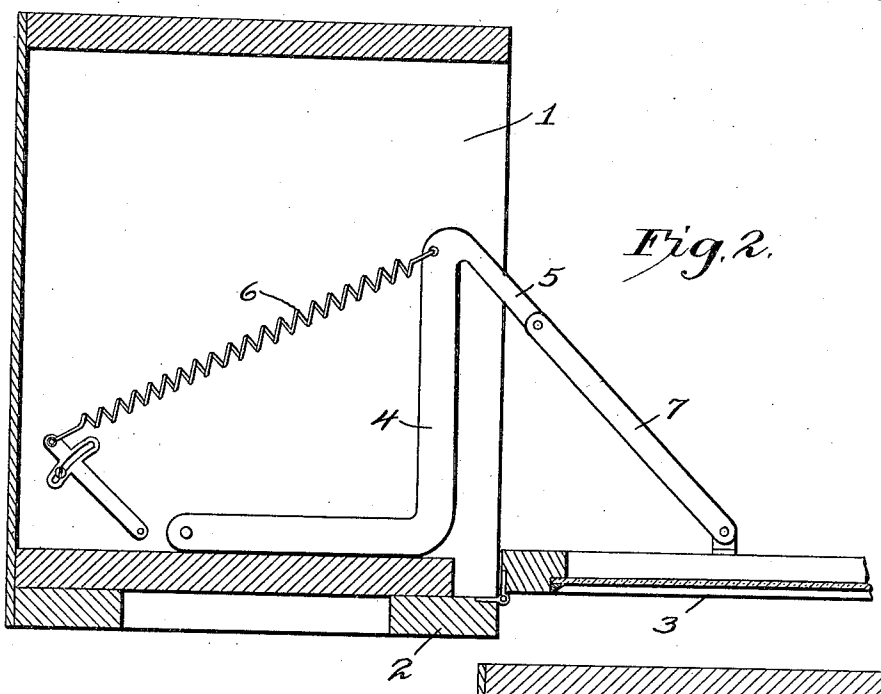


Fig. 2.

Fig. 1.

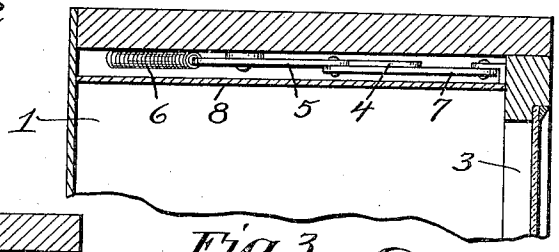
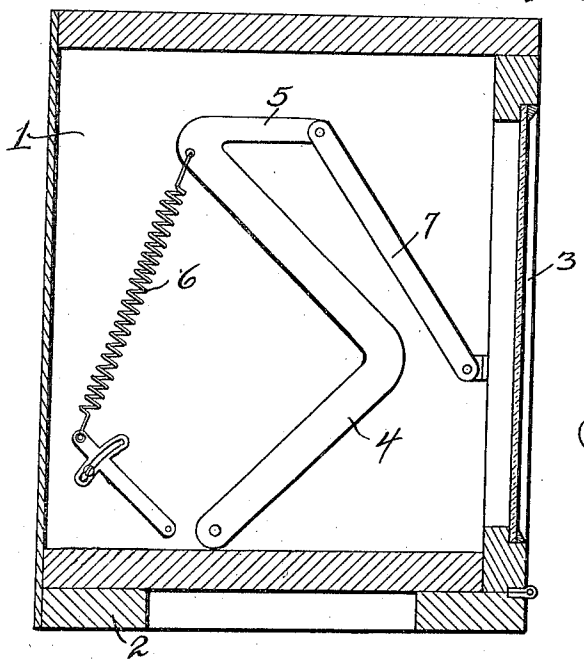


Fig. 3.



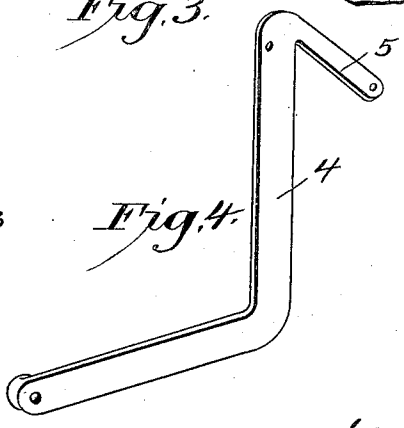


Fig. 4.

