

(No Model.)

E. B. LEE.
SAFETY PIN.

No. 541,765.

Patented June 25, 1895.

Fig. 1.

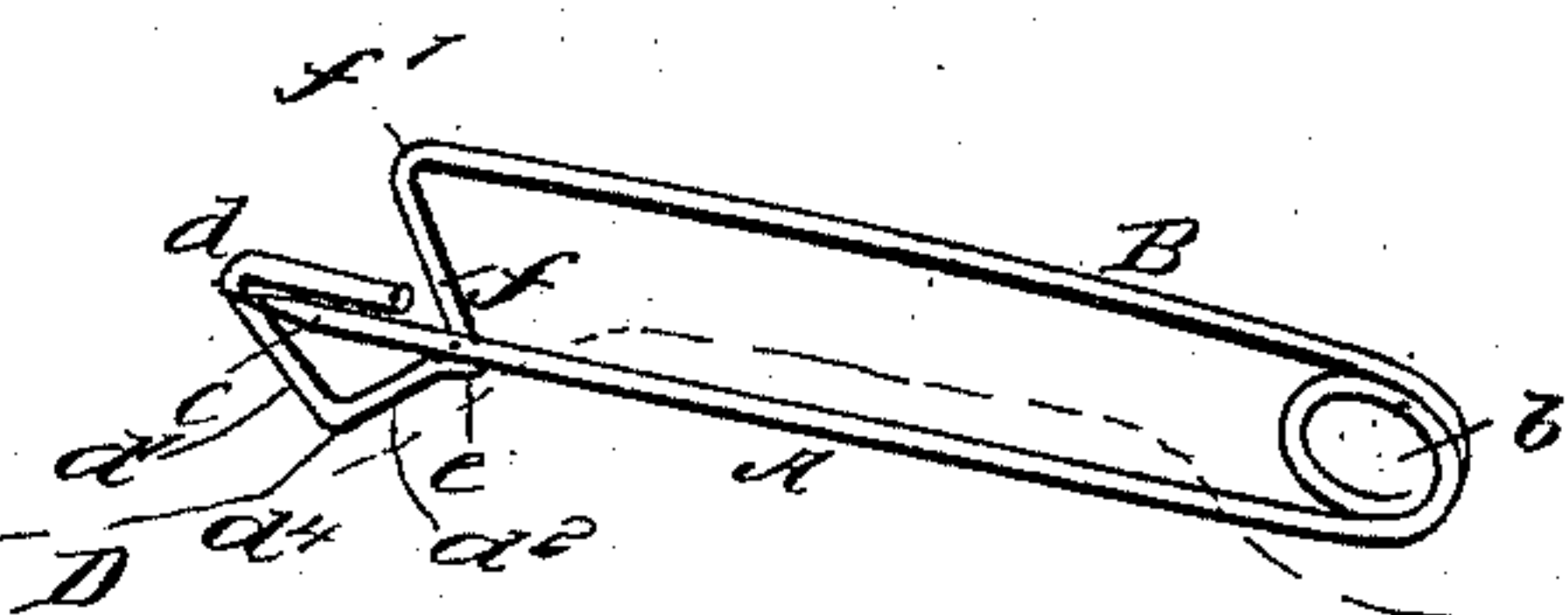


Fig. 7.

