

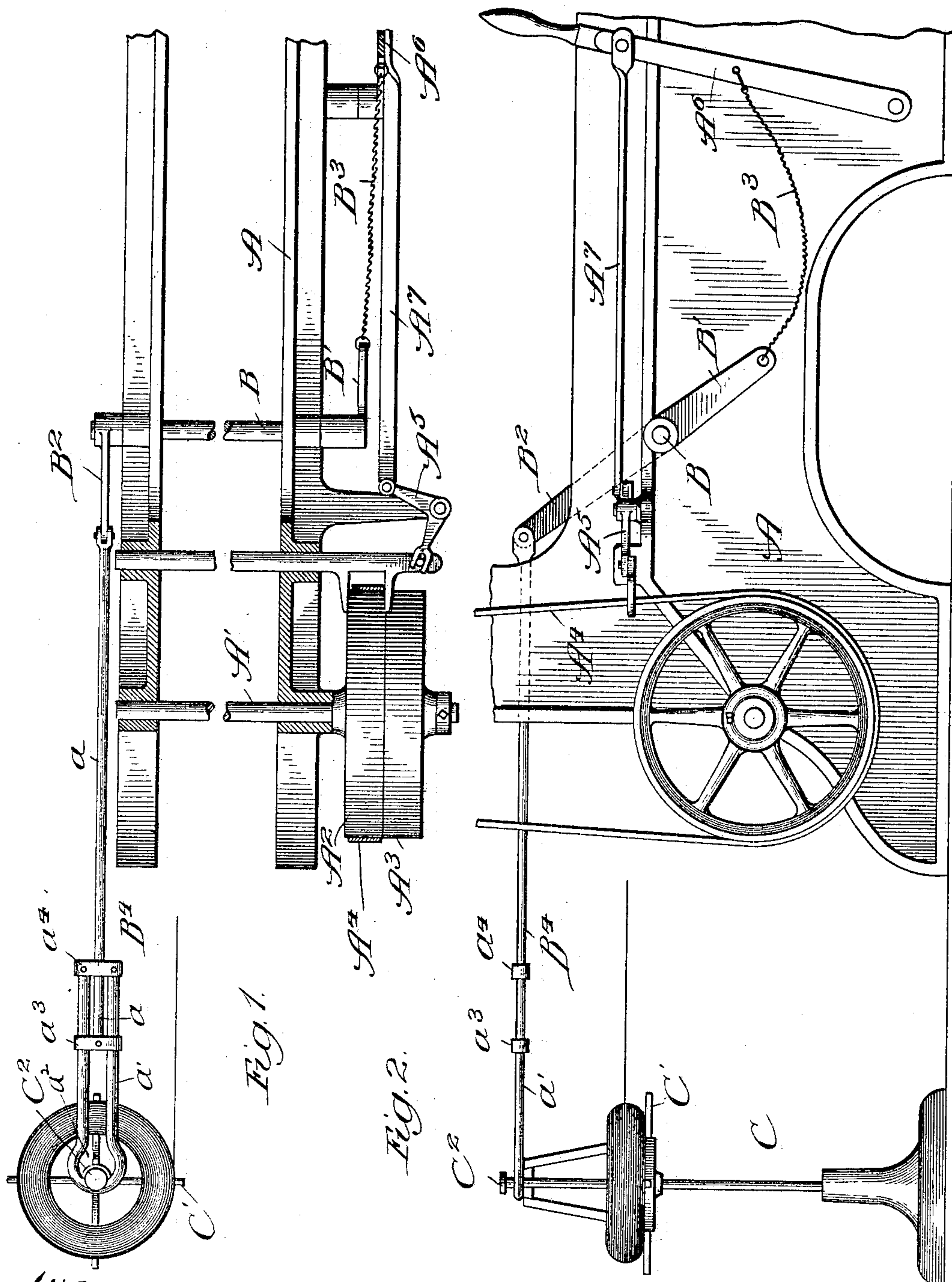
No. 758,721.

PATENTED MAY 3, 1904.

J. C. TWEED.
WIRE WORKING MACHINERY.

APPLICATION FILED MAY 1, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN C. TWEED, OF DEKALB, ILLINOIS, ASSIGNOR OF ONE-HALF TO
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WIRE-WORKING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 758,721, dated May 3, 1904.

