This invention relates to devices for holding together temporarily as a unit an assembled column or page of type matter. Pages of type matter are made up of independent type slugs or pieces and heretofore the type matter of each separate page has commonly been held together during proofing and transfer to the press by a cord wrapped about the assembly and tied. This old method of procedure is not only crude and cumbersome but is, furthermore, unsatisfactory in consuming much time and because the type matter is not held with the desired firmness. The primary object of my invention is to provide a new and improved holding device for this purpose which may be readily applied to and removed from the assembled type matter, and which will hold the same securely together and permit its transfer as a unit.

I am aware that frames of more or less rigid construction have been heretofore proposed for this purpose, but all of such devices, as far as I am aware, have been objectionable for one or more reasons and none is generally used. My invention herein contemplates a light inexpensive but effective device comprising only two elements, one element being an endless band or frame of flexible and resilient strip metal and the other being a cooperating wedge constructed preferably of resilient sheet metal. When a page of type matter has been made up, this band may be readily placed thereover, and the insertion of the novel wedge of my invention then serves to hold the type matter compressed tightly together as a unit with the band temporarily distorted or deformed to the outline of the enclosed type matter and wedge. The flexibility of the band permits it to conform to the shape of the type matter, and the wedge is preferably so constructed, as hereinbefore described, that its action serves to tension the band about type matter and hold it drawn tightly together. Upon the removal of the wedge, the band immediately returns to its initial undeformed rectangular shape. The construction of such a simplified and inexpensive device, for the purpose described, comprises an object of my invention.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof, selected for purposes of illustration and shown in the accompanying drawings, in which:

Fig. 1 is a perspective view showing my improved type holding device in use;

Fig. 2 is a side elevation showing the assembling of the device onto a column of type matter;

Fig. 3 is a fragmentary sectional view taken on line 3–3 of Fig. 1 but on a larger scale;

Fig. 4 is a perspective view of the wedge;

Fig. 5 is a plan view, on a larger scale, showing the type holder positioned loosely about a column of type slugs.

Fig. 6 is a similar plan view showing, in a somewhat exaggerated manner, the binding action of the flexible frame upon the enclosed type matter and wedge.

Referring more specifically to the drawings by reference characters, 10 indicates a column or page of type slugs assembled in printing arrangement. The assembling of these slugs is ordinarily performed on a flat surface 12 and from such surface the assembled slugs must be transferred as a unit to the press or elsewhere. The slugs have heretofore been commonly tied together by passing a cord several times therearound and tying the same as tightly as possible. This method of procedure is obviously slow, inefficient and unsatisfactory.

The band 14 of my improved holding device is preferably constructed of thin, flexible and resilient strip or ribbon steel and is formed into rectangular shape and secured together at the ends 16 in any convenient manner, as by lacquering and welding. The size of the band is such that it may embrace loosely the body of type matter 10 and leave a space 18 at one end of such width as to admit the entering edge of a wedge. When the type matter has been made up, the band is placed thereover as the type rests on the surface 12, as shown in Fig. 2. The band is of such width that the face of the type extends thereabove when the band rests upon the surface 12, as illustrated in Fig. 3. The band is then tensioned and the type matter tightly compressed into a unit by inserting a wedge, preferably of resilient material, transversely into the opening 18, it being clear that the flexibility of the band permits it to be freely and automatically drawn into firm engagement with the type slugs.

As illustrated in the drawings, I prefer to use in conjunction with the resilient band 14 a novel form of spring wedge which further facilitates the effectiveness of my holder. This wedge comprises a single piece of resilient sheet metal bent transversely upon itself at 20 to provide two angularly disposed sections 22 and 24. The type matter engaging section 22 is somewhat wider than the section 24, and its contacting face 26 is a plane surface adapted to engage firmly against the vertical face of the end slug. The free longitudinal edge of this section 22 is also bent over
at 23 to provide a ledge for facilitating the inserting and removing of the wedge. The wedge is of sufficient length to engage the end of the type body along a straight line of appreciable length and, as herein shown, extends perhaps four-twelfths of the width of the frame so that each end of the wedge approaches the corners of the frame. It will be clear that the inserting of the wedge is effective to force the slugs tightly together and to draw or bind the band into tight contact therewith, also the resiliency of the wedge and all times to retain the several elements thus secured together as a unit.

It will furthermore be noted that the free longitudinal edge of the outer section 24 of the wedge is bent inwardly at 30 to provide a single smooth bearing surface to engage against the band 14. This section is also bowed in a manner spacing its intermediate portion 32 further from the inner section 22 than are its end portions. This construction, in conjunction with the plane face 36 of the section 22, facilitates insertion of the wedge and assures a uniform pressure against the type matter. It being clear that the intermediate, outwardly-bowed portion 32 contacts with the band and thereby equalizes the pressure along and against the slugs. It will be noted also that the angular configuration imparted to the sections 22 and 24 of the wedge has the effect of decidedly stiffening them and thus adapting them for their intended purpose.

The band 14, as already intimated, may be constructed of thin, flexible ribbon steel, and in contour it is preferably rectangular and slightly longer than the length of the standard page which the printer desires to set up. It is also resilient in character so that, upon removal of the wedge, it may be depended upon always immediately to resume its initial rectilinear shape. When the wedge is forced into place, the adjacent end member of the band is bowed into conformity with the face of the wedge member and its two side members are sprung inwardly into binding engagement with the ends of the type lines, as indicated particularly in Fig. 6. The innermost flange or edge 28 not only facilitates forcing the wedge into its band-tensioning position but also provides means by which the wedge may be conveniently removed when the type is eventually set up in the press.

