(No Model.) 2 Sheets—Sheet 1.

F. B. SPOONER.

CORSET CLASP.

No. 421,445. Patented Feb. 18, 1890.

Fig. 1.

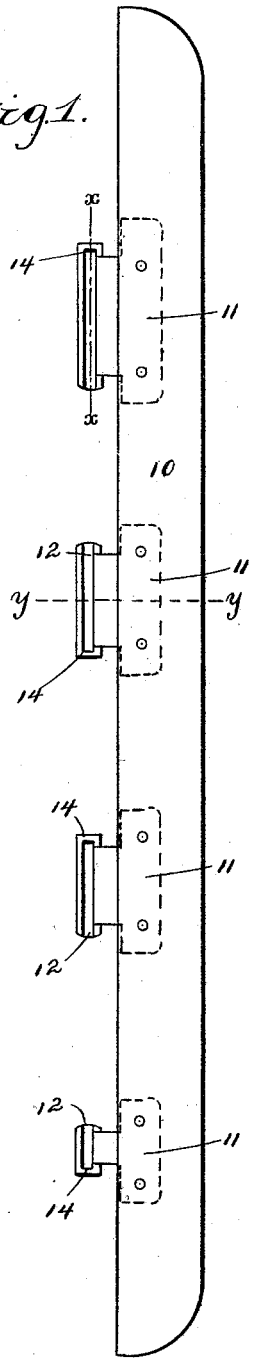


Fig. 2.

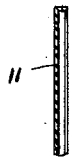


Fig. 3.

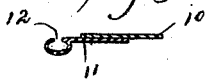
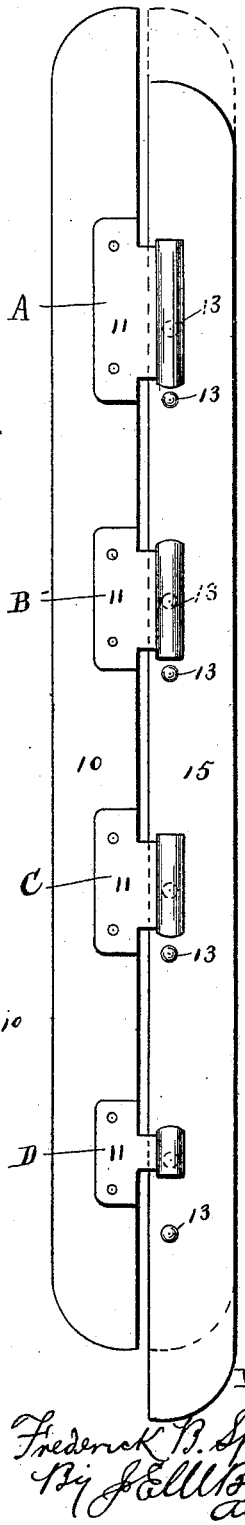


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

F. B. SPOONER.

CORSET CLASP.

No. 421,445. Patented Feb. 18, 1890.

Fig. 5.

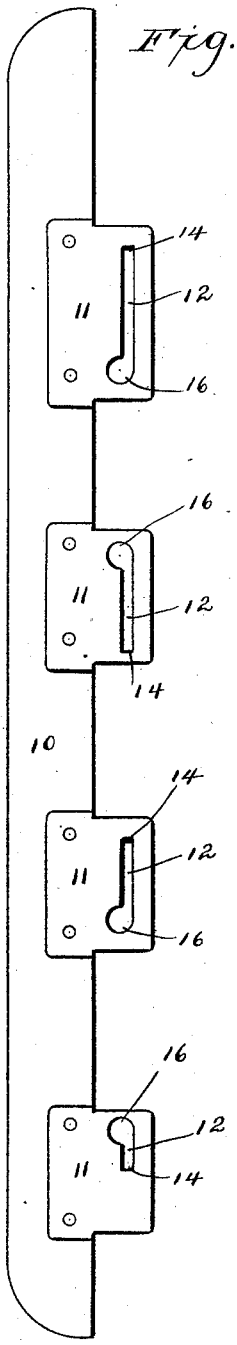


Fig. 7.

