

(No Model.)

R. BELL.
TEMPORARY BINDER.

No. 515,138.

Patented Feb. 20, 1894.

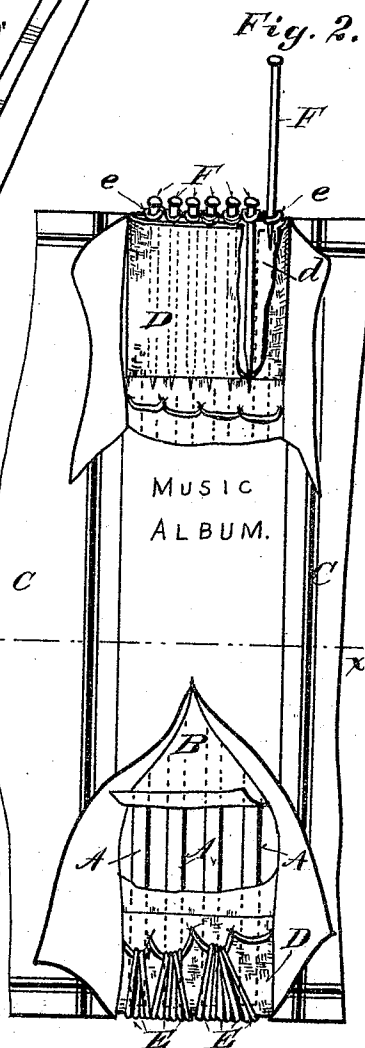
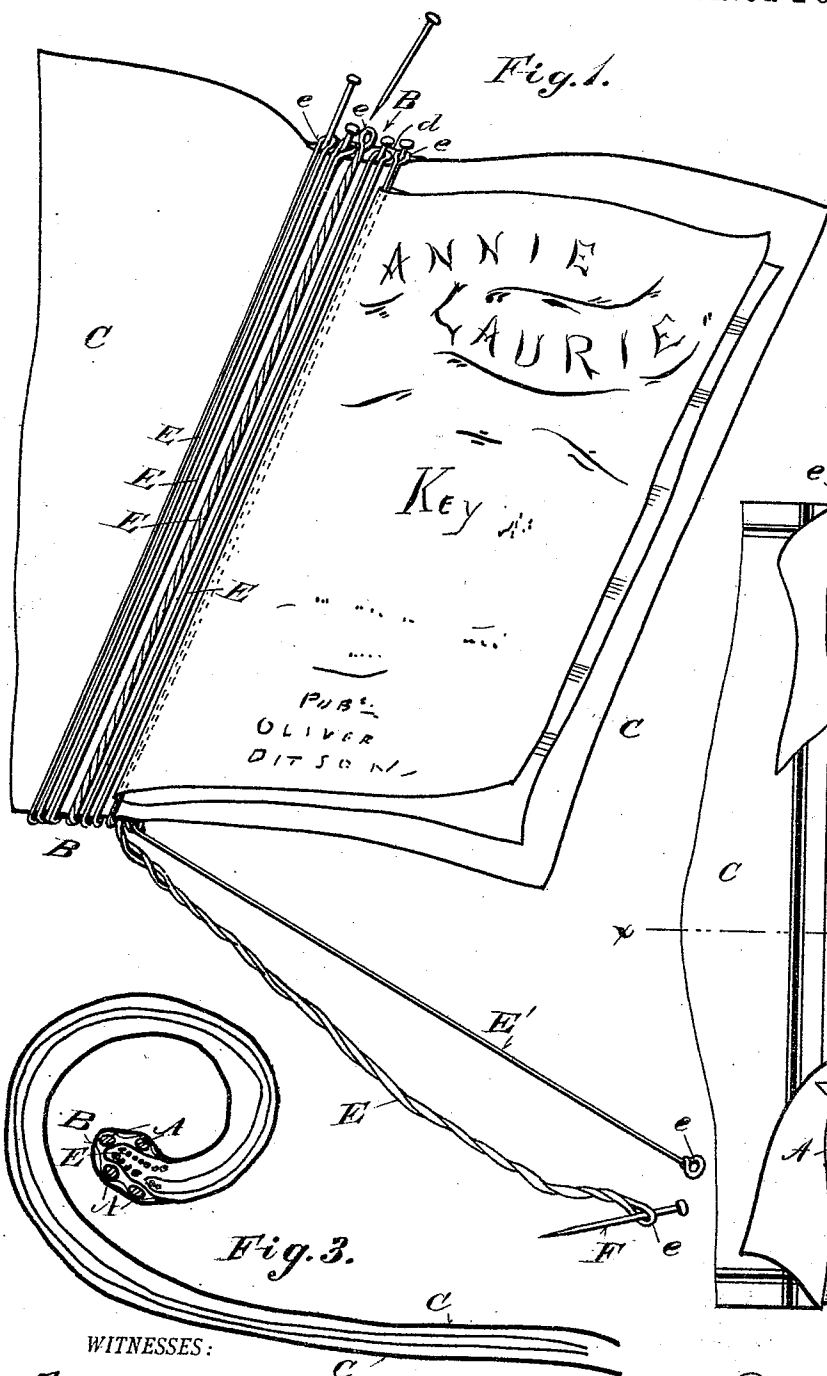


Fig. 3.

