No. 653,553. Patented July 10, 1900.

M. P. FILLINGHAM.

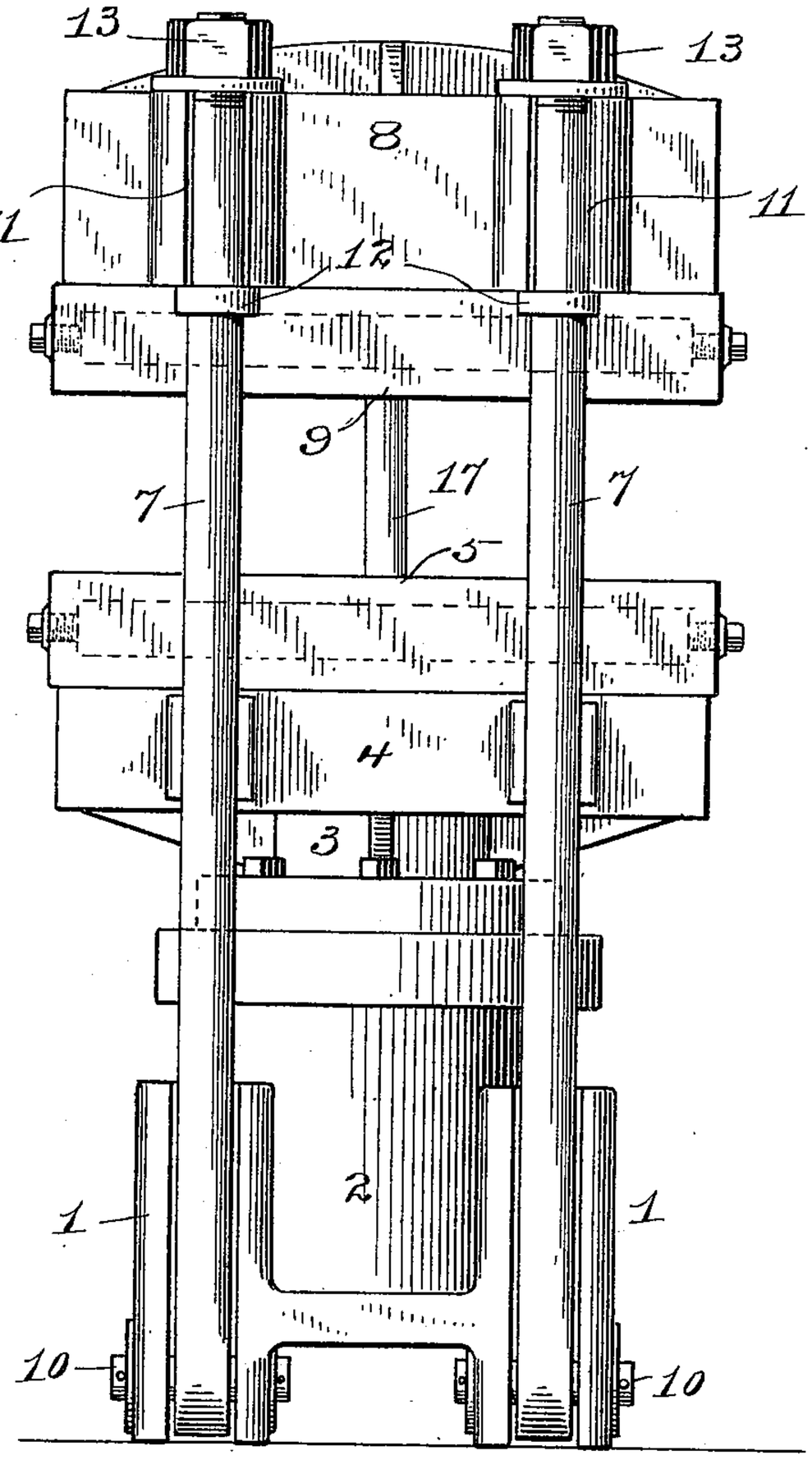
ENDLESS BELT PRESS.

(Application filed Mar. 16, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES

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Fig. 2.

