Dec. 21, 1937. E. PAYNE 2,102,910

FEED GAUGE FOR PRINTING PRESSES

Filed Dec. 28, 1936

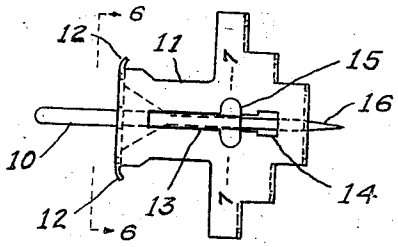


Fig. 1

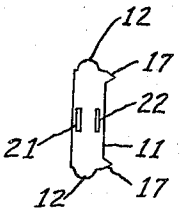


Fig. 6

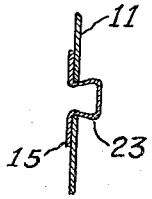


Fig. 7

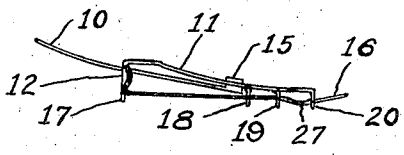


Fig. 2

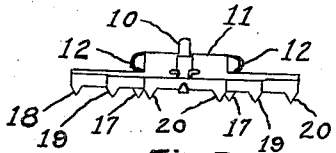


Fig. 3

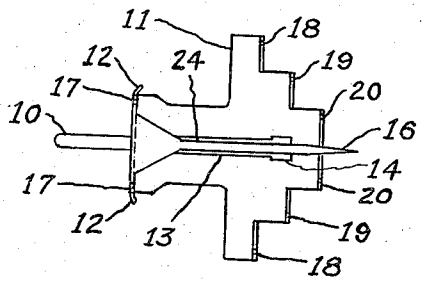


Fig. 4

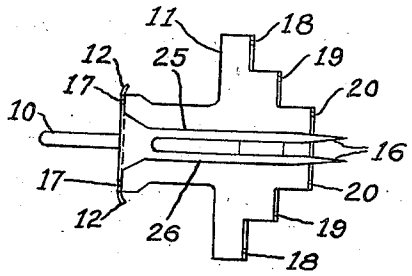


Fig. 5



Fig. 10

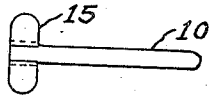


Fig. 8

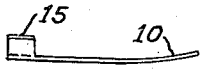


Fig. 9

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Patented Dec. 21, 1937

2,102,910

UNITED STATES PATENT OFFICE

2,102,910

FEED GAUGE FOR PRINTING PRESSES

Eugene Payne, Chattanooga, Tenn.

Application December 28, 1936, Serial No. 117,731

6 Claims. (Cl. 101—415)

My invention relates to gauges and more particularly to gauges for positioning the stock on printing presses.

It has been the practice in the prior art of what is known as job printing which consists of printing circulars, letter heads, labels, and forms of various kinds to use what is commonly called a job press having a draw sheet of appropriate thickness upon which is mounted gauges for positioning and carrying the stock to be printed into and out of engagement with the type form.

In the prior art considerable difficulty has been encountered with these gauges. A consideration of some of the various forms of gauges will serve to illustrate the problems solved by applicant.

In the general form of the present feed gauge a prong or blade is locked to, by piercing, the draw sheet or tympan sheet. This blade is secured at one end thereof to a head which has legs or wings integral therewith and extending rearwardly thereof, and which rest on the face of the draw sheet. A pin or tongue is adjustably secured to the wings and extends through a slot in the head. Teeth for seating in the draw sheet are secured to the head and are intended to position it along such sheet to accommodate changing sizes of stock.

It is necessary to employ wax for sealing the pin to the draw sheet, and as inadequate means is employed for anchoring, there is always the chance of accidental displacement by striking, and even where light stock is fed to the press it is also necessary to employ wax for precision work. For close register work it is necessary to move the pin down in the slot in the head towards the draw sheet, and insert a sharpened wooden wedge to maintain it in position. This is very inconvenient, requires a great deal of delay and provides no satisfactory holding means. And finally the use of sealing wax retards or prevents adjustment of the tongue along the legs or wings over which it must travel.

Applicant with a knowledge of all of these objections to and defects in the prior art has for an object of his invention provided a gauge having a body portion including the conventional head and a wedge shaped tail, a prong or blade secured to the head and rows of offset teeth formed on the tail resulting in a large moment arm between the points of contact of the teeth with the draw sheet and giving a maximum resisting effect against rotation caused by engagement with stock and other objects and eliminating the necessity for the use of wax which prevents further adjustment as well as introduces sticky and unclean material.

Applicant has as a further object the provision of a number of anchoring teeth which will resist to a maximum degree any tendency for relative movement.

Applicant has for a further object the provision of three sets of teeth which may be successively employed to anchor the gauge to the draw sheet, permitting of slight adjustment without producing large holes in the sheet which destroy the anchoring effect.

Applicant has as a still further object of his invention the provision of a gauge having a slotted body portion cooperating with portions of an adjustable pin or tongue permitting its movement with respect thereto but resisting such movement and locking such tongue or pin so that it may not be separated from the body portion except at one position, thereby giving an adjustable tongue which will retain its position when being so adjusted.

Applicant has as a still further object of his invention the provision of a feed gauge employing a plurality of openings in the head for successively receiving the pin or tongue to positively position it for close gauge or otherwise and eliminating the necessity for use of sharpened wooden wedges for this purpose.

Other objects and advantages of my invention will appear in the following specification, and the novel features of my invention will be particularly pointed out in the annexed claims.

