

No. 667,471.

Patented Feb. 5, 1901.

E. T. WARN.
BALE TIE.

(Application filed Sept. 11, 1900.)

(No Model.)

Fig. 1

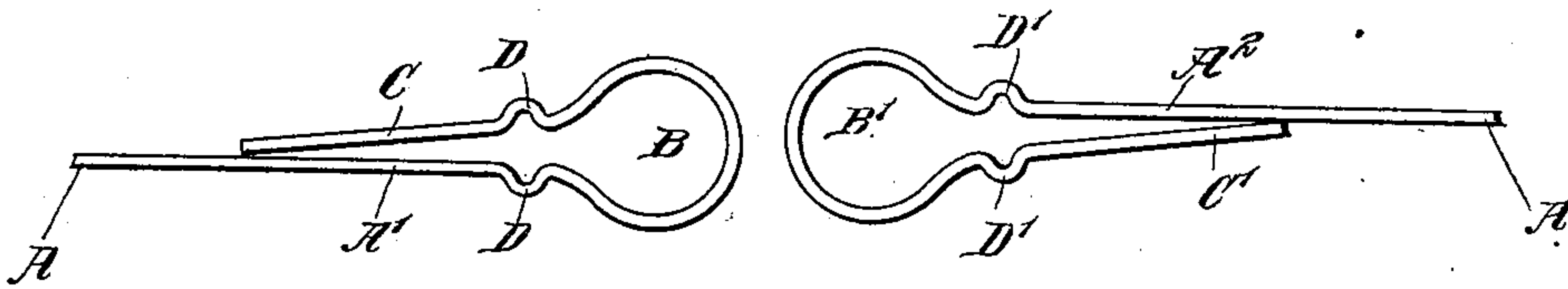


Fig. 2

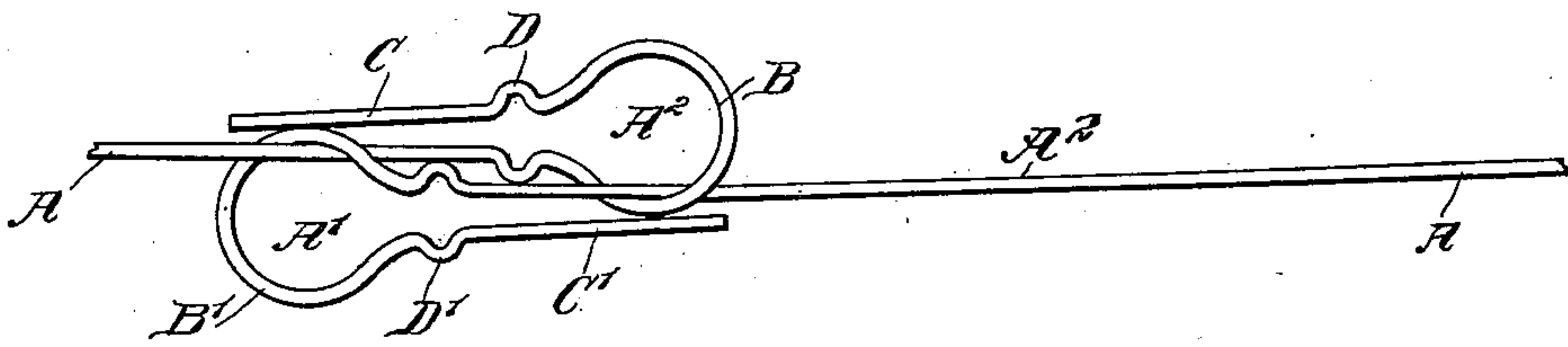


Fig. 3

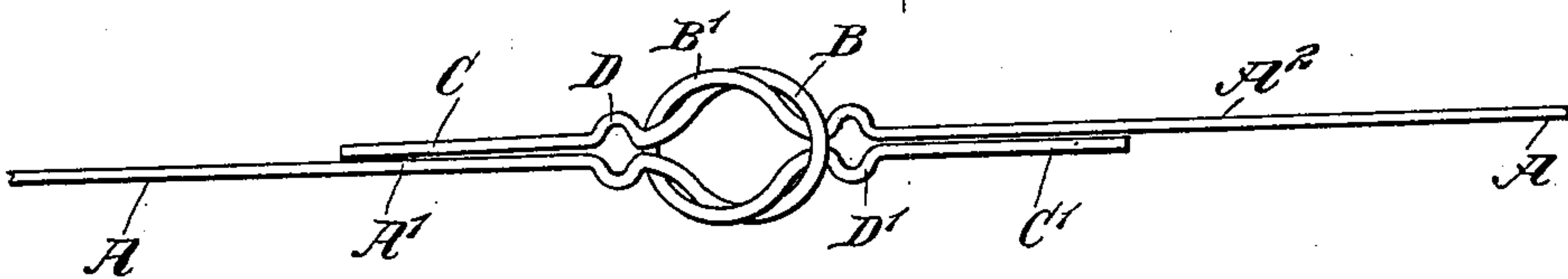
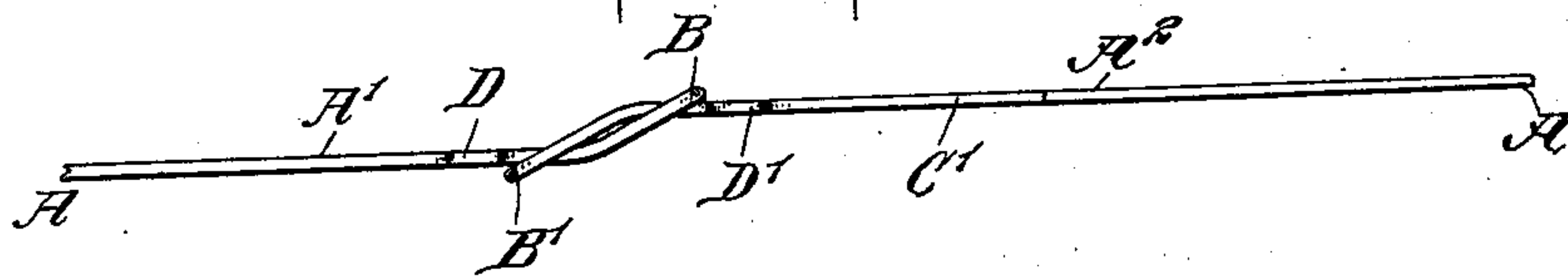


Fig. 4



WITNESSES:

J. A. Propley
Rev. G. H. H. H.

INVENTOR

Edward T. Warn.

BY

Mumford
ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWARD T. WARN, OF STERLING, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO
EARL H. REYNOLDS AND ROBERT ROSENTHAL, OF SAME PLACE.

BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 667,471, dated February 5, 1901.

Application filed September 11, 1900. Serial No. 29,639. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. WARN, a citizen of the United States, and a resident of Sterling, in the county of Whiteside and State of Illinois, have invented a new and Improved Bale-Tie, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved bale-tie which is simple and durable in construction, cheaply manufactured, and arranged to permit of conveniently and safely interlocking the ends of the tie to securely hold the bale material in position.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement with the loops disengaged. Fig. 2 is a similar view of the same with the ends of the wire partly engaged. Fig. 3 is a like view of the improvement with the loops interlocked, and Fig. 4 is a side elevation of the same.

The ends $A' A^2$ of the wire A terminate in loops B B', respectively, having their short ends C C' lying against the ends $A' A^2$, so that the loops are normally closed, as is plainly indicated in Figs. 1 and 3. The loops B B' are bent forward, but in opposite directions—that is, the loop B is bent forward and upward, while the other loop B' is bent forward and downward, (see Fig. 4)—and the short ends C C' are located on opposite sides of the ends $A' A^2$ of the wire A, as indicated in Figs. 1, 2, and 3.

In order to interlock the loops B B', the operator moves them toward each other and passes the loop B' under the loop B until the extremities of the ends C C' are closer together than the outer ends of the loops. Then the loop B is moved upward to cause the end A^2 to pass up between the ends $A' C$ and the end A' to pass up and force itself between the

