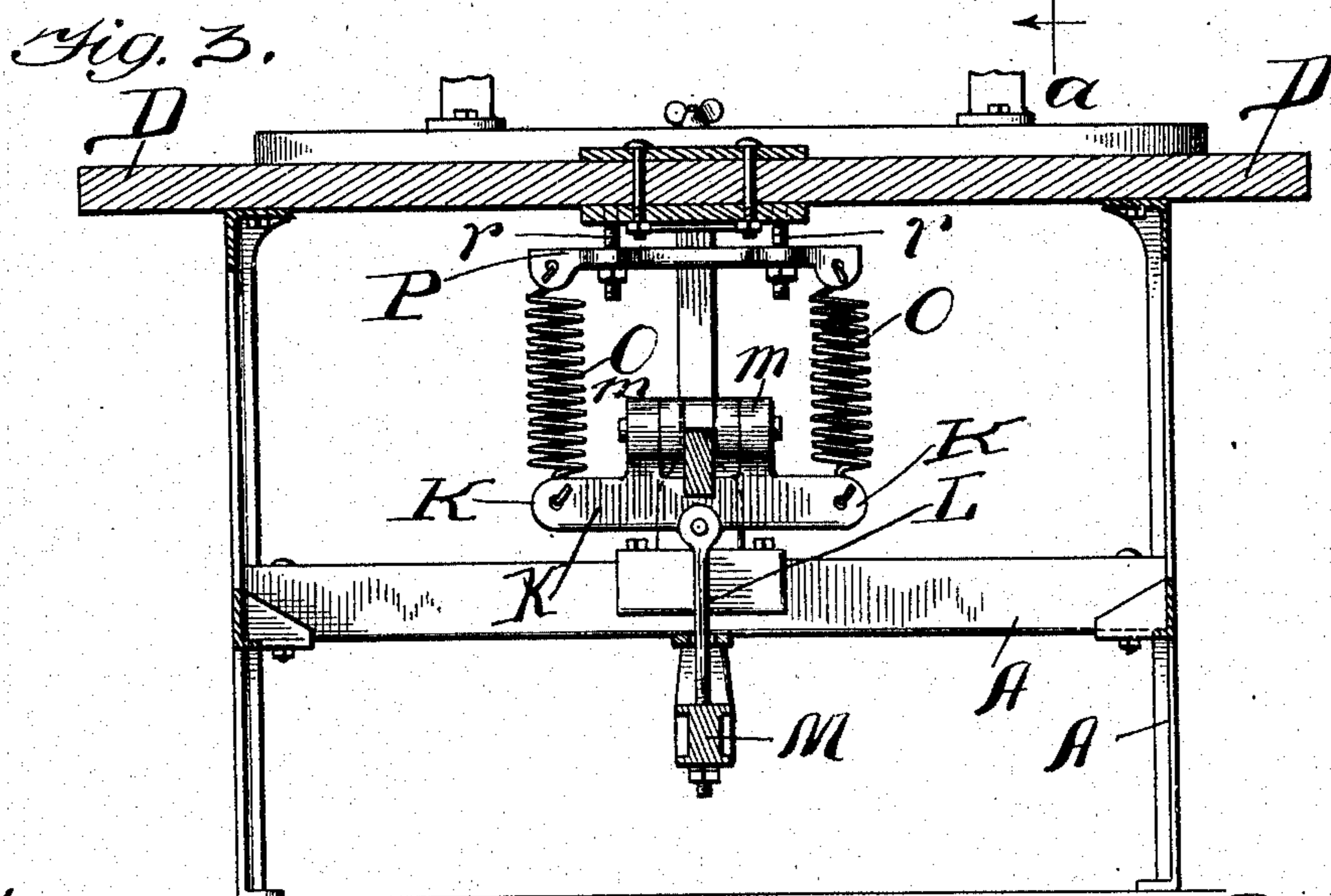
