(No Model.) 2 Sheets—Sheet 1.

T. L. KNUDTSON & J. UHRI

ADJUSTABLE SIDE GUIDE FOR PRINTING PRESSES.

No. 383,816. Patented May 29, 1888.

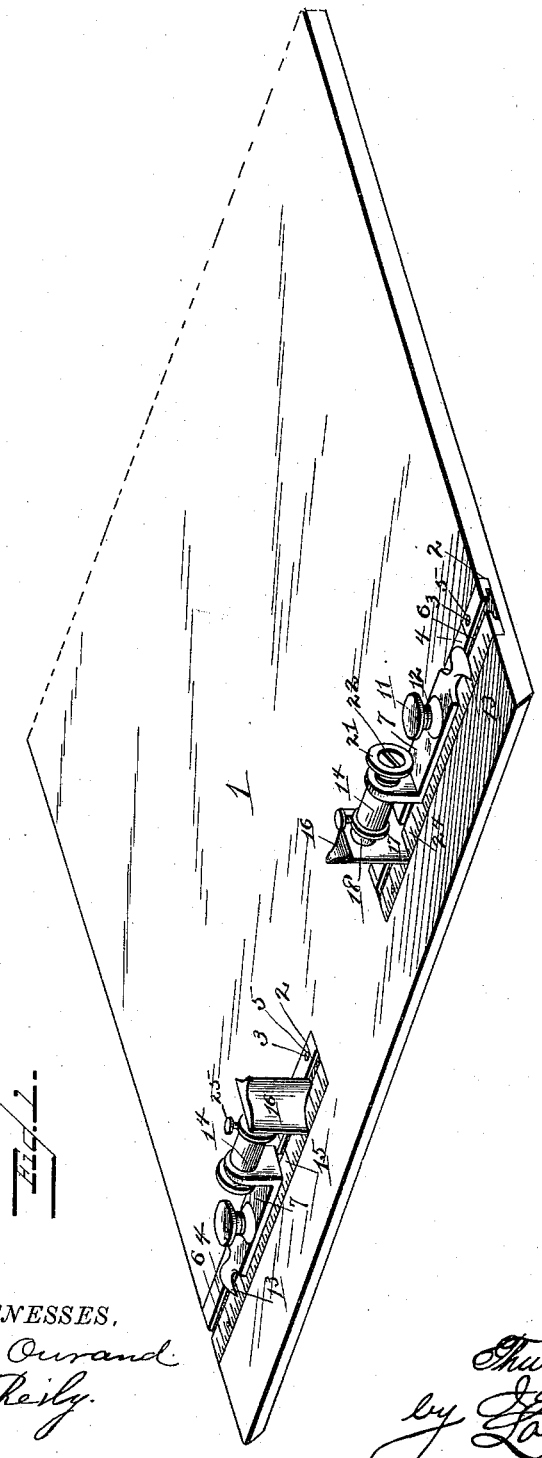

Fig. 1.

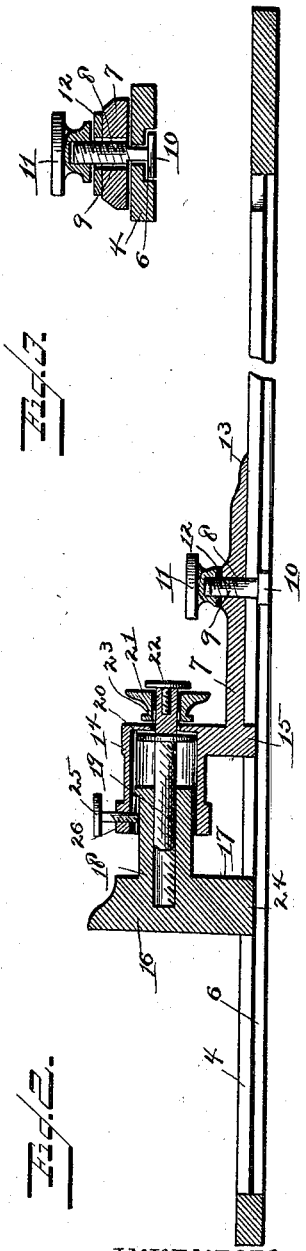

Fig. 2.

