

May 15, 1923.

1,455,346

E. L. MEGILL

GAUGE PIN

Filed Oct. 5, 1921

Fig. 1.

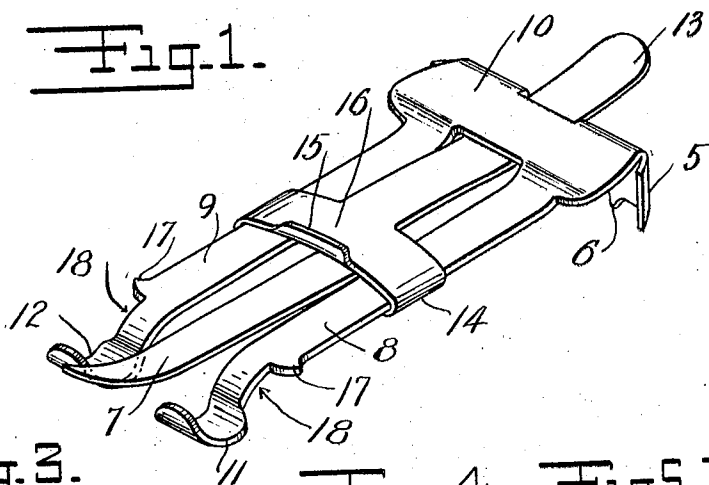


Fig. 3.

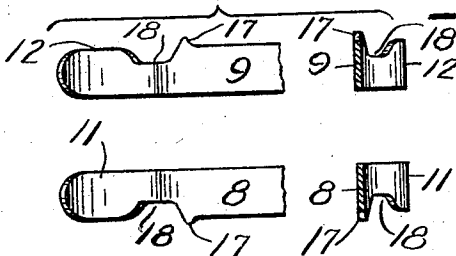


Fig. 4.

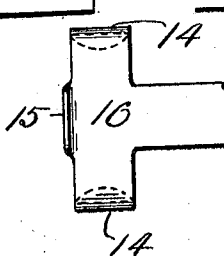


Fig. 5.

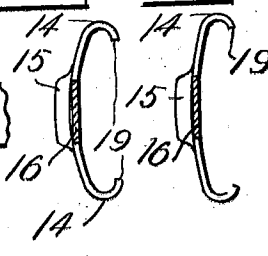
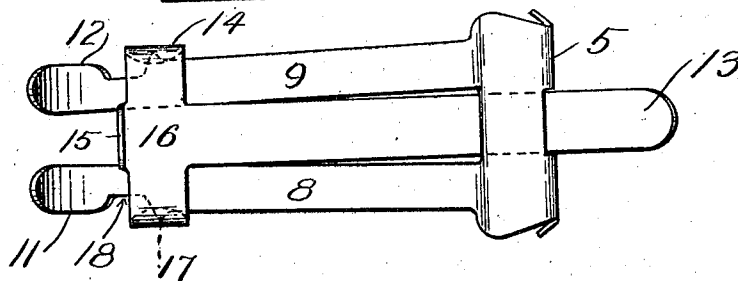


Fig. 6.

Fig. 2.



Edward L. Megill ^{Inventor}
By his Attorney
Frank J. Kent

Patented May 15, 1923.

1,455,346

UNITED STATES PATENT OFFICE.

EDWARD L. MEGILL, OF NEW YORK, N. Y.

GAUGE PIN.

Application filed October 5, 1921. Serial No. 505,479.

To all whom it may concern:

Be it known that I, EDWARD L. MEGILL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Gauge Pins, of which the following is a specification.

This invention relates to improvements in gauge pins for use in connection with printing presses and it is in general an improvement on the invention described in my Patent No. 1,385,637, July 26, 1921.

Devices of the character referred to are formed for attachment to the tympan sheet of a printing press to serve as position-defining or registering members for the successive pieces of work during the operation of making the printed impressions. The particular type of gauge pin shown in the patent and in the present application is made up of two parts, a main gauge member having a pin or prong for attaching the member to the tympan sheet, and a tongue movably mounted on the gauge member to project various distances over the face of the work. The gauge member consists of a gauge head or abutment member arranged to take a substantially normal or perpendicular position with relation to the surface of the tympan sheet and having a prong extending from a middle portion of the lowermost edge of the head in a direction away from the work. From the uppermost edge of the head extend two arms spaced apart and formed at their free extremities with downwardly bent flattened feet or pressure members which are arranged to engage the upper surface of the sheet in positions adjacent the position of the end of the prong.