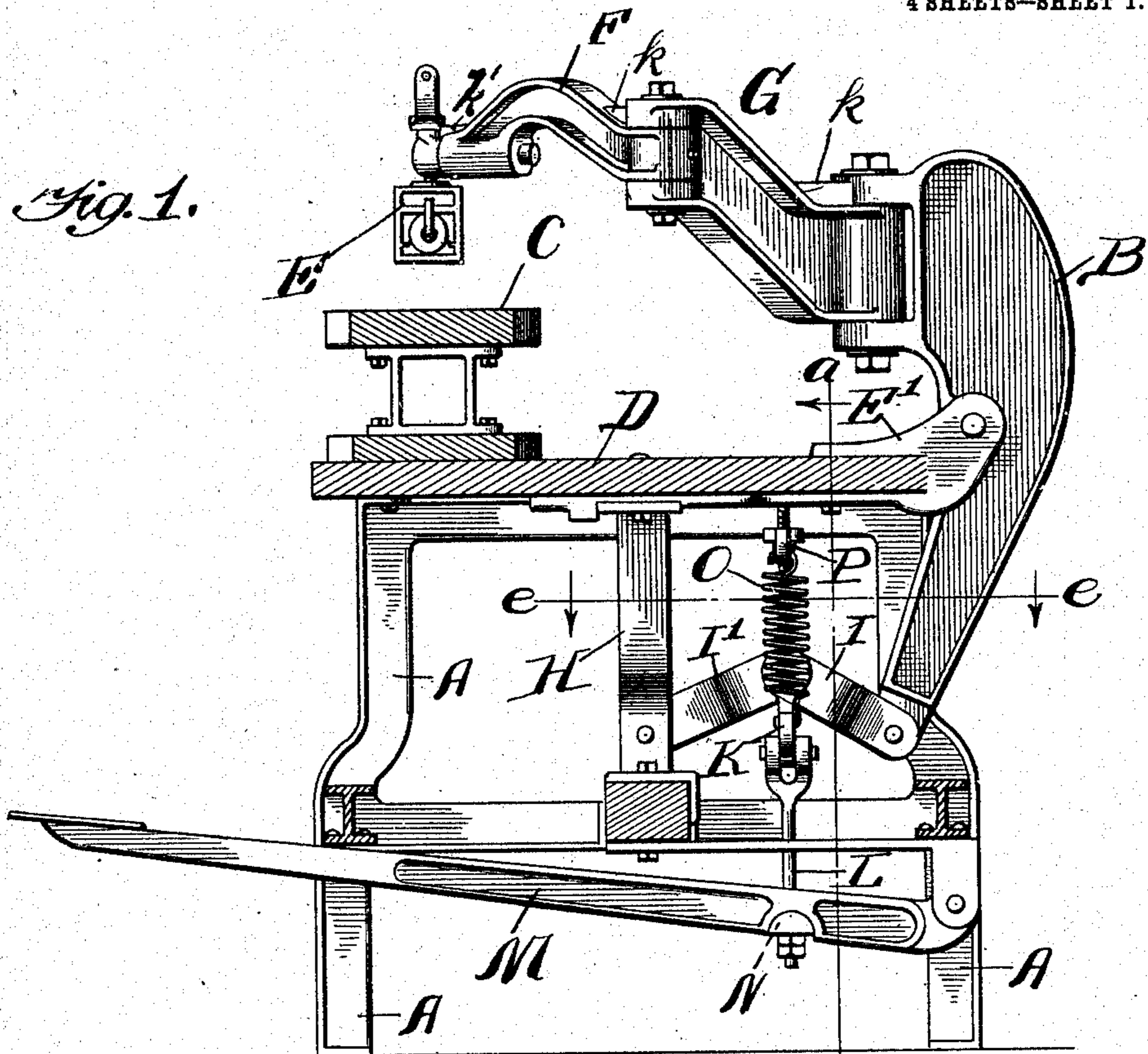