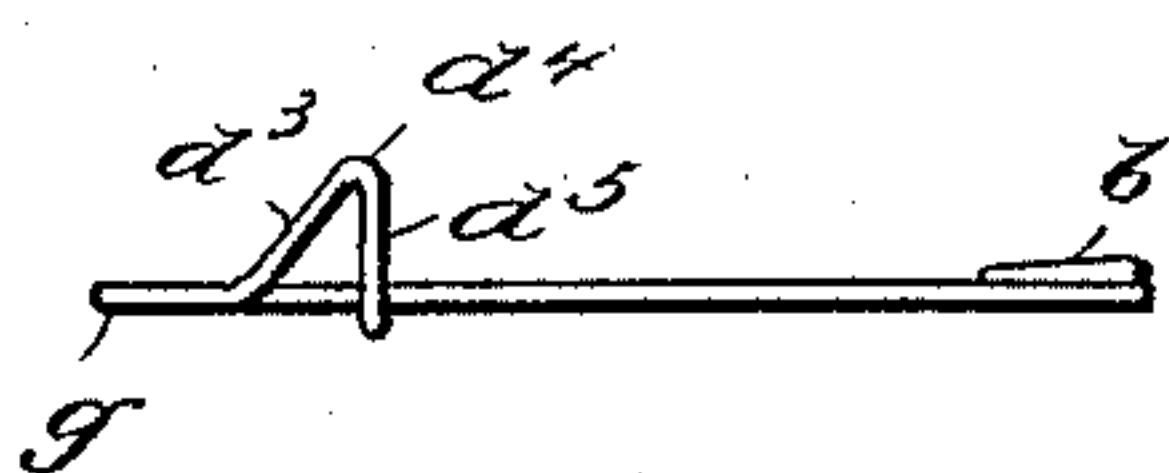


Fig. 2.

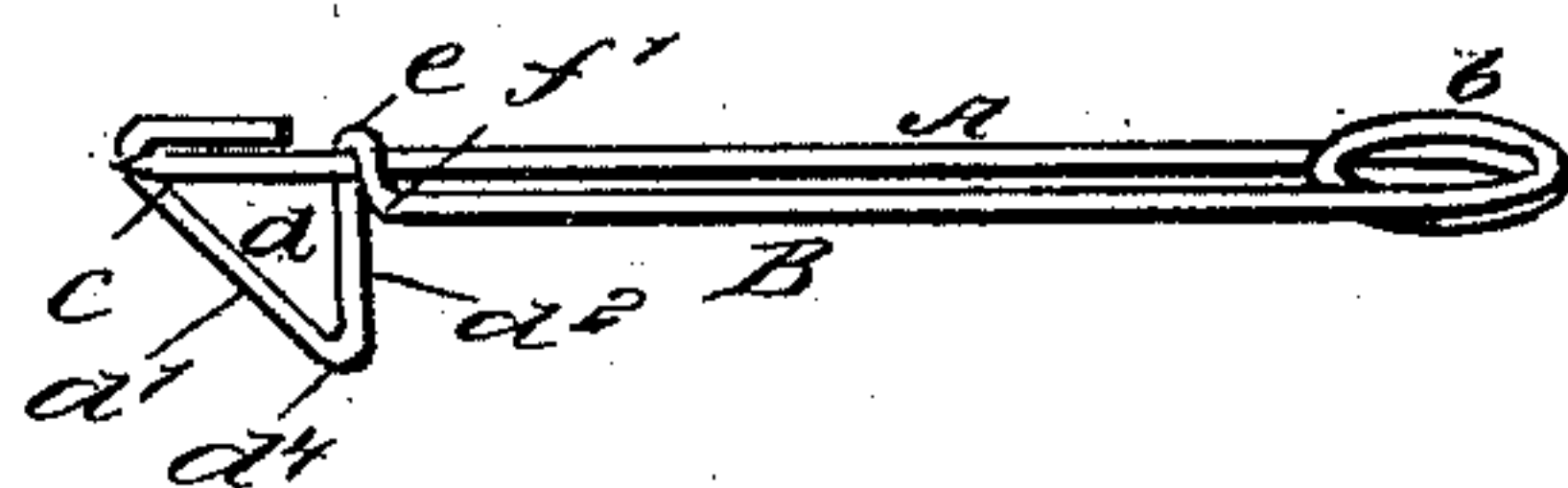


Fig. 6.

