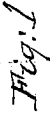


J. W. Harrison.

N^o 46.353.

Patented Feb. 14. 1865.



J. S. Brown
J. B. Woodruff

Genl W. Harrison

Sheet 2. 2 Sheets.

Mach. for Making Book Covers.

N^o 46353.

Patented Feb. 14. 1865.

Fig. 4.

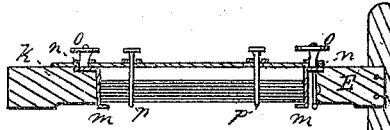
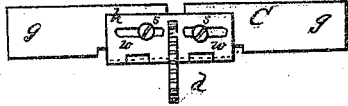
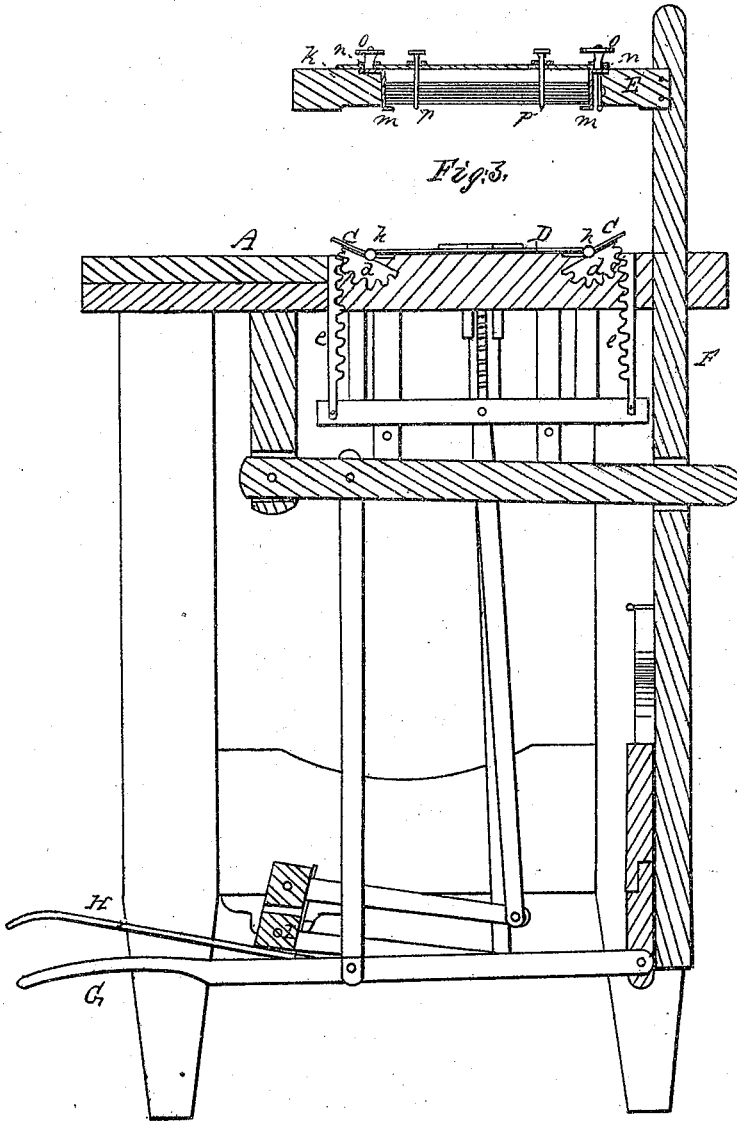


Fig. 3.



Witnesses

J. S. Brown
J. B. Woodruff

Inventor

Geo W Harrison

UNITED STATES PATENT OFFICE.

JAMES W. HARRISON, OF WASHINGTON, DISTRICT OF COLUMBIA.

MACHINE FOR MAKING BOOK-COVERS.

Specification forming part of Letters Patent No. **46,353**, dated February 14, 1865.

To all whom it may concern:

Be it known that I, JAMES W. HARRISON, of the city and county of Washington, in the District of Columbia, have invented a new and useful Machine for Making Cases in Book-Binding; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a front view of the machine. Fig. 2 shows a top view of the same, the adjustable gage, and folding wings. Fig. 3 is a section through the gage, showing the apparatus for holding and placing the back linings in the cases. Fig. 4 is a detached view of one of the folding wings C, showing the device for adjusting its length.

The object of my invention is to save time and labor in the process of putting together the several parts of which book-covers are composed; technically termed "making cases."

My invention consists in the construction of the gage, the same being so arranged and operated as to hold a quantity of the back linings in the gage and place them one at a time automatically in the cases in the most perfect manner, also in the arrangement and combination of the adjustable automatic folding wings, the same being operated by foot pedals, levers, or cams in such a manner as to leave the hands of the workman free to place the material in position and remove the cases formed without coming in contact with the glue or mucilage.

