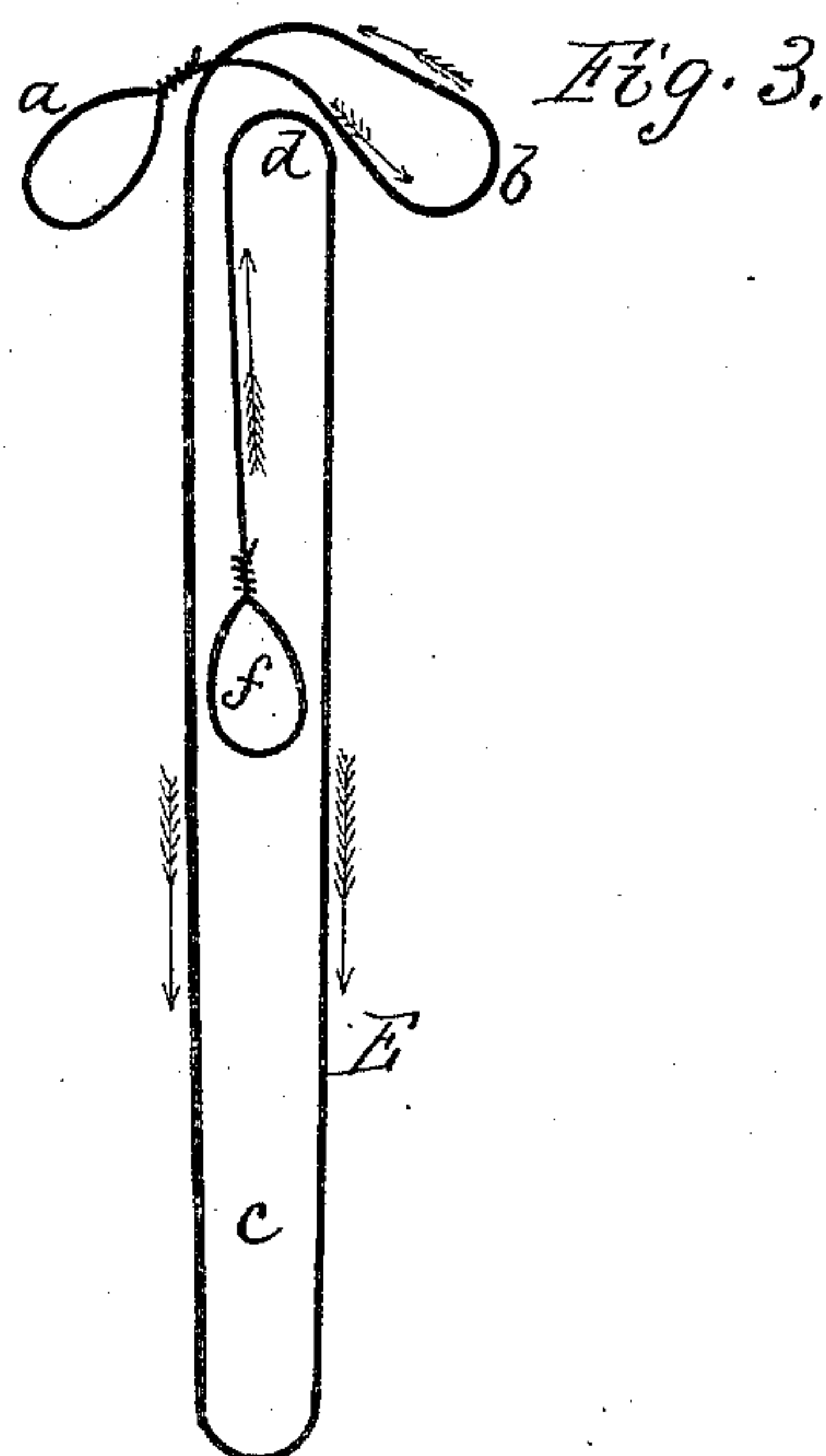
