

C. P. BASCOM.

DIE PRESS.

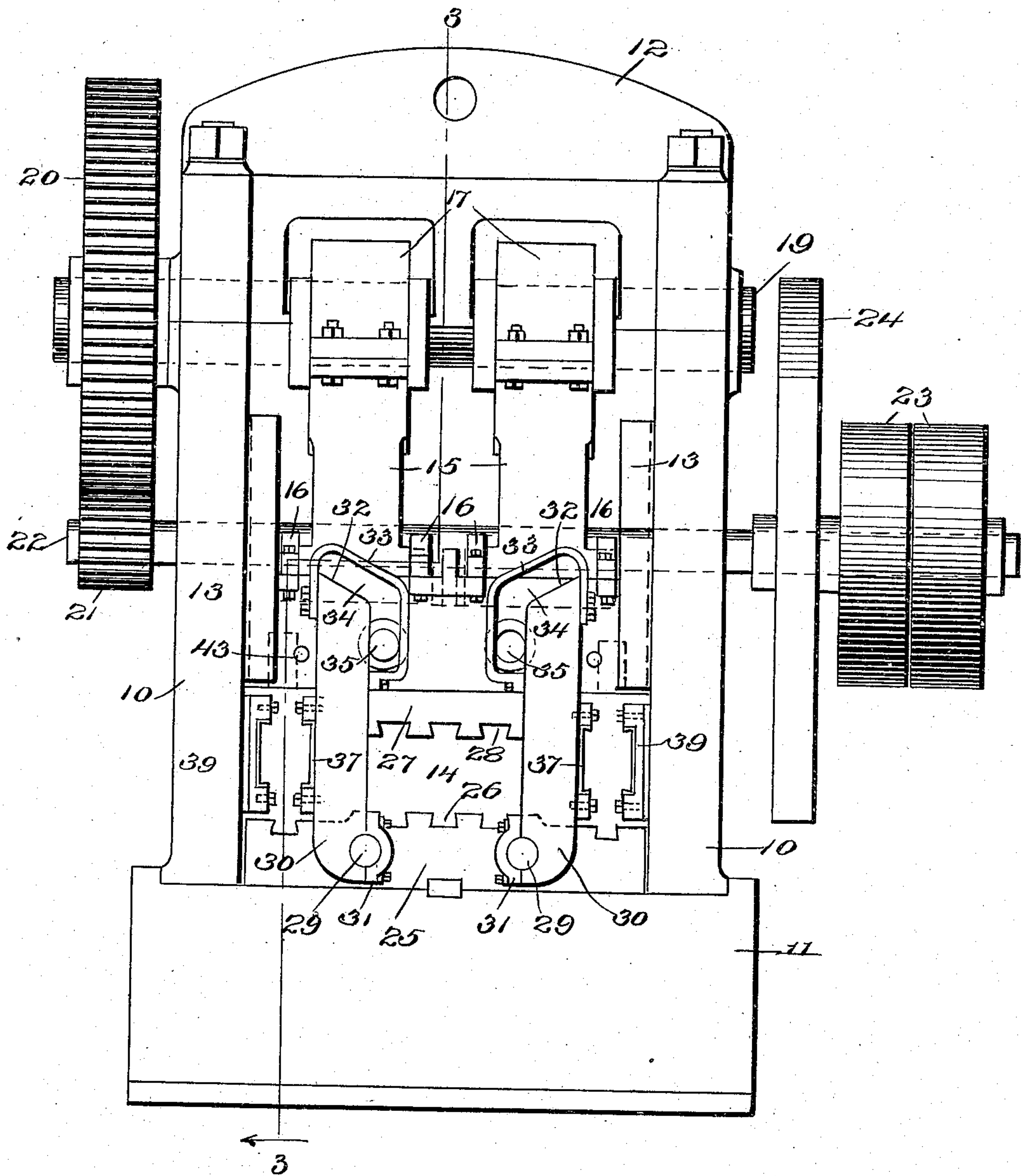
APPLICATION FILED FEB. 27, 1909.