J. GROSS.  
MACHINE FOR PRESSING CLOTHES.  
APPLICATION FILED AUG. 14, 1905.

951,909.

Patented Mar. 15, 1910.

4 SHEETS—SHEET 1.



Witnesses:  
J. B. Wein  
Ed. D. Perry

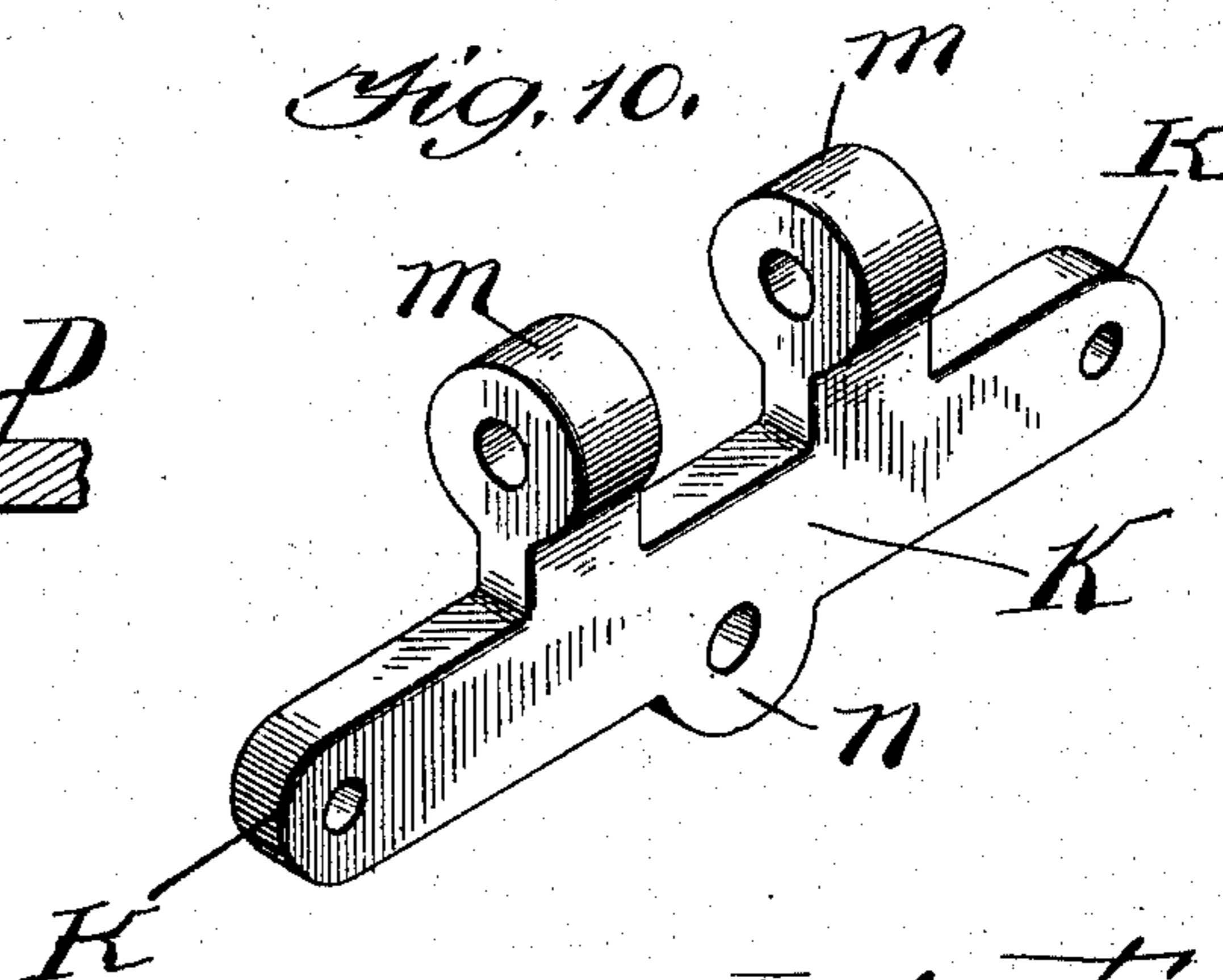
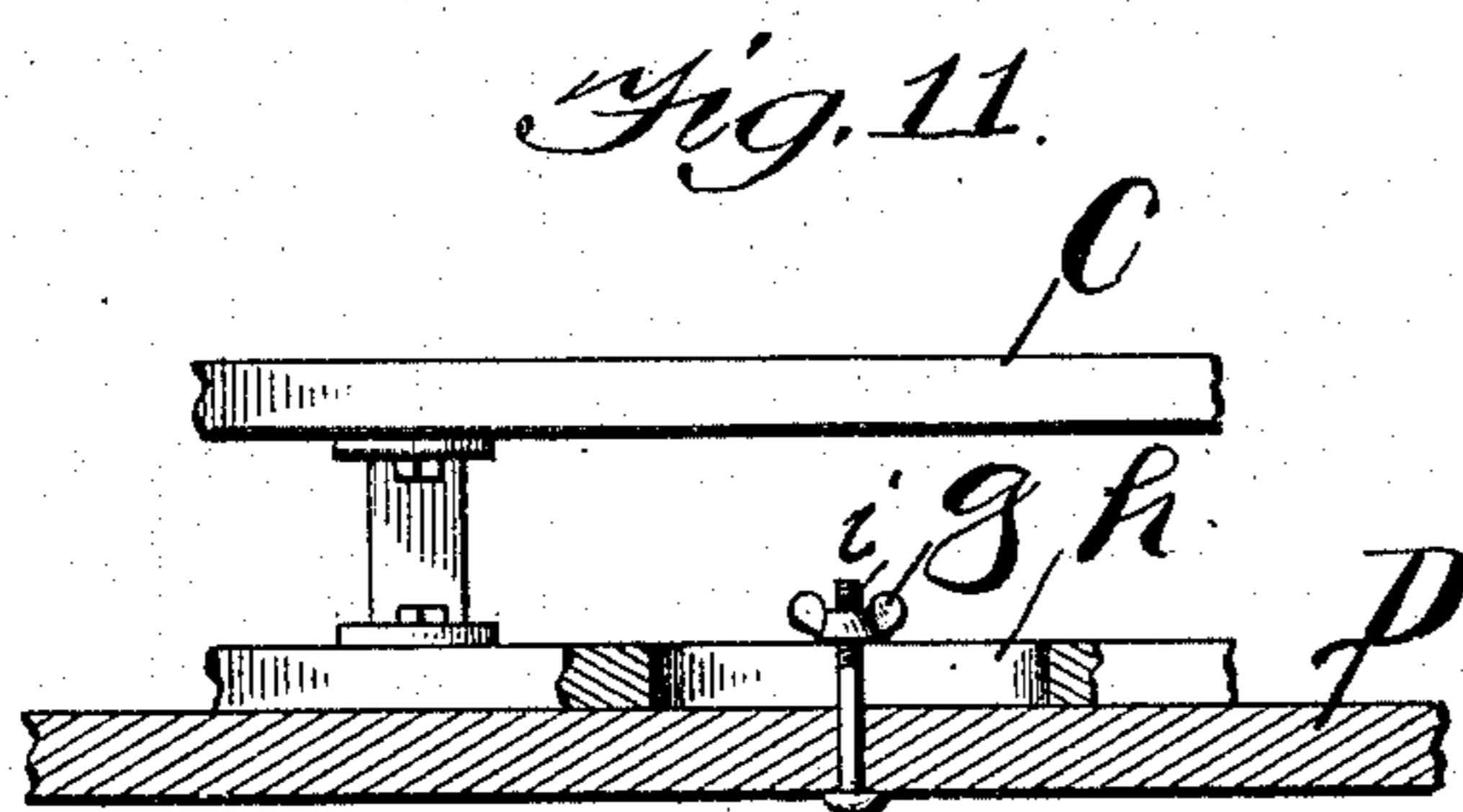
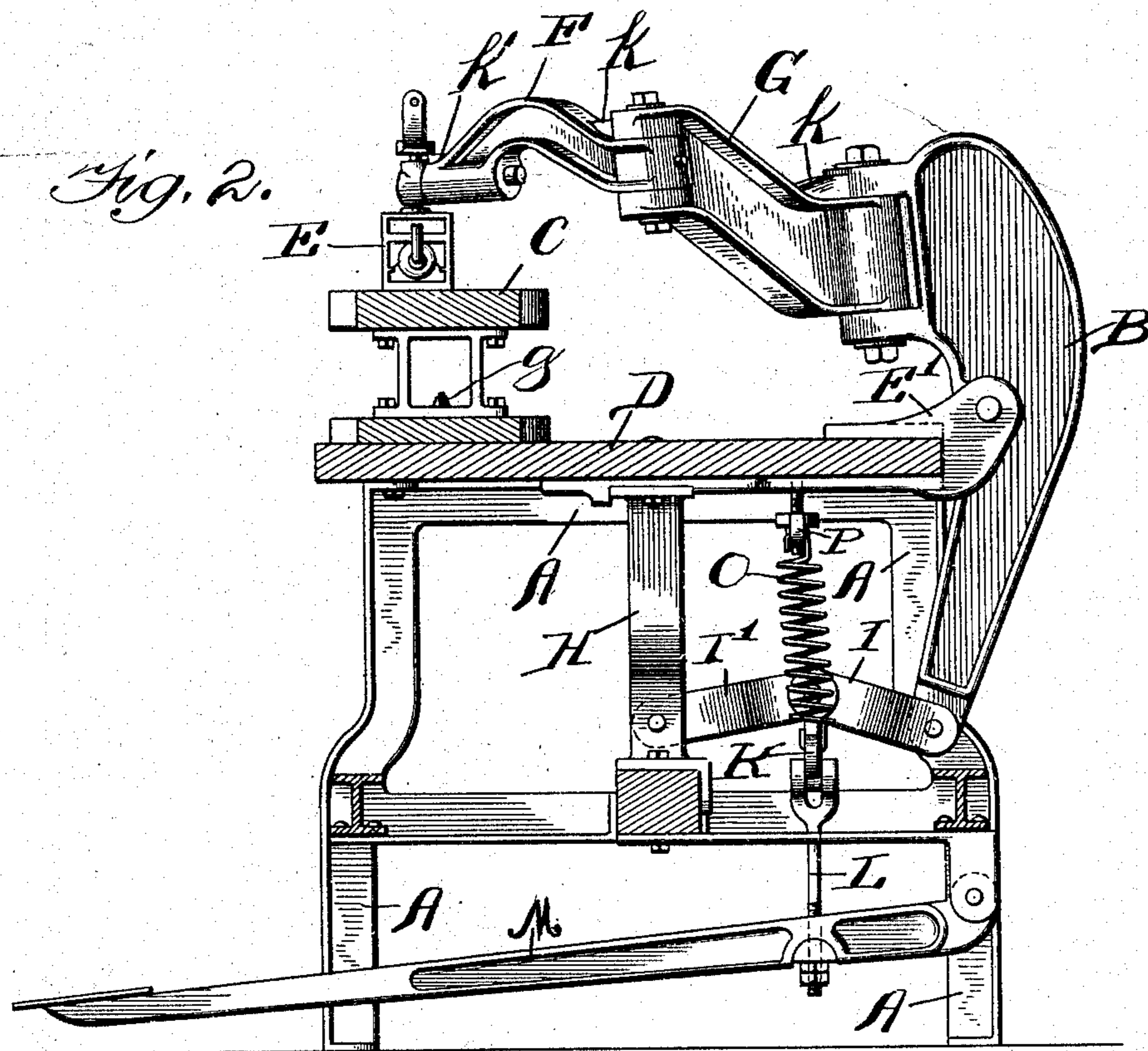
Inventor  
Joseph Gross by  
Brown Darby & Hopkins Attys.