Fig. 3.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 1.

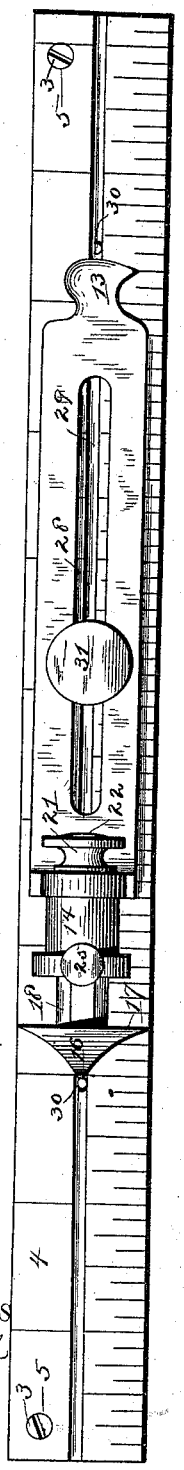
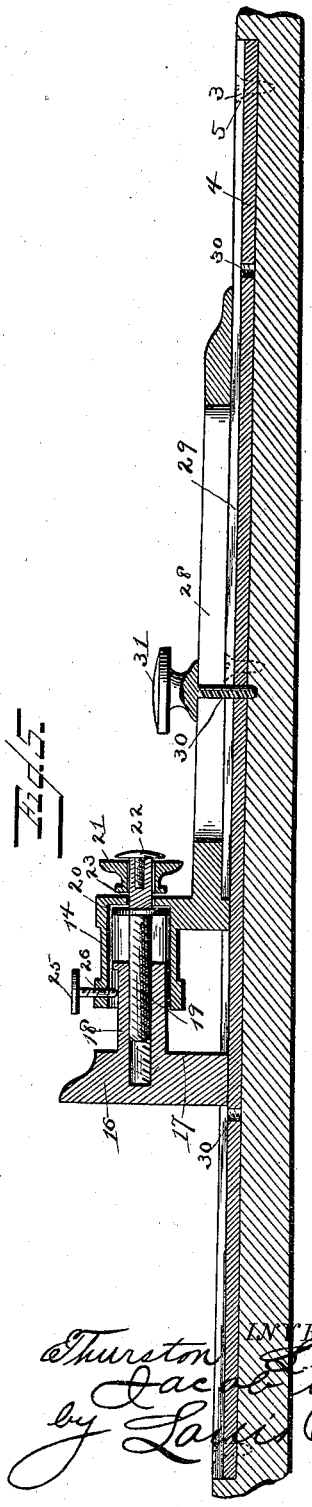


Fig. 2.



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UNITED STATES PATENT OFFICE.

THURSTON L. KNUDTSON AND JACOB UHRI, OF CHICAGO, ILLINOIS.

ADJUSTABLE SIDE GUIDE FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 383,816, dated May 29, 1888.

Application filed November 19, 1887. Serial No. 255,625. (No model.)

To all whom it may concern:

Be it known that we, THURSTON L. KNUDTSON and JACOB UHRI, both residents of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Adjustable Side Guides for Printing-Presses; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view showing the feed-board of a printing-press which is provided with our new and improved adjustable side guides. Fig. 2 is a central vertical longitudinal sectional view of one of the side guides. Fig. 3 is a transverse vertical sectional view of the same, taken on line *x x* of Fig. 1. Fig. 4 is a top plan view of a slight modification of our invention, and Fig. 5 is a longitudinal vertical central sectional view of the same.

The same numerals of reference indicate corresponding parts in all the figures.

Our invention consists in a new and improved adjustable side guide for printing-presses, which will be hereinafter fully described and claimed.

