Oct. 12, 1926. 1,602,767

E. O. HABERFELD

CLAMPING DEVICE FOR SHEETS, FORMS, CARDS, AND THE LIKE FOR MANIFOLDING PURPOSES

Filed June 27, 1924 2 Sheets-Sheet 1

Fig. 1.

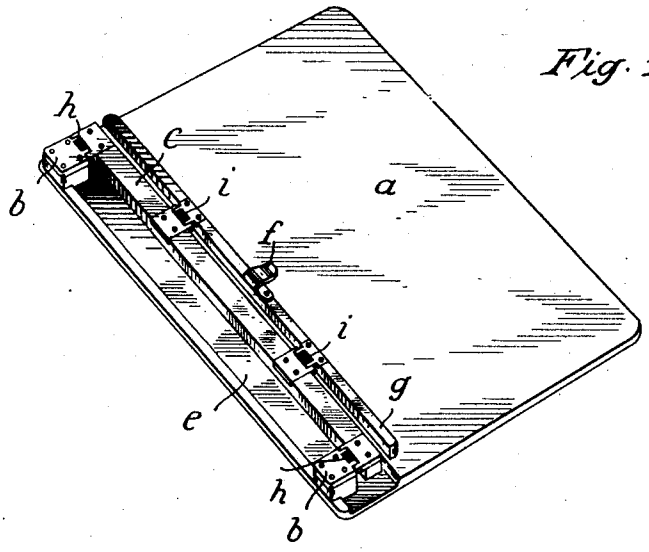


Fig. 2.

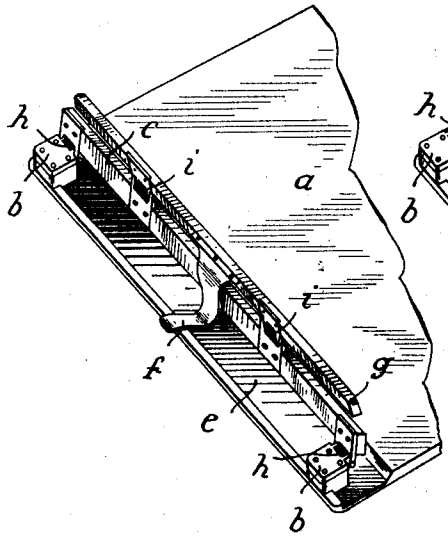
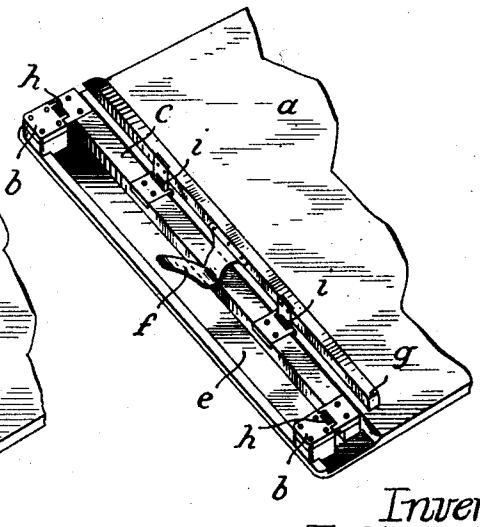


Fig. 3.



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Fig. 4.