J. GROSS.  
MACHINE FOR PRESSING CLOTHES.  
APPLICATION FILED AUG. 14, 1905.

951,909.

Patented Mar. 15, 1910.

4 SHEETS—SHEET 2.



Witnesses:  
J. B. Weir  
J. A. Perry

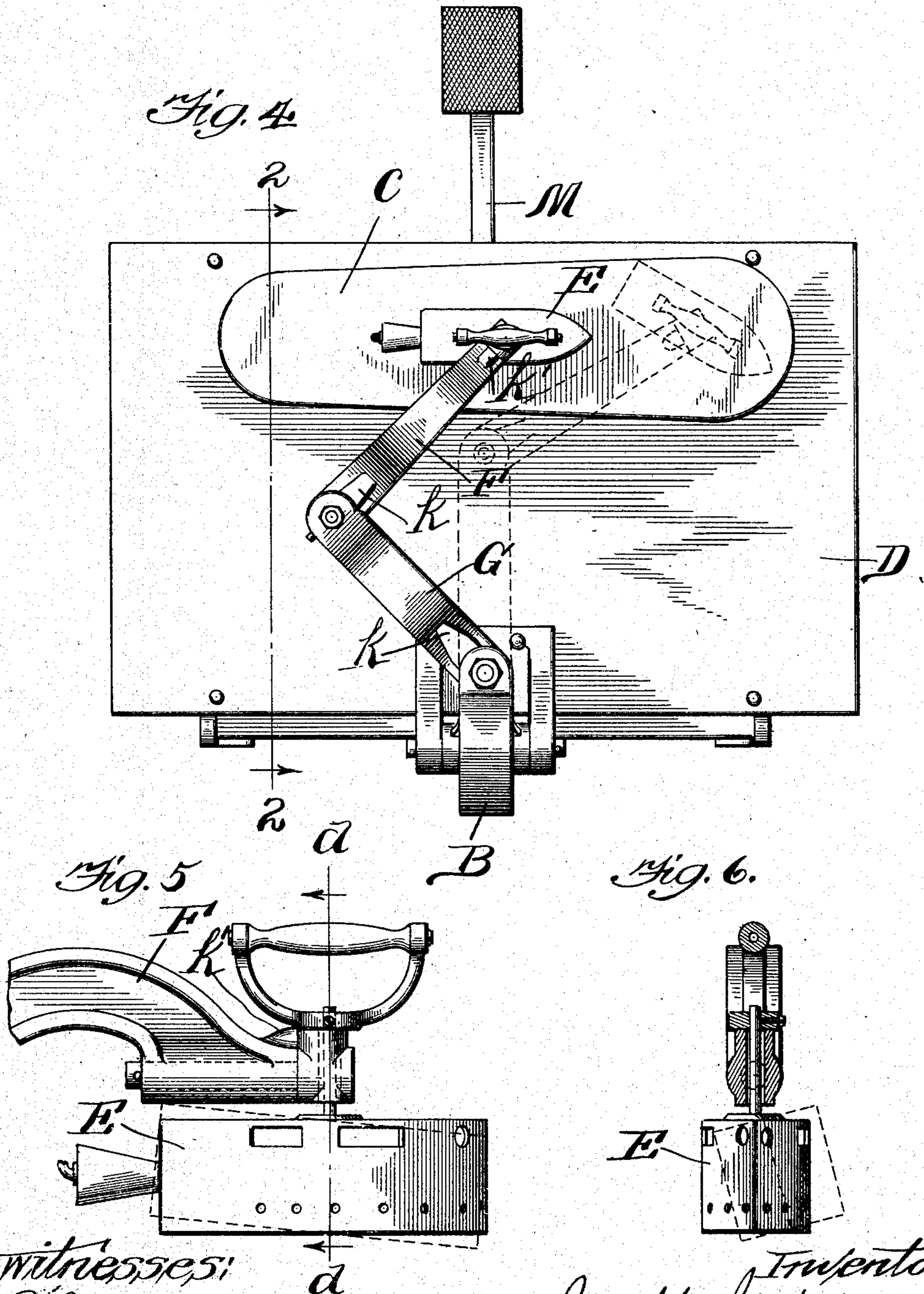
Inventor:  
Joseph Gross  
By  
Birnbaum Darby & Hopkins  
Attys.

J. GROSS.  
MACHINE FOR PRESSING CLOTHES.  
APPLICATION FILED AUG. 14, 1905.

951,909.

Patented Mar. 15, 1910.