Referring to the several parts by their designating-numerals, 1 indicates the feed-board of an ordinary printing-press to which our invention is shown as applied. The upper surface of the feed-board is formed near its lower end with the two recesses 2 2, extending parallel with the straight lower edge of the feed-board, and running in from the sides of the board to points sufficiently near its center to suit the smallest sheet of paper which is to be printed on the press. In these recesses 2 are secured, by small wood-screws 3 3, the base or stationary bottom plates, 4 4, the recesses being of such depth that when the said plates are laid in them and secured down by the small wood-screws their upper sides will be exactly flush with the upper surface of the feed-board. The heads of these wood-screws 3 fit down in countersunk apertures 5 in the bottom plates, so as to be perfectly flush with the top of the said plates and offer no obstruction. These bottom plates are graduated or marked with a scale divided into eighths of an inch, or less, when desired for very fine work.

We will now describe each of the side guides in detail, as they are precisely similar in construction.

The stationary bottom plate, 4, is formed with a central longitudinal slot, 6, and the lower half of this slot is milled out or widened so as to be nearly three times the width of the upper narrow half, as most clearly shown in Fig. 3 of the drawings.

7 indicates the adjustable guide-plate, consisting of a flat plate which rests upon the bottom plate, 4, and is adjusted back and forth upon the same, the center of this guide-plate being formed with a vertical aperture, 8.

9 indicates a threaded bolt with a large head, 10, this wide head of the bolt fitting and moving in the wide lower part of the central slot, 6, of the stationary bottom plate, 4, while the reduced part of the bolt immediately above this head fits in the narrow upper part of the said central slot. The upper part of this bolt extends up through the central aperture, 8, of the guide-plate 7, and upon the upper projecting threaded extremity of the bolt is screwed a thumb-nut, 11, a washer, 12, being placed upon the upper part of the bolt between the bottom of the said thumb-nut and the top of the guide-plate. It will be seen that by this construction when the thumb-nut 11 is unscrewed to loosen it the guide-plate can be slid along the stationary bottom plate, 4, so as to bring its inner end nearer to or farther from the center of the feed-board, and the guide-plate can then be secured in its adjusted position by tightening the thumb-nut 11. The outer end of the guide-plate is formed with a projecting point, 13, which extends down over the scale marked on the bottom plate, and which serves to indicate the exact point to which the guide-plate should be moved to suit the width of the paper which is to be printed by the press.

The inner end of the guide-plate extends up at right angles, and is there formed with a sleeve, 14, extending in parallel with the bottom plate, 4. The inner end of the guide-plate is formed on its bottom with the down-

wardly-projecting lug 15, which fits down in the upper part of the central groove of the bottom plate, and which operates to prevent the inner end of the guide-plate from turning around when the thumb-nut 11 is loosened to adjust the guide-plate.

16 indicates the head or inner end of the adjustable guide, which is of the height shown, and is at its rear side, 17, preferably as wide as the bottom plate, 4, but tapers to nearly a point at the center of its front side, as shown. This head is formed with the tubular stem 18 extending back from its rear side, and this stem 18 is interiorly threaded. This tubular stem is of such a size as to fit and move readily in the sleeve 14 at the inner end of the guide-plate, and within its threaded longitudinal bore works an adjusting-screw, 19. This adjusting-screw 19 is formed near its rear end with a collar or annular flange, 20, which bears against the inner side of the partially-closed rear end of the sleeve 14, while upon the projecting outer end of the screw is keyed a milled head, 21, by means of which the screw can be readily manipulated. This milled head is securely held in place and prevented from pulling off the end of the screw by means of a flat cap-screw, 22. The rear end of the sleeve 14 is flanged, partially closed, leaving the central aperture, 23, through which the rear end of the adjusting-screw 19 passes. It will now be seen that by turning the adjusting-screw by means of the milled head at its outer end the tubular stem of the head 16 will be drawn in or worked out from the sleeve 14, and the head itself will thus be adjusted in or out. The adjusting-screw is formed with a very fine thread, and by means of this construction of parts the head 16, against which the edge of the paper being fed comes in contact, and which forms the actual guide, can be adjusted to a hair's breadth, this being particularly adapted for fine register work.

