(No Model.)

Z. SZPOR.

FIRE ESCAPE.

No. 583,776. Patented June 1, 1897.

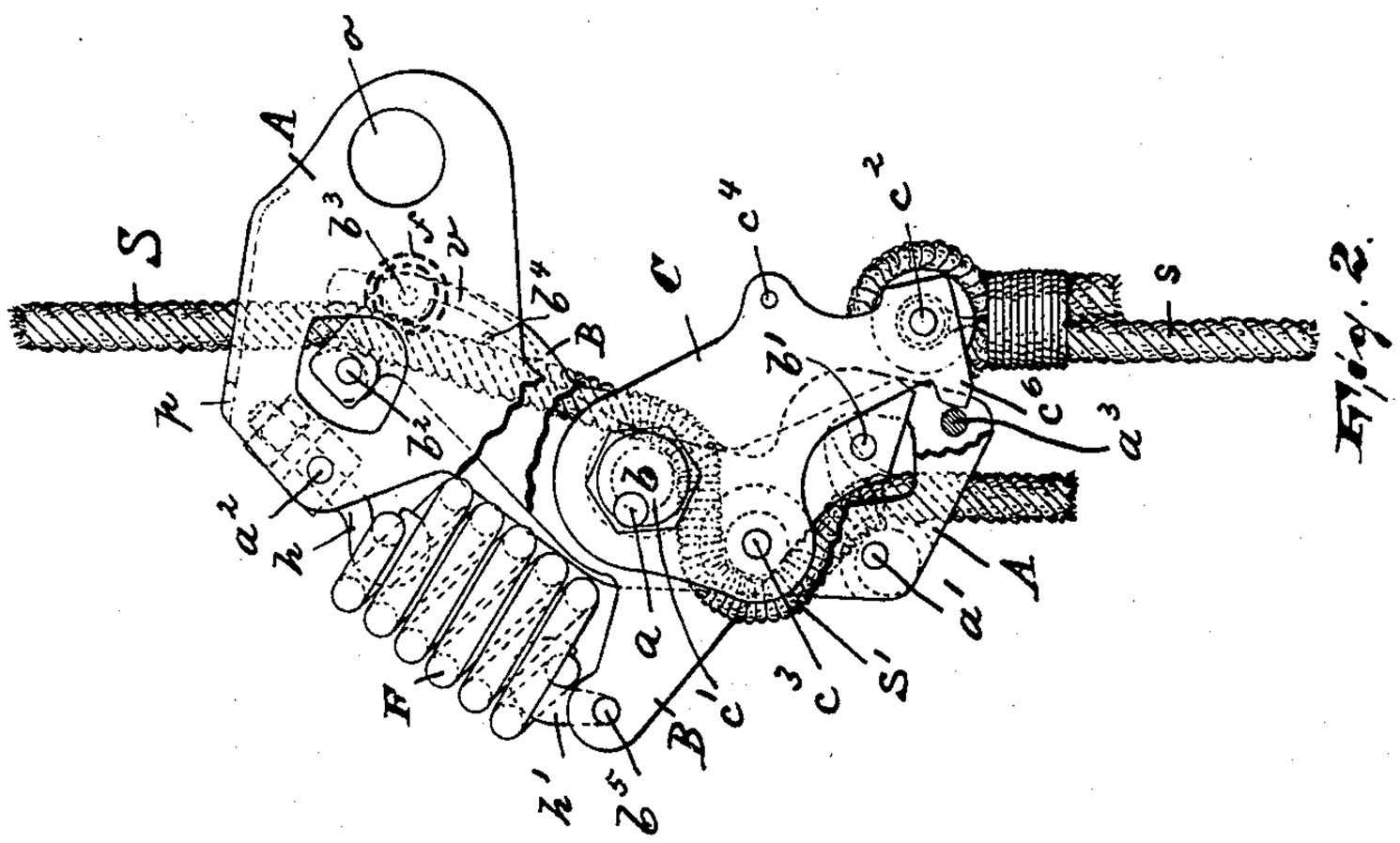

Fig. 2.

