

W. V. McKenzie,

Oil Press.

N<sup>o</sup> 35,168.

Patented May 6, 1862.

Fig. 1.

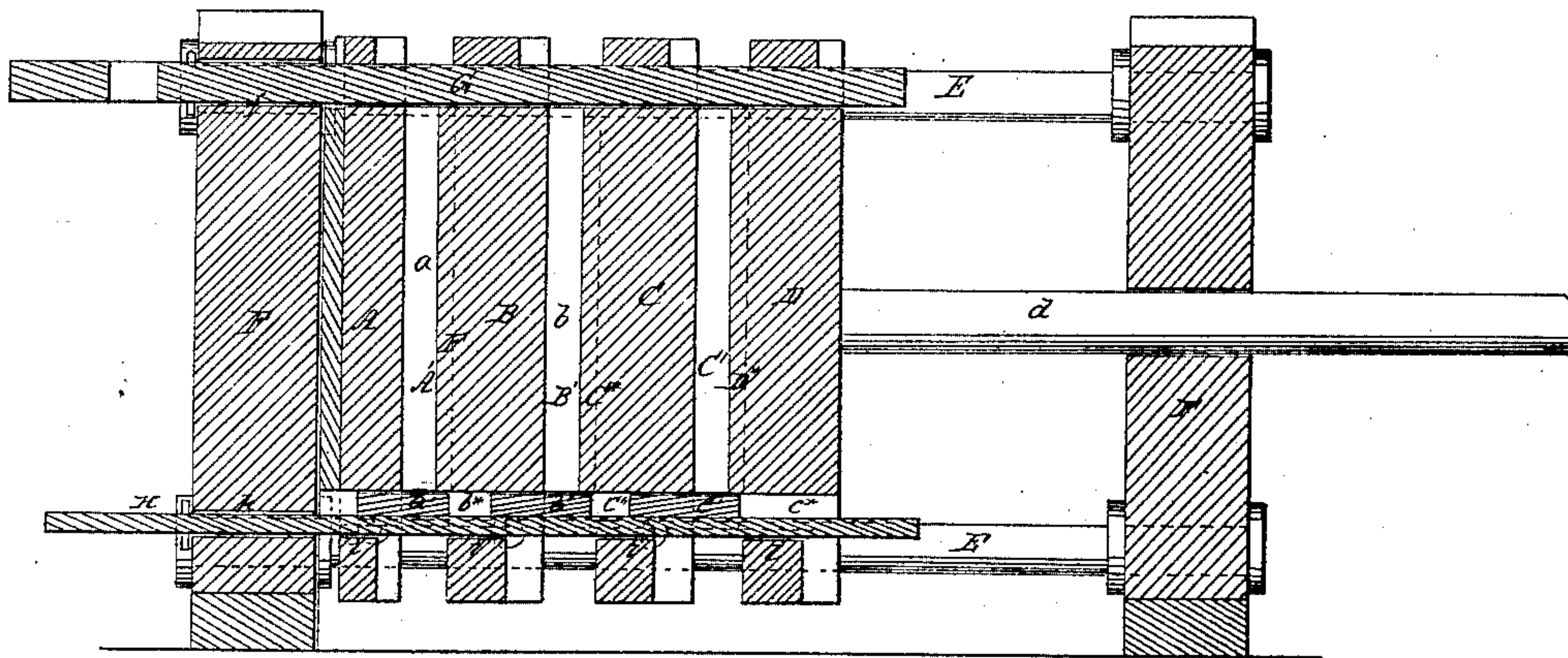
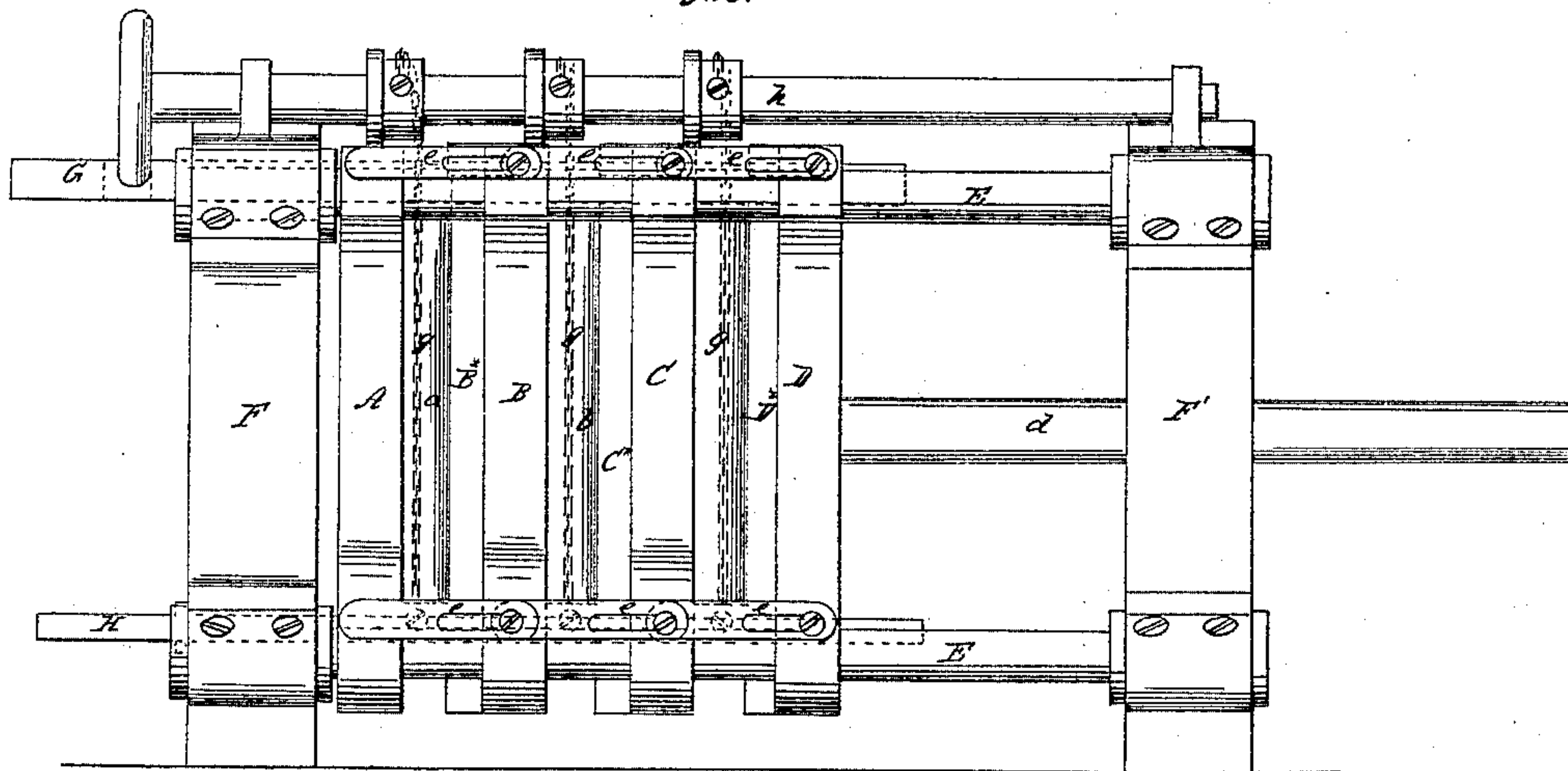