It may be further stated that my construction permits quick loosening of the type matter for the purpose of making corrections, and equally quick tightening again after the corrections have been made, without disturbing surrounding matter with which the page may have been assembled in the process of preparing for the press. A substantial amount of free space is necessary when type or slugs are to be removed from a page, and this space is made available by the simple removal of the wedge of my construction. When a page is tied with string, the entire string has to be removed to make a correction, and replaced again after the correction is made if the page is still to be handled as a unit, which is an operation consuming considerable time.

A further advantage of my invention is that the frame occupies little space more than that taken by the type matter of the page, so that when the frame is removed it is not necessary to insert space filling furniture to replace it, as the space taken by the band, except at the wedge end, is less than the take-up of the quoins used in locking the page in the form. This economy of space makes it possible to use the space more fully within the chase, which is often a point of great importance. This point is made in comparing my construction with that of sectional frames, interlocking at their corners, or semi-rigid frames of substantial thickness, which usually have to be left around the page and locked up with it in the chase, thus cutting down the effective space for type matter, and necessitating a larger investment in frames, as a sufficient number must be provided for all forms throughout the process of printing, whereas the frames of my construction may be repeatedly used on other pages, before the form is locked up for printing.

The ease with which my frame can be removed from the page after it has been set in the form, but before the form has been locked up, is due not only to its construction, but also to the fact that since the walls are so thin, the supporting furniture or chase walls are only separated from the type by a very small space. Moreover, the frame may be removed by merely lifting it vertically and since there are no interlocking corners to disengage, the type matter is given no opportunity to fall or move during the process, and much less time and skill is required to remove the frame and lock up the page than are required under any other system heretofore employed.

Having thus described my invention, what I 105 claim as new and desire to secure by Letters Patent is:

1. A type holding device comprising a flexible and resilient rectangular band adapted to be placed over and surround a column of type matter and being free to be distorted, but having the capacity of immediately resuming its initial shape, and a cooperating resilient wedge adapted to fit within the band and by reacting with the band temporarily distort it to hold the type matter compressed tightly together.

2. A type holding device comprising an endless rectangular resilient band adapted to be placed over and surround a column of type matter, and a cooperating resilient wedge adapted to fit within the band between one wall thereof and said type matter, the wedge being of sufficient length to engage the type matter along a substantial portion of the distance between the opposite side walls of the band and the resiliency of the wedge acting temporarily to distort the band and to hold the type matter compressed tightly together.

3. A type holding device comprising a flexible and resilient band of rectangular outline adapted to be placed over and surround a column of type matter, and an elongated wedge-shaped member adapted to be wedged transversely between the type matter and one wall of the band in such manner as to hold the type matter compressed tightly together as a unit with the band, the type engaging face of the member being a plane surface and the band-engaging face thereof being bowed outwardly between its ends.

4. A type holding device comprising an endless rectangular band of resilient material free to spring when tensioned and adapted to be placed over and surround a column of type matter, and a cooperating wedge of spring metal having two connected and relatively resilient portions for fitting within the band and springing it temporarily to bind the type matter tightly together.

5. The device set forth in claim 4, in which the wedge portions are in one piece integrally.

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6. A type holding device comprising an open bottomless frame of thin resilient strip steel, initially rectangular in shape, capable of being readily distorted and of immediately reassuming its initial shape upon the removal of the distorting force, and an elongated wedge member having a plane vertical face for engaging type within the frame and reacting therewith to spring the frame into binding engagement with the type matter.

7. A type holding device comprising an open frame of thin resilient strip steel, initially rectangular in shape but easily deformable and capable of immediately reassuming its initial shape upon the removal of the deforming force, and an elongated wedge member of substantially the same height as the frame and having integrally connected portions, one with a plane face for engaging the type matter within the frame and the other with a bowed face adapted to deform one side of the frame and thereby draw the whole frame into binding relation about the type matter.

8. In a type holding device, an elongated wedge member comprising a single piece of resilient sheet metal bent upon itself to provide two diverging sections, and the outer section being bowed longitudinally away from the inner section.

9. In a type holding device, an elongated wedge member comprising a single piece of resilient steel bent longitudinally upon itself to provide two upwardly-diverging sections, the outer section being bowed longitudinally away from the inner section, and one section having its upper edge bent to provide an inserting or removing ledge.

10. In a type holding device, an elongated wedge member comprising a resilient sheet of steel bent longitudinally to provide upwardly-diverging sections, one being vertically disposed and having a forwardly-projecting ledge at its upper edge and the other being of less height and bowed forwardly at the center.

11. A device for temporarily retaining a body of type matter, comprising a normally rectangular frame of thin resilient strip metal open at the top and bottom and being readily deformable in its contour, in combination with a wedge member adapted to be inserted between the endmost line of type matter and the end wall of the frame to draw the frame into binding engagement with an enclosed type body and thus compress the type from all sides, said wedge approaching at its ends the side walls of the frame and having an inner surface for engaging the type body along a straight line of appreciable length.

12. A device for temporarily retaining a body of type matter compactly together as an assembled unit, comprising a normally rectangular frame having vertical walls of thin resilient strip metal, the frame being open at the top and bottom and being readily deformable in its contour to bind the type body and tending always to release the same, in combination with a wedge member adapted to be inserted between the body of type matter and a wall of the frame to draw the frame into binding engagement with the enclosed type body and thus compress the type from all sides.

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