Oct. 15, 1940. J. J. RIEHL 2,218,220

TYPE HOLDER

Filed June 8, 1940

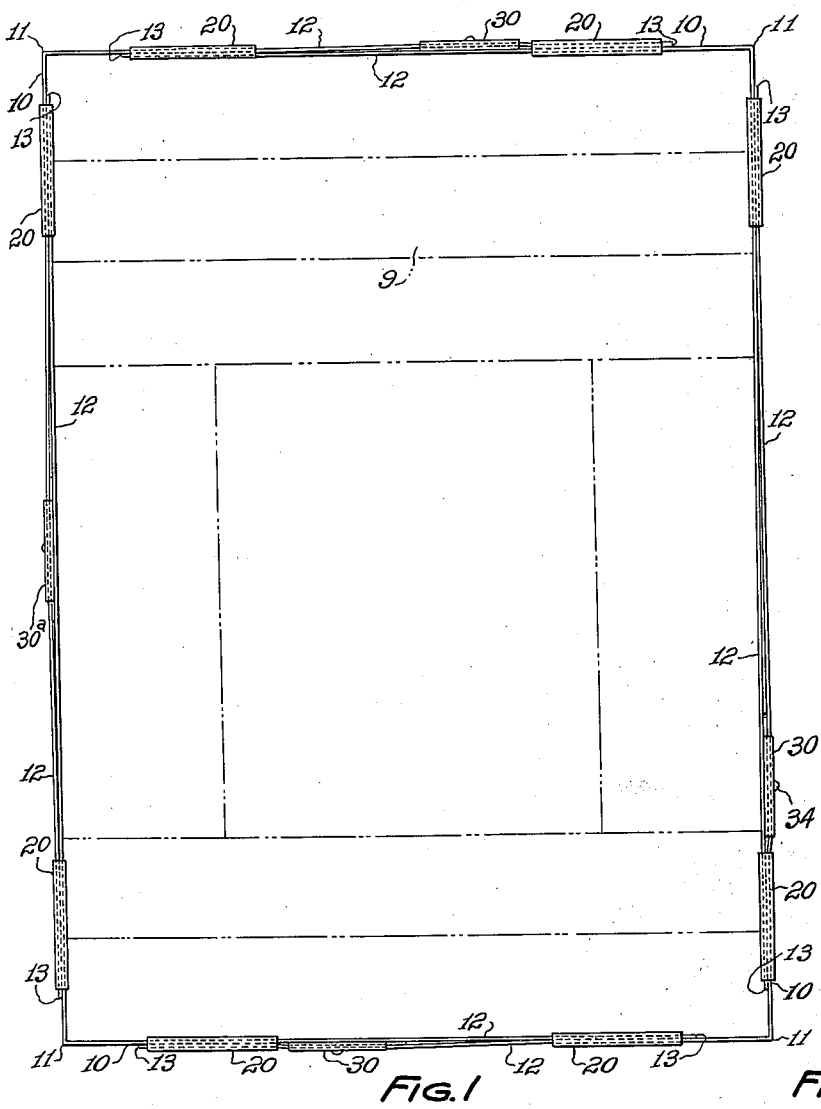


FIG. 1

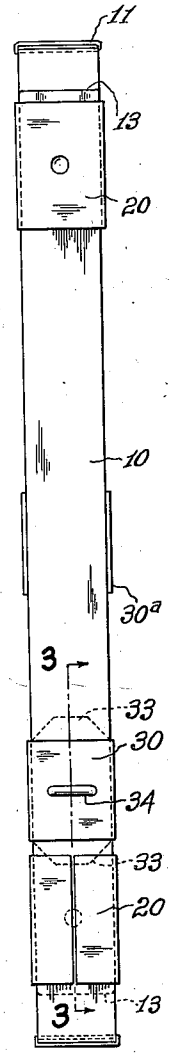


FIG. 2

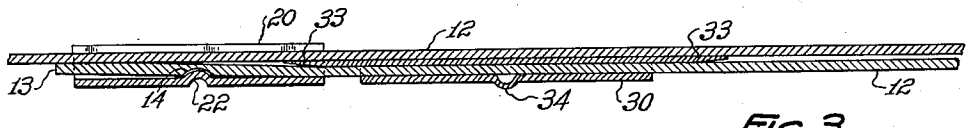


FIG. 3

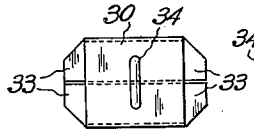


FIG. 4

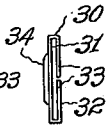


FIG. 5

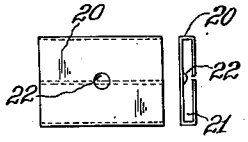


FIG. 6 FIG. 7

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TYPE HOLDER

John J. Riehl, Cleveland, Ohio

Application June 8, 1940, Serial No. 339,521

4 Claims. (Cl. 101—404)

This invention relates to printing apparatus and particularly to devices used to hold loose type, type slugs and similar printing members together.

This invention is a modification of the device shown in my co-pending application Serial No. 299,031 which was filed October 11, 1939, for a Type binder.

The principal objects of this invention are the same as those set forth in my other application but has, however, the additional feature of being made entirely of metal and is therefore more durable and lasting.

This invention also embodies a novel locking device for holding the members in any fixed or set position. This is an improvement over my earlier invention which simply provided for means of engaging the retaining members in only one fixed or set position.