931,006.

Patented Aug. 10, 1909.

3 SHEETS—SHEET 1.

Fig. 1.



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Witnesses  
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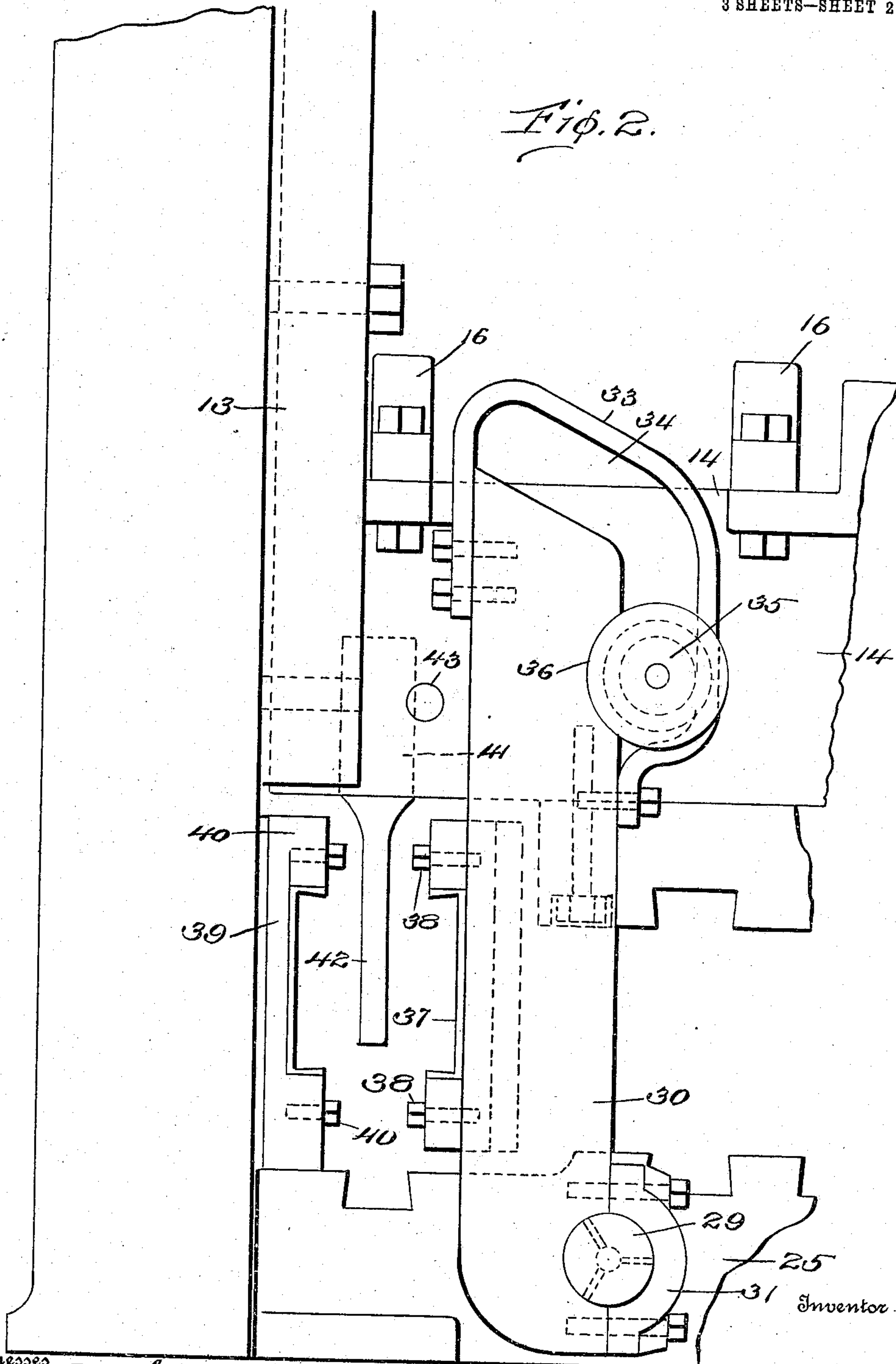
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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