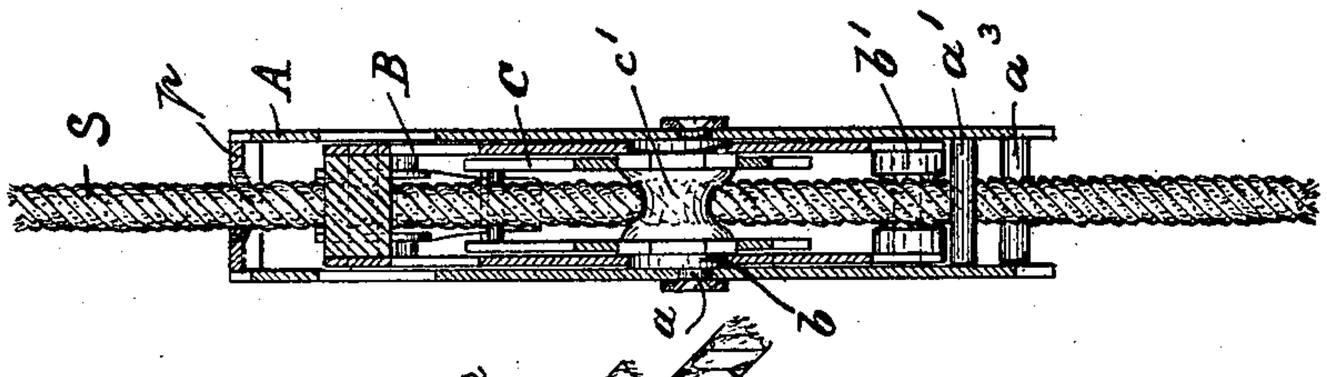

Fig. 3.

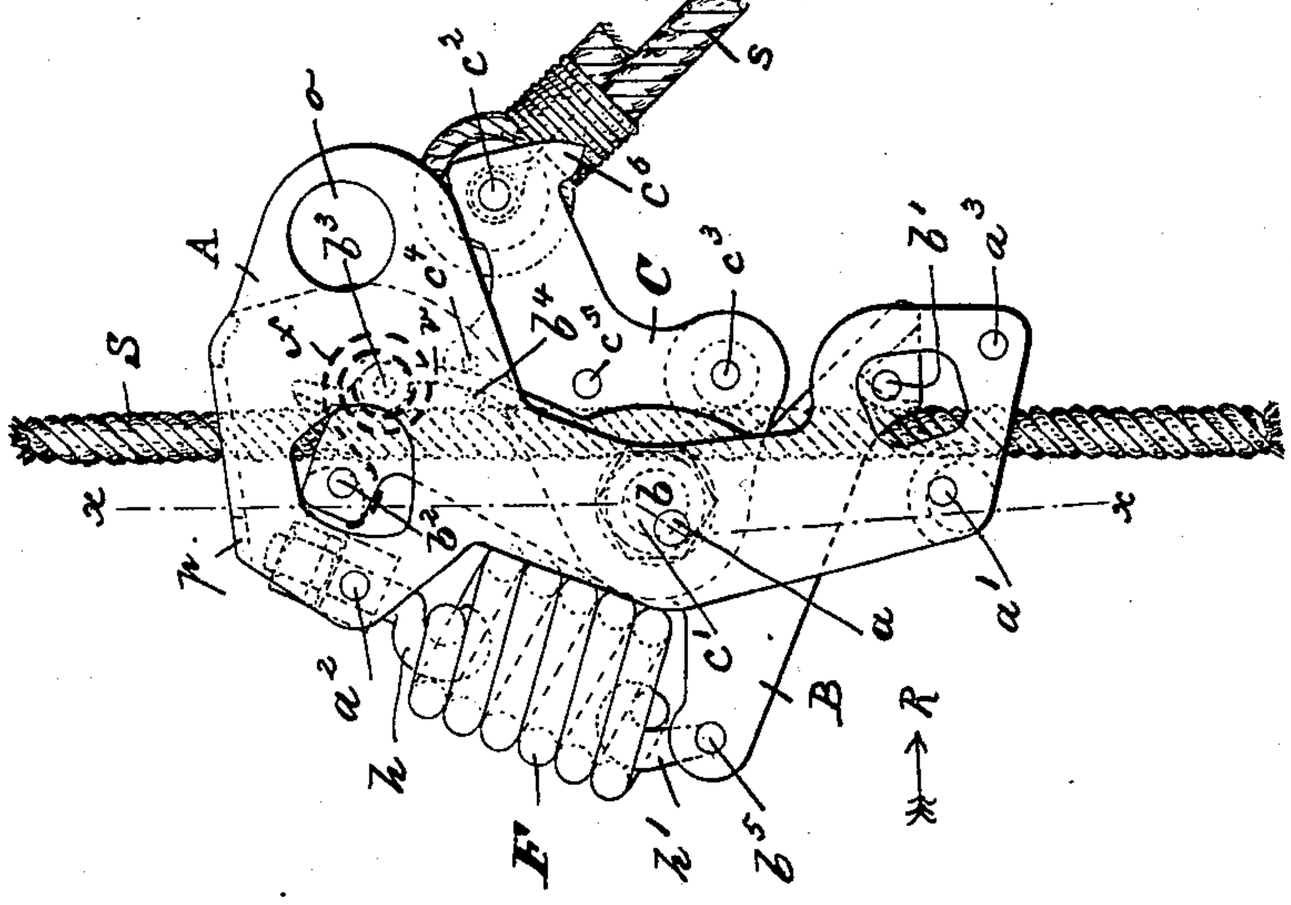

Fig. 1.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ZDZISLAW SZPOR, OF KRAKAU, AUSTRIA-HUNGARY.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 583,776, dated June 1, 1897.

