

C. PEPER.  
Hydraulic-Presses.

No. 163,606.

Patented May 25, 1875.

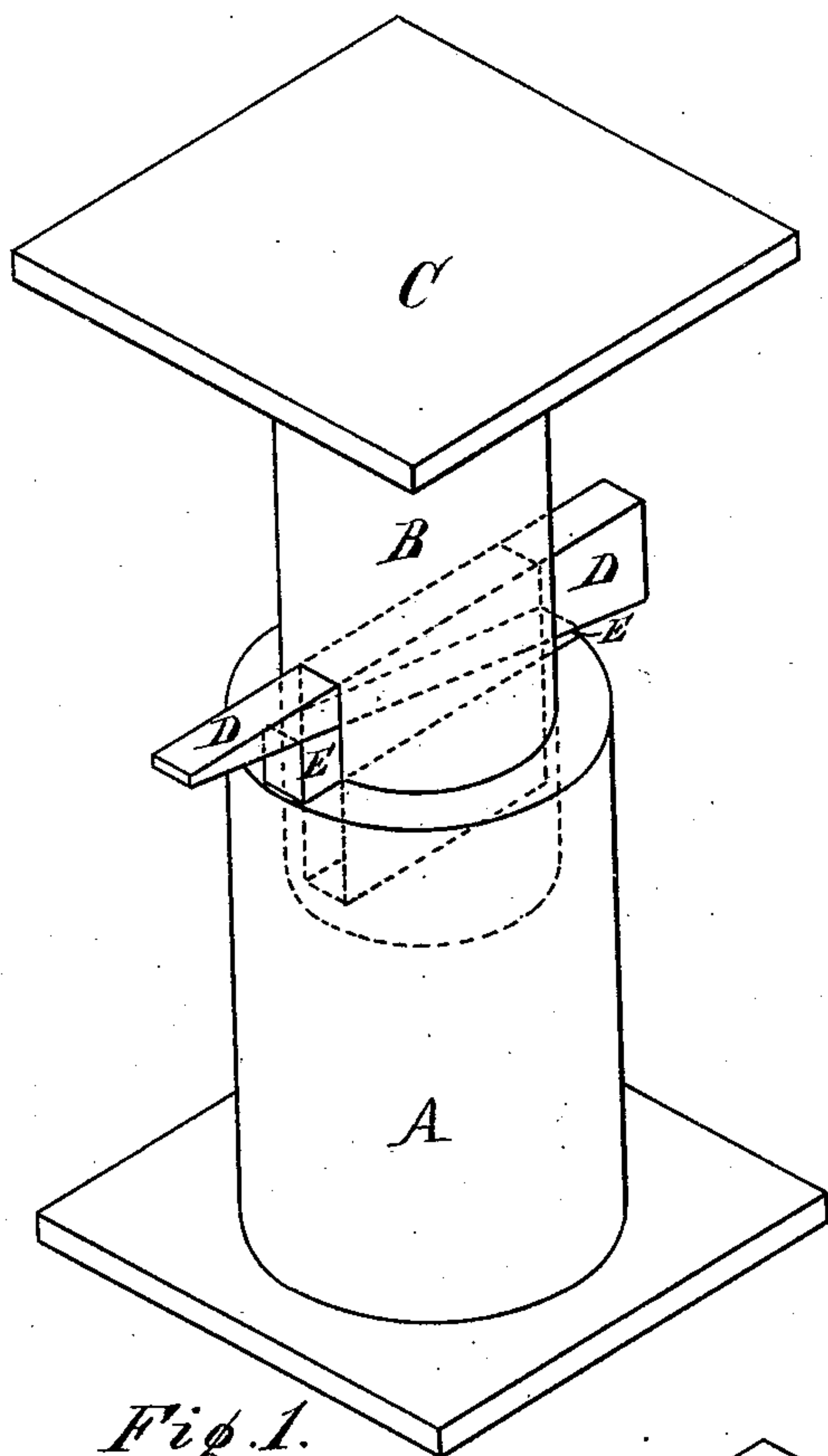


Fig. 1.