F. 16. 3.

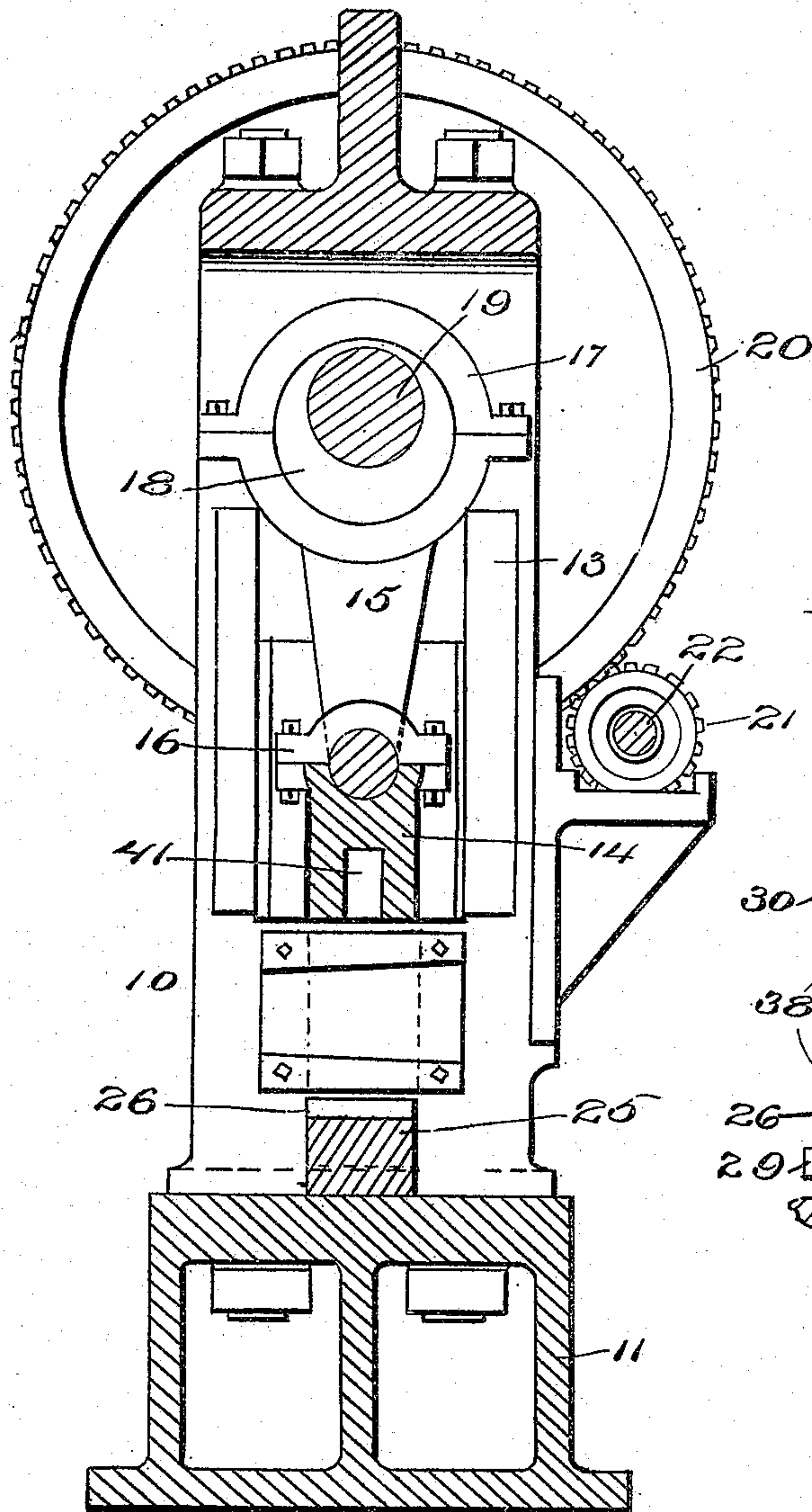