Application filed February 4, 1897. Serial No. 621,967. (No model.)

To all whom it may concern:

Be it known that I, ZDZISLAW SZPOR, a subject of the Emperor of Austria, residing in Krakau, Galicia, Austria-Hungary, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a portable fire-escape of simple, strong, and durable construction, reliable in operation, and easily handled.

The invention consists in the improved fire-escape and in the combination and arrangement of the various parts thereof, substantially as will be hereinafter more fully described, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is a side elevation of my improved fire-escape in normal position; Fig. 2, a view similar to Fig. 1 with certain portions broken away and illustrating the various parts in operative position; and Fig. 3, a detail sectional view on the line X X of Fig. 1, looking in the direction of arrow R.

In said drawings, A represents a frame consisting of two parallel side plates held together by the pins a' and a^3, arranged at or near the lower portion of said frame, and also by means of the plate p, connecting the upper portions thereof, and provided with an aperture for the free passage of a rope S. Within the frame A is arranged a second frame B, also consisting of two side plates held together by the pins b', b^2, b^3, and b^4 and eccentrically arranged on the axles a, projecting from the circular grooved block c' of an inner frame C. Said axles a have their bearings in the side plates of the frame A. The inner frame C consists of two side plates held together by the pins c^2, c^3, c^4, and c^5, and is provided at its forward end with a projection c^6, adapted to engage the pin a^3 of the frame A when in operative position. In the frame A is fulcrumed, as at a^2, a hook h, engaging one end of the spiral spring F, the other end of which is in engagement with a hook h', fulcrumed, as at b^5, to and within the frame B. On the pin b^3 of frame B is fulcrumed a lever v, secured to one end of the spiral spring f, the other end of which engages the pin b^2 or a curved grooved friction-block arranged on said pin. The lower end of said lever v is in engagement with the pin c^4 of the frame C, while its upper end engages the rope S, as clearly shown in Fig. 1. On the pin c^2 of frame c is arranged a grooved pulley, which in turn carries the rope s, adapted to be secured to a person either by means of a belt or in any well-known manner. One of the side plates, constituting the frame A, is provided at its upper right-hand corner with an opening o, adapted to be engaged by a finger of the person using the fire-escape, as hereinafter described. The pins a', b^2, and c^3 may be provided with curved grooved friction-blocks, as will be manifest. In operation the rope S is suspended from any convenient place and the rope s secured to the person intending to use the fire-escape. The latter is first adjusted at a suitable place on the rope S, which adjustment is easily accomplished by inserting one finger in the opening o and by engaging with the other part of the hand the projecting end of the frame C and by moving said frames toward each other, whereby the lever v, against the action of the spiral spring f, disengages the rope S, and thus allows a free movement of the fire escape on the said rope. After proper adjustment the frames A and C are released and the lever v is returned to its normal position by means of the spiral spring f and engages again the rope S. The person now allows his weight to act upon the rope s, whereby the frame C is swung downward on its fulcrum a until the projection c^6 engages the pin a^3. This position is illustrated in Fig. 2. The rope, which heretofore was perfectly straight, is now looped, as at S', which loop is caused by the pin c^3 being brought between the pins a' and c'. The frame B, by means of its eccentric connection b, is also operated and brought into the position as illustrated in said Fig. 2. The spiral spring F is opened and the said frames B and A are under tension of said spring F. The fire-escape is thus

securely held on the rope S, but by simply pulling the frame A, engaging the opening *o*, the friction is reduced and the fire-escape allowed to slowly descend on the said rope, as will be manifest.

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

1. In a fire-escape, the combination with an outer frame, of an inner frame pivotally connected with said outer frame, a frame intermediate said outer and inner frames, the intermediate and inner frames eccentrically arranged on the pivotal connection, a spiral spring connecting the outer and the intermediate frames, and a series of pins arranged in each of said frames and adapted to form a passage for the main rope, all said parts being so arranged, that when the inner frame is operated, the said series of pins are brought into frictional contact with the main rope, substantially as described.

2. In a fire-escape, the combination with an outer frame, of an inner frame pivotally connected with said outer frame, a frame intermediate said outer and inner frames, the intermediate and inner frames eccentrically arranged on the pivotal connection, a spiral spring connecting the outer and the intermediate frames, a series of pins arranged in each of said frames, and a spring-controlled lever pivotally secured within the intermediate frame and in engagement with the main rope and adapted to be controlled by the inner frame, all said parts being so arranged that when the inner frame is swung upward the said lever disengages the rope, and when swung downward the series of pins are brought into frictional contact with the said main rope, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 15th day of January, 1897.

ZDZISLAW SZPOR.

Witnesses:
HARRY BELMONT,
KARL ROCH.