Oct. 20, 1925. 1,557,740

W. A. SULLIVAN

LOCK WEDGE DEVICE

Filed June 3, 1925

Fig. 1,

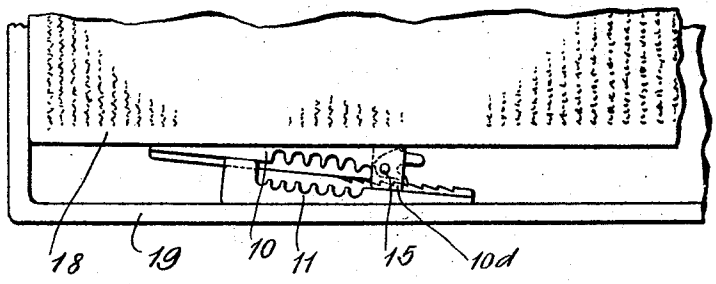


Fig. 2,

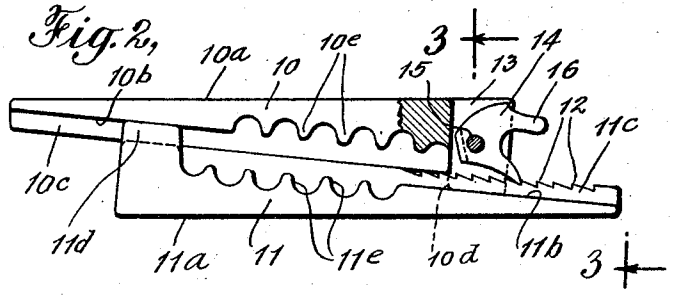


Fig. 4,

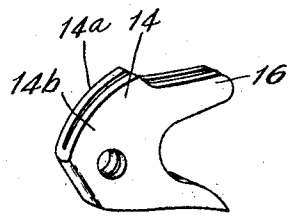
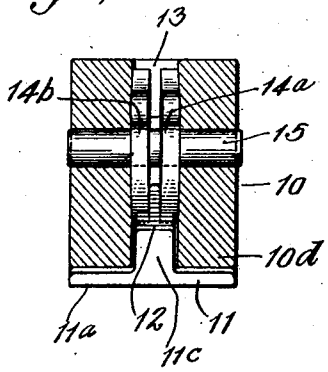


Fig. 3,



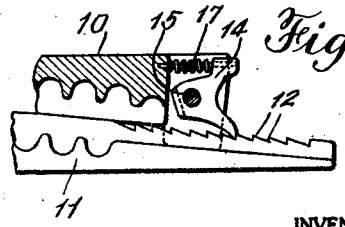


Fig. 5,

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UNITED STATES PATENT OFFICE.

WILLARD A. SULLIVAN, OF JAMAICA, NEW YORK.

LOCK WEDGE DEVICE.

Application filed June 3, 1925. Serial No. 34,533.

To all whom it may concern:

Be it known that I, WILLARD A. SULLIVAN, a citizen of the United States, and residing at Jamaica, L. I., in the county of Queens and State of New York, have invented certain new and useful Improvements in Lock Wedge Devices, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to wedge devices or printer's quoin for use in retaining parts or bodies in spaced relation or firmly in position in a predetermined support or holder such for example as the mounting and retaining of printing forms in position; and the object of the invention is to provide a device of the class specified composed of separate parts movable longitudinally of each other with cooperative means on said parts for retaining the same in predetermined positions of adjustment relatively to each other, said means comprising a plurality of teeth arranged longitudinally of one part and a pawl in pivoted engagement with the other part and cooperating with the teeth of the first named part; a further object being to provide the pawl of a device of the class specified with means for retaining the same in predetermined position; and with these and other objects in view, the invention consists in a device of the class and for the purpose specified which is simple in construction, efficient in use and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Fig. 1 is a face view of a wedge device made according to my invention and indicating one method of its use.

Fig. 2 is a view similar to Fig. 1 but showing the device only on an enlarged scale and with part of the construction in section.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a perspective detail view of a pawl which I employ.

Fig. 5 is a view similar to Fig. 2 but showing only a part of the construction and showing a modification.

In practice, I provide two wedge-shaped parts 10 and 11, both of which are of the same general form and construction and provided with flat faces 10^a and 11^a at one side thereof and tapered faces 10^b and 11^b at the other side thereof, the last named faces having arranged centrally thereof projecting ribs 10^c and 11^c and at the large end of each part 10 and 11 the faces 10^b and 11^b are extended at the opposite sides of the ribs 10^c and 11^c to form U-shaped channel portions 10^d and 11^d which overlap and engage the ribs 10^c and 11^c of the other parts as clearly seen in Figs. 1 and 2 of the drawing. In other words the channel portion 10^d engages the rib 11^c while the channel portion 11^d engages the rib 10^c.

In the construction shown the faces 10^b and 11^b, for a portion of their length and at the opposite sides of the ribs 10^c and 11^c are provided with spaced recesses forming correspondingly spaced teeth 10^e and 11^e on the respective parts whereby a suitable tool may be inserted between the teeth 10^e and 11^e for the forcible adjustment of the parts 10 and 11 longitudinally of one another in moving the wedge device into operative position.

