

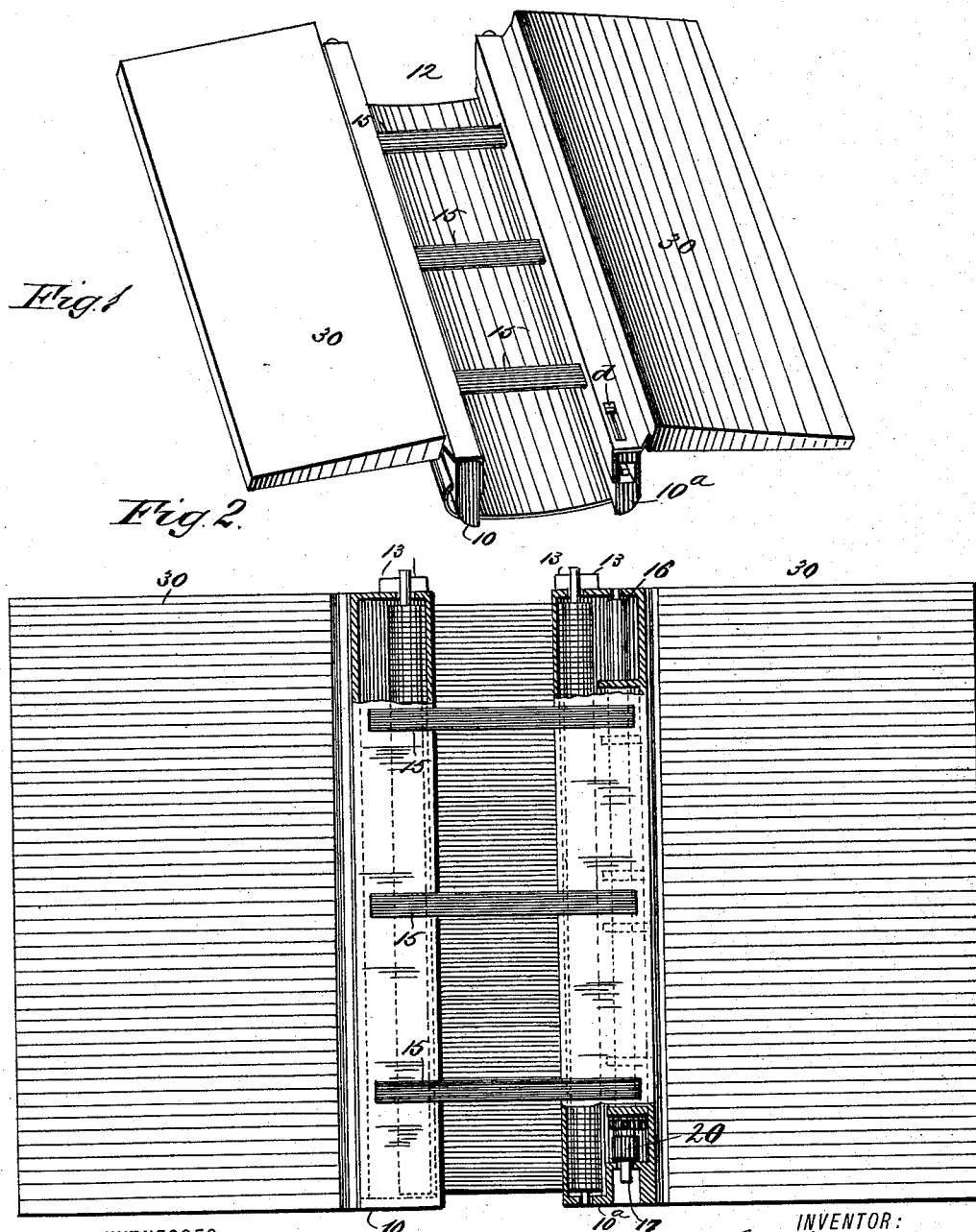
(No Model.)

2 Sheets—Sheet 1.

G. A. BLACKBURN & D. J. BRIMM.  
TEMPORARY BINDER.

No. 410,346.

Patented Sept. 3, 1889.



WITNESSES:  
*P. Mc Ardle*  
*C. Sedgwick*

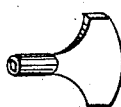


Fig. 11

INVENTOR:  
*G. A. Blackburn*  
*D. J. Brimm*  
BY *Munn & Co.*  
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

