Oct. 7, 1930. H. N. FELEY 1,777,639

BOOK

Filed Nov. 8, 1926

Fig. 1.

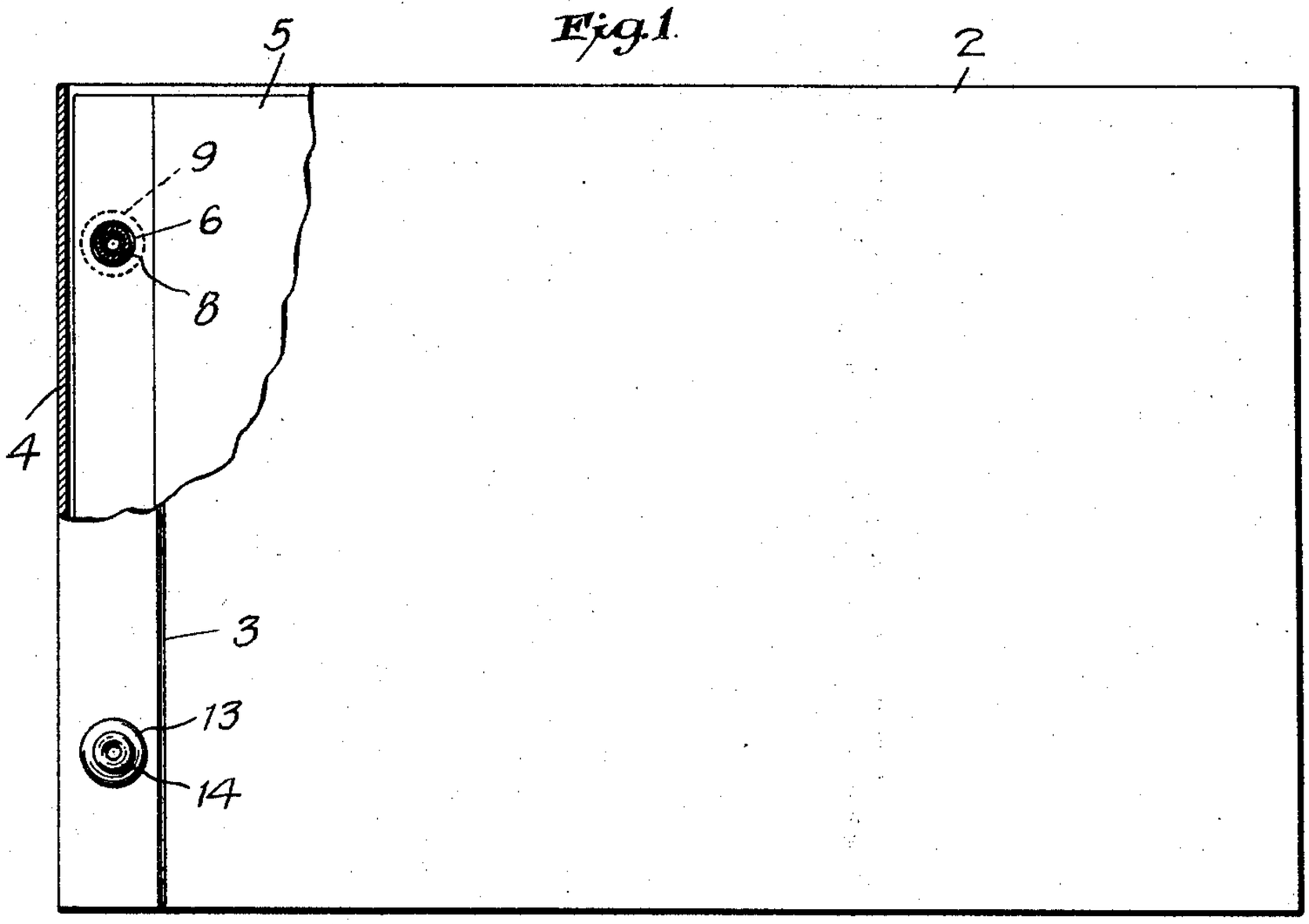


Fig. 2.