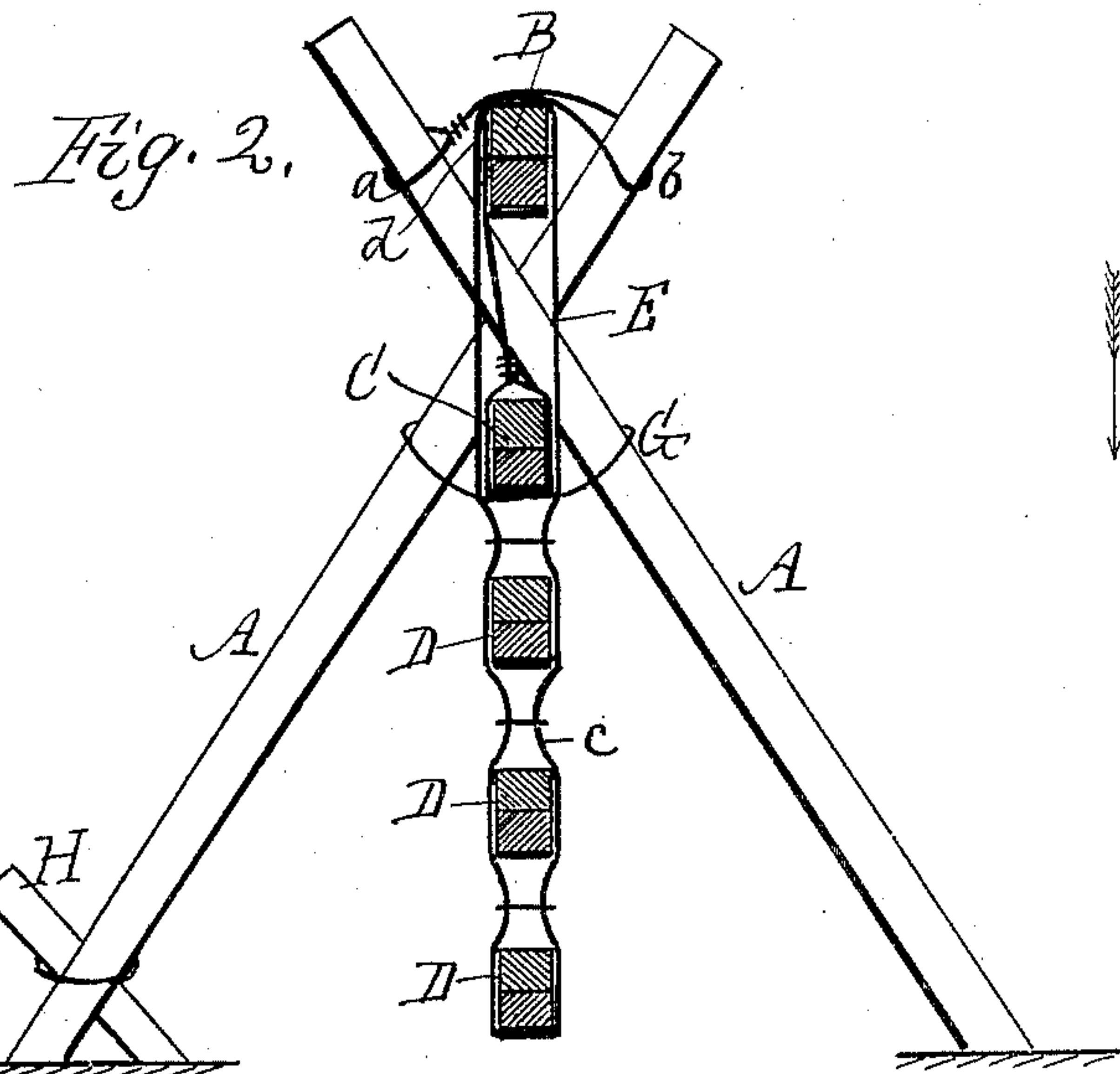
