

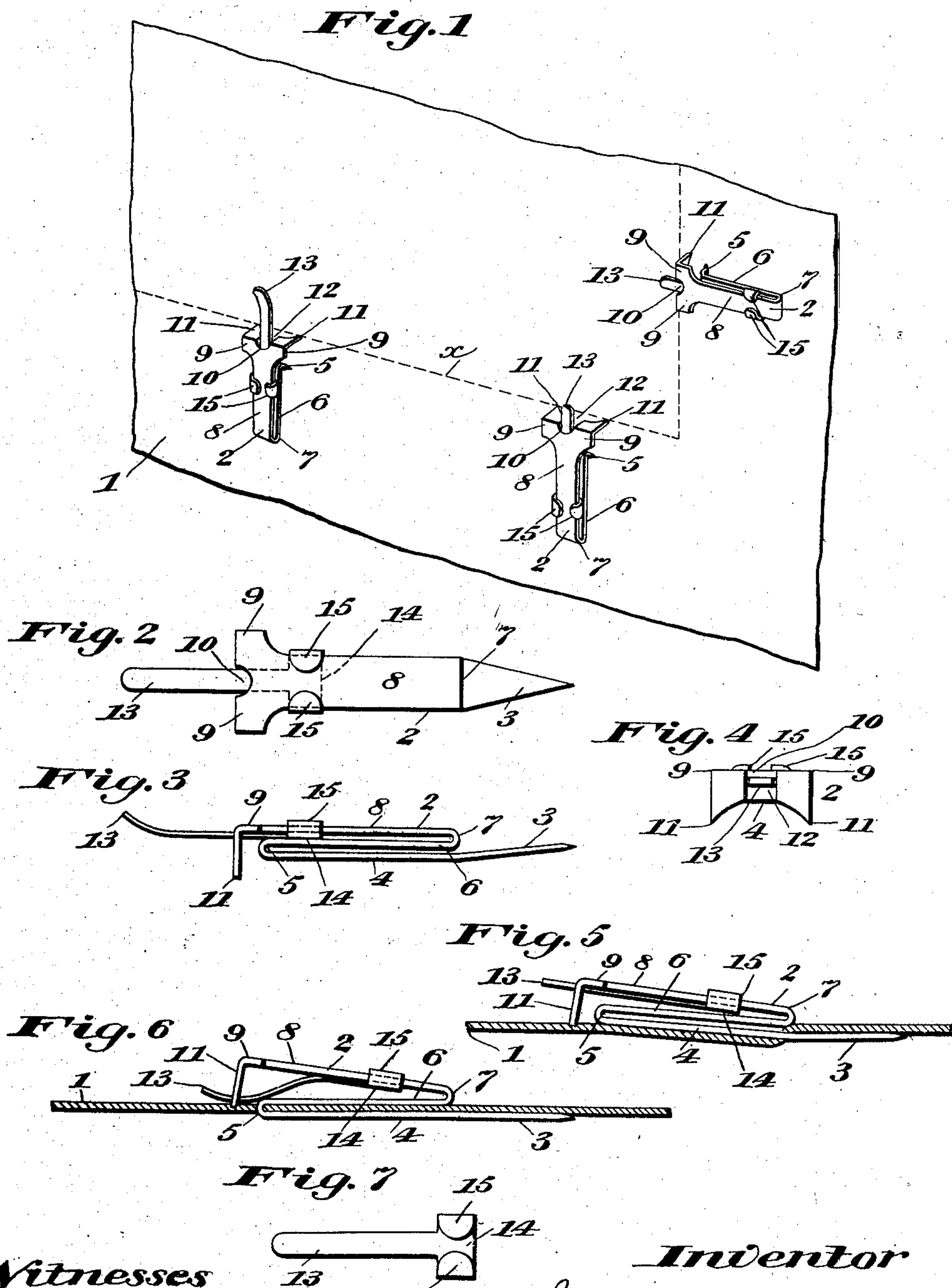
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I. H. MILLS.
TYMPAN FEED GAGE FOR PRINTING PRESSES.

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NO MODEL.



Witnesses

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TYMPAN FEED-GAGE FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 757,212, dated April 12, 1904.