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UNITED STATES PATENT OFFICE.

GIDEON KNECHTEL, OF BAY CITY, MICHIGAN.

BOOKCASE AND DROP DOOR OPERATING MECHANISM.

1,403,037. Specification of Letters Patent. Patented Jan. 10, 1922.

Application filed March 27, 1919, Serial No. 285,657. Renewed June 6, 1921. Serial No. 475,557.

To all whom it may concern:

Be it known that I, GIDEON KNECHTEL, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented new and useful Improvements in Bookcase and Drop Door Operating Mechanisms, of which the following is a specification.

This invention relates to mechanisms adapted to be used for operating the door of a book case or any similar case or shelf where a drop door of this type can be operated, and it consists in the novel features hereinafter described and claimed.

An object of the invention is to provide a door operating mechanism adapted to be used upon a unit of sectional book case and which may be easily and quickly manipulated in order to effect the opening or closing of the door.

With this object in view the door operating mechanism comprises an L-shaped lever adapted to be pivoted at the end of the book case at the inner surface thereof, the said L-shaped lever being provided at its free end with an angularly disposed extremity which is operatively connected with the door of the case or unit by means of a link. The door is hingedly connected with the body of the case and a spring is attached at one end to the end of the case and connected at its other end with the free end portion of the said L-shaped lever and is under tension with a tendency to normally hold the said lever at a retracted position within the case. A partition is located within the case adjacent the said mechanism and serves to conceal the same and also to prevent any object which may be placed in the case from coming in contact with the mechanism and interfering with the operation of the same.

In the accompanying drawings:—

Figure 1 is a transverse sectional view of a book case showing the door in closed position and showing the parts of the operating mechanism in one position.

Figure 2 is a similar view showing the door in open position and the operating parts in other positions.

Figures 3 and 4 are detailed views of the features of the invention.

As illustrated in the accompanying drawing, the case 1 is of conventional form or pattern and is provided at its lower side with rails 2 upon which the case may rest. A door 3 is hingedly connected at its lower edge with the forward rail 2 and the said door carries a panel of glass or other transparent material which adds sufficient weight to the door to hold the same at an open position after it has been swung down.

An L-shaped lever 4 is pivotally mounted in the case 1 at the end thereof and the said lever is provided at its free end portion with an angularly disposed extremity 5, the median longitudinal dimension of which is disposed at an acute angle with relation to the similar dimension of the adjacent portion of the body of the lever, 4. A spring 6 is connected at one end with the end of the body 1 and the other end of the said spring is connected with the free end portion of the L-shaped lever 4. A link 7 is pivotally connected at one end with the end of the extremity 5 and the other end of the said link is pivotally connected with the end of the door 3. A partition 8 is located in the body 1 in the vicinity of the lever 4, and links 7 and the said partition serves as means for concealing the door operating mechanism and for preventing an object which may be deposited in the case from coming in contact with the door operating mechanism and interfering with the operation thereof.

From the foregoing description taken in conjunction with the accompanying drawing it will be seen that when the upper portion of the door is swung in an outward direction with relation to the body 1 the link 7 swings the lever 4 upon its fulcrum whereby the spring 6 is stretched and when the lower edge of the L-shaped lever 4 comes in contact with the bottom or floor of the body 1 the outward swinging movement of the door 3 is stopped and by reason of the weight which is carried by the door it will remain in an open position and the articles may be removed from the body or articles, as for instance books, may be placed therein. When it is desired to close the body the free edge portion of the door 3 is lifted slightly and when the tension of the spring 6 comes into play the door 3 is swung from an open to a closed position with relation to the body 1 and the contents of the said body are completely enclosed.

Having described the invention what is claimed is;—

1. A device of the character described comprising a body, a door hingedly connected with the body, an L-shaped lever pivoted in the body, a spring connected with the

lever and the body, said lever having at its free end an angularly disposed extremity, and a link pivotally connected with the extremity and the door.

2. A device as described comprising a body, a door hingedly connected with the body, an L-shaped lever pivoted in the body and having an edge adapted to come in contact with the bottom thereof, said lever being provided at its free end with an angularly disposed extremity, a spring connecting the lever with the body and a link connecting said extremity with the door.

In testimony whereof I, affix my signature.

GIDEON KNECHTEL.