Fig. 2.



Witnesses,  
James Law  
G. W. Reed

Inventor  
W. V. McKenzie



# UNITED STATES PATENT OFFICE.

W. V. McKENZIE, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN OIL-PRESSES.

Specification forming part of Letters Patent No. 35,168, dated May 6, 1862.

*To all whom it may concern:*

Be it known that I, W. V. McKENZIE, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Oil-Presses; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of my invention. Fig. 2 is a front elevation of the same.

Similar letters of reference in both views indicate corresponding parts.

This invention is intended as an improvement on that class of oil-presses for which Letters Patent have been granted to D. L. Latourette October 28, 1851. He describes a series of parallel sliding plates each of which (with the exception of the first and the last) serves as a press-box on one side and as a follower on the other, and the several press-boxes thus formed are provided with suitable doors on top and bottom. Before the operation of pressing commences the doors at the bottom, which are attached to the press-boxes by suitable hinges, are raised by chains winding on a suitable shaft. As the pressing commences, the charges in the several press-boxes have a tendency to force the doors open, and if one of the chains holding said doors is not perfectly tight, or if it stretches somewhat before the door enters the recesses or slot in the corresponding follower, said follower catches on the edge of the door and forces it off the hinges. Such accidents cause much delay in the operation and much expense for repairs. Besides this disadvantage, the doors on the top of the several press-boxes have to be fastened down separately—an operation causing much labor and delay. These disadvantages are completely obviated by my invention, which consists in the employment of a slide passing over the top of the several press-boxes and through slots formed in the upper portions of the sliding plates in such a manner that by inserting said slide the several press-boxes are perfectly closed on the top and an additional guide for the sliding plates is obtained.