4 SHEETS—SHEET 3.



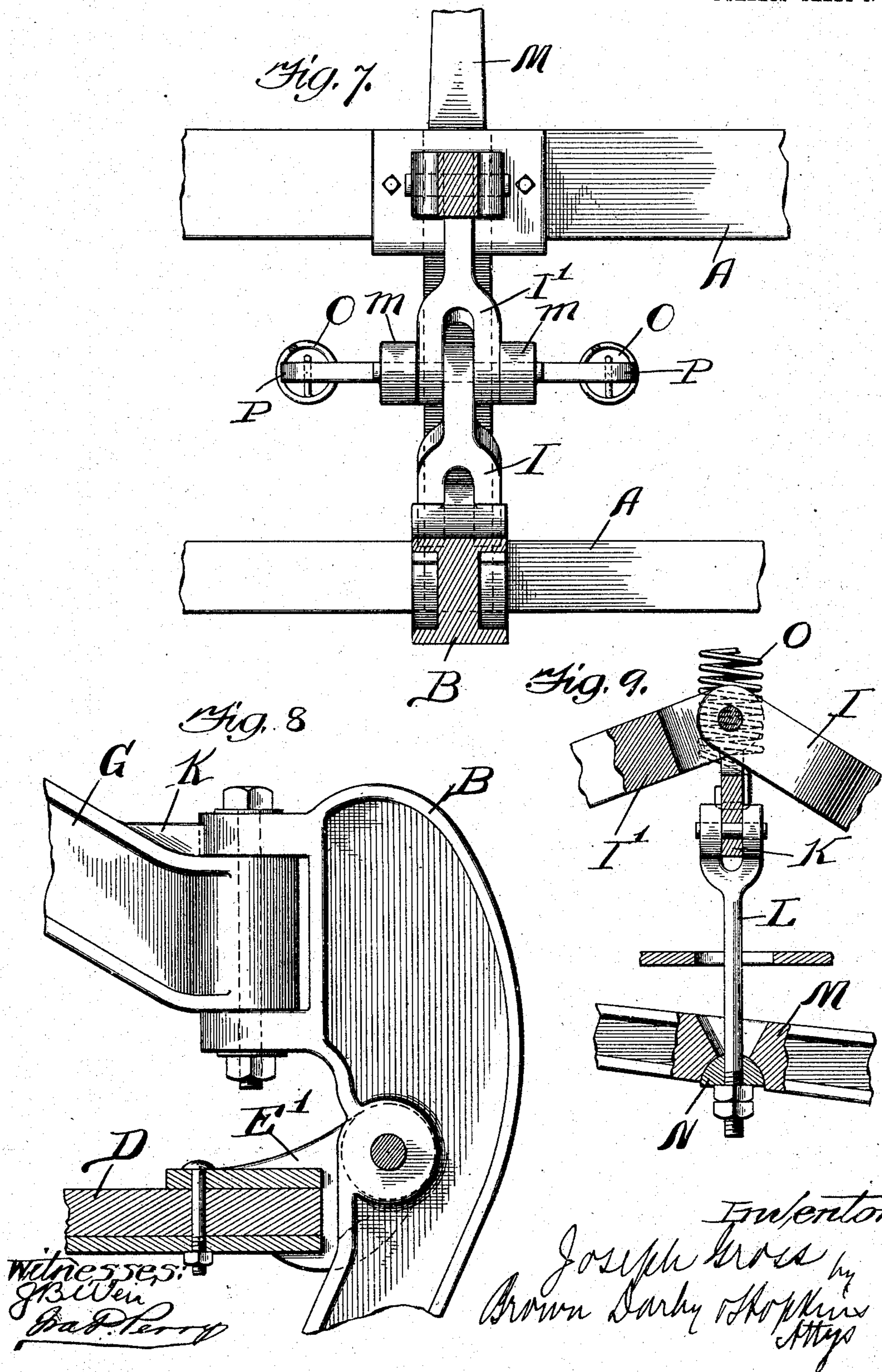
Witnesses:  
J. B. Weir  
J. D. Perry

Inventor:  
Joseph Gross  
Brown Darby & Perkins  
Attys.

J. GROSS.  
MACHINE FOR PRESSING CLOTHES.  
APPLICATION FILED AUG. 14, 1905.

951,909.

Patented Mar. 15, 1910.  
4 SHEETS—SHEET 4.



# UNITED STATES PATENT OFFICE.

JOSEPH GROSS, OF CHICAGO, ILLINOIS.

MACHINE FOR PRESSING CLOTHES.

951,909.

Specification of Letters Patent.

Patented Mar. 15, 1910.

Application filed August 14, 1905. Serial No. 274,068.

*To all whom it may concern:*

Be it known that I, JOSEPH GROSS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Machines for Pressing Clothes, of which the following is a specification.

This invention relates to a machine for pressing clothes and similar articles.

The object of the invention is to give great power to the pressing mechanism and correspondingly increase the strength of the parts to properly sustain the application of this power while at the same time preserve lightness, simplicity and cheapness of construction; and further to give a nice adjustment to the iron and to the power mechanism by which it is operated.

The invention consists substantially in the construction and arrangement hereinafter described and more particularly pointed out in the claims.