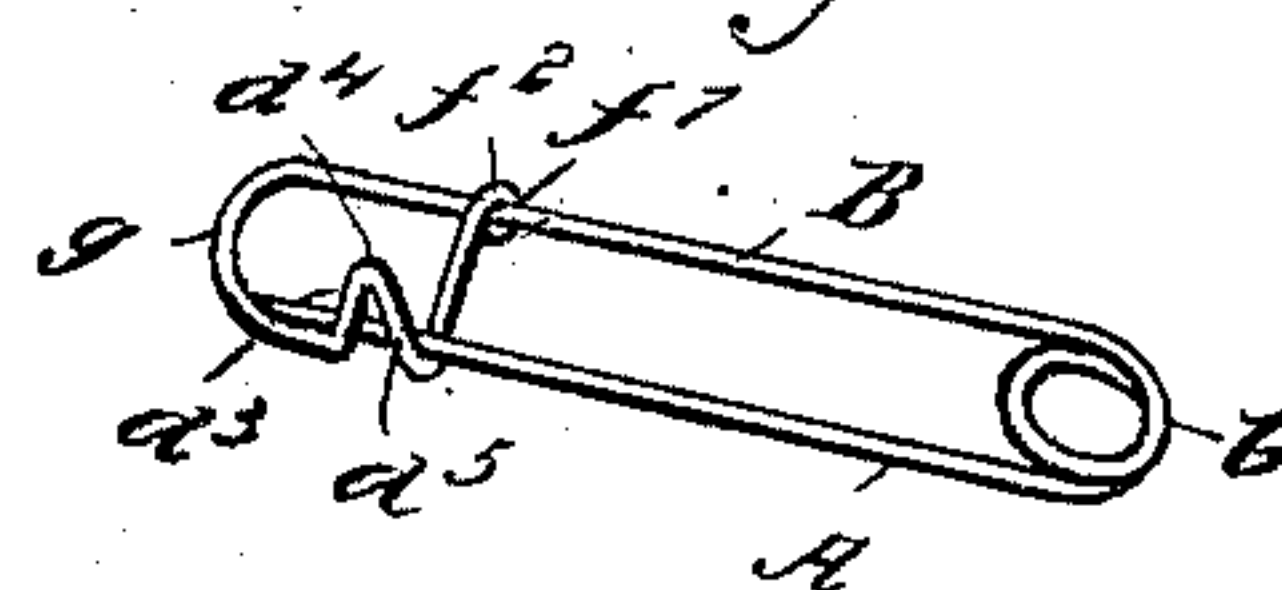


Fig. 3.