The two parallel and laterally separated arms which extend from the upper edge of the gauge head serve as supporting members for a tongue which is provided at one extremity with laterally extending hook members which embrace the outermost edges of the arms. The tongue projects forwardly from its pointed engagement with the arms and extends through an opening provided for the purpose in the gauge head to a position above the piece of work. The engagement of the tongue with the arm members is such that the tongue can be moved backwardly or forwardly along the arms to cause the free end thereof to project various distances over the face of the work.

One feature of the invention resides in the construction of the arms themselves which because of their disconnected spaced apart free ends provide for a bending of the arms toward each other to thereby release the frictional engagement of the hook members and release the tongue for ready adjustment to the desired degree of projection over the work. In addition and in combination with the resilient structure of the arms is a bowed or arched construction of the base portion of the tongue which when engaged by the finger of the operator and compressed or flattened tends to spread apart the laterally extending hook members to assist in the frictional engagement of the hook members with the outermost lateral edges of the arms.

Another feature of the invention consists in the provision of laterally extending stop members formed near the rearmost portion of the arms and which serve to limit the rearward movement of the tongue members and to prevent the tongue members from being accidentally moved out of engagement with the gauge member support. The stop members referred to are relatively small and while they serve the purpose referred to they at the same time permit of a sufficient inward bending of the arms toward each other and together with a lateral spreading of the hook members to cause the hook members to pass over the outermost extremities of the stop members to thereby provide for the removal of the tongue members from the gauge member supports when such removal is deliberately sought.

Still another feature of the invention consists in providing the pressure foot extremities of the free ends of the arm with a formation such that it materially assists in guiding the hook members of the tongue into arm engaging position when it is desired to mount the tongue members on their supports. To further assist the assembling or disassembling of the tongue members from their supports a notch or recess is formed in the outermost lateral edges of the arm members between the stop lugs referred to and the downwardly bent pressure foot members.

Other features of the invention will be hereinafter referred to.

In the drawings in which a preferred form of the invention has been selected for illustration:—

Figure 1 is a view in perspective of a gauge pin embodying the invention.

Figure 2 is a plan view of the device shown in Figure 1.

Figure 3 is a view in detail in two positions of the free ends of the gauge pin arms.

5 Figure 4 is a view of the base portion of the tongue member showing the laterally extending arm engaging hooks.

Figure 5 is a view in section showing the bowed conformation of the base portion 10 of the tongue member.

Figure 6 is a view similar to Figure 5 showing the base portion of the tongue flattened out to produce a lateral spread of the arm engaging hook members.

15 In the drawings, a gauge pin is shown which consists of a member having a gauge head 5 formed to take a perpendicular position with relation to the tympan sheet of a printing press, the gauge head being formed with downwardly projecting pins 6 which 20 take perforating engagement with the tympan sheet and serve to prevent movement of the gauge head in the plane of the supporting sheet. The gauge head 5 is provided 25 with a prong 7 projecting rearwardly from and preferably integrally connected with the gauge head. The prong projects from the lower edge of the gauge head and is designed to perforate the tympan sheet and 30 thereby pin or anchor the gauge member in place on the sheet.

The gauge member is also provided with a pair of arms 8 and 9 which extend rearwardly from a base member 10 which forms 35 an angle with the gauge head 5 and is attached to or formed integrally with the upper edge thereof. The arms 8 and 9 extend rearwardly from the rearmost edge of the bridge member 10 in a generally parallel 40 relation to each other and to the prong member 7. The arms 8 and 9 are formed at their rearmost extremities with pressure foot members 11 and 12 which are downwardly extended to engage the upper surface 45 of the tympan sheet when the gauge pin is in operating position.

The arm members 8 and 9 serve to support a tongue 13 which extends forwardly from the gauge head 5 in a position overlying the surface of the piece or sheet of work. The tongue 13 is provided at its rear extremity with laterally extending hook 50 members 14 which engage the outermost lateral edges of the arms 8 and 9. The arms 55 are preferably formed of spring metal and normally tend to maintain their spaced apart relation, this resiliency serving to cause the frictional engagement of the outer edges of the arms with the inner surfaces of the 60 hook members 14 and thereby holding the hook members in immovable relation with the arms. In order to release the hook members for movement along the arms to thereby cause the free end of the tongue 13 to 65 project various distances over the surface of

the work, the free ends or foot members 11 and 12 of the arms are pressed toward each other to release the frictional engagement of the hooks and the arms and free the tongue for movement along the arms by 70 means of the finger piece 15.

To assist in the freeing of the engagement of the hook members with the arms in order to provide for the ready adjustment of the tongue member 13, the base portion 16 of 75 the hook member is given an upwardly bowed formation so that normally the base portion of the tongue occupies a somewhat elevated position with relation to the upper surface of the arms 8 and 9. It will be 80 seen that by depressing the bowed or elevated portion of the hook member at the same time that the extremities of the arms 8 and 9 are pressed toward each other a doubly effective releasing action of the hooks 85 14 and lateral edges of the arms 8 and 9 is obtained. This is brought about by the lateral spreading of the hook members produced by the flattening of the bowed portion as indicated in Figures 5 and 6 of the 90 drawing.

