No. 613,073. Patented Oct. 25, 1898.

C. PARTINGTON.

GAGING JACK FRAME.

(Application filed Mar. 7, 1898.)

(No Model.)

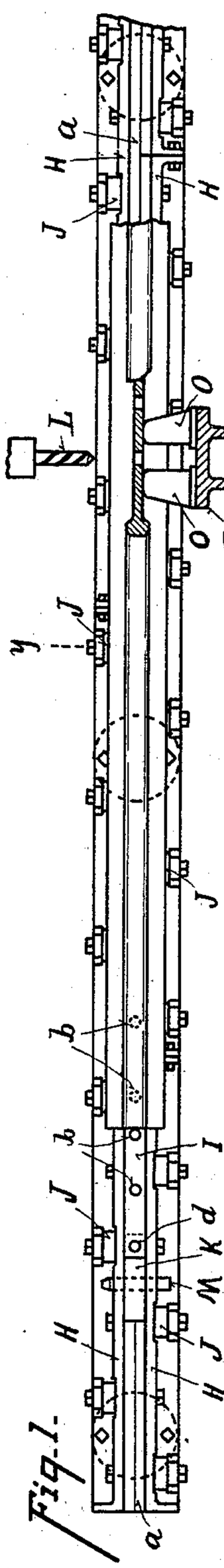
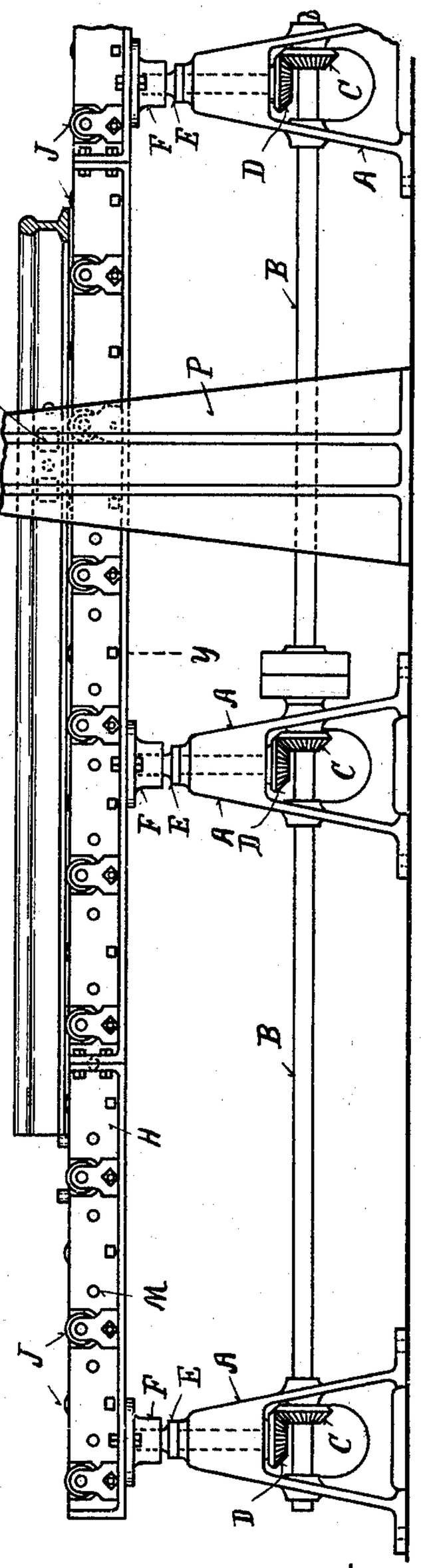


Fig. 1.