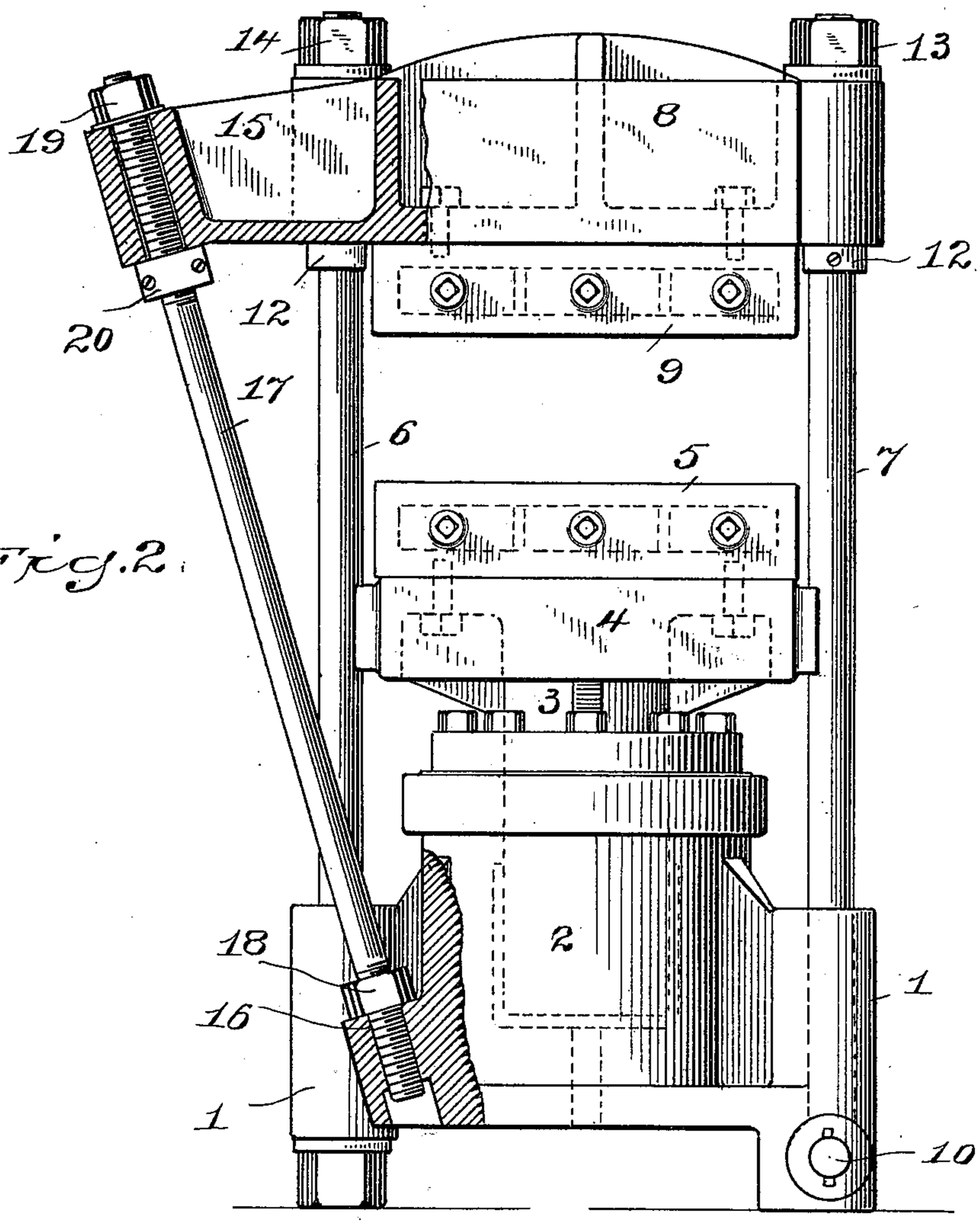