In order to prevent the accidental movement of the tongue 13 in a rearward direction to an extent sufficient to remove the tongue from its engagement with the arms 95 8 and 9 laterally extending stopping lugs 17 are formed on the lateral edges of the arms 8 and 9. These lugs serve to engage and stop further rearward movement of the hook members 14 when the hook members 100 are brought to their rearmost position.

It will be seen that the stop lugs 17 are sufficiently small to permit of their passing between the opposing inner faces of the oppositely disposed hook members 14 when 105 the extremities 11 and 12 of the arms 8 and 9 are moved inwardly toward each other a sufficient distance as is indicated in Figure 2 of the drawing. It will thus be seen that by pressing inwardly the extremities 110 11 and 12 of the arms 8 and 9 and at the same time depressing the bowed portion 16 of the tongue 13 a sufficient deformation of the parts is procured to effect the release 115 of the hook members from the supporting arms. This feature provides for the ready interchange of tongue members having different lengths in accordance with the requirements of the work, or to replace tongue members which may have become injured 120 or broken.

In order to facilitate the removal of the hook members 14 from their engaging position with the arms 8 and 9, recesses 18 are 125 formed in the lateral edges of the arms 8 and 9 just to the rear of the stop lug member 17, the recesses 18 serving to permit the passage therethrough of the extreme tips 19 of the hook members 14 as will be clear. In order to assist in guiding the hook members 130

into a position in which they will pass through the recesses 18 in an assembling operation, the pressure foot extremities 11 and 12 of the arms 8 and 9 are formed with a suitably curved formation to guide the hook members into the recesses 18.

It will be seen that I have provided a gauge pin in which the tongue members can readily be interchanged without the exertion of substantial muscular effort by the fingers of the user. This is accomplished by distributing the deformation of parts necessary between both the supporting arm members and the arm engaging portion of the tongue itself so that a relatively small deformation of each of all the parts is sufficient to produce the requisite clearance for the purpose.

What I claim is:

1. In a gaging device for printing presses, a work positioning member, means for attaching the work positioning member to the tympan sheet of a press, a pair of spaced apart tongue supporting arms attached to said member, and a tongue mounted on said arms to extend over the face of the work, said tongue being provided with laterally extending hook members formed to engage the outside edges of the arms, said tongue member between said hook members being formed of resilient metal and normally bowed and said arms being also formed of resilient metal, whereby a flattening of the bowed portion of the tongue and a bending toward each other of the spaced apart resilient arms permits the release of the hooks from engagement with the arms.

2. In a gaging device for printing presses, a work positioning member, means for attaching the work positioning member to the tympan sheet of a press, a pair of spaced apart resilient arms attached to said member and extending away from the work engaging portion thereof, a tongue mounted on said arms to extend over the face of the work, said tongue being provided with laterally extending hook members formed to engage the outside edges of the arms, said tongue member between said hook members being formed of resilient metal and normally

bowed whereby a flattening of the bowed portion of the tongue and a bending toward each other of the spaced apart resilient arms releases the frictional engagement of the edges of the arms and the hook members to provide for the adjustment of the tongue along said arms, and stop members provided on said outside edges of said arms near the free ends thereof to prevent the accidental removal of said hooks from the arms, said stop members permitting the passing of the hooks thereover for release at the will of the operator.

3. In a gaging device for printing presses, a work positioning member, means for attaching the work positioning member to the tympan sheet of a press, a pair of spaced apart resilient arms attached to said member and extending away from the work engaging portion thereof, the free ends of said arms being provided with curved feet, a tongue mounted on said arms to extend over the face of the work, said tongue being provided with laterally extending hook members formed to engage the outside edges of the arms, said tongue member between said hook members being normally bowed, stop members on said outside edges of said arms near said curved feet, recesses in said lateral edges between said stop members and said feet, said bowed formation of said tongue permitting a flattening thereof and said resilient arms being capable of being bent toward each other to permit said hook members to pass said stop members and pass through said recesses, and said curved feet being formed to guide said hook members into said recesses.

4. In a work positioning member for printing presses, an elongated support, a tongue slidably mounted on said support for projection to various extents over the work, said tongue being provided with laterally extending hook members for engaging the lateral edges of the support, and said tongue member being bowed between said hook members for the purpose described.

In testimony whereof I affix my signature.
EDWARD L. MEGILL.