To enabled others skilled in the art to make and use my invention or machinery for making cases or book-covers, I describe it more fully, referring to the drawings and to the letters marked thereon.

I make a table, A, of suitable dimensions, it being supported on legs or a strong frame in the usual manner. In the top of the table A is fitted slides B B, which are made to be adjusted and are held firmly in any desired position by the thumb-screws *b b*. On the top of the slides B B are placed two of the folding wings D D. The apparatus for operating them consists of the segments of gear-wheels *d d*, backs *ee*, and levers *ff*, all of which are secured to the slides B B, so that their operation is the same, to turn over the cloth or other material with which the outside of the case is covered, when secured in any position to favor

the width of the case—the slides B B being constructed so as to adjust the width of the cover or case from both sides of the center of the machine. At right angles with the folding wings D D are placed similarly-constructed folding wings C C, operated in a similar manner, to turn over the top and bottom of the cloth on the case. These wings C C are made so that they can be extended longitudinally to favor the width of the back of the case or book-cover. This is effected by having the folding parts of the wings *g g* parted in the center and made to slide on the hinge or center piece, *h*, and secured to it by set-screws *s s*, working in slots *ww*. (See Fig. 4.) On the extreme ends of the wings *g g* are nibs *i i*, turned up at right angles, for the purpose of indenting and forcing in the cover against the edge of the pasteboard right at the corners, so as to make smooth and even corners when the material is brought over by the other wings, C C, to complete the case.

For the purpose of placing the back linings centrally and truly on the case without handling and at the same time have the gage in position to place the pasteboards, I have the gage E, attached to a sliding post, F, which is placed centrally with the turning over or folding apparatus in the rear of the table A, so that the gage E is elevated and held up by a yielding spring, *j*, directly over the cover, so that when it is depressed by the action of the foot on the pedal G, the linings being in the gage, the bottom one is brought in contact with the glue or mucilage on the cover, which adheres to it. The pasteboards, being then placed to the gage, it is allowed to be raised by the action of the spring, leaving the back lining and the pasteboards in their places to be folded in.

The gage E is made of metal, the arms *k k* being of such width as to form a box, or receptacle to contain a quantity of the linings, and are made so as to be adjusted to any desired width of the back of the case or book-cover. The linings are supported on their ends by resting on the ledges of slight springs *m m*, which are attached to slitted bars *n n*, so that they can be moved and adjusted to any desired point and then secured by set-screws *o o*.

When the back of the cases are very wide, there may be a tendency of the linings to

sag and fall below the bottom of the gage, and draw the ends off the narrow ledges of the springs *m m* and fall on the case at a time and in numbers not wanted. This I prevent by having one or more very fine wires, *p p*, they having a slight enlargement at the lower end, the same passing up through small punctures in the linings and secured in a suspended position to a slitted bar, *q q*, on the top. These suspended wires keep the linings on a level with the bottom of the gage, while they present no obstacle to a single lining being drawn off when its lower surface comes in contact with the glue. To operate, I adjust the gage to the desired width of the back of the cases and secure it by the set-screws. The linings, being cut to the proper length and width, are placed in the gage, they being supported on the springs and thin vertical rods. The cloth for the covers, being cut the proper dimensions, is placed upon a zinc plate, where the glue is spread over its surface. It is then placed centrally on the machine under the gage, which is brought down upon the cloth by the action of the foot on the center pedal, *G*, and held there, while the two pasteboards are placed. The gage, being then released from its pressure, resumes its elevated position, leaving the back lining fixed in its place. Then the left-foot pedal, *H*, is pressed down, which operates the folding-wings *O O*, and turns over the cloth and secures it at the top and bottom of the case. The foot is then changed to the right pedal, *I*, which, being pressed down, in like manner operates the folding-

wings *D D*, thus turning over the other edges and securing them, when the case is ready to be removed from the machine and rubbed down.

The whole process of making cases—such as feeding in the cloth in strips from off rollers, spreading the glue on the same, cutting the covers to the size, placing them and the pasteboard on them, removing and rubbing down and completing the cases—I contemplate doing by machinery, operated automatically, and for which I purpose subsequently to make application for separate patents.

Having described my invention, or such portions of it as are shown in the accompanying drawings, what I claim as new, and desire to secure by Letters Patent, is—

1. The gage, the same being so constructed as to form a box or receptacle to contain a quantity of back linings, and so operated as to place them automatically, one at a time, in the case, at the same time the gage is in its position for placing the pasteboards, as described, for the purposes herein set forth.

2. In combination with adjustable back gage, the adjustable automatic folding-wings, the same being operated by cams or foot-pedals, levers, and springs, for the purpose of turning over and securing the cloth on the cases in making book-covers, as herein specified.

JAS. W. HARRISON.

Witnesses:

EDM. F. BROWN,
J. B. WOODRUFF.