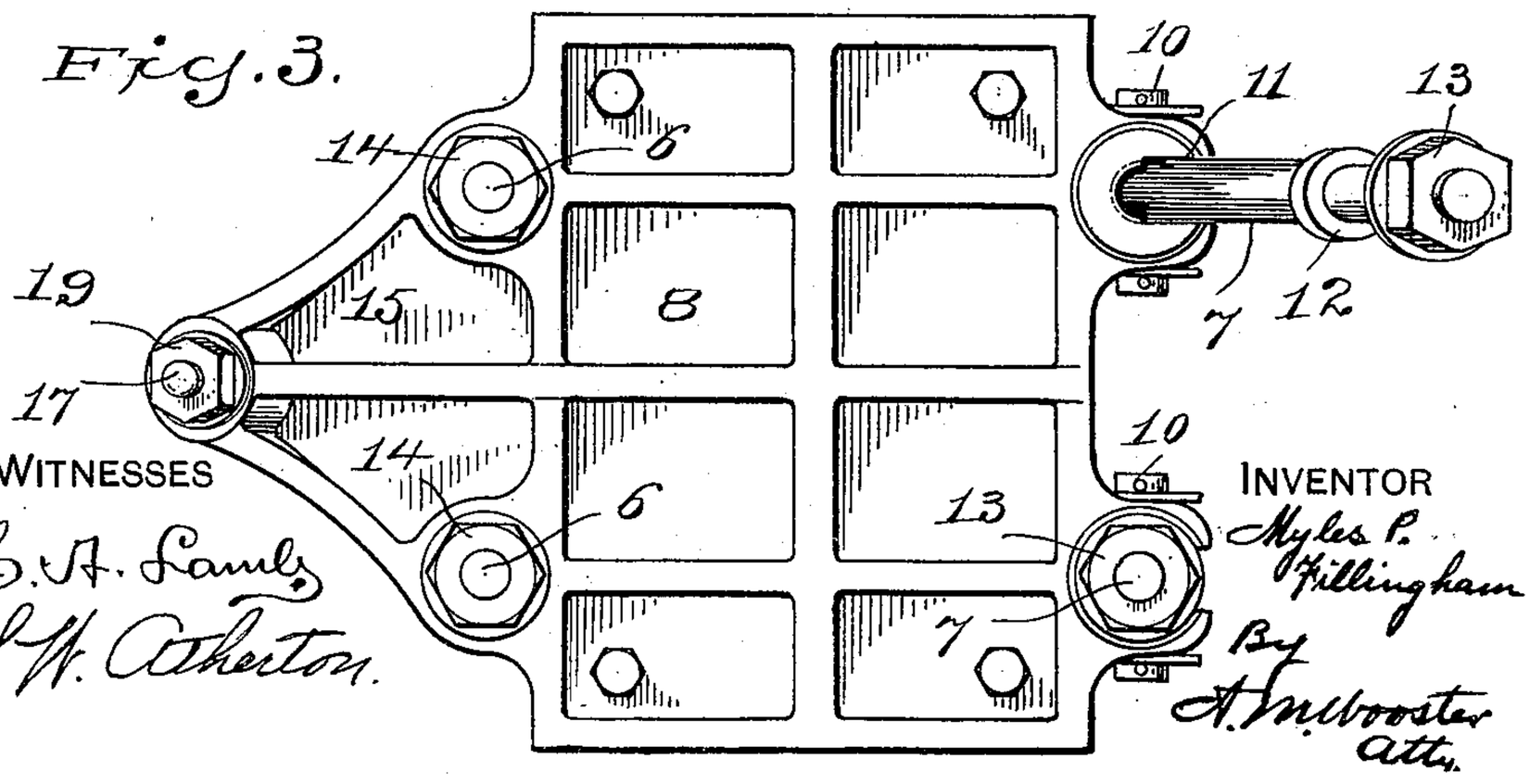


