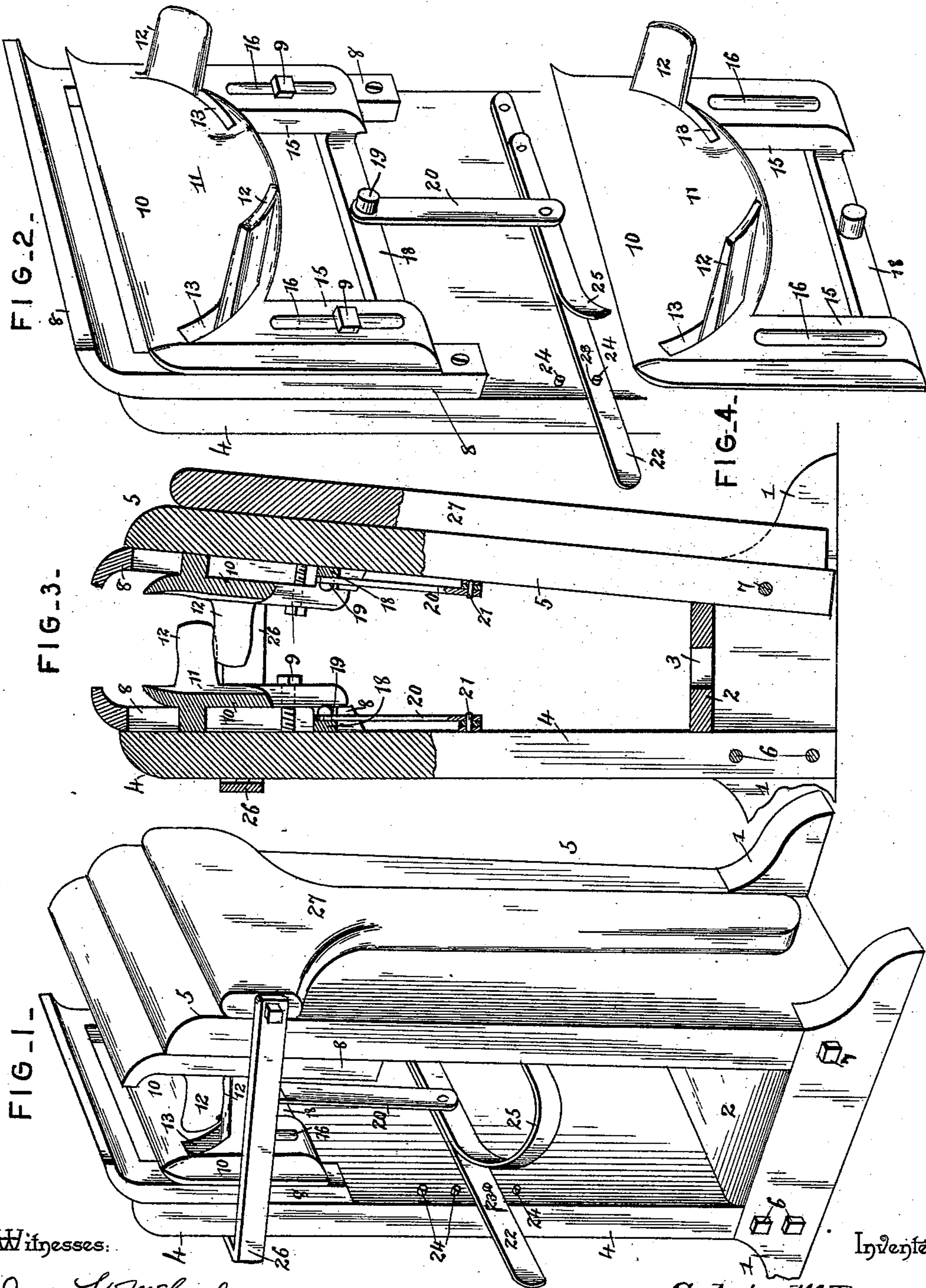


(No Model.)

C. W. DOE.
BROOM PRESS.

No. 464,094.

Patented Dec. 1, 1891.



Witnesses:

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UNITED STATES PATENT OFFICE.

CALVIN W. DOE, OF BIG RAPIDS, MICHIGAN.

BROOM-PRESS.

SPECIFICATION forming part of Letters Patent No. 464,094, dated December 1, 1891.

Application filed November 5, 1890. Serial No. 370,391. (No model.)

To all whom it may concern:

Be it known that I, CALVIN W. DOE, a citizen of the United States, residing at Big Rapids, in the county of Mecosta and State of Michigan, have invented a new and useful Broom-Press, of which the following is a specification.