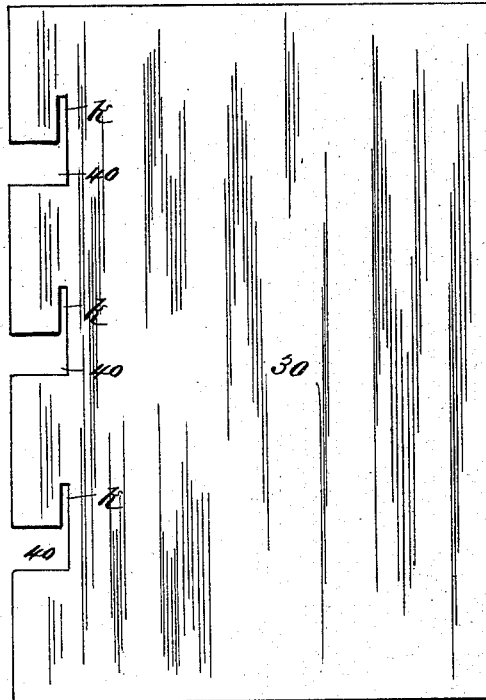
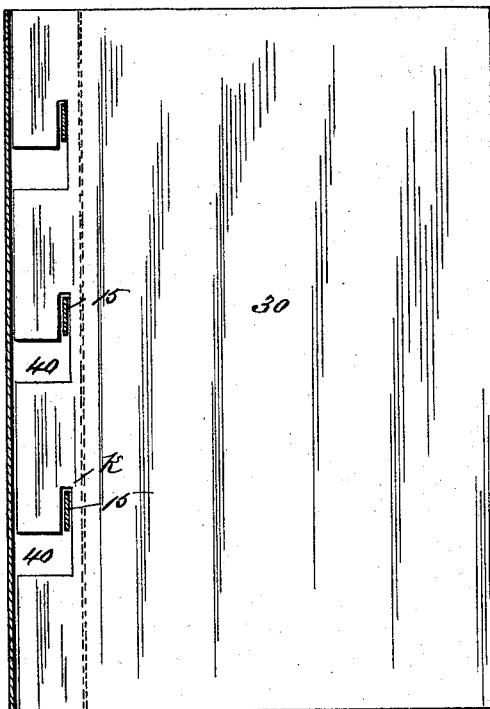
G. A. BLACKBURN & D. J. BRIMM.  
TEMPORARY BINDER.

No. 410,346.

Patented Sept. 3, 1889.

Fig 3

Fig 4



12

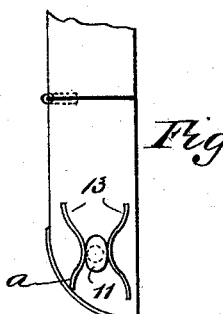


Fig 6

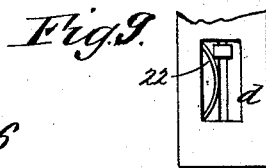


Fig 9



Fig 7

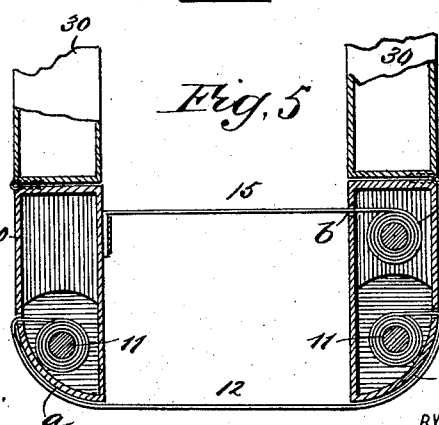


Fig 5



Fig 8



Fig 10

WITNESSES:

J. M. Ardle.  
C. Sedgwick.

BY

INVENTOR:

G. A. Blackburn  
D. J. Brimm  
Munn & Co  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

GEORGE A. BLACKBURN AND DANIEL J. BRIMM, OF COLUMBIA, SOUTH CAROLINA.

## TEMPORARY BINDER.

SPECIFICATION forming part of Letters Patent No. 410,346, dated September 3, 1889.

Application filed December 31, 1888. Serial No. 295,056. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE A. BLACKBURN and DANIEL J. BRIMM, both of Columbia, in the county of Richland and State of South Carolina, have invented a new and Improved Temporary Binder, of which the following is a full, clear, and exact description.

The object of our invention is to provide a temporary binder which may be also used as a permanent binder, wherein the parts are so formed and connected that the book may be expanded or contracted to receive a greater or less number of sheets; and to the end named the invention consists, essentially, of a book provided with an extensible back, binding-strips, and a means for tightening the binding-strips and the back, all as will be hereinafter more fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of our improved binder. Fig. 2 is a plan view of the same, the covers being open and parts being broken away. Fig. 3 is a central sectional view taken through the back. Fig. 4 is a view of one of the leaves. Fig. 5 is an enlarged cross-sectional view of a portion of the binder. Fig. 6 is a view representing the attachment by which the back rollers are held from turning. Fig. 7 is a longitudinal sectional view illustrating the connections employed to hold the binder-strips. Fig. 8 is a sectional view on line *x x* of Fig. 7. Fig. 9 is a plan view of the construction shown in Fig. 7. Fig. 10 is a longitudinal sectional view of a modified construction, and Fig. 11 is a perspective view of a form of key adapted for use in connection with the binder.

In the drawings, 10 and 10<sup>a</sup> represent two boxes or cases of any proper material, but preferably made of metal. These boxes are hollow and quadrant-shaped at *a*. Within the boxes there are journaled longitudinal shafts or rollers 11, upon which shafts there is wound a backing 12 of any proper material. One end of each of the rollers 11 ex-

tends through the box end, there to rest between springs 13, the extending end being oval or of irregular form, so as to be held from turning by the springs; but instead of using springs such as those shown any other proper construction could be employed.