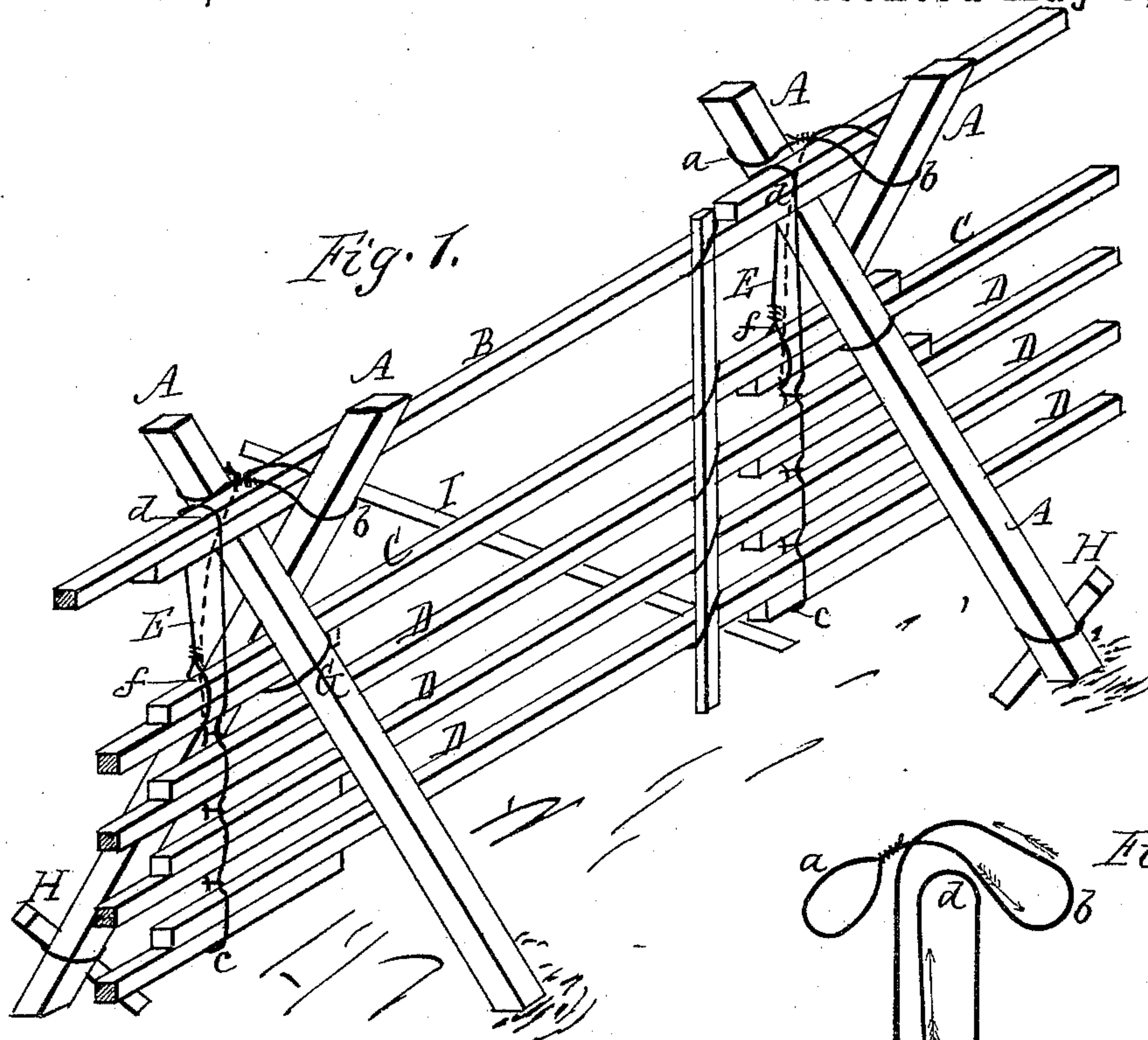


