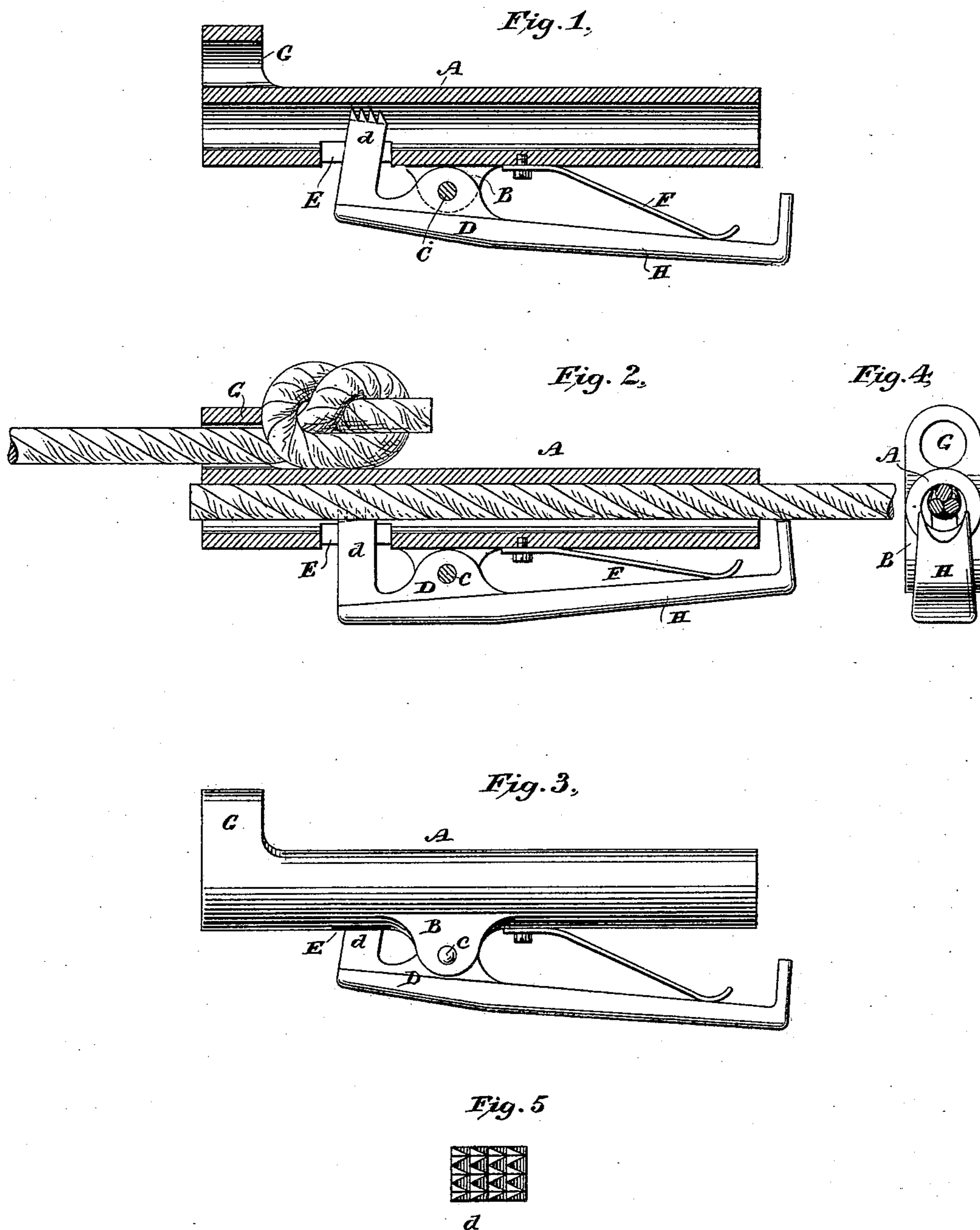


(No Model.)

G. REIMERS.
FASTENER FOR CLOTHES LINES.

No. 420,962.

Patented Feb. 11, 1890.



Witnesses
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UNITED STATES PATENT OFFICE.

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FASTENER FOR CLOTHES-LINES.

SPECIFICATION forming part of Letters Patent No. 420,962, dated February 11, 1890.

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To all whom it may concern:

Be it known that I, GERHARD REIMERS, residing in the city, county, and State of New York, have invented a new and useful Improvement in Fasteners for Clothes-Lines or Similar Articles, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, which form a part hereof.

My invention refers to that class of devices used to secure the end of a rope or line adjustably to another rope or line, or to another part of the same rope or line, so that the line or lines can be readily adjusted—that is; shortened or tightened, or can be released at will; and it is especially intended for use upon clothes-lines in cities and elsewhere where the line being accessible from only one place it is desirable that the whole line should be movable, so as to be passed under the hands of any one standing and working it, and should be adjustable by some simple means.