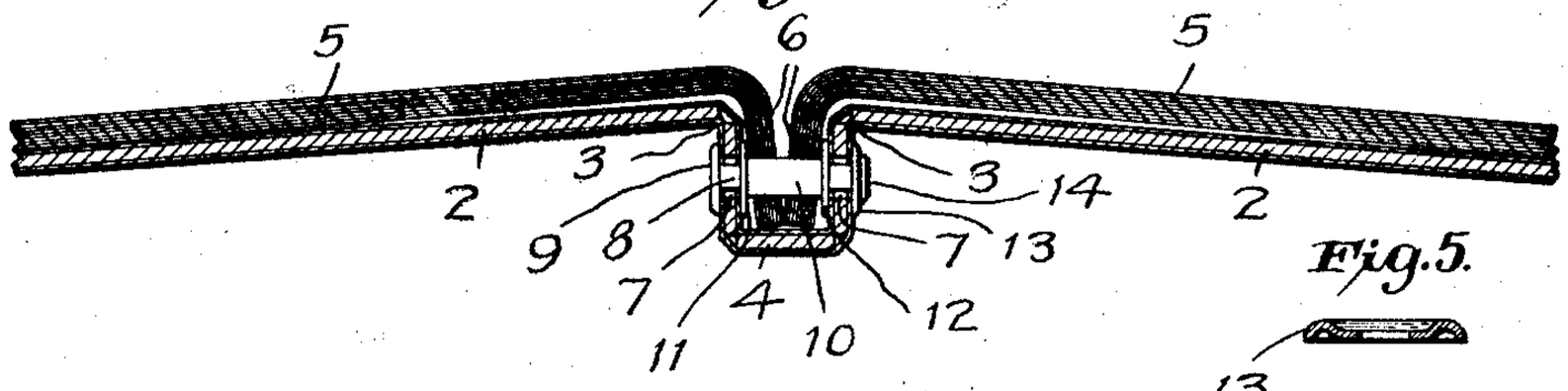


Fig. 5.

Fig. 3.

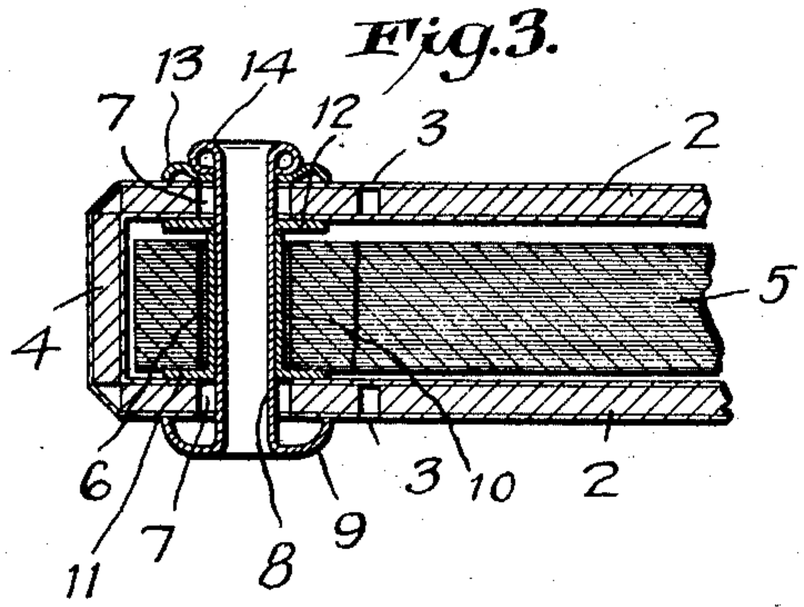


Fig. 4.

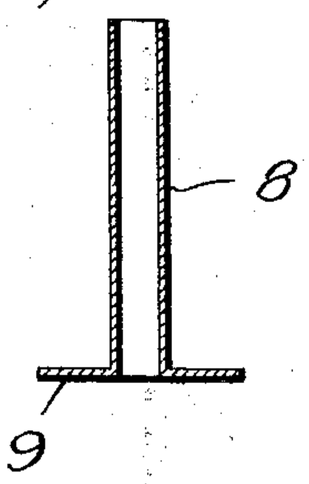


Fig. 6.

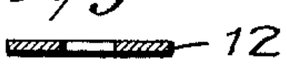
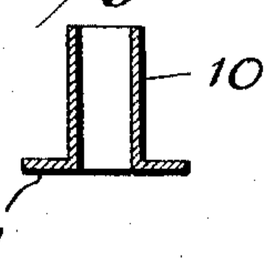


Fig. 7.



INVENTOR
Henry N. Feley

BY Geo. A. Senior
HIS ATTORNEY

Patented Oct. 7, 1930 1,777,639

UNITED STATES PATENT OFFICE

HENRY N. FELEY, OF EAST ORANGE, NEW JERSEY

BOOK

Application filed November 8, 1926. Serial No. 147,051.