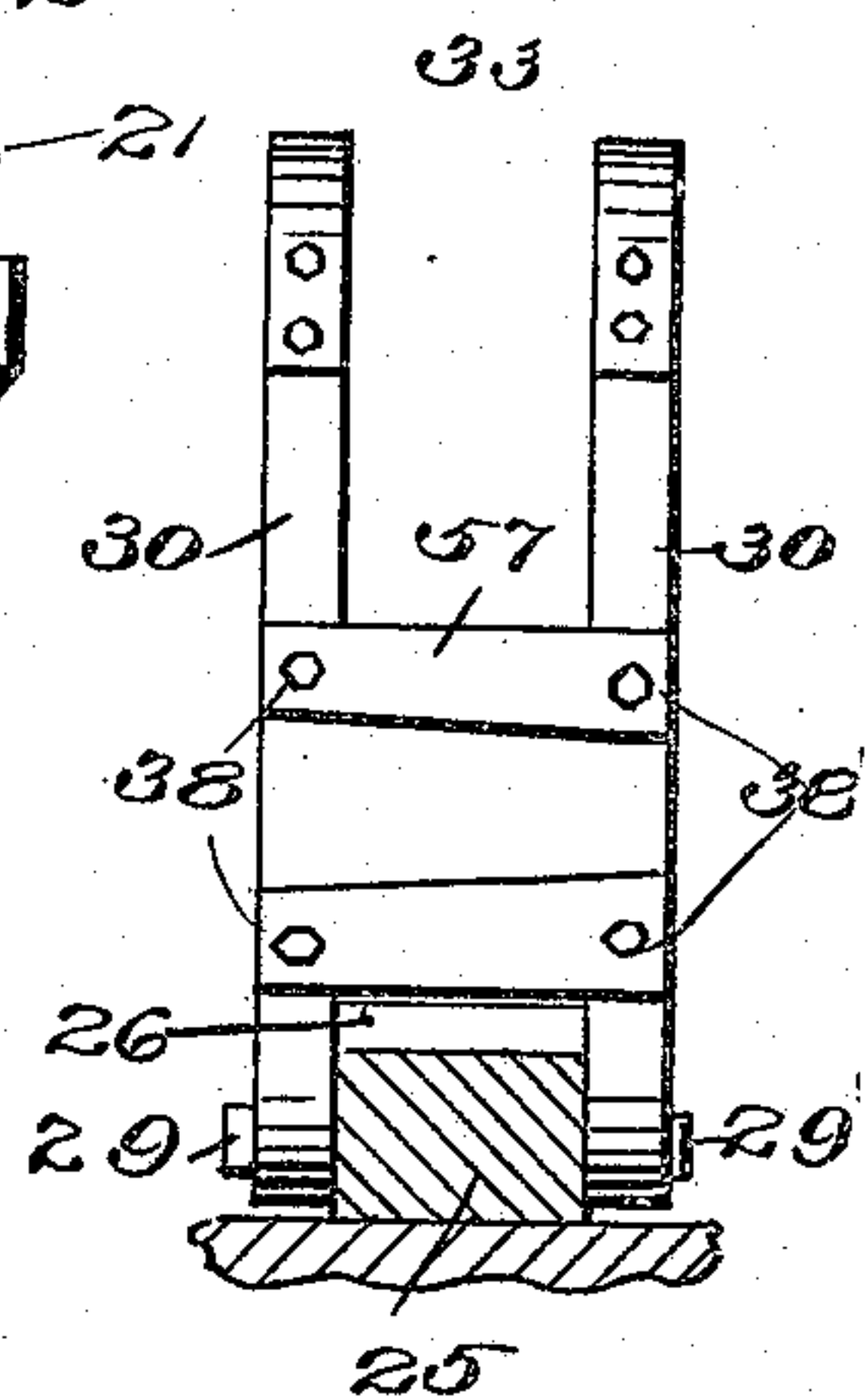


Fig. 4.



