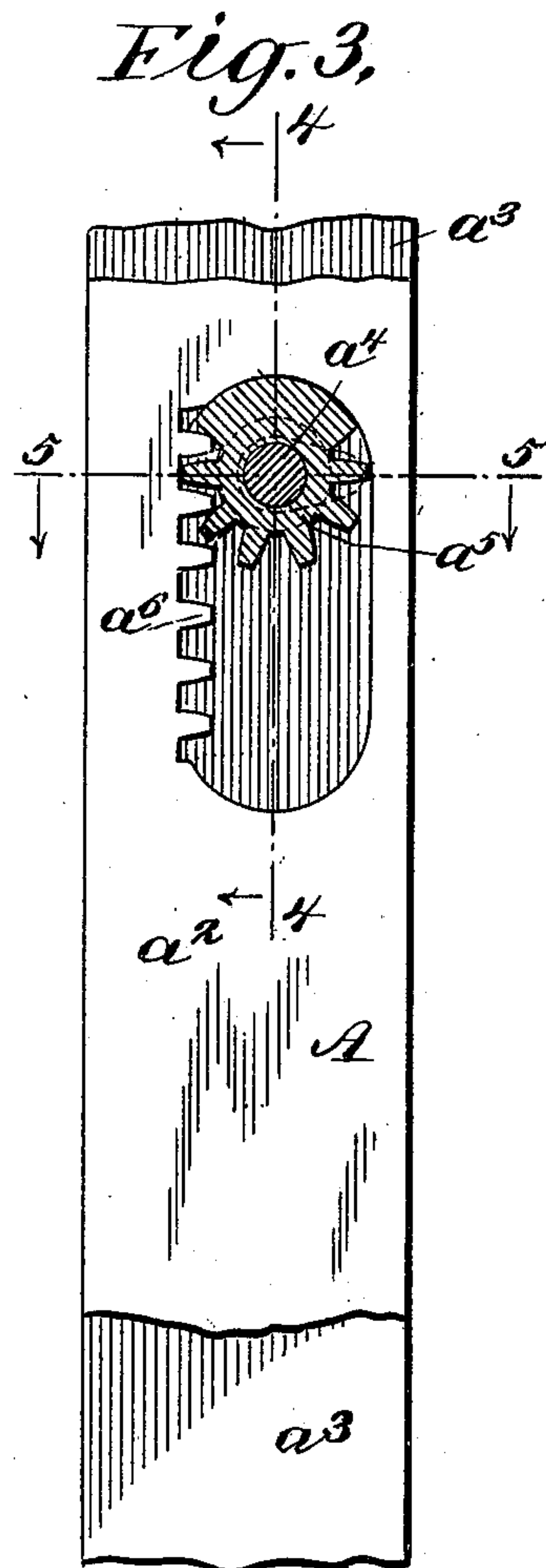
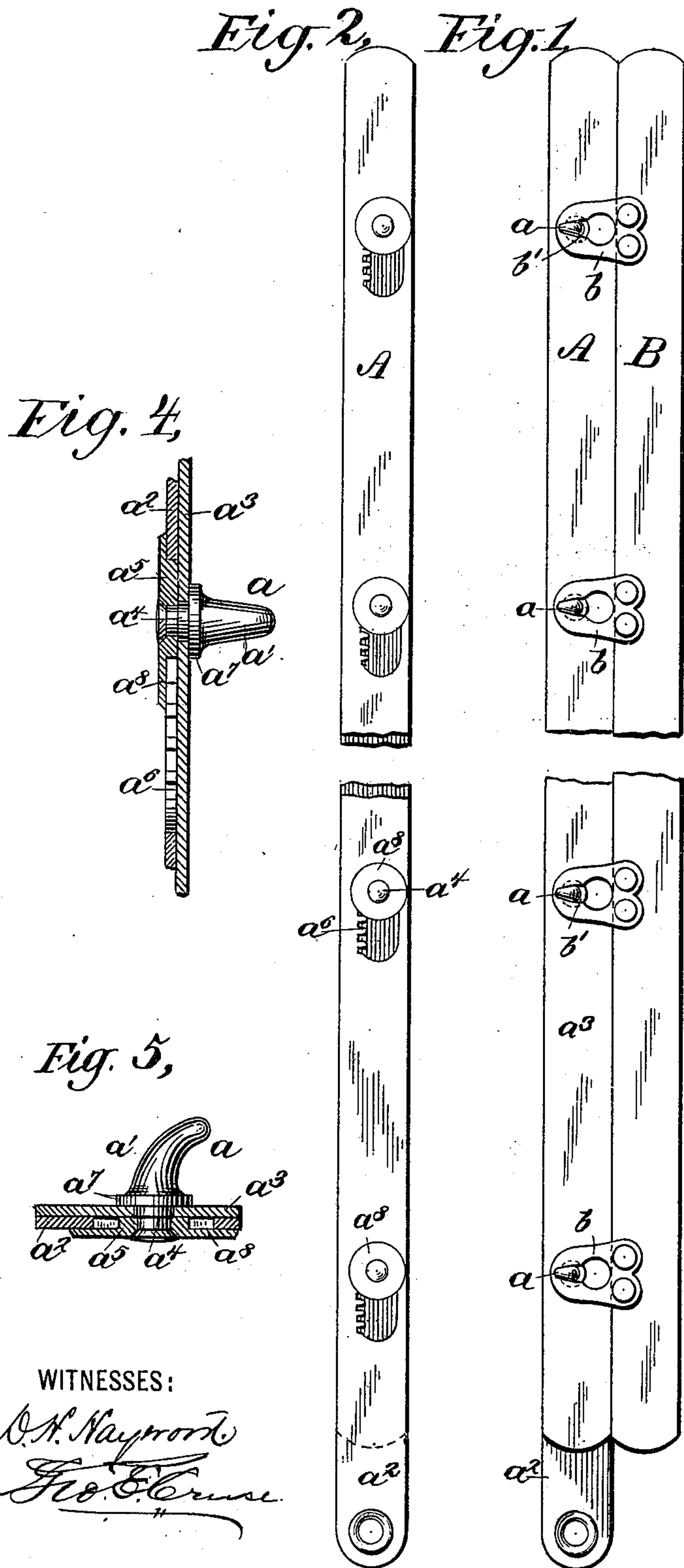


No. 639,940.