In carrying my invention into effect, I provide the upper face of the rib of one of the parts, the part 11 in the construction shown, with a plurality of teeth or projections 12 which extend longitudinally of the small end portion of said part, and the large end portion of the other part, the part 10, is apertured as shown at 13 to receive a pawl 14 pivotally mounted within the aperture 13 of the part 10 as shown at 15. The pawl 14 is adapted to engage the teeth 12 of the part 11 and a finger piece 16 is employed for moving the pawl into and out of engagement with said teeth in the adjustment of the separate parts 10 and 11.

It will be noted that the pawl 14 in the construction shown is fashioned from a sheet of metal bent centrally to form two spaced parts 14^a and 14^b which are similar in form and these parts are adapted to frictionally enter the aperture 13 whereby the pawl will be retained in different positions of adjustment by its frictional engagement with the walls of the aperture 13.

In Fig. 5 of the drawing, I have shown a modification in which I employ a spring 17 which operates in connection with the pawl 14 and serves to hold the same in engagement with the teeth 12 at all times when

the separate parts of the device are in operative relation.

It will be understood that the separate parts 10 and 11 are only coupled together by placing one upon the other and interlocking the ribs with the channels of the respective parts to permit of the sliding movement of the parts one upon the other or the movement of one part on the other part. In the use of the device, the separate parts 10 and 11 are placed one upon the other with the wide end of one part adjacent the narrow or contracted end of the other part and said parts so coupled together are placed between two bodies or walls of bodies, for example the bodies 18 and 19 as seen in Fig. 1 of the drawing, which partially represent a printing form, and type or printing matter in the form, and in securing the bodies in proper position to retain the same against displacement, the parts 10 and 11 are adjusted longitudinally by a suitable tool as hereinbefore set out and when in proper position of adjustment, the pawl 14 is moved into engagement with one of the teeth 12 to retain the parts in the desired position of adjustment, it being understood that with the construction shown in Fig. 5 of the drawing, the pawl 14 is automatically moved into operative position by the spring 17.

When it is desired to remove the wedge device or the separate parts 10 and 11 thereof, the pawl is released from the teeth 12 and the parts 10 and 11 moved into position to permit of their removal from predetermined bodies or supports.

I am well aware of the fact that wedge devices of the class to which my invention relates are old in the art but in the use of such devices that are now known, it has been found, in practice, that the separate parts of the wedge slip and become loose, causing the displacement or shifting of the parts or bodies to be secured and retained in position by such wedge device, thus rendering the wedge devices now in use, impractical and unreliable. With my improved construction however, the objections to devices of the class specified as now used, are overcome in the provision of means for locking the separate parts 10 and 11 of the wedge device against longitudinal movement one upon the other when in fixed position of adjustment.

It will be understood that while I have shown certain details of construction for carrying my invention into effect that I am not necessarily limited to the specific structure herein shown and described, and various changes therein and modifications thereof may be made within the scope of the appended claims without departing from the spirit of my invention or sacrificing its advantages.

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

1. A device of the class described comprising two wedge-shaped bodies adapted to be placed one upon the other, means for retaining said bodies against lateral displacement, cooperative means on said bodies for retaining the same against movement longitudinally of one another in one direction, said means comprising a plurality of teeth arranged longitudinally of one of said bodies, a pawl fashioned from sheet metal folded to form two similar and spaced side portions, said pawl being pivoted to the other of said bodies and cooperating with said teeth, and the side portions of said pawl having spring properties adapted to frictionally engage the body in connection with which it is mounted to retain the pawl in predetermined positions.

2. A device of the class described comprising two interengaging and cooperative parts movable longitudinally of each other, means on said parts for moving the same longitudinally of each other, one of said parts being provided with longitudinally spaced teeth and the other of said parts being slotted at one end thereof, a pawl pivotally mounted to said last named part and positioned within said slot, said pawl being composed of sheet metal folded to form two similar and spaced side portions having spring properties whereby the side portions of said pawl will frictionally engage the walls of the slot to retain the pawl in predetermined positions and said pawl cooperating with the teeth of the other part for locking the separate parts against movement in one direction.

3. In a printer's quoin of the class described, means for retaining the separate parts of the quoin against movement in one direction comprising teeth arranged longitudinally of the contracted end portion of one part and a pawl pivotally mounted within a slot on the enlarged end portion of the other part and adapted to cooperate with the teeth of the first named part, said pawl being composed of sheet metal fashioned to form two similarly formed and spaced side portions having parts for engagement with said teeth and finger parts, and means cooperating with said pawl for retaining the same in predetermined position.

4. In a printer's quoin of the class described, means for retaining the separate parts of the quoin against movement in one direction comprising teeth arranged longitudinally of the contracted end portion of one part and a pawl pivotally mounted within a slot on the enlarged end portion of the other part and adapted to cooperate with the teeth of the first named part, said

pawl being composed of sheet metal fashioned to form two similarly formed and spaced side portions having parts for engagement with said teeth and finger parts, means cooperating with said pawl for retaining the same in predetermined position, and said pawl having resilient properties for engagement with the walls of said slot to frictionally retain the same in position.

In testimony that I claim the foregoing as my invention I have signed my name this 2nd day of May 1925.

WILLARD A. SULLIVAN.