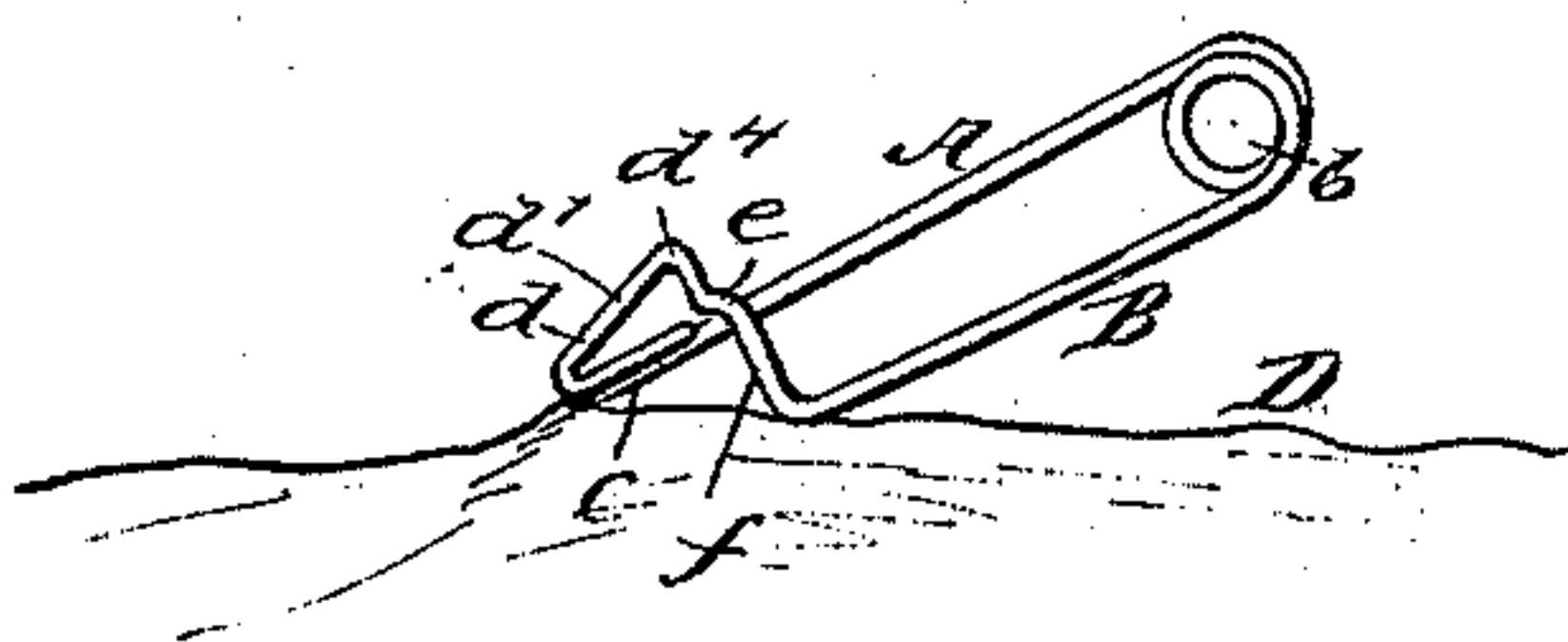


Fig. 4.