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# UNITED STATES PATENT OFFICE.

CALVIN P. BASCOM, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO FAYETTE R. PLUMB, INCORPORATED, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## DIE-PRESS.

No. 931,006.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed February 27, 1909. Serial No. 480,421.

*To all whom it may concern:*

Be it known that I, CALVIN P. BASCOM, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Die-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to die presses and has for an object to provide a press having oscillating jaws, such jaws carrying die plates and adapted to hold an article while being punched to prevent expanding of the article by the punching process.

A further object of the invention is to provide an improved form of oscillating jaw with improved die plate connecting the jaws and operating therewith.

A further object of the invention is to provide in a die press improved means for operating the oscillating jaws.

With these and other objects in view, the invention comprises certain novel constructions, combinations and arrangements of parts, as will be hereinafter fully described and claimed.

In the drawings: Figure 1 represents the improved die press in side elevation. Fig. 2 is a fragmentary view in side elevation enlarged showing the detail of one of the oscillating jaws. Fig. 3 is a transverse sectional view of the machine taken on line 3—3 of Fig. 1. Fig. 4 is a view in side elevation of a pair of oscillating jaws with their connecting die plate secured thereto.

Like characters of reference designate corresponding parts throughout the several views.

The press is constructed of side uprights or housings 10 erected upon any approved form of base 11 and joined at their upper ends by a cross piece 12. To the side housings 10 guide-ways 13 are secured within which guide-ways a cross head 14 is mounted to reciprocate vertically. The cross head 14 is operated by means of pitman rods or links 15 pivoted between bearings 16 and provided at their upper ends with eccentric straps 17 engaging upon eccentrics 18 mounted upon a shaft 19. The shaft 19 is driven in any approved manner here shown as by means of a gear 20 intergeared with a

pinion 21 which is carried upon a shaft 22, which said shaft also carries the usual fast and loose pulleys 23 and a fly wheel 24.

Upon the base 11 a lower die plate 25 is secured in any approved manner provided with tapered or dove-tailed slots 26 adapted for holding a die, and the cross head 14 is also provided with an upper die plate 27 similarly provided with dove-tailed slots or grooves 28 adapted to hold an upper die. The lower die plate 25 is provided with fulcrums 29 upon which are fulcrumed oscillating jaws 30 in any approved manner as by means of a strap or clip 31. The oscillating jaws 30 are provided at their upper ends with an inclined or tapered extremity shown at 32 and with a jaw strap 33 secured to the upper end of such jaw and spaced therefrom to produce a slot 34 in which moves a pin or roller 35 carried by the cross head 14. The roller 35 is preferably provided at its outer end with a flanged head or keeper 36 to prevent the jaw from moving upon the said roller longitudinally thereof.

It will be noted especially from Fig. 4 that the jaws 30 are arranged in pairs mounted upon the same fulcrum 29 or fulcrums in alinement with each other and move simultaneously under the action of similar rollers 35 carried upon opposite sides of the cross head 14. The pair of jaws 30 are connected by means of a jaw die plate 37 secured thereto in any approved manner as by the bolts 38.

Opposite the die plate 37 a similar die plate 39 is secured to the housing 10 in a manner similar to the securing of the die plate 37 as by the bolts 40. It will be noted that the die plates 37 and 39 are provided with tapered dove-tailed recesses adapted to receive a die to be firmly seated therein by driving. The jaw plate 37 is preferably composed of cast or other easily frangible iron or material so that in case an article is received between the die plates 37 and 39, which is too cold or otherwise too hard to be operated upon by the dies held by the said plates, the die plate 37 is broken or sheared upon the edges of the jaw 30, thereby relieving the balance of the mechanism from undue strain, such die plates 37 being cheaply and quickly replaced.

The cross head 14 is provided with a socket 41 in which a punch 42 is seated and



held in position by means of the pin 43 inserted through the cross head and engaging a complementary slot or furrow formed in the periphery of the shank of the punch.

