Jan. 2, 1940. T. E. RAYMOND 2,185,314

FILTER PRESS FILLER BLOCK

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Fig. 1.

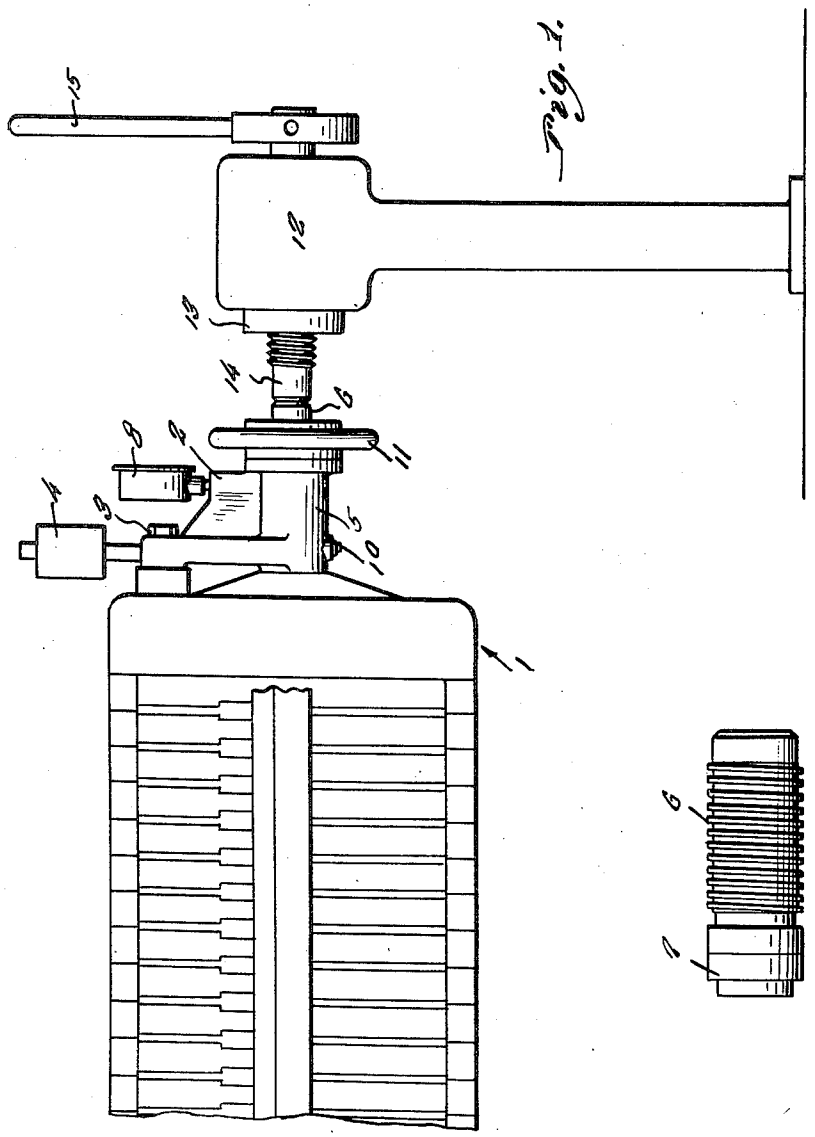


Fig. 3.

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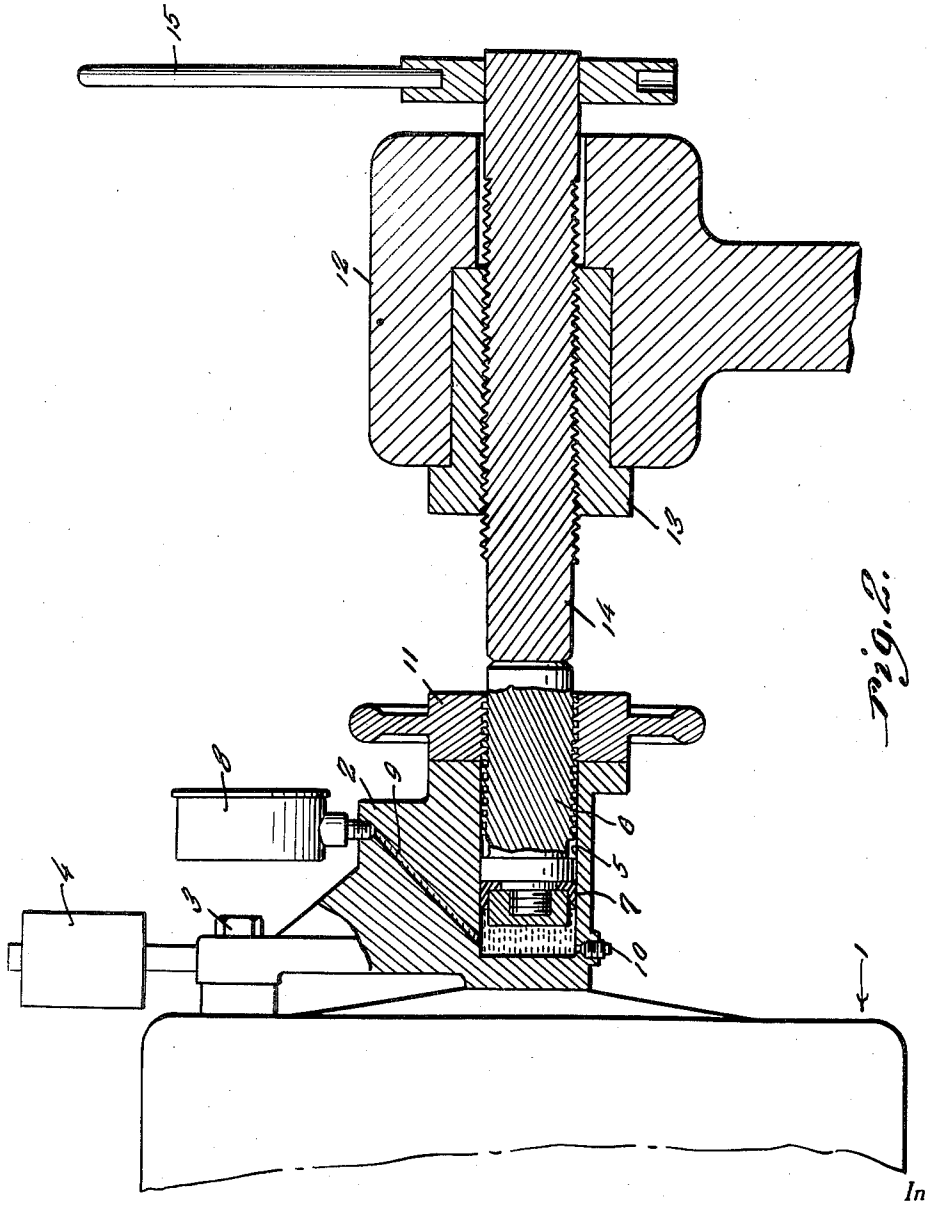