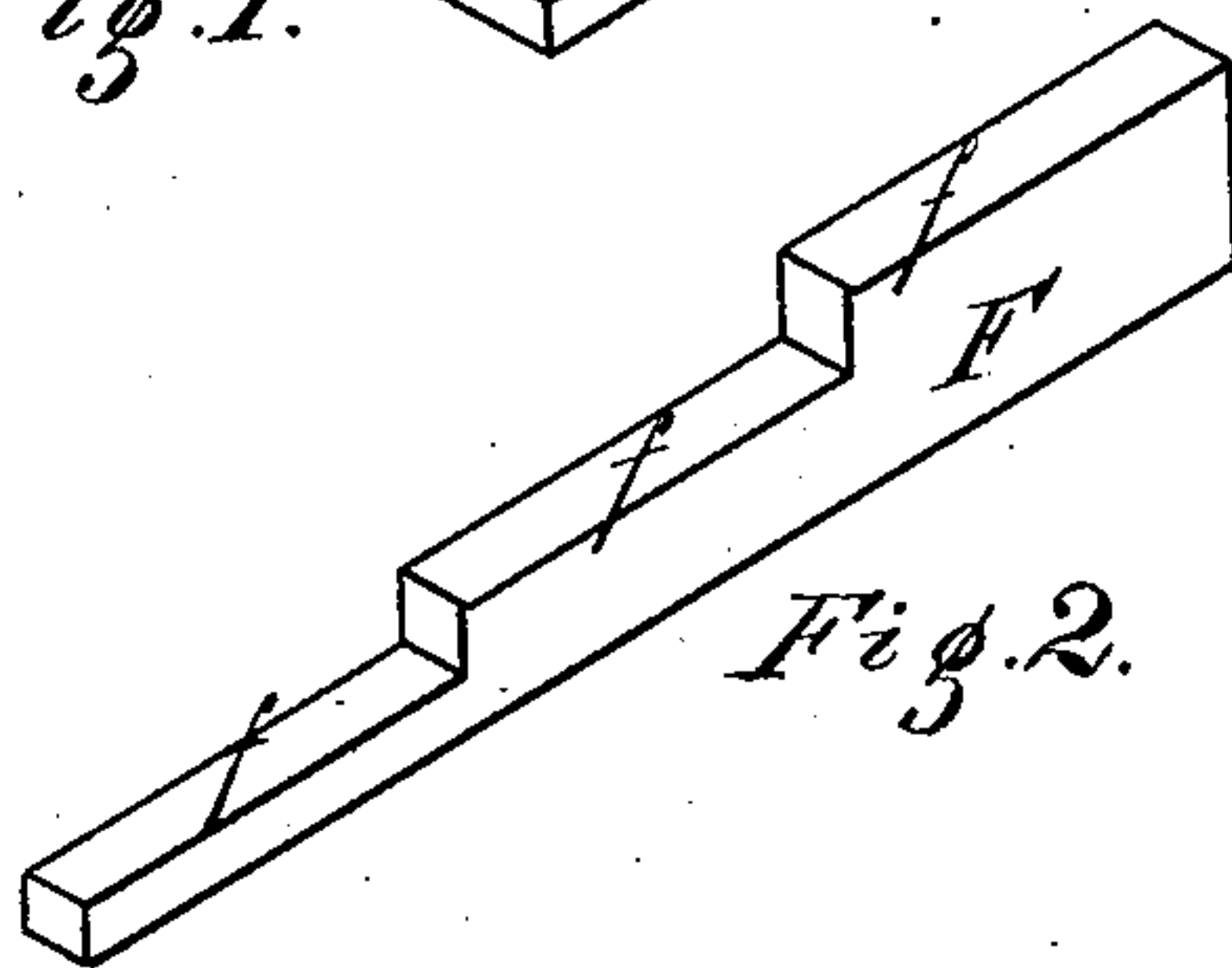


Fig. 2.

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# UNITED STATES PATENT OFFICE.

CHRISTIAN PEPER, OF ST. LOUIS, MISSOURI.

## IMPROVEMENT IN HYDRAULIC PRESSES.

Specification forming part of Letters Patent No. **163,606**, dated May 25, 1875; application filed April 19, 1875.

*To all whom it may concern:*

Be it known that I, CHRISTIAN PEPER, of St. Louis, county of St. Louis and State of Missouri, have invented an Improved Hydraulic Press, of which the following is a specification:

This invention relates to hydraulic presses that have the packing in the ram, and is designed to obviate the use of the ordinary screw means used to retain the ram in a "true" and stationary position, and to effect the same ends in a more simple, ready, and effective manner.

Of the drawing, Figure 1 is my invention in perspective, Fig. 2 being a perspective of a modification thereof.

A is the cylinder; B is the ram; C is the platen. Said parts are all made to operate as usual. My improved features are as follows:

I provide the ram B with a slot, *b*, which passes entirely through said ram, as indicated in Fig. 1. D and E are incline planes for purposes of sustaining the ram. That of E rests by its base in the slot; that of D serves as a follower, by means whereof the operator can follow up the movement of the ram, by inserting it in the slot to rest on that of E. The incline plane D is inverted when used so that the incline faces of D and E come contiguous to each other, and the base of both being parallel at all points of insertion, the ram is consequently sustained in true vertical position. When the ram is to be lowered the planes can be removed out of ram. If de-

sired, a key device, Fig. 2, can be used in place of the incline planes. The key F I form to have varying offset bearings, *f*, so that it can be inserted in varying positions in the slot, according to the heights assumed by the raising ram. It is only necessary, after pressure has been produced, to insert the key F, which, by its proper bearing *f*, fits in the opening presented by the slot *b*, out of or above the cylinder. The key thus passed through the slot has its rest on top of the cylinder, and in this manner supports the ram stationary. When the ram is to be lowered the key is disengaged out of the slot or ram. A simple and effective means is thus provided to retain the ram stationary, and rendering the pressure action more compact, uniform, and perfect.

What I claim is—

1. The key F, having offset bearings *f*, in combination with the ram B, having slot *b*, of hydraulic presses, for the purpose of supporting the ram stationary, substantially as set forth.

2. In a hydraulic press, the incline planes D and E, in combination with the cylinder and platen, for the purpose of supporting the ram stationary, substantially as set forth.

In testimony of said invention I have hereunto set my hand.

CHRISTIAN PEPER.

Witnesses:

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