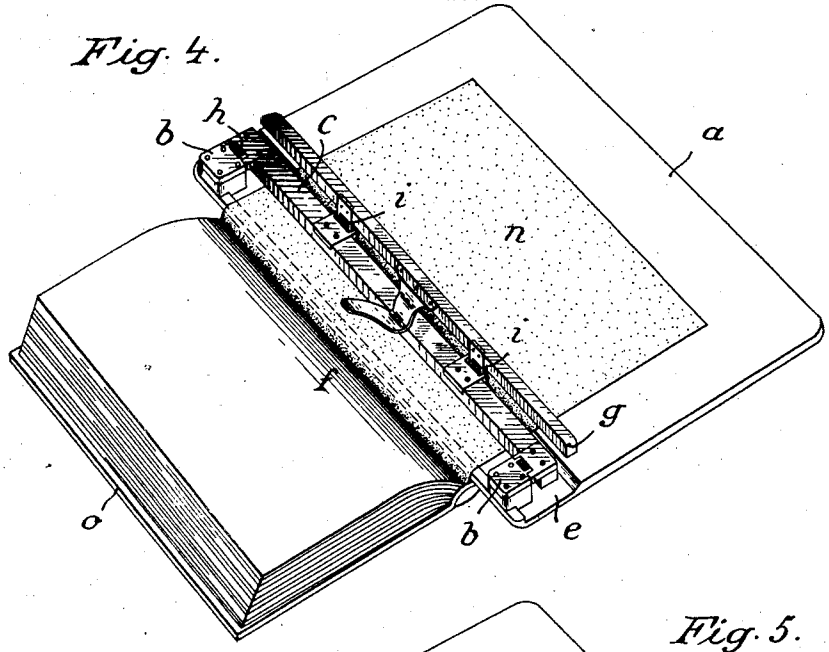


Fig. 5.

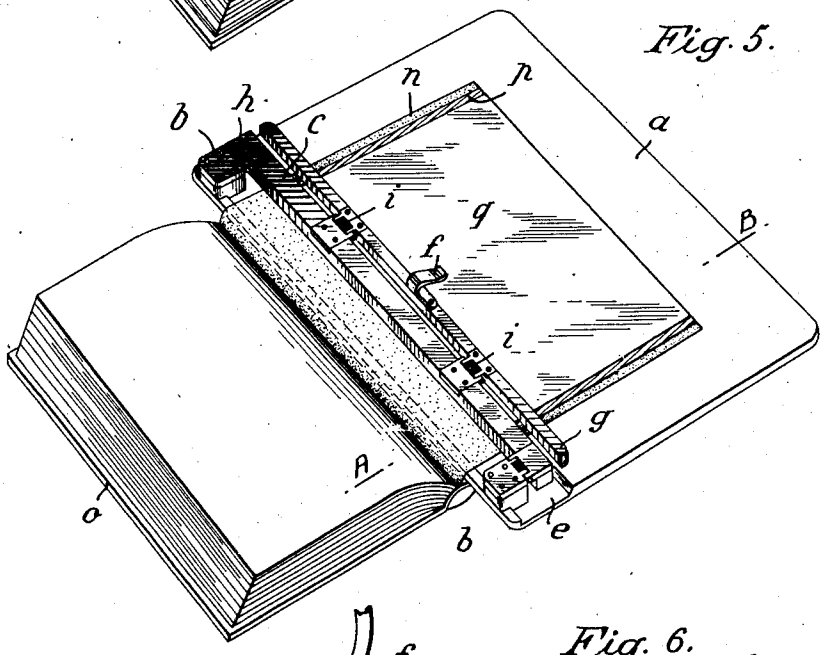
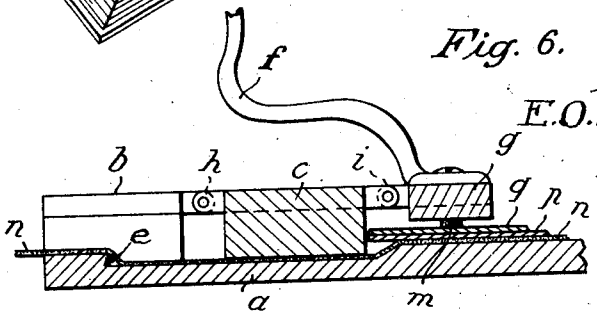


Fig. 6.



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UNITED STATES PATENT OFFICE.

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CLAMPING DEVICE FOR SHEETS, FORMS, CARDS, AND THE LIKE FOR MANIFOLDING PURPOSES.

Application filed June 27, 1924, Serial No. 722,866, and in Germany July 1, 1922.

The subject of this invention is a device for manifolding on loose sheets, forms, cards and the like and has for its object to enable the use of sheets bound into books, as well as that of such loose sheets. The devices according to the invention may thus be used both for loose sheets and the like alone and for such sheets together with sheets bound into books for manifolding purposes.

The invention makes use of a device, in which one or more clamping bars are attached to a solid base or support in such a manner that they can either be turned about an axis and hinged open or be raised in some other way from the support and, after being released, move preferably automatically into a holding position, in which they press the sheets tightly together and against the support. Any number of sheets can in this way be temporarily bound together as it were, the top sheet of which may be written on by hand, a carbon paper or the like being inserted face downwards between it and the sheet lying below it.