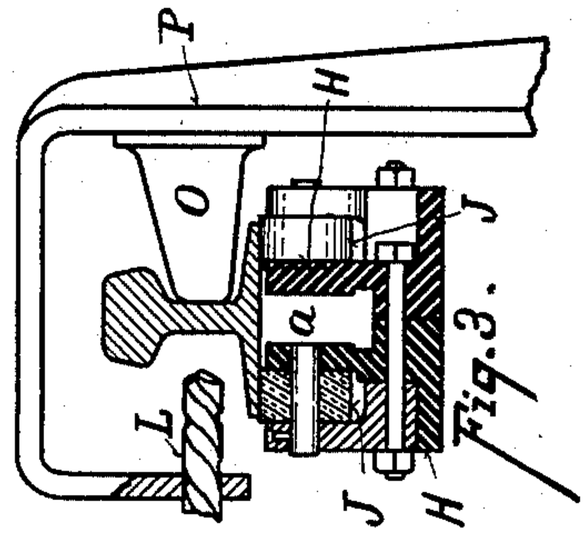


Fig. 3.

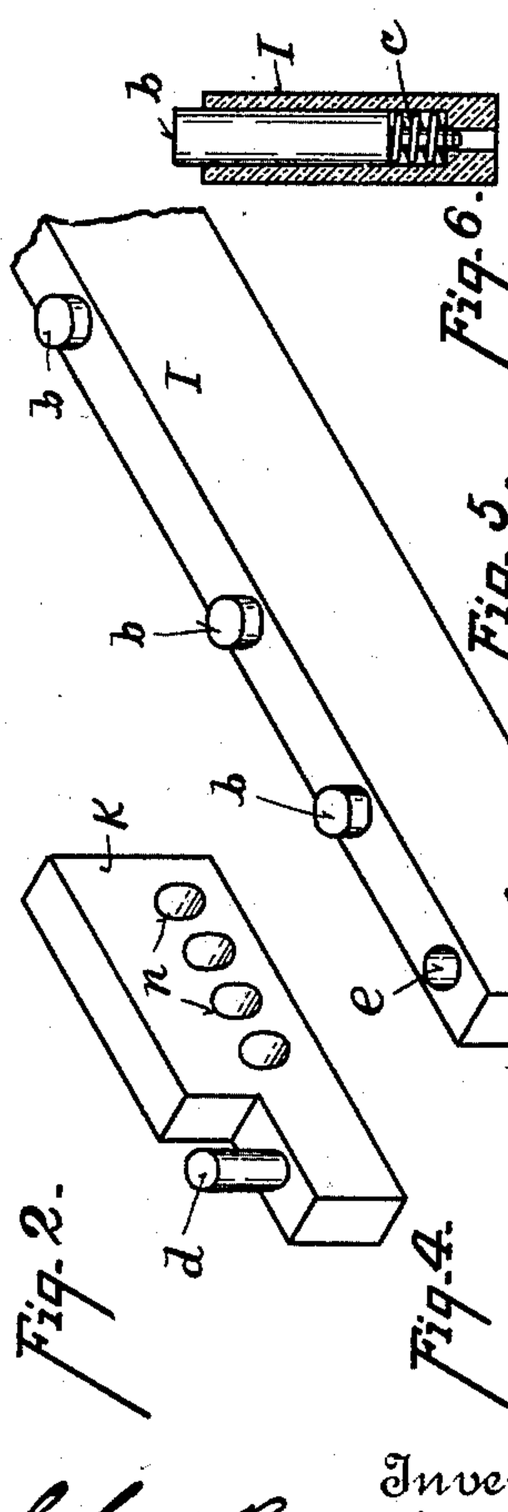


Fig. 6.

Fig. 5.

Fig. 2.

Fig. 4.

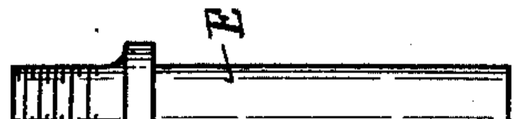


Fig. 7.