To one of the boxes there are connected bands or strips 15, made of heavy tape or of metal, which said bands or strips are carried through openings *b*, formed in the inner wall of the opposite box, there to be secured to a roller 16, which is provided with a head 17 of proper form to be engaged by a key or wrench socket. Upon the shaft 16 there is mounted a ratchet-wheel 20, that is engaged at such times as it is desired to hold the shaft from turning by a double-toothed pawl 21, the stem of the pawl extending upward through a longitudinal slot *c*, formed in the upper wall of the case, the head of this stem riding in a recess *d*, so as to leave the upper face of the box flush; or any other convenient form of ratchet and pawl might be employed. In connection with the head of the stem 21 we arrange a spring 22, said spring being employed to hold the double-toothed pawl in engagement with the ratchet 20, or to hold said pawl out of engagement with the ratchet.

To the boxes or cases 10 and 10<sup>a</sup> we hinge covers 30, which covers are of any proper form, the hinge-connection, however, being, by preference, such that the inner faces of the covers will rest in a plane parallel with the upper faces or edges of the boxes 10 and 10<sup>a</sup> when the covers are open.

The sheets to be bound in the binder above described are made with L-shaped slots 40, the arrangement being such that the strips or bands 15 may be passed through the main bodies of the slots, and the leaves then moved until the strips rest in the branch slots *k*. After a number of leaves have been inserted the bands 15 are tightened and the rollers 11 are adjusted, so as to impart a proper tension to the back 12. Then if other leaves are to be inserted, the parts are loosened and the leaves are inserted alphabetically, if desired.

In certain instances it might be desirable to bind leaves that were not specially cut for use in connection with our binder; and to this

end we employ the modified construction shown in Fig. 10, wherein the bands are shown at 15<sup>a</sup> and run in planes at right angles to the planes in which the bands 15 run, the post or shaft 16<sup>a</sup>, to which the bands are secured, being centrally arranged, as shown in Fig. 10.

We will now point out some of the advantages resulting from the above-described construction.

The temporary binder or extensible book is simple in its construction and is easily managed. For books such as ledgers, where there are only insertions and additions to be made, the construction shown in the principal figures of the drawings would be used.

The contents of the binder can be increased or diminished, as desired, and perfect alphabetical arrangement can always be preserved. Sheets can be added, withdrawn, changed, &c., in any part of the volume in a moment without dislocating the other leaves.

The binder is useful in book-keeping, for as a ledger it can be made the size desired, the binding strips or tapes running through slots formed in the permanently-bound leaves, additional leaves with L-shaped slots (shown in the drawings) being provided for use, if desired, so that the book-keeper can insert these sheets as they are needed in any part of the volume, and the added sheets may be numbered decimally as they are inserted. This overcomes the difficulty experienced by all book-keepers in spacing. If it is desired, the accounts can be kept in perfect alphabetical order by having all of the sheets with the L-shaped slots. Then any sheet could be removed at will. The binder also enables the book-keeper to run his books as long as he pleases or to close them when he desires. If a page is badly blotted, it can be removed, rewritten, and replaced. If hinged sheets are used, all the advantages of a flexibly-backed book are secured.

The binder is useful as a file for letters, bills, invoices, &c.; but for this purpose we would employ the construction shown in Fig. 10, these letters, &c., being bound in such a manner as to enable the book-keeper to arrange them alphabetically or chronologically, and any one of the letters may be withdrawn and replaced at pleasure without moving the other sheets held by the binder.

This binder, we might say, is indispensable

to librarians, and it enables them to keep a perfect alphabetical catalogue of all the authors and books in an increasing library. One sheet must be allowed to an author. This will give room for a brief account of the man and a list of his works, and when the catalogue has become as large as is convenient it can be divided and two volumes used. This division can go on indefinitely until there is a volume for each letter of the alphabet, if necessary, every name always remaining in perfect alphabetical order, so that at any time a printed catalogue can be quickly and readily prepared.

These are a few of the advantages resulting from the use of the binder forming the subject-matter of this application.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a temporary binder, the combination of two cases having covers hinged thereto, a backing adjustably connected to the cases, and adjustable binding-strips extending from one case to the other, substantially as described.

2. In a temporary binder, the combination of cases, covers hinged thereto, rollers mounted in the cases, a back connected to the rollers, binding-strips, and a means for adjusting said binding-strips, substantially as described.

3. In a temporary binder, the combination, with cases, of shafts or rollers mounted therein, leaves hinged thereto, a flexible back connected to the rollers, binding-strips, a roller to which said strips are connected, and a means for locking the roller to place, substantially as described.

4. In a temporary binder, the combination, with cases, of covers hinged thereto, rollers mounted therein, springs arranged in connection with the rollers, a flexible back connected to the rollers, binding-strips connected at one end to one of the cases, a shaft arranged in the other case, the binding-strips being connected to this shaft, a ratchet carried by the shaft, and a pawl mounted in the case and arranged to engage the ratchet, substantially as described.

GEORGE A. BLACKBURN.  
DANIEL J. BRIMM.

Witnesses:

O. E. THOMAS,  
HENRY M. LEE.