The bottom of the head 16 is formed with a downwardly-extending central lug, 24, which fits and slides in the upper part of the central slot of the bottom plate, this lug extending forward to the extreme front of the head.

In operation the bottom plates, 4 4, having been secured in the recesses 2 2 in the upper surface of the feed-board of a press, near the lower end of the said board, the guides are adjusted as follows: The bottom plates and the recesses in which they fit are made long enough in each case so that the inner ends of the bottom plates will extend in under and beyond the edges of the smallest sheet which is to be printed on that press. The guide-plates 7 7 are then adjusted by first loosening the thumb-nuts 11, when the plates, with the bolt 9, can be slid along and adjusted to any point of the slots of the bottom plates, and when the guide-plates are adjusted to the requisite point, which is shown by the end points, 13, on the scale marked on each bottom plate, they are secured in their adjusted positions by tightening down the thumb-nuts 11 11. For fine work the heads 16 16 can then be adjusted to a hair by the adjusting-screws 19, as before described, and when thus adjusted to the exact point they are locked, held in their adjusted positions by the set-screws 25, which work down through threaded apertures 26 in the top of the inner ends of the sleeves 14, with their inner ends, when the screws are screwed down, bearing upon the flattened top of the stem 18. The guides being thus adjusted, the paper is fed into the press down the feed-board, passing between the contracted front ends of the heads 16 16, which thus serve to guide each sheet perfectly straight. The lugs 24 on the bottom of each head fitting closely in the central slot of the bottom plates effectually prevent the edges of the sheets from getting under the lower edge of the heads, as will be readily seen. The sheets of paper will thus be guided evenly and perfectly straight, and by means of the delicately-adjusted heads can be fed to the exact point desired.

In Figs. 4 and 5 the guide-plate is shown considerably longer than in the other figures of the drawings, and is formed with a longitudinal central slot, 28. The stationary bottom plates are formed in this modification with a central longitudinal recess or groove, 29, extending down from their upper surface, in place of the slots shown in Figs. 1, 2, and 3, and with vertical threaded openings 30 30, running down through the central line of the plates. These bottom plates are secured in position in the same manner as the plates 4, and each guide-plate is adjustably secured upon its bottom plate by a set-screw, 31, which passes down through the longitudinal slot of the guide-plate into one of the threaded apertures 30, and it will be seen that the guide-plate can be adjusted when the said set-screw is loosened, and secured in its adjusted position by tightening the said screw. The set-screw can be set in either of the threaded apertures 30 to adjust the relative position of the guide-plate.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of our invention will be readily understood. It will be seen that our new and improved adjustable side guides for printing-presses are comparatively simple, strong and compact in construction, and exceedingly efficient in their operation.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

1. In a side guide for printing-presses, the combination, with the bottom plate formed with the longitudinal slot widened along its lower half and having the scale marked upon it, of a guide-plate formed with the central aperture, the bottom lug at its inner end, and the point at its outer end, the threaded bolt, and the thumb-nut, substantially as set forth.

2. In a side guide for printing-presses, the combination, with the bottom plate and the

adjustable guide-plate formed at its inner end with the sleeve having the top set-screw, of the head formed with the bottom lug and the tubular interiorly-threaded stem, and the adjusting-screw formed with the collar and having the milled head secured upon its outer end, substantially as and for the purpose set forth.

3. In a side guide for printing-presses, the combination of the bottom plate formed with the longitudinal slot widened along its lower half and having the scale marked upon it, the guide-plate formed with the central aperture, the indicator-point, the bottom lug, and the sleeve having the top set-screw, the threaded bolt and the thumb-nut for the same, the head formed with the bottom lug and the tubular interiorly-threaded stem, and the adjusting-screw having the milled head secured on its outer end, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

THURSTON L. KNUDTSON.
JACOB UHRI.

Witnesses:
FRITHIRF ALEXIS EGERSTON,
JOHN I. MACDONALD.