(No Model.)

F. A. WILLIAMS.
FENCE.

No. 474,072.

Patented May 3, 1892.



Witnesses

Chas. W. Siderer,
Geo. B. Selden.

Inventor
Frank A. Williams
By his Attorney
R. F. Osgood.

UNITED STATES PATENT OFFICE.

FRANK A. WILLIAMS, OF CLARENDON, NEW YORK.

FENCE.

SPECIFICATION forming part of Letters Patent No. 474,072, dated May 3, 1892.

Application filed July 31, 1891. Serial No. 401,267. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. WILLIAMS, of Clarendon, in the county of Orleans and State of New York, have invented a certain new and useful Improvement in Fences; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to rail fences of that kind where cross-stakes are used and the rails are suspended by wires.

My invention consists in a new arrangement of the wires, whereby the weight of the lower rails of the fence serves to bind the two upper rails into the upper and lower crotches of the stakes, thereby dispensing with the necessity of a binder, which has heretofore had to be used to produce the same effect.

In this fence a single length of wire is used at the end of each section. One end of this wire is tied to the top of one of the cross-stakes, then is carried over the top of the rider-rail and around the top of the opposite stake, thence over the top of the rider again, then down and up to form the loop for supporting the lower rails, thence over the rider-rail again, and thence down to the second rail, to which the end is tied. By this means the wire acts in the same way as a cord passing over two pulleys and draws the upper rail down and the second one up by the weight of the lower part of the fence.

In the drawings, Figure 1 is a perspective view of a length of rail fence, showing my invention. Fig. 2 is an end elevation of the same. Fig. 3 is a diagram showing a perspective view of one of the wires bent in the form which it assumes in binding the fence, the arrows showing the direction of strain to bind the two upper rails of the fence into the opposite crotches of the cross-stakes.

A A indicate the cross-stakes, B the upper rail, C the second rail, and D D the lower rails, of the fence. The two rails B C rest in the upper and lower crotches of the stakes and are drawn tightly therein to bind and

stiffen the stakes by the weight of the lower rails D D.

E E are the wires by which the rails are attached to the stakes. Each of these wires is in a single length. One end is attached to the top of one of the stakes, as shown at *a*. The wire is then crossed over the upper rail and carried around the top of the opposite stake, as shown at *b*. The wire is then carried over the rail again and down and up, forming the suspension-loop *c*, in which all of the lower rails of the fence rest. It is passed over the upper rail again, as shown at *d*, and extended down and tied to the second rail, as shown at *f*. As the wire is thus arranged, the weight of the lower rails of the fence produces leverage on the wire, the strain being in the direction of the arrows in Fig. 3. The tendency is to draw the upper rail B tightly down into the upper crotch of the cross-stakes and the second rail C tightly up into the lower crotch of the stakes. The heavier the weight of the fence the greater is the binding strain. This binding of the stakes stiffens them and holds the fence up.

In addition to the above, the crossing of the wire from one stake to the other draws them together under the weight of the fence. A cross-wire G is used to connect the stakes below the lower crotch, but is not used to support the second rail C, as the latter is drawn up by the strain on the loop *f*.

Anchor-stakes H H are used in the ordinary way, and, if desired, diagonal braces I I may also be used, one with each section.

Having described my invention, I do not claim a wire loop embracing the two upper rails and tightened by a binder. Neither do I claim a wire attached to the top of one of the stakes, looped around the upper rail, thence carried to the second rail, encircling the same, and wound around the stakes.

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

The combination, with the crossed stakes A A and the rails B C, resting, respectively, in the upper and lower crotches of the stakes, of the wire E, attached at one end to the top

of one of the stakes, thence carried over the top rail and around the other stake and back over the rail again, thence down and up, forming a loop to receive the lower rails of the
5 fence, thence over and around the top rail again, and thence down and attached to the second rail, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

FRANK A. WILLIAMS.

Witnesses:

BRUCE B. ATKINS,

B. C. MATHES.