Fig. 2.

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2,185,314

FILTER PRESS FILLER BLOCK

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Application March 29, 1939, Serial No. 264,835

1 Claim. (Cl. 210—188)

This invention relates generally to new and useful improvements in filter presses and more particularly to filler blocks therefor.

The primary object of the present invention is to provide, in a manner as hereinafter set forth, a filler block, comprising novel means for indicating by fluid pressure the pressure to which the filter press is being subjected.

Other objects of the invention are to provide a pressure indicating filler block of the aforementioned character which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of one end portion of a filter press equipped with a filler block constructed in accordance with the present invention.

Figure 2 is a view principally in vertical longitudinal section through the invention.

Figure 3 is a detail view in elevation of the piston.

Referring now to the drawings in detail, it will be seen that the reference numeral 1 designates generally one end portion of a conventional filter press. The embodiment of the present invention which has been illustrated comprises a block 2 of suitable metal which is mounted for swinging movement on one end of the press 1, as at 3. As usual, the block 2, when in operative position, is engaged with the central portion of the end of the press 1. The reference numeral 4 designates a counter weight for the block 2.

Extending into the block 2 from the outer end thereof is a cylinder 5 for the reception of a suitable fluid, such as oil. Slidably mounted in the cylinder 5 is a piston 6 having mounted on its inner end portion a cup washer 7. Mounted on the block 2 is a pressure gauge 8. The gauge 8 receives fluid from the cylinder 5 through a duct or passage 9 in the block 2. A drain plug 10 is provided for the cylinder 5. Threadedly mounted on the piston 6 is a hand nut 11 which is engageable with the block 2. The purpose of the hand nut 11 will be presently set forth.

The reference numeral 12 designates a portion of the end frame of the press. Mounted in the end frame 12 is an internally threaded flanged bushing 13. Threadedly mounted in the bushing 13 and operatively engageable with the piston 6 is a pressure screw 14. The pressure screw 14 is manually operable through the medium of a hand lever 15 on one end portion thereof.

It is thought that the operation of the invention will be readily apparent from a consideration of the foregoing. With the hand nut 11 backed off sufficiently on the piston 6, the screw 14 is actuated in a manner to drive said piston 6 into the cylinder 5. This, of course, forces the fluid into the cylinder 5 through the duct 9 into the gauge 8 which is actuated thereby. Thus, by simply reading the gauge 8 the pressure being exerted on the press 1 may be accurately ascertained. When this has been done the hand nut 11 is screwed into engagement with the block 2 thereby providing a metal to metal transfer of the closing pressure and, further, maintaining the proper closing pressure even though leakage of the fluid past the cup washer 7 and the piston 6 occur. This constitutes an important and desirable feature of the invention.

It is believed that the many advantages of a filter press filler block constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A filler block for transmitting pressure from a pressure member to a press comprising a body having one end adapted to engage an end of the press, a cylinder in the body opening out through the other end thereof, a pressure gauge carried by the body and said body having a conduit therein leading from the inner end of the cylinder containing liquid to the gauge, a piston in the cylinder and having one end extending from the open end of the cylinder and said end being adapted to be engaged by the pressure member and a nut threaded on the outer end of the piston for engaging the body for transmitting the pressure applied to the piston to the body after the piston has been moved into the cylinder a predetermined degree.

THOMAS E. RAYMOND.