Like reference letters designate the same parts in the several figures of the drawings, in which,—

Figure 1 illustrates the machine in side elevation and at rest. Fig. 2 illustrates the machine in side elevation with the parts in active position. Fig. 3 is a transverse vertical section of the table and operating mechanism beneath the same on the line *a*, *a*, Fig. 1. Fig. 4 is a top plan view of the machine. Fig. 5 is a detailed view of the inside elevation of the iron. Fig. 6 is a front elevation of the iron with its joint in vertical section on the line *d*, *d*, Fig. 5, and showing the different positions in solid and dotted lines. Fig. 7 is a horizontal section on the line *e*, *e*, Fig. 1, showing the toggle joint in the plan from the top. Fig. 8 is an enlarged detail view of a part of the rocker arm and its connection to the table and to the middle arm. Fig. 9 is an enlarged detail sectional view of the connections between the treadle bar and the everer link. Fig. 10 is an enlarged detail view in perspective of the everer link; and Fig. 11 is a detail view of the press buck with the table in section and the ends of the buck broken away.

In Fig. 4 of the drawings there is shown in plan the several parts of the machine, and it will be noticed that the press buck is wider at one end than at the other and in the present instance this pressing buck is made reversible, that is, it can be turned

end for end, so that the larger end may be presented to the operator's right hand or by adjustment the smaller end may be presented to the operator's right hand, thus making it very convenient for him in the operation of pressing different parts of the garment and a great saver of time. This reversal is effected in the present instance by loosening the thumb nut shown in Fig. 11. It will be seen that the thumb nut *g* is arranged to bear upon the walls *h* of an elongated slot in the base of the supporting frame of the press buck *C*, and is adjusted on the threaded end of the bolt *i* which is secured to the table *D* and passes up through the slot in the base of the press buck. By loosening this nut the base of the buck, together with the buck, may be reversed and clamped to the table by tightening the nut. This is manifestly a very simple operation, which the operator can perform almost instantly, and thus adapt the position of the board to his convenience. Of course, in pressing garments the necessity for reversing the press buck arises very frequently and the ultimate saving of time in the course of a day by the easy manipulation of this press buck, in the manner indicated, will be very considerable.

The table *D* is supported in any well known manner, but preferably upon an angled iron frame *A*, such as is shown, and it in turn supports the press buck and the bracket for the rocking arm, as will be hereinafter more particularly set forth. The bracket, which is designated by the letter *E'*, is bolted to the table and has one arm extending beyond and slightly above the rear end of the table, as shown, and upon this arm is pivoted the rocking arm *B*; and said bracket is further made in the form of a clamp to embrace that edge of the table and has its lower branch extended underneath the table, to a point slightly beyond the center, so as to afford a support from which to hang several parts of the operating mechanism, as will be set forth. Figs. 1, 2, 3 and 8 illustrate the construction of this bracket and means of attaching it to the table, and its various uses.

The iron is of the usual form and heated by a gas pipe in the usual manner, as is designated in the drawings by the letter *E*, and is mounted by the usual universal joint upon a forearm *F*, which in turn is vertically pivoted to a middle arm *G*, and the

latter to projecting lugs from the rocking arm B. In this machine, the power for applying the iron is very great, and, therefore, the movable joints through which this power is applied to the iron must be of unusual substance, and, accordingly, I have devised special means to reinforce these joints without adding materially to the weight of metal. By referring to Figs. 1, 2 and 4 of the drawings, and especially to Fig. 4, it will be seen that at each joint of the rocker arm and on one of the sections there is provided a reinforcing lug  $k$  which is cast with the steel of the arm and curved on one face to rest against and snugly fit and turn upon the projecting lugs of the rocking arm and the middle arm, respectively, which projecting lugs are the bearings for the pivots and are rounded at the point upon which each lug bears. In short, the reinforcing lugs are concaved upon their faces which bear against the convex surface of the supporting lugs. A similar reinforcing lug  $k^1$  is provided on the arm at the point where the iron is pivotally connected thereto and which coöperates with the projecting portion of the pivot of the iron. It will be, therefore, observed that when power is applied to the rocking arm by any suitable means, and consequently the upper end of such arm is thrust forward and downward, these reinforcing lugs act as abutments to prevent the slipping of the pivot lugs so as to strain them or fracture them, which otherwise has been found in practice to result after the bearings of these lugs are worn, and permit certain movement on the pivots. This is especially necessary in a construction like the present one where a toggle lever is employed to apply the power, for, as is well known, a toggle lever is one of the most powerful mechanical instruments to apply power. And it must be understood that when the iron is upon the press buck, and is thus supported, the thrust of the operating mechanism is upon these joints or pivots between such iron and the rocker arm, and at this time these reinforcing lugs come into play most advantageously. The lower end of the rocker arm is secured by a pivot to the outer end of a short link of the toggle lever, the other link of which lever is pivoted at its outer end to the center post H, the latter being provided with a forked end for the purpose. The short link of the toggle lever is designated by I and the long link by I', and the inner ends of these two links are pivotally joined by a short shaft which extends through them and is also extended through the two upright bearing lugs  $m$  of the evener link K.