In the drawings, Figure 1 shows a vertical longitudinal section of the line-fastener, showing all its parts, the dog and spring being in elevation. Fig. 2 is a similar view showing the lines in position in the fastener. Fig. 3 is a side elevation in perspective. Fig. 4 is an end elevation of the device. Fig. 5 is a perspective view of the surface of the upper end of the dog—one of the parts hereinafter explained.

Similar letters in all the figures indicate similar parts.

The line-fastener is constructed preferably of some metal—such as brass or galvanized iron—which has the requisite strength and which will not rust or corrode; but when intended for use where no great strength is required, or where not exposed to the weather, it can be made of some cheaper material.

A in Fig. 1 is a tube somewhat larger than the line on which it is intended to be used, having on its under side two lugs B, of which one is shown in Fig. 1, and the other, precisely similar, is on that part of the line-fastener not shown in this figure, but appears in Fig. 3. Through these two lugs B B runs a pivot C, furnishing a bearing for the spring-dog D. The spring-dog has a bent or rectangular end piece *d*, projecting upward through a slot E

in the under side of the tube A. This end piece *d* of the dog D is pressed or forced up into the tube by a spring F between the other end of the dog D and the tube A. The back end of the dog D constitutes a lever H, by means of which the rope can be released. This lever H runs parallel, or nearly so, with the tube A, by which arrangement a good bearing for the spring is furnished, and also the device can be readily operated with one hand. The spring is of importance, because while if the dog is fairly engaged with the rope it will hold against any strain, it would not without the spring be certain to catch or engage in the first instance. It is also important that the line-fastener should be adapted to be held and operated with one hand, so that the other shall be free to adjust the lines and for other purposes. The dog or end piece *d* moves in a line at right angles, or nearly so, to the rope, and in that respect materially differs from cams or eccentrics, which have been sometimes suggested for this purpose. This feature, combined with the operation of the spring, makes the first engagement especially sure and certain and enables the disengagement of the rope to be more easily effected. On the upper side of the tube A, at what may be called its "front end," is a short tube G, of a diameter similar to the tube A, or it may be somewhat smaller, but still large enough to permit the passage through it of the line on which it is intended to be used.

The end piece of the dog D is provided with teeth or is corrugated or roughened, and to gain the best effect these teeth or corrugations should be made in a peculiar manner, to be hereinafter explained.

Considering the end of the fastener carrying the tube G as the front end, the operation of the fastener is as follows: The end of the line is passed backward through the tube G and knotted, so that it cannot slip through, and the strain upon this line or end of the line being forward the fastener is firmly secured to it. The other line or the other end of this line is passed from the rear of the main tube A through it above the end of the dog D and out at the front end, it being understood that the strain upon this line is backward, so that the loose end of the line is in front of the line-fastener. The end of the

dog D, therefore, is pressed upon the under side of the rope with the full force of the spring, and being assisted by the corrugations or teeth before spoken of, holds the rope
5 firmly between the dog and the upper side of the tube A. When desired, the back end of the tube and the lever H can be grasped and pressed together in the hand, thus drawing back the end piece *d* of the dog from contact
10 with the line, and thereby releasing the line, which can then be readily shifted in the line-fastener or released from it entirely.

When used as a clothes-line fastener, as before suggested, the line would pass from
15 the tube G to a pulley or sheave at some outer point, through this to and through a second pulley near the operator, and then to the back end of the tube A and through it, as before.

20 The upper face of the end *d* of the dog D is provided with teeth or corrugations, before spoken of, transverse to the rope. These teeth are inclined forward, as shown in the drawings, and are calculated to engage the
25 line and resist any backward strain or pull. The result will be that such a strain must tend to pull the dog upward and tighten its hold upon the rope, so that the greater the strain upon the latter the more firmly it will
30 be held by the dog. In addition to these transverse teeth longitudinal grooves may be cut upon the upper or bearing face of the dog, so as to show a series of square teeth inclined forward, as shown in Figs. 1 and 5.

35 When desired, the back end of the dog D or the lever H may be rounded at its edges, so as

to form a handle which can be conveniently grasped so as to compress it upon the tube A to release the line. When the rear end of the dog is turned up, as shown in Figs. 1, 2, 40 and 3, for the purpose of protecting the hand, this end must be grooved, as shown in Fig. 1, so as not to interfere with the rope. It will be seen that the effect of this arrangement and construction of parts will be that while
45 the line passing through the tube can be drawn in one direction through the tube at all times by simply exerting force enough to overcome the pressure of the spring, when the dog is engaged the line is held firmly
50 against any motion in the other or backward direction. By releasing the dog the line can be set entirely free.

What I claim, and desire to secure by Letters Patent, is—

The line-fastener consisting of tubes A and G, lugs B on the tube A, dog D, pivoted in the lugs, and having at one end the end piece *d* and at the other the lever H, parallel, or nearly so, to the tube A, and the spring
55 F, between the tube A and the lever H, whereby the spring F presses out the lever H and causes the end piece *d* to bear against the rope at right angles, or nearly so, to the rope, and whereby the tube and dog can read-
60 ily be grasped and the dog released by one hand, substantially as specified.

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Witnesses:

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