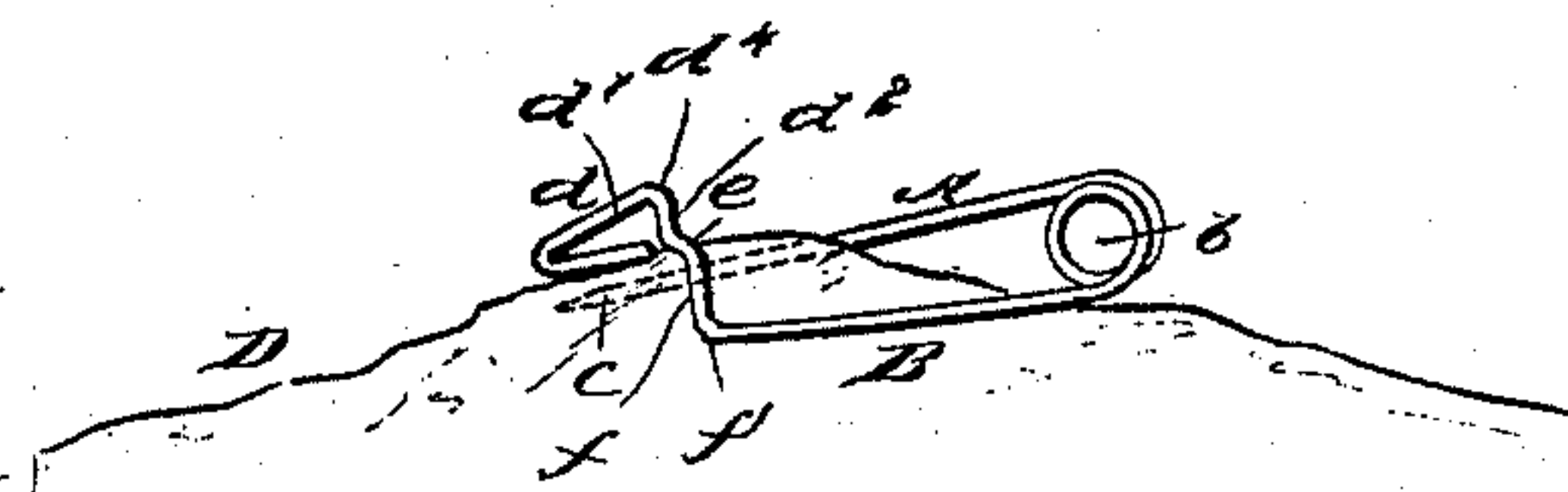
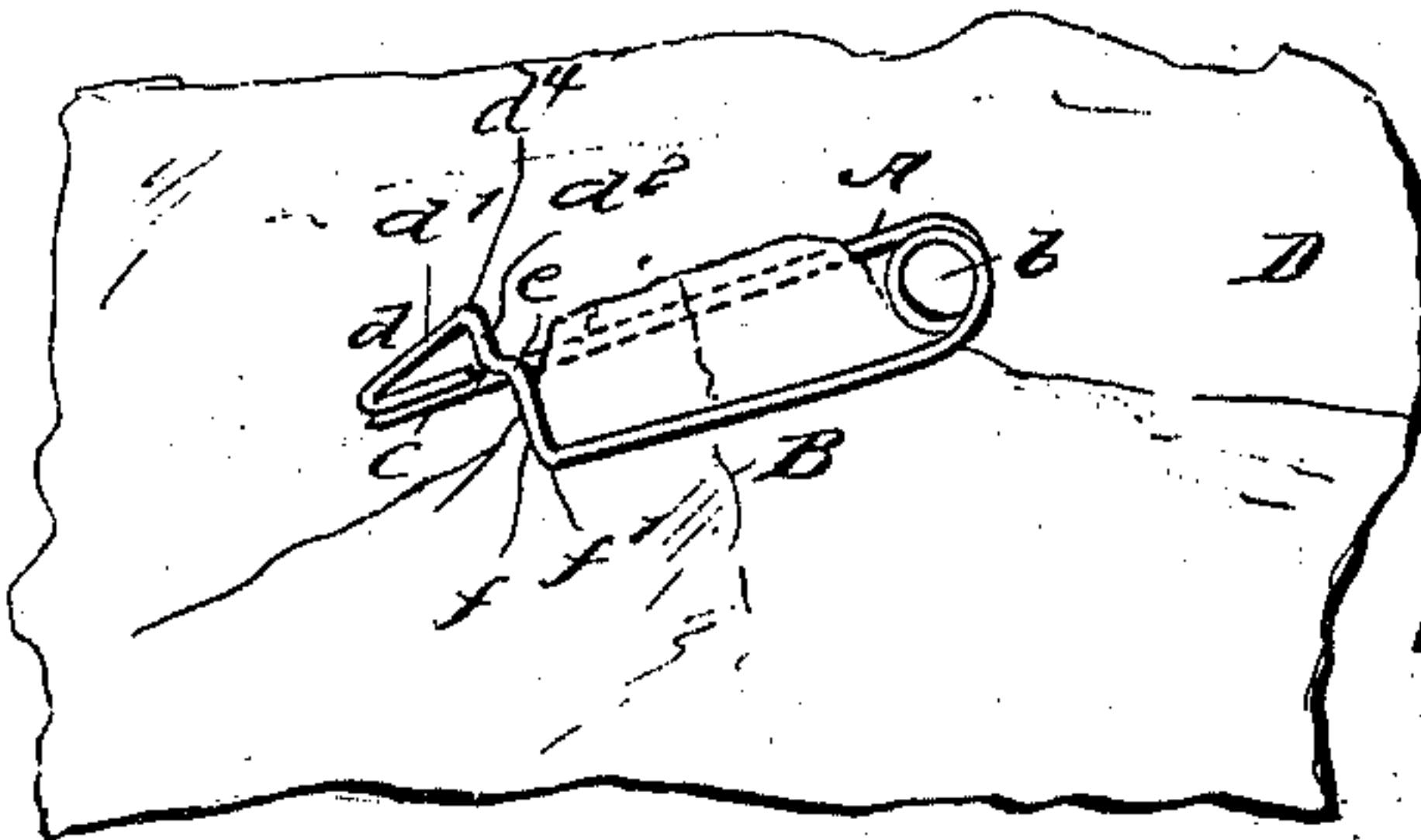


Fig. 5.