This invention has relation to broom-presses, the objects in view being to increase the strength and durability of the press and its stability without increasing the cost of the same, to provide for a convenient means of adjusting the broom during the process of stringing the same, and for operating the jaws to clamp and unclamp the broom.

With the above and other minor objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a broom-press constructed in accordance with my invention. Fig. 2 is an inner view of one of the members. Fig. 3 is a vertical longitudinal section. Fig. 4 is a perspective in detail of one of the adjustable formers.

Like numerals of reference indicate like parts in all the figures of the drawings.

The base of the press comprises opposite standards 1, connected by a central platform 2, having a broom-handle-receiving opening or hole 3.

4 designates the rigid member, and 5 the hinged or pivoted member, which, as is usual, is formed of wood. Each member is reduced at its lower end and takes between the opposite standards 1, the rigid member being bolted, as at 6, between said standards, and the pivoted or hinged member pivoted, as at 7, between said standards. Each of the members is provided upon its inner side and its upper end with a vise-jaw 8 of inverted-U shape, and each of the terminals of each jaw is provided with an inwardly-disposed headed stud 9.

10 designates the former-plates, each of which is concaved, as at 11, and provided with a pair of inwardly-disposed laterally-inclined studs 12 and openings 13. The studs of one former alternate with those of the other former and enter the slots of the other. Each former-

plate is provided at its sides with depending arms 15, having longitudinal slots 16, which receive the headed studs 9 of the jaws. It will thus be seen that the former-plates are adapted for vertical movement. The depending arms of the former-plate are connected in pairs by cross-bars 18, to the centers of which there are pivoted, as at 19, straps 20, the lower ends of which are pivotally connected, as at 21, to the centers of a pair of pivoted levers 22, one of which is extended beyond one edge of one of the members and terminates in a handle, and in rear of the handle is provided with a perforation 23, adapted to receive any one of a series of adjustable studs 24, projecting inwardly from the inner face of an adjacent member.

25 designates a bow-spring sprung in between the opposite levers just mentioned and serving, when not otherwise influenced, to spread the two members, or, rather, force the hinge member away from the stationary member.

26 designates a U-shaped bail secured to the outer face and near the upper end of the fixed member, the opposite terminals of the bail embracing the two members at their edges and extending a short distance beyond the outer face of the hinged member.

27 designates a lever eccentrically pivoted between the terminals of the bail.

In operating upon a broom the adjusting-lever 22 is raised and its perforation engaged by the upper adjusting-stud of the series. A broom is then placed in an inverted position between the formers and the handle of the broom in the opening 3. The first string is then placed in the broom-head, after which the eccentric-lever is loosened and the lever 22 lowered one stud, after which the members are retightened by the lever 27 and the second string is placed in position, and so on the entire series of strings is set.

The ease with which the machine may be operated will be readily apparent, as will also the accuracy with which the distance apart of the strings may be gaged. It will be observed that each string is inserted directly above the jaws of the press, so that the broom-head is held most rigid during the operation. The wood of the members extends nearly to

the upper ends of the jaws and prevent the breaking of the jaws, as is often the case in other machines.

Having described my invention, what I claim is—

1. In a broom-press, the combination, with the opposite members, the U-shaped bail connected to one of said members embracing and projecting beyond the opposite member, the operating-lever 27, eccentrically pivoted in the bail, of the opposite inverted-U-shaped jaws secured to the upper ends and inner sides of the members, the opposite former-plates having slots and arms, the arms and slots in one plate alternating with those in the other, said plates having depending slotted arms connected by a cross-bar, headed studs passing through the slots and projecting from the jaws, opposite straps pivoted at their upper ends to said cross-bars, levers pivoted at one end and connected at their centers to the lower ends of the straps, one of the levers extending beyond its members and terminating in the handle and in rear of the handle provided with a perforation, and a series of adjusting-studs projecting from the member and adapted to engage the perforation of the lever, substantially as specified.

2. In a broom-press, the combination, with the opposite members and means for adjust-

ing the same with relation to each other, of a pair of former-plates adjustably mounted upon the inner faces of the members, and means for adjusting said plates up and down upon the members, said former-plates being concaved, as at 11, and provided with laterally-inclined studs 12 and openings 13, the studs of one plate alternating with those of the other plate, substantially as specified.

3. In a broom-press, the combination, with the opposite members and means for clamping the same, of the opposite former-plates mounted for vertical movement upon the inner faces of the members, the levers 22, pivoted to the inner faces of the members, the series of studs 24 for engaging a perforation in one of the levers, the links 20, pivoted to the levers 22 and to the adjacent former-plates, and the bowed spring interposed between the levers 22, serving to spread the members and yieldingly retain the perforated lever 22 in engagement with a stud, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CALVIN W. DOE.

Witnesses:

C. F. BARNARD,

E. H. MERRITT.