5 The position and proportion of the punch 42 relative to the inclination and taper of the upper end of the oscillating jaws are such that when the cross head 14 is at the upper extreme of its limit, the roller 35 is  
10 disposed in the upper extremity of the slot 34, and such jaw following the movement imparted thereto by the inclination of the slot 34 is oscillated to move away from the die plate 39. An article, as for instance, a  
15 hammer, hatchet or the like, which is to have an eye punched therein, is now inserted between the dies carried by the die plates 37 and 38, and as the cross head descends the jaws 30 are forced toward the housing 10  
20 by reason of the roller 35 riding downwardly upon the incline 32. The proportion is such that as long as the jaws 30 are being moved or until the roller 30 had reached the shoulder of the jaw the punch 42 has not engaged  
25 the work but approximately at the time the roller 35 passes over the shoulder and starts to descend in the vertical portion of the slot 34, the jaws having been closed, the punch engages the work and while the roller 35 is  
30 traveling downwardly in the vertical portion of the slot 34, the punch is being inserted through the work gripped between the dies carried by the die plates 37 and 38. Upon the upward movement of the cross  
35 head 14 the punch 42 is wholly withdrawn from the work while the roller 35 is traveling upwardly in the vertical portion of the slot 34, and as soon as the roller engages the inclined portion of the jaw strap 33, the  
40 punch has cleared the work and the jaw is opened to release the work from between the jaws.

It will be apparent, of course, that any approved form of dies may be carried by  
45 the die plates 25 and 27, and also by the die plates 37 and 39 so that any tool, implement or other article may be formed by the employment of the dies carried by either of the die plates mentioned.

50 What I claim is:—

1. In a die press, a bed, a reciprocating head, jaws pivoted to the bed, provided with an inclined cam slot at the top, and means carried by the reciprocating head engaging  
55 within the slot.

2. In a die press, a bed, a reciprocating head, jaws fulcrumed upon the base and provided adjacent their upper ends with

inclined cam slots, means carried by the reciprocating head engaging within the slots, 60 a die plate carried rigidly by the base, and an opposing die plate carried by the jaw.

3. In a die press, a base, a reciprocating head, a pair of jaws pivoted to the base and each provided adjacent its upper end with 65 an inclined cam slot, means carried by the cross head engaging within the cam slots of the jaws, a die plate carried rigidly with the base, and a die plate rigidly secured to and spanning the interval between the jaws. 70

4. In a die press, a base, a reciprocating head, jaw members fulcrumed to the base, jaw straps secured adjacent the upper ends of the jaws and spaced therefrom producing a cam slot in each, a reciprocating head, 75 means carried by the reciprocating head engaging within the cam slot, and a die plate carried by the jaws.

5. In a die press, a base, jaws spaced from each other and concentrically fulcrumed 80 upon the base and provided adjacent their upper ends with registering cam slots, a reciprocating head, aligned means carried by the head engaging within the cam slots, a die plate carried rigidly with the base, and 85 a die plate spanning the interval between the jaws.

6. In a die press, a base, a pair of jaws fulcrumed upon the base, and provided adjacent their upper ends with cam slots, a 90 reciprocating head, means carried by the head disposed within the cam slots, a die plate carried rigidly by the base, an opposing die plate carried by the jaws, and a punch carried by the reciprocating head 95 adapted to operate between the die plates.

7. In a die press, a base, oscillating jaws pivoted to the base, a reciprocating head, means carried by the jaws providing a cam slot adjacent their upper ends part of which 100 slot is inclined and part vertical, means carried by the cross head adapted to operate within the cam slot, a die plate carried rigidly with the base, an opposing die plate carried by the jaws, and a punch carried by 105 the reciprocating head so proportioned that it engages between the die plates only while the slot engaging means is traveling in the vertical portion of the slot.

In testimony whereof I affix my signature 110 in presence of witnesses.

CALVIN P. BASCOM.

Witnesses:

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JOHN M. WILLIAMS.