WITNESSES:

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EPHRAIM BLAKE LEE, OF WESTON, MICHIGAN.

SAFETY-PIN.

SPECIFICATION forming part of Letters Patent No. 541,765, dated June 25, 1895.

Application filed January 30, 1895. Serial No. 536,660. (No model.)

To all whom it may concern:

Be it known that I, EPHRAIM BLAKE LEE, of Weston, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Safety-Pins, of which the following is a full, clear, and exact description.

This invention has for its object the production of a safety-pin of any desired size and for any use or purpose to which safety-pins can generally be applied, which shall be easily operated in its action as regards locking and unlocking itself when projected into the goods to which it is applied, and removal therefrom, shall securely protect the point of the pin, is not liable to become accidentally detached and when removed locks itself ready for use as before.

To these and other ends the invention consists in a safety-pin of novel construction, substantially as hereinafter described and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a view in perspective, as seen from its face side, of a safety-pin constructed in accordance with my invention, and showing by dotted lines a piece of cloth to which the safety-pin is supposed to be applied. Fig. 2 is an edge view of said safety-pin. Fig. 3 is a view showing the pin as about being entered in the cloth or other goods; Fig. 4, a view showing the pin as about being removed from the cloth; Fig. 5, a plan or face view showing the pin as entered through the cloth and locked. Fig. 6 is a perspective view of a modification, and Fig. 7 is a side view of such modification.

The whole safety-pin may be made of spring wire or any other suitable material or materials and ordinarily consists of a spring member, arm or leg A and a member, arm or leg B, normally in approximately parallel relation with each other. As here shown, the two members A and B are supposed to be made of a single piece of wire doubled over upon itself at the back end of said members and these formed into a spring coil b, to make the pin-proper piece or member A, which is pointed at its front end, as at c, as in the case

of other safety-pins, but, instead of the member A flying outward from its sheath when unlocked and requiring a closing or opening and side movement by the fingers to lock or unlock it with or from its sheath or shield, its tension and operation are such that it always remains under cover, as it were, control, or in close proximity to a shoe d at the forward end of the member B which constitutes the lock of the member A and protects its point.

While the safety-pin is here shown as made of one piece of spring wire or other suitable material, it may be constructed of two or more pieces of suitable material, if desired, and the shoe d instead of being in the shape of a figure 4, as shown, caused by bending the forward end of the member B first to one side, then forward and afterward back in approximate line or plane with the main portion of the member B, is not necessarily restricted to this shape but might be annular, oval or other shape so long as it extends sufficiently to one side and in front for the pointed portion of the spring pin or member A to rest on or against it, both when the safety-pin is in lock after penetrating the goods or fabric D and after the pin has been drawn out of or detached from the goods.

For explanation of the operation of the safety-pin as represented and described, said pin is made to enter the goods D, which may be of one or more thicknesses, by pressing the forward end of the shoe d up against said goods as shown in Fig. 3. By doing so the point of the member A will pass through the goods from the exterior surface thereof and back from its inner surface to the exterior again, and its pointed portion c will spring into lock with or rest on or against the shoe d, as shown in Figs. 1, 3 and 5; or in other words the pin frame has a portion projecting laterally to its pin seat and so arranged relatively to the pin point that pressure of such lateral portion against the goods will cause the point of the pin to project or be exposed so that it can be inserted in the goods. Thus the pin, when entered, locks itself and is a safety one, and its point is protected at the same time. Said safety-pin too is removed without unlocking or unhooking, by simply turning the whole pin over laterally and

drawing it out at the same time, as shown in Fig. 4, after which the two members A and B go back to their normal positions and lock themselves when the pin is detached from the goods. A small set-off or overhang at e is made in the shoe d , which set-off in itself forms a lock that helps to hold the pin from drawing out if in the same position as when put in, but when turned right side up or outmost it will be impossible for the pin to pull out.