Application filed February 13, 1903. Serial No. 143,191. (No model.)

To all whom it may concern:

Be it known that I, IRWIN H. MILLS, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Tympan Feed-Gages for Printing-Presses, of which the following is a specification.

This invention relates to certain improvements in gage-pins such as are commonly used by printers for attachment to the tympan-sheets of presses in position for gaging the positions of sheets to be printed; and the object of the invention is to provide a device of this character of a simple and inexpensive nature and of a strong, compact, and durable structure which shall be capable of convenient attachment to the tympan-sheet and also of ready adjustment when so attached to accommodate work of different kinds.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts of the improved gage-pin whereby certain important advantages are attained and the device is made simpler, cheaper, and otherwise better adapted and more convenient for use than various other forms of similar devices heretofore in use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a perspective view drawn to a small scale and showing a fragment of the tympan-sheet of a press with gage-pins embodying the invention applied thereto in position for use, and Fig. 2 is a top view drawn to a larger scale and showing one of the gage-pins constructed according to the invention detached from the tympan-sheet. Fig. 3 is a side or edge view showing the improved gage-pin as illustrated in Fig. 2, and Fig. 4 is a front end view of the same. Fig. 5 is a sectional view taken through the tympan sheet and showing in side or edge elevation the improved gage-pin carried thereby and adjusted to one position; and Fig. 6 is a view similar to Fig. 5, but showing a different adjustment of the improved gage-pin.

Fig. 7 is a detail view showing detached the pliant tongue forming a part of the improved gage-pin.

As shown in the views, 1 indicates the tympan-sheet of a press, to which the improved gage-pin is shown applied for use, and 2 indicates as a whole the gage-pin, which is formed, as herein shown, from an elongated strip or piece of thin and elastic sheet metal, one end portion 3 of which is made pointed and is arranged to project beyond the body portion of the device, so as to be in convenient position for being pushed through the tympan-sheet 1 for securing the device in position thereon.

The metal strip from which the gage-pin is produced is bent, as shown at 5, to produce two elastic plies or members, a lower member 4, extended from the pointed portion 3 to the bend 5 on the bottom of the pin and extended at an angle to said portion 3, as shown in Figs. 3 and 5, and a central spring member 6, lapped upon the top of the lower member 4 and extended rearwardly above the same to but not over the pointed portion 3.

At the rear end of the central member 6 the metal piece or strip is formed with another bend 7, whereby an upper spring member 8 is produced, which latter member 8 is extended forwardly above the central member 6 and has its forward end arranged to project slightly in front of the bend 5, as shown in Figs. 1, 3, 5, and 6, said forward end of the upper member being provided with lateral enlargements or wings 9 9, extended outward beyond opposite sides of the narrower rear portion of the device and separated from each other at the front end of member 8 by an opening 10, centrally produced between them.

The lateral wings or enlargements 9 9 of the front end of the upper member 8 of the improved gage-pin are provided at their front edges with downwardly-bent parts 11, the lower ends of which are pointed, as clearly shown on the drawings, to produce prongs adapted for engagement with the tympan-sheet 1 for holding the gage-pin in adjusted position thereon, and said prongs 11 11 are separated from each other by a slotted opening 12, extended down between them and form-

ing an extension of the opening 10 between the wings 9 9, above described.

In the opening 12 between the prongs 11 11 is arranged the projecting end of an adjustable pliant tongue 13, the forward end of which is made rounded and is adapted to project more or less far in front of the prongs 11 11, while the rear end thereof is arranged to extend between the upper member 8 and the central member 6 of the device and is formed with an enlargement 14, the opposite side portions 15 15 of which are arranged to project beyond the sides of the upper member 8 and are bent up and around the upper edge portions thereof, as shown in the drawings, to adapt the tongue 13 for sliding engagement lengthwise upon said upper member 8. The form of the tongue 13 will be clearly seen in Fig. 7, which is a detail view showing this part of the device detached.