In the drawing Figure 1 is a plan view of my improved gauge. Figure 2 is a side elevation of the same gauge. Figure 3 is a rear end elevation of the same gauge. Figure 4 is a plan view of the same gauge from the bottom. Figure 5 is a modification of the same gauge from the bottom. Figure 6 is an end view of the head of my gauge. Figure 7 is a cross-section of a detail of my pin securing means. Figure 8 is plan view of my pin. Figure 9 is a side elevation of my improved pin. Figure 10 is an end view of the same pin.

Referring to the drawing in detail, **10** designates a resilient pin or tongue carried by a body **11** which cooperates with projections **15, 15** overlapping the outer surface of the body and an arched central portion **23** which under hangs the walls defining the slot **11** to interlock the body and pin together as in Figure 7. Adjacent one end of slot **11** is an enlarged portion **14** permitting the disengagement of the pin from the body portion. Projections **12, 12** on the head serve to guide the stock into position.

Secured to the head is a prong or blade 16 and on the paper engaging portion are teeth 17, 17. The tail or rear portion of the body is formed in wedge shape having sets of anchoring teeth on the draw sheet engaging face. The first set of teeth 18, 18 are most widely spaced and form the most extreme points on the wedge. The next set to the rearwardly are 19, 19 which are offset from the first set and spaced more closely together. The last set is located at the extreme rear and are on the point of the wedge, being off-set longitudinally and laterally from the other sets, are most closely related and are designated by 20, 20.

In the modification of Figure 5 a double blade or prong 25, 26 is employed to secure the gauge to the draw sheet.

In the head is formed a plurality of slots 21, 22 through which the tongue 10 may be successively extended. For other than close gauge work the tongue ordinarily extends through slot 22. In this way the necessity for a wooden or other wedge inserted behind the tongue to force it down into close gauge position is entirely eliminated, and the tongue is always positively positioned at the desired location.

The gauge is positioned by piercing the draw sheet on the press with the prong or blade point 16, running the point 16 along the inner surface of the sheet for some distance, then piercing it again, thereby locking the gauge to the draw sheet. When the head of the gauge 11 has reached the correct position for the particular stock to be printed, and if the stock is thin, the teeth 17, 17 on the head are forced and anchored in the draw sheet. After this the end of tongue 10 is inserted through the slot 21 or slot 22, depending upon whether the work is to be close gauge or not. Portion 23 and projections 15, 15 are moved along slot 11 until tongue 10 has reached its appropriate position. As the stock varies or changes it is necessary to disengage teeth 17, 17 and slide the gauge bodily up or down until the proper position is reached, but this movement is very slight. The gauge, after this adjustment, must again be anchored, and this time it will be by teeth 18, 19, 20 on one side of the wedge shape tail. When the wedge and body are again adjusted it will be anchored by teeth 18, 19, 20 on the other side of the wedge shape tail. In other words only one of each set of teeth on the tail will engage and anchor into the draw sheet at a time. In this manner the draw sheet is only punctured by each set of teeth on every third adjustment so that the openings formed are not so close together that they join each other and form large holes in the draw sheet destroying the anchoring effect.

Where heavy stock requiring little adjustment is to be printed, but which would apply so much force to the gauge that teeth 17, 17, on the head would not anchor it, or where great precision is necessary on light stock, movement of the gauge may be prevented and anchoring successfully attained by forcing all of the teeth 17, 17, 18, 18, 19, 19, 20 and 20 into the draw sheet and anchoring all of them. In this manner staggering or off-setting the teeth 18, 18, 19, 19, 20, 20 to form a wedge shape tail, and providing a moment arm of maximum length between anchoring points, with a minimum of material, results in resisting to a maximum degree all attempts to rotate or pivot the gauge. The use of sealing wax is not necessary when this gauge is employed and results in an easily removable and adjustable gauge. It saves much of the printer's time and eliminates the sticky and undesirable effect of such wax which penetrates the draw sheet and gauge and destroys adjustment of the tongue or pin.

The body portion 11 of the gauge is of curved formation lengthwise, and the resilient tongue 10 conforms to this curvature. The resilient projections 15, 15 and the portion 23 tend to move toward each other producing a tight frictional engagement with the body 11 of the gauge, maintaining the tongue in the position where it has been adjusted.

Tongues or pins of varying lengths may be employed to accommodate the various types of stock printed.

Having thus described my invention, I claim:

1. A device of the character described, comprising a body portion, a head secured to said body portion, a plurality of tongue receiving openings in said head, a prong for securing said head and body to a draw sheet, and a tongue adjustably secured to said body portion and extendable through either of said openings for engagement with printing stock.

2. A gauge of the character described comprising a body portion, rows of teeth on the draw sheet engaging face of said body portion, an apertured head secured to said body portion, teeth on the sheet engaging face of said head, and additional means for securing said head and body portion to said draw sheet.

3. A gauge of the character described comprising a body portion having a tail, rows of teeth mounted on the draw sheet engaging face of said tail, an apertured head, and a tongue cooperating therewith for positioning stock, and a prong secured to said head for locking it to said draw sheet.

4. A gauge of the character described comprising a body portion having a slot therein, an apertured head secured thereto, a tongue passing through said apertured head and having a resilient portion adjustably seated in said slot and yieldingly contacting the walls thereof for retaining said tongue in adjusted position, and teeth on said head and body portions for anchoring them to a draw sheet.

5. A gauge of the character described comprising a body portion having a slot therein, a head integrally secured to said body portion, openings in said head, a tongue having a portion adjustably seated in said slot, said tongue also extendable through either of said openings, means for interlocking said gauge with a draw sheet and sets of staggered teeth on said head and body portion for anchoring them against movement.

6. A gauge of the character described comprising a body portion, rows of teeth in staggered relation on the draw sheet engaging face of the body portion, an apertured head secured to the body portion, teeth on the sheet engaging face of said head, and additional means for securing said head and body portion to said draw sheet.

EUGENE PAYNE.