These and other objects as well as a fuller understanding of the invention may be had by referring to the following description and claims together with the accompanying drawing in which like parts are designated by like reference characters and in which:

Figure 1 is a plan view of the device constituting my invention;

Figure 2 is a side view of the same;

Figure 3 is an enlarged horizontal sectional view taken along the lines 3—3 of the Figure 2;

Figure 4 is a side elevation of one of the lock members;

Figure 5 is an end view of the lock member shown in the Figure 4;

Figure 6 is a side elevation of one of the clamp or channel members; and

Figure 7 is an end view of the same.

The device constituting this invention is made up of three groups of parts. There are first, the four confining members or wall portions 10; next, the clamp or channel members 20, of which there are not less than four or more than eight; and the four lock or wedge members 30. Each of these members will be described in detail and in the order just set forth.

The confining members 10 are simply four strips of hard stiff metal about five-eighths of an inch wide or slightly narrower than the height of a type body. Their lengths depend upon the size of the holder desired. Each of the four members is bent at right angles to form the square and sharp corners 11. The members 10 are then assembled so as to form an adjustable rectangular frame with portions of the walls 12 overlapping. The Figure 1 shows how the confining members are arranged around a page of composed type members. In this figure the character 9 indicates schematically the page of type members.

The wall portions 12 each include an end portion which is designated by the character 13, and one end portion of each confining member is provided with a small hole or depression 14 which accommodates a clamp member 20 hereinafter described.

The clamp members 20 are small rectangular pieces of thin sheet springy metal bent to form a channel or folded around two overlapping or touching wall portions 12. Actually they are simply small tensioned clips which hold the confining members 10 in assembled relation to form the frame. They fit around the members loose enough so that one of the wall members 12 may slide easily through the channel and on the other wall member, but also tight enough to hold the confining members rigidly without unnecessary play or distortion. Each clamp member is fastened to its end portion by the small depressed area or nodule 22 which engages the hole 14 in the confining member end portion 13. It is also possible to attach the clamp members 20 to the end portions 13 by a rivet or a weld or by other well known means. These other means, however, are not shown in the drawing as they are well known to the art and are simply mechanical substitutions of the method shown. When the confining members 10 and the clamp members 20 are assembled as shown, the confining members may be expanded or contracted with respect to each other to form a rectangular frame of different dimensions, the size of which is limited only by the length of the wall portions 12.

The four lock members 30 are made of thin sheet metal and resemble somewhat the clamp members 20 heretofore described. Each lock member is bent around only one wall portion and is formed with the channel 31 in a manner which permits it to slide smoothly on the engaged wall portion. The lock members 30 are mounted on the wall portions facing the outside of the frame and between two adjacent clamp members 20. The inside parts 32 of the lock members 30, the parts that slide between the two contiguous wall members 12, have wedge members 33 integral therewith. The wedge members 33 are tapered longitudinally and laterally so that when the lock member 30 is slid along the outer wall member close to one of the clamp members, the wedge 33 tightens the fit of

the two contiguous wall members within the clamp member. The wedge part 33 does not have to enter the clamp channel 21 very far, but only far enough to spread the wall portion sufficiently to enable the tensioned walls of the clamp member 20 to hold the contiguous walls 12 in a fixed position. In order to facilitate the movement or operation of the lock member 30, its outer surface is provided with a small bump or ridge 34 which may be more easily contacted.

In the Figure 1 all of the lock members 30 are shown in the closed or fixed position with the exception of the member 30*a* on the left side of the frame which is still in the open position. The Figure 3 more clearly shows the relative positions of the parts when in a closed position.

Among the many advantages obtained by the use of this device, one in particular is the great economy with which the article may be manufactured and assembled. Furthermore, all of the parts are made of durable metal and will last indefinitely. The confining members may be expanded or contracted quickly and easily without the use of special tools or skill, and when stored or shipped the units may be nested together to save room.

It will now be clear that there is provided by this invention a type holder which accomplishes the objects of the invention. While the invention has been illustrated in its preferred form and while certain broad general terms have been used to describe it, it is to be understood that the embodiment of the invention as described and illustrated herein is not to be considered in a limiting sense as there are many other forms or modifications of the invention which are also considered to be within the scope of the appended claims.

I claim:

1. A type holder, comprising in combination, a plurality of confining members, each of the said confining members having, a wall portion and an end portion, a clamp means mounted on the said end portions and in loose engagement with a wall portion, and a lock member slidably mounted on a wall member and retaining the said wall portion in a tight engagement with the clamp means.

2. A type holder, comprising in combination, a plurality of wall portions having end portions thereon, a plurality of channel members mounted on the said end portions and slidably receiving the said wall portions, the said wall portions being thereby attached together to form an enclosing member, and lock members mounted on the wall portions cooperating with the said channel members and retaining the wall portions in a fixed position.

3. In a type holder of the type having an adjustable wall formed of two longitudinal metal strips and a channeled clamp for retaining the strips in slidable relation, a lock for retaining the said strips and clamp in a fixed position, consisting of a collar member slidably mounted on one of the strips, and a wedge member on the collar member insertable in the channelled clamp between the said longitudinal strips and tightening the strips therein.

4. In combination with composed type, a holder comprising, L-shaped confining members having end portions thereon assembled to form a rectangular frame, clamp members mounted on the end portions of the said confining members and slidably engaging an end portion of an adjacent confining member in a manner whereby the said rectangular frame may be either expanded or contracted around the composed type, and lock members on the confining members engaging adjacent end portions and cooperating with the said clamp members in a manner whereby the said confining members are retained in a fixed position.

JOHN J. RIEHL.