May 3, 1932. A. BEBEL 1,856,843

SAFETY REMOVABLE FASTENER

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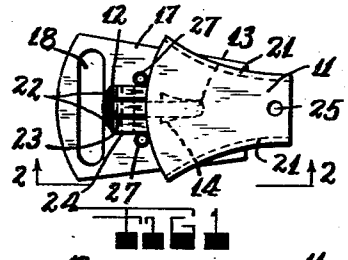

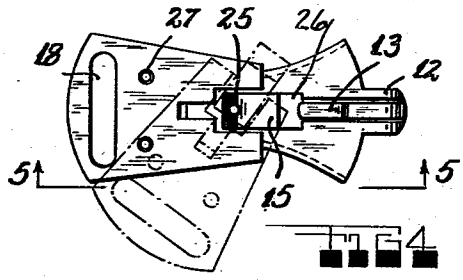

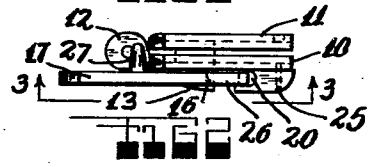

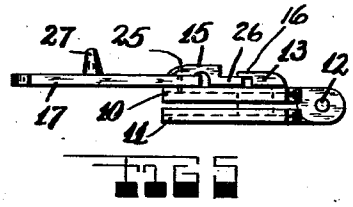

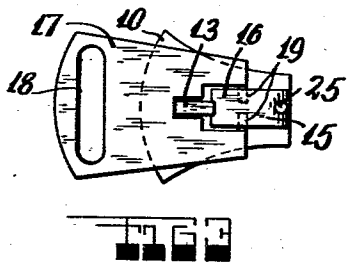

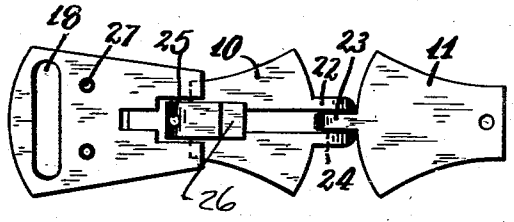

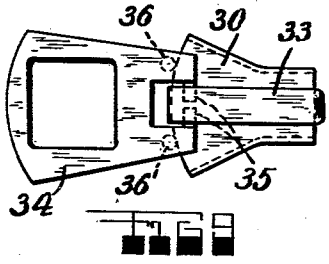

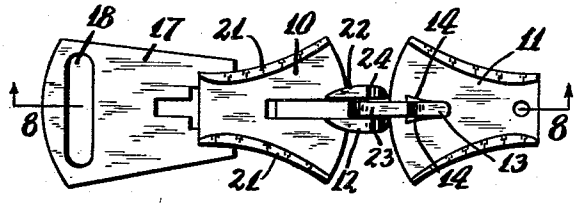

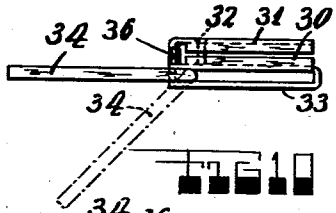

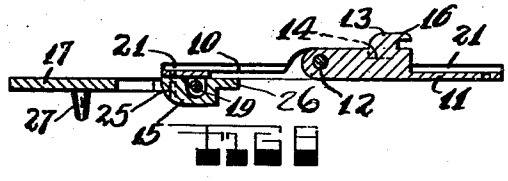

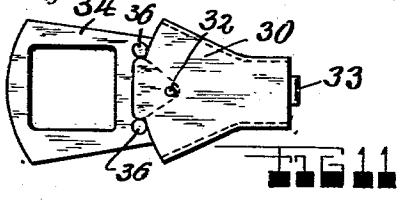

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UNITED STATES PATENT OFFICE

ABRAHAM BEBEL, OF NEW YORK, N. Y.

SAFETY REMOVABLE FASTENER

Application filed December 1, 1931. Serial No. 578,263.

This invention relates to new and useful improvements in a safety removable fastener slide.

The invention has for an object the construction of a control slide for engaging fasteners which is characterized by the provision of a post projecting from one of a pair of upper and lower spaced trapezoidal guide plates and formed on the projecting end with a hook capable of engagement with a latch to hold the guide plates together.

Furthermore, it is particularly proposed to swivelly mount the latch element and to connect a handle thereon for the purpose of moving the slide and the simultaneous purpose of operating the latch element.

A still further object of the invention is the provision of tapered pegs projecting from the handle and engageable against one edge of one of the guide plates to hold the handle in a closed position.

A still further object of this invention is the construction of a device of the class described which is of simple, durable construction, dependable in use and efficient in operation, and which can be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:—

Fig. 1 is a bottom view of a control slide constructed according to this invention.

Fig. 2 is an edge elevational view of Fig. 1 looking in the direction of the line 2—2 of Fig. 1.

Fig. 3 is a plan view of the slide seen as though looking in the direction of the line 3—3 of Fig. 2.

Fig. 4 is a view similar to Fig. 1 but showing the trapezoidal guide plates pivoted away from the handle.

Fig. 5 is an edge elevational view looking in the direction of the line 5—5 of Fig. 4.

Fig. 6 is a view similar to Fig. 4 but showing the guide plates opened.

Fig. 7 is a bottom view of Fig. 6.