Application filed May 1, 1903. Serial No. 155,146. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. TWEED, a citizen of the United States, residing at Dekalb, in the county of Dekalb and State of Illinois, have invented a new and useful Improvement in Wire-Working Machinery, of which the following is a specification.

My invention relates particularly to means for automatically stopping machines for working upon wire, such as barbed-wire-making machines, fence-making machines, and the like.

My primary object is to provide means whereby the spool from which wire is being fed into the machine will serve to throw the machine out of gear in case the wire becomes tangled and the spool is drawn toward the machine.

The invention is illustrated conventionally in the accompanying drawings, in which—

Figure 1 represents a plan sectional view of a portion of a wire-working machine, such as a barbed-wire-making machine, with my improvement applied thereto; and Fig. 2, a broken side elevational view of the same.

A represents a portion of the frame of a machine of the general character mentioned, having a driving-shaft A', equipped with tight and loose pulleys A² A³, respectively; A⁴, a belt through which power is supplied to the machine; A⁵, a belt-shifting lever; A⁶, an ordinary hand-lever controlling the power of the machine; A⁷, a link joining said lever to the bell-crank lever A⁵; B, a rock-shaft equipped at one end with an arm B' and at the opposite end with an arm B²; B³, a flexible connection joining the arm B' to the hand-lever A⁶; B⁴, a link connected with the arm B², and C a loose stand bearing a reel or spindle C' of the usual construction except that it is provided at its upper end with a stud C². The link B⁴ comprises a rod *a*, connected with the arm B², and a yoke *a'*, adjustably connected therewith and having a slot *a''* for receiving loosely the stud C². The member *a* has a head *a'* with perforations in which the members of the yoke may be caused to slide in adjusting the yoke, and the yoke has a

head *a'* with a central guide perforation for the member *a*.

The operation will be readily understood. As the wire is drawn into the machine from the reel the weight of the stand and reel is sufficient ordinarily to prevent the reel from being drawn toward the machine. Should the wire become entangled, however, the reel may move toward the machine a certain distance without affecting the operation of the machine. Should the wire become disentangled before the stud C² engages the head *a'*, the machine will continue to operate. Should the wire fail to become disentangled, the link B⁴ will be moved through the medium of the stud C², thereby operating the rock-shaft B through the medium of the arm B² and shifting the hand-lever A⁶ through the medium of the chain B³, thereby shifting the belt from the fast to the loose pulley and stopping the machine. The construction is such that the machine will be stopped before the reel can by any possibility reach the machine and cause injury. By reason of the adjustability of the link B⁴ the link may be shortened at will and the reel set at any desired distance from the machine. When once adjusted in length, the link may be treated as though its parts were rigidly joined together.

It will be understood that the device may be applied to machines of various forms and for various purposes. It likewise will be understood that a plurality of reels may be employed, each connected with the rock-shaft B in a manner similar to that in which the reel C' is connected therewith, so that when the wire becomes entangled at any reel the machine will be automatically stopped.

Changes in details of construction within the spirit of my invention are contemplated. Hence no undue limitation should be understood from the foregoing detailed description.

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

1. The combination with the mechanism for throwing a machine of the character described into and out of gear, of a reel from which wire is fed into the machine and which is

equipped with a stud, and a thrust-transmitting link connected with said stud and with said mechanism and serving to throw the machine out of gear, for the purpose set forth.

5 2. The combination with the mechanism for throwing a machine of the character described into and out of gear, of a reel from which wire is fed into the machine, and a thrust-transmitting link having lost-motion connection with said reel and suitable connection
10 with said mechanism and serving to throw the machine out of gear, for the purpose set forth.

15 3. The combination with the operating-gear of a machine of the character described, of means for automatically throwing the machine out of gear, comprising a rock-shaft suitably connected with the operating-gear and equipped with an arm, a reel over which

wire is fed into the machine, and a thrust-transmitting connecting-link joining said reel 20 to said arm, for the purpose set forth.

4. The combination with the operating-gear of a machine of the character described, of means for automatically throwing the machine out of gear, comprising a rock-shaft suitably 25 connected with the operating-gear and equipped with an arm, a reel from which wire is fed into the machine equipped at its upper portion with a stud, and a link having lost-motion connection with said stud and pivotal 30 connection with said arm, for the purpose set forth.

JOHN C. TWEED.

In presence of—

A. S. KINSLOE,
CHAS. C. POND.