Patented Dec. 26, 1899.

J. T. ROBIN.
FASTENING DEVICE.
(Application filed Oct. 14, 1899.)

(No Model.)



WITNESSES:

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FASTENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 639,940, dated December 26, 1899.

Application filed October 14, 1899. Serial No. 733,598. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH T. ROBIN, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Fastening Devices, of which the following is a specification.

My invention relates to a device for securing together opposite portions of an article of wearing-apparel—as, for example, the opposite portions of a corset. I will describe a fastening device embodying my invention and then point out the novel features thereof in the claims.

In the accompanying drawings, Figure 1 is a front view of a fastening device embodying my invention. Fig. 2 is a rear view of one of the parts of the device shown in Fig. 1. Fig. 3 is a detail view, partly in section. Fig. 4 is a detail sectional view taken on the line 4 4 of Fig. 3. Fig. 5 is a detail sectional view taken on the line 5 5 of Fig. 3. Figs. 3, 4, and 5 are drawn to a larger scale than Figs. 1 and 2.

Similar letters of reference designate corresponding parts in all the views.

A and B represent two parts of the fastening device which are secured to the opposite edge portions of an opening in an article of wearing-apparel. The part A is provided with a series of hooks a , which engage with a series of eyes b , carried by the part B. The hooks a are each provided with a convex surface a' . These surfaces permit, when the hooks are in proper position, of the eyes b , engaged with the hooks, riding over them and becoming easily disengaged from the hooks. The openings in the eyes b have a contracted part b' , in which the hooks rest when the parts A and B are fastened together.

In practice when the parts A and B are fastened or are to be fastened the hooks a are in the position shown in Fig. 1; but when these parts are to be unfastened or disengaged the hooks are rotated a half-circle. The rotation of the hooks brings them in such a position that the convex surfaces a' will be presented to the eyes b , thus permitting the parts being disengaged.

The part A comprises two superimposed strips a^2 a^3 , one of which—as, for instance,

a^2 —is adapted to have a longitudinal movement. This longitudinal movement of the strip a^2 is adapted to produce the rotation of the hooks a , and this is accomplished by the following means: Each hook a is provided with a shank or stud a^4 , which projects through an opening provided for it in the strip a^3 . A gear a^5 is rigidly fixed to the shank or stud, and the gear is engaged by a rack a^6 , carried by the strip a^2 . The gears a^5 work in elongated openings provided in the strip a^2 , and on one side of each opening teeth are formed which may constitute the racks a^6 . Each gear is preferably fixed to its shank or stud by riveting, as clearly shown in Figs. 4 and 5. This is accomplished by providing each gear with a central opening, through which a reduced portion of the shank passes, and then upsetting the end of the shank. The upper face of the gear bears against a shoulder on the shank in order that the rivet may be made. Each gear is also provided with a flange a^8 , which extends beyond the edges of the elongated openings provided in the strip a^2 . In practice I prefer to have each flange integral with its gear. This may be accomplished by stamping them from metal of the required thickness. These flanges, in conjunction with the shoulders a^7 on the hooks, serve to hold the strips a^2 and a^3 together. These flanges, also in conjunction with that part of each shank or stud which passes through its opening in the strip a^3 , prevent relative transverse movement of the two strips.

The several gears are provided with teeth only on a portion of their peripheries, and the purpose of this is that the hooks will only be rotated a half-circle or given a half-turn. The other portions of the gears are plain and may bear against the plain edges of the elongated openings, the said openings being of such a width as to permit of this. The ends of the openings are also plain and rounded in order that the gears may fit in these ends at the limits of their movements. In practice when the parts A and B are in engagement there is a lateral strain exerted on them. This strain produces enough friction between the several parts to prevent the hooks from being accidentally rotated.

The operation of the device, briefly stated, is as follows: When it is desired to fasten the opposite portions of the garment, the hooks are turned to the position shown in full lines in 5 Fig. 1 and the eyes engaged with them in the usual manner. When it is desired to unfasten the opposite portions, the strip a^2 is moved longitudinally, which movement causes the hooks to turn or reverse their position, as 10 shown in Fig. 5, to present the convex surfaces a' to the eyes, thus enabling the parts A and B and the opposite portions to separate.

What I claim as my invention is—

1. In a fastening device, the combination 15 of the parts A and B, said part B being provided with eyes, and said part A comprising the superimposed strips a^2 , a^3 , one of which is adapted to have movement longitudinally of the other; said part A carrying hooks each 20 of which is provided with a shank to which a gear is riveted, and said part A also carry-

ing racks which are in engagement with said gears.

2. In a fastening device, the combination of the parts A and B, said part A being pro- 25 vided with hooks, each of which is provided with a shoulder and a flanged gear, which is adapted to be rotated, and said part B being provided with eyes which engage with said hooks; said part A comprising superimposed 30 strips which are held together and prevented from having relative transverse movement by the shoulder on the hooks and the flanges on the gears.

In testimony whereof I have signed my 35 name to this specification in the presence of two subscribing witnesses.

JOSEPH T. ROBIN.

Witnesses:

GEO. E. CRUSE,
DONALD CAMPBELL.