Witnesses
C. W. Miles.
Oliver B. Kaiser

Inventor
Chas. Partington
by Wood Boyle
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES PARTINGTON, OF NEWPORT, KENTUCKY, ASSIGNOR TO THE WEIR FROG COMPANY, OF CINCINNATI, OHIO.

GAGING JACK-FRAME.

SPECIFICATION forming part of Letters Patent No. 613,073, dated October 25, 1898.

Application filed March 7, 1898. Serial No. 672,941. (No model.)

To all whom it may concern:

Be it known that I, CHARLES PARTINGTON, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Gaging Jack-Frames, of which the following is a specification.

The object of my invention is to provide a machine or jack-frame for holding material to be pierced with holes, which are serially made by a proper tool at predetermined intervals, the gaging or spacing of the distance between the holes being obtained by the automatic action of stop-pins in the templets resting beneath the base of the work.

Another object of my invention is to combine with the face of the bed-plate a series of rollers, upon which a rail or girder is supported, a series of gaging-templets forming a part of the face of the bed-plate and provided with stop-pins which are depressed by the weight of the material and which automatically come into position for gaging the advance of the material to be wrought and to serve as a rear abutment against which the work is held, thereby obtaining an accurate spacing, which is predetermined by the templets and their contained stop-pins, said templets being removably connected to and forming a part of the base on which the rail or girder is supported by such jack-frame.

The features of my invention are more fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top plan view of my improvement. Fig. 2 is a side elevation of the same. Fig. 3 is a central vertical section on line *y y*, Figs. 1 and 2. Figs. 4, 5, 6, and 7 are detailed views of the operative parts of my improvement.

A A A represent a series of truss-frames; B, a shaft journaled in the truss-frames, as shown. C represents bevel-gears on said shaft driving gears D, secured to the upright screw-shafts E, which project up through the truss-frames A. Upon these vertical shafts are bolsters F, upon which the bed-plate H is supported. The bed-plate H is provided with a recess *a*, into which slides the templets or gage-blocks I. J represents friction-rollers placed at suitable intervals along the bed-plate. The article, such as a rail or girder, to be treated is placed on said rollers so that it may be easily adjusted longitudinally. The templets I are provided with spring-pins *b*, which are shown as preferably supported upon a coil-spring *c*. These are placed at appropriate intervals in the templet I. Each pin indicates or gages the point at which the hole is to be pierced in the material. In order that the templet may be adjusted longitudinally, so as to change the distance of the starting-point—say the distance of the first gage-pin *b* from the tool L—I preferably provide an adjusting-block K, to which the templet I is connected by means of pin *d* and hole *e*. Block K is anchored in any desired adjustment by means of the lock-pin M, which passes through the bed-rails H and through one of the holes *n* of the adjusting-block.

P represents a buttress or standard. It is provided with anvil-blocks O, which form the abutment against which the work is supported and held to the operation of the hole-piercing tool L.

The mode of operation is as follows: The templet I or a series of templets are adjusted in position. They contain spring-pins the requisite distance apart and correspond in number with the holes to be pierced. The rail or girder is placed in position, as shown in Fig. 3, resting on the rollers and upon the stop-pins, which are depressed by it. It is moved along longitudinally until it passes the first pin, which springs up, and the rail or work is brought back to abut squarely against it, as shown in Figs. 1 and 2, and also to abut the anvil-block O, when the piercing-tool is applied. When this first hole has been made, the work is moved along until it passes the second stop or gage pin, when it is adjusted against it properly and the second hole is made. In order to adjust the work vertically, so the holes may be pierced in the proper vertical plane, shaft B is turned, which turns the screw-shafts E, the threaded portion of which engages with the bolsters F, which raises or lowers the entire bed and the material supported thereon. This method of gaging the work is very advantageous. First, it saves marking off the rails with chalk or pencil;

second, it securely holds the work to the operation of the tool, so that the hole is pierced in the proper and exact place and plane, and, third, it is adapted to support very heavy material, which is easily moved on the friction-rollers forming the face of the bed-plate or frame. The use of the templets I insures the uniform boring of any desired number of parts, thus securing exact duplicate work. Again, the adjustments are easily and quickly made. This method also saves the measuring and laying off of the holes on the material and is absolutely accurate. The stop-pins act automatically in coming into position for gaging the work. I have shown only one tool for piercing the hole; but of course a series of tools could be employed.