In the use of the improved gage-pin constructed in accordance with my invention it will be understood that since the device is formed from elastic or spring material the several members 4, 6, and 8 will be held elastically pressed toward each other in the positions shown in Fig. 3 and may have their lapped surfaces more or less nearly in contact or flush upon one another, as may be desired, and when the pointed end 3 of the device is pushed through the tympan-sheet, as shown in Figs. 5 and 6, the lower member 4 and the central member 6 will act to grip the said tympan-sheet between them, so as to hold the device frictionally in any position in which it may be adjusted. In this way the lower member 4 of the device may be pushed wholly beneath the tympan-sheet, as shown in Fig. 6, or it may be pushed thereunder to any less extent, as indicated in Fig. 5, for example, this adjustment of the device permitting the bearing-surface produced by the prongs or pointed projections 11 11 at the front end of the gage-pin to be set in position to receive and engage the edge of the sheet to be printed, as indicated at *x* in Fig. 1, so as to permit such sheet to be held in proper position during the operation of the press.

When the pointed end 3 of the gage-pin has been pushed through the tympan-sheet 1 and said pin has been set in adjusted position thereon, the points or prongs 11 11 at the front end of the gage-pin will be pressed into close engagement with said tympan-sheet in such a way as to hold the gage-pin securely in its adjusted position and prevent it from being moved laterally or forward or backward, and the elasticity of the upper member 8 and central member 6 will act to hold the said points or prongs pressed firmly upon the tympan-sheet, as will be readily understood.

When the gage-pins have been secured in adjusted positions upon the tympan-sheet, so that their bearing-surfaces formed of the front sides of the points 11 11 are in position to

properly engage the sheets to be printed, as above described, the tongues 13 may be employed to prevent the edges of the sheets from slipping out of engagement with said bearing-surfaces when engaged thereon. For this purpose the fore end of the tongue 13 may be adjusted to project more or less far beyond the front end of the upper member 8 of the gage-pin, accordingly as the printed form is more or less close to the edge of the sheet, and said end of the tongue 13 is capable, owing to its pliability, of being bent close to or farther away from the tympan-sheet 1, as indicated in Figs. 6 and 5, respectively, according to the requirements of special purposes or cases. The openings 10 and 12 at the fore end of the device permit the pliant metal of the tongue 13 to be readily bent into the desired contour and have a range of front the full depth of said openings 10 and 12.

From the above description of my improvements it will be seen that the gage-pin constructed according to my invention is of an extremely simple and inexpensive nature and is very strong, compact, and durable in structure and is also capable of a great variety of adjustments, so as to render it suited for work of different kinds, so that the device is especially well adapted for use, and it will also be obvious from the above description that the device is capable of considerable modification without material departure from the principles and spirit of the invention, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the several parts of the device as herein set forth in carrying out my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A gage-pin or the like formed of a piece of spring metal bent upon itself to produce three members one above another, the lower member having means for attachment to a tympan-sheet and the upper member having a downwardly-directed part forming a bearing to be engaged by a sheet to be printed and a pliant tongue adjustably held to the members and having an end portion extended in front of the said bearing.

2. A gage-pin or the like formed of a piece of spring metal bent upon itself to produce three members one above another, the lower member having its free end rearwardly extended and pointed to be passed through a tympan-sheet and said lower member and also the member above it being adapted to press elastically on the tympan-sheet to hold the device in position thereon and the upper member having its forward end provided with a downwardly-directed part forming a bearing to be engaged by a sheet to be printed.

3. A gage-pin or the like formed of a piece of metal bent upon itself to form three members, the lower member having at its rear end

a point to be passed through a tympan-sheet and the forward end of the upper member being bent downward and provided with pointed parts spaced apart and adapted to bear on a tympan-sheet, and a pliant tongue held for movement on the gage with an end passed through the space between said pointed parts.

4. A gage-pin or the like formed of a piece of spring metal bent upon itself to produce three members one above another, the lower member having a pointed rear end to be passed through a tympan-sheet and the upper mem-

ber having its forward end provided with a downwardly-directed part forming a bearing to be engaged by a sheet to be printed and a pliant tongue adjustably held to the upper member with an end portion extended in front of said bearing.

Signed at Cincinnati, Ohio, this 4th day of February, 1903.

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Witnesses:

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