WITNESSES:

J. A. Siefer
Julian Laughlin

INVENTOR

Robert Bell
BY
H. M. Plaisted.
HIS ATTORNEY.

UNITED STATES PATENT OFFICE.

ROBERT BELL, OF ST. LOUIS, MISSOURI.

TEMPORARY BINDER.

SPECIFICATION forming part of Letters Patent No. 515,138, dated February 20, 1894.

Application filed March 27, 1893. Serial No. 467,768. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BELL, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Temporary Binders, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in temporary binders.

My improvements have reference to a binding strand or connection, having a loop in one end and fastened to the back of the binder, and means to secure temporarily, said loop to the back; have reference to a back, rigid lengthwise or vertically, and flexible transversely; have reference to stiffening pieces flexibly inter-connected to form such a back; have reference to a series of binding strands and pins adapted to secure such strands temporarily to the back; and have reference to other points of construction hereinafter described and claimed.

In the accompanying drawings on which like reference letters indicate corresponding parts, Figure 1 represents an inside face view of my binder with a sheet of music in position; Fig. 2, an outside back view with parts exposed to show the construction; and Fig. 3 a sectional edge view on the line $x-x$, Fig. 2, showing the flexibility of the binder.

The letters A designate stiffening pieces, preferably of stout wire, flexibly connected together in a back B, provided with covers, C, for the protection of the sheets to be secured in the binder. The ends of the pieces are loosely held in sheaths or guards D, of fabric or other suitable material, that form an edge at each end of the back over which extend the binding strands or connections, E, along the inside of the binder. These strands may be of stout thread and are secured at one end to the back, preferably at the bottom, and each has a loop or eye, e , at the other end, through which passes a pin, F, into the sheath D, or other part of the back. As shown in Fig. 2, the top sheath has a pocket, d , into which the pins are inserted and extended through the bottom thereof, to maintain them in place. Other means for engaging the looped end of the strand to the back may be employed. The loop or eye, e , is

formed by the bight of the doubled strand, as on the left in Fig. 1, or in any other convenient way. The strand itself may be duplex, single, or otherwise, as long as a loop or its equivalent is formed at one end. One or more strands may be held by each pin, as shown in Fig. 2. Each strand is preferably of a fixed length, and independent of the others, but it may be shortened by twisting as shown in Fig. 1. A series of tense binding connections from the bottom of the back to the top, is thus formed. The sheets of music, for example, are laid in the binder, and the binding strands are passed up between the leaves, and the looped ends are secured by the pins, or other temporary means. Any one of the sheets may be readily taken out by withdrawing its binding pin to free the strand that it holds. Any number of sheets may be thus held by the binder according to its capacity.

At E', Fig. 1, I have shown a rigid, non-elastic binding strand of wire or other material, looped at both ends; one end is hooked into an eyelet in the bottom of the back, and the other end is adapted to be engaged by the pin F, as above described.

Fig. 3. indicates the adaptability of the binder to be rolled up for carrying. The flexibility of the back transversely is of especial advantage in securing compactness, and is one of the features of my invention.

The terms, loop, eye and hook, are taken as equivalents in this specification.

While I have specified a non-elastic binding strand in exemplifying my invention, I do not limit myself to binding strands having this characteristic, but may employ a strand more or less elastic, so long as it is provided at one end with a loop, adapted to be temporarily secured to the back. I therefore lay broad claim to such construction irrespective of the material of which the strands are composed.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a binder, the combination with a back, of a binding strand having a loop formed at one end of the strand and fastened to the back at the other end of the strand, and a detachable pin adapted to be inserted in said loop of

the strand to temporarily secure it to said back.

2. In a binder, the combination with the back, of a duplex binding strand consisting of parallel parts forming a bight or loop at one end and fastened to the back at the other end, and a pin to engage said loop end and back, whereby the length of the strand may be adjusted by twisting or untwisting the same.

3. In a binder, the combination with a back having a pocket at one end, of binding strands fastened to said back at one end, and each provided with a loop at the other end, and binding pins to engage said loop ends and the back by insertion in said pocket.

4. In a binder, the combination with a back composed of lengthwise stiffening pieces, flexibly connected transversely, and flexible sheaths for the ends of said pieces, of binding strands having loops at one end and fastened at the other to said back, and binding pins

to engage said loop ends with said back by insertion in one of said sheaths, substantially as described.

5. In a binder, the combination with a lengthwise stiffened back composed of material transversely flexible, and a binding device for said back, of a flexible cover secured to said back, whereby the inclosed sheets bound therein may be rolled up into a compact carrying roll.

6. In a binder, a back composed of independent stiffening pieces arranged lengthwise of the back, and fabric connections for said pieces to secure flexibility transversely, and independent binding devices mounted on the inside of said back.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT BELL.

Witnesses:

A. C. LAUTER,
JENNIE SCHOEKEL.