In the preferred form of construction shown in the drawings there are shown two sets of friction-rollers, the peripheries of which project up slightly above the face of the bed-plate and of the templets. These two sets of rolls are highly advantageous where railroad-rails or a wide base-rail or girder is to be bored. The templets I are interchangeable, there being a stop-pin for each hole to be bored. In practice the templets, with their stop-pins, are made for the particular kind of work to be employed. For instance, if a rail is to be bored for the fish-plate bolts only two stop-pins would be required. If, however, a rail is to be used for a frog or crossing, more holes are required to be bored, and their locations are predetermined and the stop-pins are put in the appropriate places in the templets. It will be observed also that it is essential to provide means for adjusting the rail longitudinally, as it is essential to be able to start the work at any desired point. In the ordinary range of work a single anchor-block K, provided with a series of spacing-holes *n*, with the lock-pin M, will be sufficient for the adjustment.

Having described my invention, I claim—

1. In a gaging-frame comprising a bed-plate, one or more series of friction-rollers upon which the work is supported, interchangeable templets provided with stop-pins at predetermined distances adapted to be depressed by the work and spring into position to serve as a gage and abutment, substantially as specified.

2. A gaging jack-frame comprising a bed-plate, a series of friction-rollers journaled in said bed-plate, a templet detachably secured to said bed-plate and provided with a series of spring-actuated pins located in said templet, the same being adapted to be depressed by the material placed on said bed-plate and supported above said templet, substantially as specified.

3. A gaging jack-frame comprising a bed-plate supported by two or more screw-shafts having bolster connections to said bed-plate, one or more series of friction-rollers forming the work-support of said bed-plate, a templet provided with spring-actuated stop-pins placed longitudinally parallel with said friction-rollers, and so adjusted in position that the stop-pins are depressed by the work supported upon the face of the templets, substantially as specified.

4. In a gaging jack-frame the combination with a bed-plate supported upon a series of vertically-adjusting screw-shafts connected to said bed-plate, and means for raising and lowering said shafts simultaneously, one or more series of rollers forming the work-support, and interchangeable templets carrying spring-pins located at predetermined distances seated in said bed-plate, substantially as specified.

5. In a gaging jack-frame the combination of a bed-plate, a series of vertically-adjusting screw-shafts with bolster connections journaled within supporting-stands, means for rotating simultaneously said screw-shafts, one or more series of rollers journaled in said bed-plate and projecting slightly above the face of interchangeable templets provided with spring stop-pins, said pins being adapted to be normally depressed by the work and automatically rising to gage the forward movement of the work at predetermined intervals, substantially as specified.

6. In a gaging jack-frame the combination of a longitudinal supporting-frame mounted upon a series of simultaneously and vertically adjustable supports, a series of friction-rollers journaled on said frame and adapted to support the material, interchangeable templets provided with gaging-pins located in said gaging device each being adapted to engage with the end of the material, whereby any desired longitudinal adjustment may be automatically obtained, substantially as specified.

7. The combination of a gaging jack-frame, means for adjusting said frame vertically, a series of friction-rollers journaled in said frame and adapted to support the material, a series of interchangeable templets connected to an anchor-block K, supported on said frame said templets being provided with one or more stop-pins, adapted to be depressed by the material when in position and to abut the end of said material when released, whereby any desired longitudinal adjustment of the material may be obtained, substantially as specified.

In testimony whereof I have hereunto set my hand.

CHARLES PARTINGTON.

Witnesses:

OLIVER B. KAISER,

W. R. WOOD.