The safety-pin can either be made a right hand or left hand one, according to the side from which the shoe d projects.

In the form shown in Figs. 1 to 5, the shoe is formed as follows: The member B is bent at f' and carried at right angles forming an arm f , which projects laterally to the member B in a plane parallel with that of the coils of the spring b . On the extremity of this arm is formed the shoe or seat for the point of the pin, this shoe being in the form of a figure 4 and composed in the construction shown of wire bent, forming the arms d^2 and d' united at an angle at d^4 , the arm d' being set at an angle, so that when the pin is being applied or inserted, pressure on this angle at d^4 will cause the point of the pin to be exposed at the base of the angle, so that it can be inserted in the goods and will when so inserted spring back into locking contact with its seat.

In releasing or removing the pin, if it be turned slightly to one side, pressure on the shoe will cause the pin to move out of its seat, so the point of the pin may be slipped out of its seat and the pin removed.

In the form shown in Figs. 6 and 7, the material after forming the member or limb B, is continued around the front of the pin in curved form as at g , then bent to form the shoe, that is, bent upward to form the inclined edge d^3 of the shoe, is then bent downward at d^4 to form the rear edge d^5 , and is then carried across the pin as at f' to a connection with the member B, around which it is bent as shown at f^2 .

In both cases there are the front and back edges to the shoe. In both there is the inner side or side toward the pin A, against which the pin rests, in both there are the bends, points, angles f' , d^4 , that bear against or are presented to the fabric or garment in withdrawing or disengaging the pin, and in both there is the generic feature of the pin member and the shoe, the shoe forming a guide surface and permitting the pin member or pin proper to flex at an angle to the normal plane of the members A, B, that is at an angle to

the direction from one member to the other; also, in both instances the shoe at its top or angle d^4 overhangs toward the opposite side of the pin to ordinarily prevent disengagement of the pin.

It will be noticed that the pin point is movable to and from its seat in a direction laterally to or at right angles to the plane of the pin actuating coils. This construction permitting the insertion and removal of the pin without necessitating the special hand manipulation of the pin out of its seat prior to such insertion or removal.

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

1. A safety pin having its fixed member provided with a shoe arranged at approximately a right angle to the body of the pin, the pin point being movable laterally along such shoe toward and from its seat, and the front end of such shoe being inclined forming a runner-like guide to aid in inserting the pin in a fabric without first unseating said pin by special hand manipulation, substantially as and for the purpose set forth.

2. A safety pin having its fixed member provided at the lower edge of its front end with a shoe arranged approximately at a right angle to the plane of the body of the pin and projecting laterally from said body and the pin point fitted and playing in the angle formed between the shoe and the pin body, and flexing at an angle to the plane of the body substantially as described, whereby on applying the pin with pressure to the goods the pin point may be caused to protrude and penetrate such goods, substantially as and for the purpose set forth.

3. A safety pin having its body or fixed member provided at its front end with a shoe projecting laterally from said body, the extremity of such shoe and the transversely opposite portion of the fixed member forming bearings spaced apart and arranged to rest upon and be pressed against the fabric to which the pin is to be applied and the pin having its point playing in the space between said opposite bearings and flexing at an angle to the plane of the body whereby in application of the pin to the goods it may be flexed as described by pressure to cause its point to protrude and enter the goods, substantially as and for the purposes set forth.

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Witnesses:

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