It will be observed, by inspecting Figs. 2 and 7, that the shorter link I of the toggle has a yoked end which connects it to the rocker arm while the longer link I' of the toggle lever, is connected by a plane end to

a yoke end of the center post, but this long arm of the toggle lever has in its turn a yoke at its inner or central end which incloses a plane inner end of the shorter link of the toggle, and thus the two fill the space between the vertical lugs  $m, m$ , of the evener link K. This evener K has centrally on its under side a depending lug  $n$  forming a bearing for the pivot which joins it to the yoked upper end of the draw bar L, and the lower end of which draw bar is threaded and passes through the main operating bar M, which, in this instance, is shown as a treadle bar, but, of course, may be operated by any suitable power, if desired. On the under side of this operating bar there is formed a semi-circular recess, as is best shown in Fig. 9 of the drawing, and in this recess is placed a semi-sphere N, through which the draw bar also passes and on the under flat side of which rests the nut which holds said draw bar in place and adjusts it. There may be also provided an additional nut as a lock nut, as shown. The upper side of the operating bar is cut away angularly to permit movement of the bar on the draw rod. The evener link has hooked to each end of the same a spring O and the upper ends of these two springs are secured to the spring holder P, which in turn is adjustably supported from the bracket on the under side of the table by boss bolts  $r, r$ , which pass through this spring holder and are secured to it by nuts arranged on the under side to engage such bolts. The tension or pull of the springs is adjusted by these nuts and boss bolts with the consequent action of holding up the iron at its proper normal position above the press buck and also holding the operating lever in its normal and proper position against the cross-bar of the frame. It is evident that if the springs became slack, and there was no means of adjusting them, the evener link would drop, as would also the draw bar and the operating bar, which would cause the toggle levers to be straightened and the iron to approach too closely to the press buck, thus preventing the manipulation of the garment or goods to be pressed. Again, the movement of the operating lever may be varied by means of the nuts on the lower threaded end of the draw bar, which likewise effects a similar and additional adjustment of the position of the iron and of the several parts connecting it with the operating bar.

From the foregoing, it will be understood that the adjustment of the springs O upon the bolts  $r, r$ , will adjust the iron to the desired position above the press buck, so that the goods being pressed may be manipulated by the operator properly and conveniently, and will at the same time hold the operating arm at its proper position for a state of rest. The adjustment of the draw

bar through the operating arm will cause the springs to act in a particularly quick and easy manner, thus giving the desired tension to such springs and returning the parts to the proper position. It will also be seen that the co-action of the toggle levers and springs in applying the iron to the press buck avoids the jolt or jar which would result injuriously to the operator when the iron contacted with the press buck through the means of a more positive movement, and at the same time any desired and necessary pressure may be given through the medium of this powerful mechanism now employed.

What I claim and desire to secure by Letters Patent is,—

1. In a machine for pressing clothes the combination with the iron and mechanism for operating the same, including a toggle lever, a link in which the arms of the toggle are pivoted at their inner ends and providing also a point of connection for the operating lever and for a pair of springs, springs secured to such link and supported from the frame, and means for adjusting such springs.

2. In a machine for pressing clothes the combination with the iron and mechanism for operating such iron, including a toggle lever, a supporting link in which the two arms of the toggle lever are pivoted at their inner ends and such link provided with parts to be connected to the pair of springs, and to the operating bar, two springs connected at one end to the two ends of such link and at their upper ends connected to a spring holder, and adjusting screws connected to the frame and to the spring holder, whereby such springs may be adjusted and the position of the iron regulated as desired, and an operating bar also connected to the link at the point before stated.

3. In a machine for pressing clothes, the combination with the iron of mechanism for operating such iron including a toggle lever, resilient means engaging said lever adjacent

its pivot for supporting such toggle lever, an operating bar, and adjusting means on the operating bar also connected with the toggle lever and the said resilient means for adjusting the operating bar.

4. In a machine for pressing clothes, the combination with an iron of actuating mechanism for the same, including a toggle lever, springs for supporting such toggle lever and adjusting means for regulating the tension of such springs and consequently the position of the iron, an operating bar, and devices connecting said bar with the toggle lever and the said springs adjacent the pivot of the lever, said devices including means for adjusting the bar with respect to the lever.

5. In a machine for pressing clothes the combination with the iron of mechanism for actuating the same comprising a toggle lever, a link supporting the toggle lever, springs supported from the frame and secured to such link, and means connected with the frame for adjusting the tension of such springs, a draw bar pivoted to the link and at its other end screw-threaded and passing through the operating bar and underneath such bar and a nut for adjusting such draw bar.

6. In a machine for pressing clothes, the combination of an iron, mechanism for actuating the iron comprising a toggle lever, an operating bar for the lever, a link supporting the toggle lever, a bar adjustably secured to the frame, springs secured to the bar and link, a draw-bar pivoted to the link and at its other end screw threaded and passing through the operating bar and a nut for adjusting said draw-bar.

In testimony whereof I have signed my name to this specification in the presence of the two subscribing witnesses.

JOSEPH GROSS.

Witnesses:

FRANK T. BROWN,  
E. C. SEMPLE.