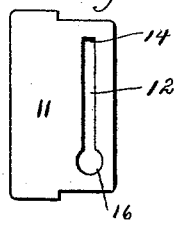
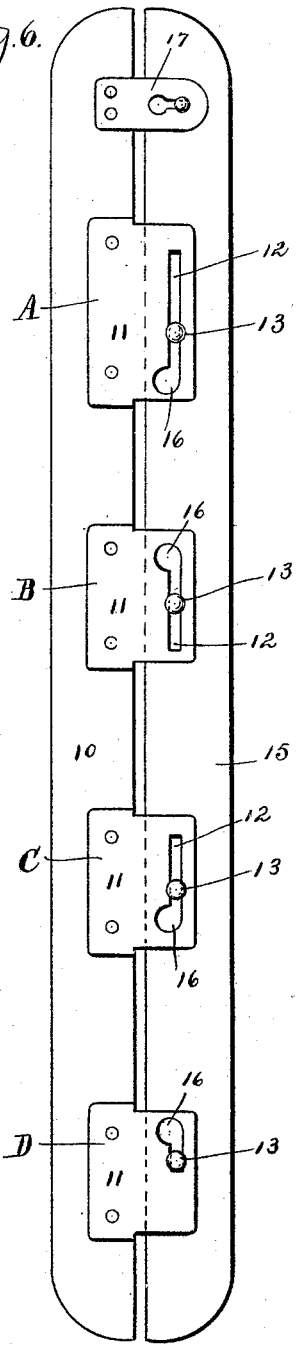


Fig. 6.



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UNITED STATES PATENT OFFICE.

FREDERICK B. SPOONER, OF BROOKLYN, NEW YORK.

CORSET-CLASP.

SPECIFICATION forming part of Letters Patent No. 421,445, dated February 18, 1890.

Application filed March 25, 1889. Serial No. 304,609. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK B. SPOONER, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Corset-Clasps, of which the following is a specification.

My invention relates to means whereby corsets are secured in position on the wearer.

The object I have in view is to devise a clasp that shall be easy of manipulation and secure against becoming accidentally unfastened. My improved clasp is inexpensive to manufacture and very durable, and is not liable to injure the garments of the wearer.

In applying the invention to a corset I make use of a series of the plates hereinafter described, which are formed with slots or grooves, the said slots or grooves being of unequal lengths and provided with stops arranged alternately at the top and bottom of the slots or grooves. It is of course obvious that the stops may be arranged alternately at the bottom and top of said slots or grooves and the same result obtained as when arranged alternately at the top and bottom. Either arrangement is within the scope of my invention, as herein claimed. The said slots or grooves may be formed either by making a perforation of the required form in the plate or clasp or by shaping the metal comprising the plate or clasp in such manner as to provide in this way a slot or groove of the requisite dimensions. I do not intend to restrict myself to any particular manner of making the slot or groove, as that is not, generically speaking, of the essence of my invention. When the slot or groove is formed by shaping the metal, instead of perforating it, I am enabled to produce a clasp having a smooth top forming a cover for the head of the engaging stud, and this is the plan preferred by me, and it obviously offers the best advantages, since when thus formed its outer or front surface is smooth and the stud or equivalent device is not exposed to view when within the slot.

To enable those interested in this class of inventions to construct and make use of my improvements, I will now describe the same in connection with the accompanying drawings, which form part of this specification, and wherein like features are indicated by like figures of reference in the several views.

In the drawings, Figure 1 is an inside plan view of a corset-steel to which is secured a set of clasps or plates embodying my invention. Fig. 2 is a longitudinal sectional view through the line $x\ x$ of Fig. 1. Fig. 3 is a cross-section through the line $y\ y$ of Fig. 1. Fig. 4 is an outside plan view of the corset-steel shown in Fig. 1 and the companion steel provided with studs or their equivalent, which co-operate with the plates of the first-mentioned steel, this view showing in full lines the parts disconnected and in dotted lines the parts connected. Fig. 5 is an outside plan view of the corset-steel, showing a modified form of clasp. Fig. 6 is a view similar to Fig. 4, showing the form of clasp indicated in Fig. 5 and the companion steel provided with studs or equivalent devices coperating therewith, this view indicating the parts fastened together. Fig. 7 is another modified form of the shape of the slot of the clasp or plate.

Referring to the drawings, 10 designates the corset-steel, to which the plates or clasps 11 are secured. These plates may be riveted to the steel 10, as shown.

In Figs. 1 to 4 the style of plate 10 is shown which I prefer to employ. That portion of the plate which does not lap onto the steel 10 is stamped up in such manner as to form a tube with a longitudinal groove or slot 12 on its under surface, which is adapted to receive the stud or its equivalent 13, by which the fastening is effected. This construction gives to the face of the clasp or plate a smooth surface, which, while not essential, is very desirable, since it serves to conceal the stud and avoids all liability of the latter interfering with the clothing of the wearer.

One end of the longitudinal slot or groove 12 is open while its opposite end is closed, and the several slots or grooves in which the studs slide are required to be of unequal lengths, as shown. The closed ends of the slots 12, when such construction is made use of, serve as stops 14 for the studs 13, (secured to companion steel 15,) and they avoid any liability of the studs passing clean through the slots, thus facilitating the operation of the invention. The plates 11 are not required

to be of unequal lengths, though they are thus illustrated in the drawings. They may all be of one length and have their grooves or slots formed of the requisite lengths, and their stops, when these are employed, arranged within the grooves at the required distances from the entrances to the grooves or slots. In practice I shall generally provide each steel 10 with four plates or clasps; but two may be employed, and also a greater number than four; and the plates 11 are attached to steel 10 in such manner that the slots or grooves of the same are parallel with the length of said steel.