It consists, further, in the employment of a sliding key passing through slots in the lower

parts of the sliding plates, in combination with the hinged doors at the bottom of the several press-boxes in such a manner that by the action of the key the doors are prevented being forced open when the operation of pressing commences, and they are not liable to become injured by catching against the followers.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation with reference to the drawings.

A series of plates, A B C D, are arranged on guide-rods E, which are rigidly fastened to the two end plates, F F'. The plate A is stationary and it is firmly connected to the end plate F, and from its surface rise two flanges, *a*, which form the sides of the press-box A' and the guides for the follower B\*, which is attached to that side of the plate B facing the plate A. The plate B slides on the guide-rods E, and from its side opposite the follower B\* rise two flanges, *b*, which form the sides of the press-box B', similar in every respect to the press-box A'. The plate C is arranged precisely like the plate B in every respect, being provided on one side with the follower C\* and on the other side with the press-box C'. The last plate, D, in the series is similar to the plates B C, being provided with a follower, D\*, to fit into the press-box C'; but its outer side, instead of being provided with flanges, has a stem, *d*, rising from its center, which slides in the end plate F', and through which motion is imparted to the sliding plates D C B. Slotted links *e* connect the corners of the sliding plates and serve to keep said plates in the proper relation to each other. A slide, G, which passes through a slot, *f*, in the upper part of the end plate F and through corresponding slots in the plates A B C D, closes the several press-boxes A' B' C' on the top, and it forms an additional guide for the sliding plates B C D. By withdrawing this slide the press-boxes are opened simultaneously for the purpose of changing them, and by inserting the slide all the boxes are closed effectually and with little trouble or loss of time.

The bottoms of the press-boxes A' B' C' are formed by doors *a' b' c'*, which are hinged to the lower edges of plates A B C, and which connect by means of chains *g* with the rotary shaft *h*, so that by rotating said shaft



the doors are closed or opened simultaneously. The sliding plates B C D are provided with slots  $b^*$   $c^*$   $d^*$  to receive the doors  $a'$   $b'$   $c'$  when the plates are forced up toward the end plate F; but in order to permit said doors to enter the corresponding slots it is necessary that they should be perfectly closed. If one of the doors is permitted to hang down a little before it has passed into the corresponding slot, it is liable to catch against the edge of said slot and to get broken or otherwise injured, and if the doors are held up by the chains  $g$  only they are liable to be forced open and to become broken by catching against the edges of the corresponding slots. In order to effectually prevent this difficulty, I use a key, H, which passes through a slot,  $h$ , in the end plate F and through recesses  $i$  in the plates A B C D close under the doors when the same are closed, as clearly shown in Fig. 1 of the drawings. This key does not interfere with the sliding motion of the plates B C D, and it keeps the doors up and causes them to catch without fail in the corresponding slots  $b^*$   $c^*$   $d^*$ . The chains  $g$  are only required to close the doors so that the key can be inserted, and after the key is inserted they are not subjected to any further strain.

When the doors are closed by the use of the chains only, they are liable to become broken or forced off their hinges almost with every operation of pressing, and so much time is lost in repairing and readjusting things that a press of this construction has heretofore become a source of continual annoyance.

By the use of my improvement the operation is rendered perfectly safe, and the danger of breaking the doors or any other part of the press is completely avoided.

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

1. The employment of the slide G, in combination with the press-boxes A' B' C', constructed and operating substantially as and for the purpose herein shown and described.

2. The arrangement of the key H, in combination with the hinged doors  $a'$   $b'$   $c'$  at the bottom of the press-boxes A' B' C', constructed and operating as and for the purpose specified.

W. V. MCKENZIE.

Witnesses:

JAMES LAIRD,  
G. W. REED.