Fig. 3.



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UNITED STATES PATENT OFFICE.

MYLES P. FILLINGHAM, OF ANSONIA, CONNECTICUT, ASSIGNOR TO THE FARREL FOUNDRY AND MACHINE COMPANY, OF SAME PLACE.

ENDLESS-BELT PRESS.

SPECIFICATION forming part of Letters Patent No. 653,553, dated July 10, 1900.

Application filed March 16, 1900. Serial No. 8,956. (No model.)

To all whom it may concern:

Be it known that I, MYLES P. FILLINGHAM, a citizen of the United States, residing at Ansonia, county of New Haven, State of Connecticut, have invented a new and useful Endless-Belt Press, of which the following is a specification.

My invention relates more especially to endless-belt presses—that is, a class of presses in which it is necessary to detach the side rods upon one side from the cross-head in order to remove the belt or other article that is being pressed from between the platen and the bed. Heretofore in order to permit the side rods to be disconnected and swung out of the way it has been necessary to provide an independent support, usually an overhead support, for the end of the cross-head from which the side rods were to be detached. This has been an inconvenient and tedious operation and has added materially to the cost of producing this class of belts, owing to loss of time in manipulating the cross-head and detachable side rods.

My invention has for its object to provide a construction of press which shall be compact and relatively inexpensive, in which all overhead connections for the cross-head shall be dispensed with, and which, owing to the fact that the cross-head is fixed and the detachable side rods may be manipulated without loss of time, shall effect an important saving in the cost of pressing belts.

With these ends in view I have devised the simple and novel construction which I will now describe, referring to the accompanying drawings, forming part of this specification, and using reference characters to designate the several parts.

Figure 1 is an end elevation of my novel press; Fig. 2 a side elevation, partly in vertical section; and Fig. 3 is a plan view illustrating the manner in which the swinging side rods are detached from the cross-head.

It is of course well understood that in this class of presses the platen and bed, either or both, are heated by steam or in any suitable manner. In use if the ends of the belt are united before pressing, the side rods upon one side must be detached from the cross-head to permit the insertion of the belt, then replaced and secured, and after the operation of pressing is completed the side rods must be released and detached again to permit the removal of the belt. As presses of this class have heretofore been constructed the weight of the cross-head has normally rested upon collars on the side rods, so that when it was desired to detach the swinging side rods it was necessary to provide temporary support for that end of the cross-head—in other words, it was necessary to remove the weight from the swinging side rods before they could be detached from the cross-head, and after the swinging side rods had been returned to place the weight of that end of the cross-head was again allowed to rest upon them. The bed is ordinarily raised and lowered by hydraulic means, a portion of the belt being pressed between the bed and the platen at each operation. When the desired amount of pressure has been applied to a portion of the belt and for the required length of time, the bed is lowered and the belt is shifted, so as to place a portion thereof contiguous to the portion already pressed between the platen and the bed. The bed is then raised as before to press another portion of the belt, then lowered again and the belt shifted, then raised again, and so on until the entire belt is pressed. If not already united, the ends of the belt may be overlapped in proper position between the platen and the bed and united by heat and pressure. After completing the pressure of the belt the bed is lowered, the side rods upon one side are disconnected from the cross-head, after which the belt may be removed from between the platen and the bed.

My invention consists in providing means whereby the cross-head is rigidly but adjustably secured in place independently of the detachable side rods, so that the latter may be swung into and out of place without any loss of time. This result I accomplish by means of an extension of the cross-head and a tie-rod or tension-piece, which retains the cross-head in position and permits the detachable side rods to be swung into and out of place by simply loosening the nuts at their upper ends sufficiently to permit them to swing clear of the top of the cross-head.

1 denotes the framework; 2, a hydraulic cyl-

inder; 3, the piston; 4, the piston-head; 5, a bed carried thereby; 6, fixed side rods; 7, detachable side rods; 8, the cross-head, and 9 a platen which is secured to the cross-head. The detachable side rods are pivoted in the framework, as at 10, their upper ends swinging into sockets 11 in the cross-head. The swinging side rods are shown as provided with collars 12, adapted to lie below the cross-head and to support its weight if required, the upper ends of the swinging side rods being retained in the sockets by nuts 13. The fixed side rods are also shown as provided with collars 12.

14 denotes nuts at the upper ends of the fixed side rods.

15 denotes a heavy and very strong lateral extension of the cross-head on the side of the fixed side rods, 16 a threaded hole in the framework, and 17 an oblique tie-rod or tension-piece which engages the threaded hole in the framework and the extension of the cross-head and, with the fixed side rods, sustains the weight of the cross-head. I have shown the tie-rod as threaded at both ends, the lower end being provided with a nut 18, engaging the framework, and the upper end with a nut 19, engaging the upper side of the extension, and a two-part nut 20, engaging the lower side of the extension.

It will of course be understood that the special mode of construction and design of the parts and the mode in which the tie-rod is connected to the framework and to the extension are not of the essence of my invention, but may be greatly varied without departing from the principle thereof.

Having thus described my invention, I claim—

1. In a press the combination with framework and fixed and detachable side rods, of means coacting with the fixed side rods to sustain the cross-head independently of the detachable side rods.

2. The combination with the framework and side rods of a press, of a cross-head having an extension upon the side having the fixed side rods and an oblique tie-rod between said extension and the framework, substantially as shown, for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

MYLES P. FILLINGHAM.

Witnesses:

ARTHUR R. MORGAN,

CHAS. B. FOSTER.