Beginning either at the upper or lower end of the steel 10, the plates or clasps 11 are arranged in such order—the required distances apart—that the groove or slot of each successive clasp will be of decreased or increased length, the shortest groove or slot being at the lower end of the steel or at its upper end, according as to whether the slot of greatest length is at the upper or lower end.

In Figs. 5 and 6 a modified form of making slot 12 is shown. In these views the slot instead of being formed by stamping up the metal of plate 11, by which mode of construction the face or outer surface of the plate furnishes a cover for the stud, the same is formed by perforating the plate. The slots 12 are cut in the plates of the desired lengths, and at one of their ends there is made an enlargement 16, to permit the head of the cooperating stud to enter in effecting the fastening. This form of plate also differs from that previously described in that the slot is closed at both ends, one end only, however, serving as a stop to limit the vertical movement of the stud. The enlargement 16 may be altogether on one side of the slot, as shown in Fig. 5, which construction, by avoiding the angular edge at the point indicated, facilitates the insertion and removal of the studs 13, or equally on both sides, as shown in Fig. 7. In the construction of clasp shown in Figs. 5 to 7 the end of the slot serves the function of and is, in fact, stop 14.

The manner in which my invention operates will be fully understood from an inspection of Figs. 4 and 6 of the drawings. In Fig. 4 the companion steel 15 is shown in full lines in the position it occupies when brought up to steel 10 to effect the fastening, while in Fig 6 the two steels 10 and 15 are shown fastened together. In the operation of effecting the fastenings the stud 13 is engaged with the slot of clasp A at its open lower end, which brings the stud of clasp B in position at the top of its slot, and a movement downward causes the latter stud to pass into the slot of this clasp B, the stop of said clasp preventing the stud of clasp A from moving far enough down to become disengaged from its slot. The act of joining clasp B and its stud brings the stud of clasp C at the bottom of its slot, and an upward movement of steel 15 carries this stud into said slot, which movement of steel 15 carries the studs of clasps A and B upward, the stop of plate C preventing the disengagement of the studs of clasps A and B. By the last-mentioned movement of steel 15 the stud of clasp D is brought at the top of its slot and a downward movement completes the locking of the series of clasps, this movement being limited by the stop of the clasp D. The locking, it will be observed, is accomplished by an alternate up and down movement of the steel 15. The rigidity of the steels renders the fastening very easy to effect, and no ordinary movement of the body will be great enough to cause the fastenings to become disconnected.

It is essential to the operation of my invention that the slots of the several plates secured to the corset-steel, and in which the studs slide, should be of unequal lengths, and also that the entrances to said slots should be arranged alternately at top and bottom (or vice versa) of the series of plates.

Ordinarily the friction of the studs or equivalents within the slots will answer to prevent the parts from becoming separated; but in some cases it may be desired to provide a supplemental fastening device at the lower or upper ends of the steels 10 and 15. This fastening device may be of any of the well-known forms, an example of which is shown at 17, Fig. 6.

In making use of my invention there is no necessity for springing or bending the corset-steels, which fact greatly facilitates the operation of fastening and unfastening the corset.

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

1. A corset-steel having plates attached thereto, said plates shaped at their outer edges to form grooves on their under surfaces extending parallel with the length of the corset-steel, said grooves provided with stops at their ends, in combination with a companion steel provided with engaging-studs, substantially as set forth.

2. A corset-steel provided with a series of tubular plates slotted or grooved parallel with the length of the steel to which they are attached, and having stops to limit the passage of the rivets or studs on the opposite steel with which they engage, said stops arranged alternately at the top and bottom of said tubular plates, substantially as set forth.

3. A corset-steel provided with a series of plates, each of which is formed with a longitudinal groove or slot provided with a stop, the said grooves or slots being of unequal lengths and the stops arranged alternately at the top and bottom of the grooves or slots, in combination with a companion steel provided with studs of analogous devices, substantially as set forth.

4. A corset-steel provided with a series of plates which are grooved or slotted on their under surfaces and smooth on their exposed

or outer surfaces, the said grooves or slots being of unequal lengths and each provided with a stop, the said stops arranged alternately at the top and bottom of the grooves or slots, in combination with a companion steel provided with studs or analogous devices, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 19th day of March, A. D. 1889.

FREDERICK B. SPOONER.

Witnesses:

J. E. M. BOWEN,

W. E. BOWEN.