In every case at least two sheets are thus held together usually with the interposed third sheet (carbon paper) and held rigidly in position against the support. If the top, bottom or an intermediate sheet is not loose, but bound into a book, provision is made according to the present invention, that such a bound-in sheet may also be placed between the bar or bars and the support. For this purpose the bars or the like are so mounted on or secured to the support that between these securing means there is sufficient space for slipping a sheet through. These securing means may be so constructed that the bar or the pivotal axis of the same lies at such a height above the support as to leave a space between bar and support, so that one or more bound-in sheets can be inserted from the right or left or that, on the bar being raised or hinged over, suitable recesses in the bar form a space, which allows one or more bound-in sheets to be inserted from the right or left.

In the drawings is shown an example of an embodiment of the invention with two clamping bars one of which being designed to press a bound-in sheet on the base plate and the other to press loose sheets against the bound-in sheet.

Figure 1 is a perspective view of such an embodiment of the invention, both bars being pressed down.

Figure 2 is a similar view showing both bars being raised.

Figure 3 is a similar view showing the first bar pressed down, the second bar raised,

Figure 4 is a similar view showing the application of the clamping device on a book, the first bar pressed down on a bound-in sheet of this book, the second bar raised,

Figure 5 is a similar view showing both parts pressed down,

Figure 6 is a cross-section on the line A—B of Figure 5.

In the drawings a is a supporting board (Fig. 1), for instance of aluminium, on which brackets b are fixed. To these brackets is hinged a clamping bar c, which engages in a recess e preferably provided in the supporting board. To the bar c is hinged a second clamping bar g, on which a thumb piece or handle f is fixed. h are springs, which have an abutment on the brackets b and press the bar c with considerable force against the recess e. i are springs, which are weaker than the spring h for which the bar c forms an abutment and which press the bar g with suitable force against the supporting board a.

The clamping device is used in the following manner:

By turning the thumb piece f in the counter-clockwise direction the bar g is first raised until the thumb piece f rests against the bar c (Fig. 3). By continuing to turn the thumb piece f in the same direction the bar c is carried along too and raised (Fig. 2).

A sheet n, which is bound into a book o, may thereupon be inserted from the left through the space (Fig. 2) under the raised bar c. The thumb piece f is thereupon released until the bar c rests on the sheet n (Fig. 4), and presses it into the recess e under the action of the spring h. A carbon paper p is now laid onto this sheet n. Over the sheet n and carbon paper p one or more papers q, forms or the like, through which an impression is to be made, are pushed until they lie against the edge of the bar c. The thumb piece f is thereupon completely released, so that the bar g is also pressed by the spring firmly against the supporting board, after which the manifolding may be commenced. Pads m may if desired be fixed

to the underside of bar *g* as shown in Figures 5 and 6.

Any number of fixed or loose sheets for any purpose can thus be held against the support.

The movement of the bar *c* may be effected by separate handle instead of by the thumb piece *f*, if desired.

The object of the recess *e* is to bring the clamping bar *c* below the surface of the supporting board *a* (Fig. 6), so that no sheets can be pushed between the bar *c* and the supporting board *a* after the bar *c* has been pressed down. The right edge of the bar *c* ensures that the superposed generally loose sheets shall lie straight one on the other.

In order that in the case of particularly large sheets the bar *c* or *g* shall not give in the middle, one or both bars are preferably given a permanent set in the reverse direction by being slightly bent down in the middle towards the supporting board. With a similar object in view the supporting board may be given a slight upward camber in the middle below the bar *c* or *g*. The amount of camber is of course very slight and consequently hardly noticeable.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a clamping device for sheets, forms, cards and the like, a supporting board, a bar pivotally secured to the board at spaced points, said bar being adapted to be turned off to permit of the insertion of a sheet of a bound volume between it and the board and between the points of pivotal connection of the bar with said board, and a second bar pivotally secured to the first bar.

2. In a clamping device for sheets, forms, cards and the like, a supporting board, a bar pivotally secured to the board at spaced points, said bar being adapted to be turned off to permit of the insertion of a sheet of a bound volume between it and the board and between the points of pivotal connection of the bar with said board, and a second bar pivotally secured to the first bar, means normally tending to move both bars into engagement with the board, the second mentioned bar being adapted to clamp a sheet arranged upon the inserted page of a bound volume.

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