ends $A^2 C'$, the short ends C C' yielding outwardly and the end A^2 passing sidewise over the end A' , as shown in Fig. 2. The upward movement of the loop B is continued, and the short ends C C' being released will spring back into engagement with the ends $A' A^2$, respectively—that is, back into their normal position—owing to the resiliency of the spring material of the wires. The ends $A' A^2$ are then drawn apart, so that the loops B B' interlock with each other, as is plainly shown in Figs. 3 and 4.

In order to prevent the loops from becoming accidentally unlocked, the ends A' and C and the ends A^2 and C' are formed with transversely-extending corrugations D D', respectively, located outside of the loops B B' when the latter are in an interlocked position, as shown in Fig. 3.

By the arrangement described the loops are very conveniently interlocked without requiring twisting, turning, or bending of the wires and at the same time securely interlocked without danger of accidental opening, especially as the short ends C C' are in a closed position—that is, close to the ends $A' A^2$. (See Fig. 3.)

It is expressly understood that the loops B B' cannot become accidentally disengaged unless the short ends C C' are opened up; but as this is not liable to occur it is evident that the loops remain interlocked, and consequently the tie holds the bale material securely in position.

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

1. A bale-tie consisting of a wire having its ends formed with loops, one of which is bent forward and upward and the other is bent forward and downward, the short ends of the loops being normally in contact with the main portion of the wire, but adapted to spring away therefrom and lying on opposite sides of the wire, as set forth.

2. A bale-tie consisting of a wire having its ends formed with loops, one of which is bent forward and upward and the other is bent forward and downward, the short ends of the

loops being normally in contact with the main portion of the wire, but capable of being sprung away therefrom and lying on opposite sides of the wire, and transverse corrugations in the short and long ends of the wire adjacent to the loops thereof, as set forth.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

EDWARD T. WARN.

Witnesses:

I. L. WEAVER,

E. B. FACEY.