The object of the invention is to provide an improved flat-opening check-book, or other book, constructed in an advantageous manner so that the book will lie open at any point. It is a serious inconvenience of ordinary check-books that they must be held open in order to keep the stubs from springing over onto the page to be written upon. According to the present invention the book is bound by means of shaft members passed through openings in the sheets and cover and provided with upset ends outside the cover, and spacer means on the shafts inside the cover, the spacer means being adapted to bear against the inner sides of the cover and keep the sheets free, that is to say, not tightly held or gripped. This, together with the fact that the openings through the separate sheets are materially larger than the diameter of the parts standing within them, permits the leaves to separate loosely at any point where the book may be opened. Other features of the invention will become apparent as the specification proceeds.

In the accompanying drawings, forming part hereof:

Fig. 1 is a plan view of the book embodying the invention, a portion of the cover being broken away;

Fig. 2 is a longitudinal section through the book, open, the end portions being broken away because of lack of space;

Fig. 3 is a fragmentary view on a larger scale, showing the closed condition; and

Figs. 4, 5, 6 and 7 are detail sectional views of parts seen in Figs. 1, 2 and 3, before assembling.

The stiff-board cover of the book is marked 2, the hinges of the front and back parts of the cover are marked 3, and the binding strip of the cover is marked 4. The interior pad consists of separate leaves 5, not united by stitching, staples or gum.

Two large holes 6 are made through the rear portion of the collection of sheets, and corresponding holes 7 are made in the cover. The holes in both the leaves and cover may be made at the same time.

A tubular shaft 8 having a flange 9 is first inserted through each of the holes in one of the parts of the cover, the flange 9 being on the outside of the cover. A sleeve 10 having a preformed flange 11 is then pushed over each of the shafts 8 so that the flange 11 bears against the inside of the cover.

The two shafts 8 and two sleeves 10 having been inserted in this manner, the collection of sheets 5 are placed over the shafts and sleeves. Then two washers 12 are passed over the protruding ends of the shafts 8 so as to abut the ends of the sleeves 10 opposite the preformed flanges 11. The openings 7 in the other cover member are then passed over the ends of the shafts, this cover member resting on the washers 12. A washer 13 is placed over the end of each shaft outside the cover, and the ends 14 are upset, forming a retaining head. The flanges 9 forming the heads at the opposite side of the book are preferably shaped under pressure in the dies as shown in Fig. 3.

It will be observed that the spacer means formed by the sleeves 10, the flanges 11, and washers 12 of which bear against the inner sides of the cover is so designed, and of such length, that the pressure exerted in clinching and upsetting the binder fastenings does not result in the leaves 5 being gripped or compressed at the binding. Instead they remain quite loose between the parts of the cover, which are held somewhat away from the leaves by the flanges 11 and washers 12. The distance between the flanges 11 and washers 12 is greater than the thickness of the pad of leaves, or, at least, the leaves are only loosely held between these flanges and washers. Furthermore, it will be seen that the holes 6 through the leaves are materially larger than the external diameter of the sleeves 10 within them. Consequently, when the book is opened at any point, the two sections of the collection of leaves part freely as shown in Fig. 2, and there is no tendency for one side to flop over on the other.

Further contributing to this effect, the individual sheets are provided with creases 15, parallel with the binding, adjacent and in front of the holes 6, these creases tending to destroy the springiness of the paper at the regions where the leaves curve over the bends

of the cover at the hinges 6, without seriously injuring the strength of the fiber.

In my Patent No. 1,606,213, issued Nov. 9, 1926, of which the present invention is an improvement, two abutting sleeves provided with flanges on their remote ends are utilized for the spacer means. It has been found very advantageous, particularly in manufacturing a thin book, to use only one sleeve with its preformed flange and a washer as illustrated in this application. When assembling the smallest size standard book the construction illustrated is used to great advantage. In assembling books of greater thickness sleeves of different lengths corresponding to the number of sheets are used. Obviously the illustrated construction might be used on a book of any desired thickness with satisfactory results.

I claim:

A book comprising covers and intervening sheets both formed with registering openings, a shaft adapted to be passed through the openings in the covers and sheets and headed beyond the covers, a sleeve slidably fitting the shaft and having a right-angled flange at one end, said shaft heading and sleeve flange confining one cover, the flange of the sleeve resting against the outermost sheet on one side and the sleeve having a length exceeding the combined thickness of the sheets, and a flat washer fitted over the shaft beyond and bearing squarely against the free end of the sleeve, the remaining cover being confined between the shaft heading and the washer, the length of the sleeve permitting a comparatively loose play of the sheets between the flange of the sleeve and the washer.

In testimony whereof I affix my signature.

HENRY N. FELEY.