Fig. 8 is a sectional view taken on the line 8—8 of Fig. 7.

Fig. 9 is a plan view of a control slide constructed according to a modification of the invention.

Fig. 10 is a side elevational view of Fig. 9.

Fig. 11 is a bottom view of the control slide shown in Fig. 10.

The control slide, according to this invention, comprises spaced upper and lower trapezoidal guide plates 10 and 11 respectively hingedly connected together at 12 which is the central portion of the latch ends of the trapezoidal shape. A post 13 projects from one of the guide plates through the other and is formed with a shoulder 14 to limit pivoting of the guide plates so that they are parallel with each other. A latch element 15 is swively mounted upon one of the plates and is adapted to engage beneath a hook portion 16 formed upon the post 13. A handle 17 is pivotally mounted on the latch element 15.

The handle 17 is formed from a thick plate of metal having an opening 18 stamped at one end. At the other end it is formed with inward directed prongs 19 adapted to engage in an opening 20 formed in the latch element 15. The guide plates 10 and 11 have inwardly directed longtiudinal edges 21 adapted to engage upon the sides of the fastener so as to bring them into engagement with each other. The hinge 12 is formed by a pair of lugs 22 projecting from the edge of one of the plates and a straddling lug 23 projecting from the edge of the other plate. A pintle pin 24 engages through these lugs to conclude the hinge connection. The hinge connection serves to guide the latch end of the trapezoidal guide plates so as to cause the fastener to travel around the sides thereof which are curved as shown on the drawing.

The post 13 is located immediately adjacent the hinge 12 and further serves to guide the hookless fasteners as they pass through the trapezoidal guide plates. The latch 15 is pivotally supported by a pin 25 which en-

gages through the latch and through one of the guide plates. The latch has a reduced front edge 26 which is capable of engaging the hook 16. A pair of pegs 27 project from the handle 17 and are located to be disposed on the opposite sides of the hinge 12 and to frictionally engage against the edge of one of the guide plates so that the handle may be snapped into a locked position. The pegs 27 are tapered as clearly shown in Fig. 2 for example. This insures clamping of the parts together. In Fig. 4, the dot and dash lines indicate a pivoted position of the handle 17 in which position the latch 15 is correspondingly moved so that its reduced end 26 disengages from the hook 16. In Figs. 6 and 7 the guide plates have been shown completely open as when the central slide is removed from a line of fasteners.

Normally, in operation the control slide is in a condition as illustrated, for example, in Fig. 1. To move the slide it is necessary that the handle 17 first be pivoted around the pegs 19 and then the trapezoidal plates may be moved back and forth to cause engagement and disengagement from the fasteners. If it becomes necessary for any reason whatsoever to remove the control slide from the fasteners, the handle 17 can be pivoted to the position indicated in Fig. 4, which causes the latch to release the hook and permits the plate sections 10 and 11 to be pivoted open and off the line of fasteners.

In Figs. 9, 10, and 11, a modification of the invention has been disclosed in which a pair of upper and lower spaced trapezoidal guide plates 30 and 31 respectively have been shown held in fixed relation by a rivet 32. Upon the top guide plate 30 a strap element 33 is secured and extends its complete length. A handle 34 is formed with prongs 35 engaging beneath the strap 33 so that the slide may be drawn back and forth with the handle. A pair of pegs 36 project from the handle 34 and are adapted to engage against one edge of the guide plate 30 to latch the handle in an inoperative position.

The dot dash lines in Fig. 10 indicate a pivoted position of the handle wherein it is free to move the guide plates back and forth.

While I have shown and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, and a handle pivotally mounted on said latch element.

2. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, and a handle pivotally mounted on said latch element, said post being formed with a shoulder to limit closing of the guide plates to a parallel position.

3. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, and a handle pivotally mounted on said latch element, said hinge comprising lugs projecting from the edges of the guide plates and a pin engaging therethrough.

4. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, and a handle pivotally mounted on said latch element, said latch element having a reduced front end capable of engaging with said hook.

5. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, and a handle pivotally mounted on said latch element, said handle being formed with inturned prongs engaging in an opening in the sides of said latch element.

6. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook

on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, a handle pivotally mounted on said latch element, and pegs projecting from said handle located to engage on opposite sides of said hinge and frictionally against the edge of one of the guide plates.

7. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, a handle pivotally mounted on said latch element, and means for holding said handle frame against one of said plates.

8. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, and a handle pivotally mounted on said latch element, the swivelling of said latch element being accomplished by a pintle pin engaged through the latch element and the adjacent trapezoidal guide plate.

9. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, and a handle pivotally mounted on said latch element, said latch plate being located upon the narrow end of said trapezoidal guide plate.

10. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, and a handle pivotally mounted on said latch element, said handle being formed with inturned prongs engaging in an opening in the sides of said latch element, said prongs being disposed between the swivel connection of said latch element and the free end of the latch element.

11. A safety removable fastener slide, comprising upper and lower spaced trapezoidal guide plates hingedly connected together at the central portions of the larger sides, a post projecting from one of the guide plates through the other and formed with a hook on its extended end, a latch element swivelly mounted on one of the guide plates and engageable with said hook to hold the guide plates closed, and a handle pivotally mounted on said latch element, said latch element swinging in a plane parallel to the planes of said trapezoidal guide plates.

In testimony whereof I have affixed my signature.

ABRAHAM BEBEL.