

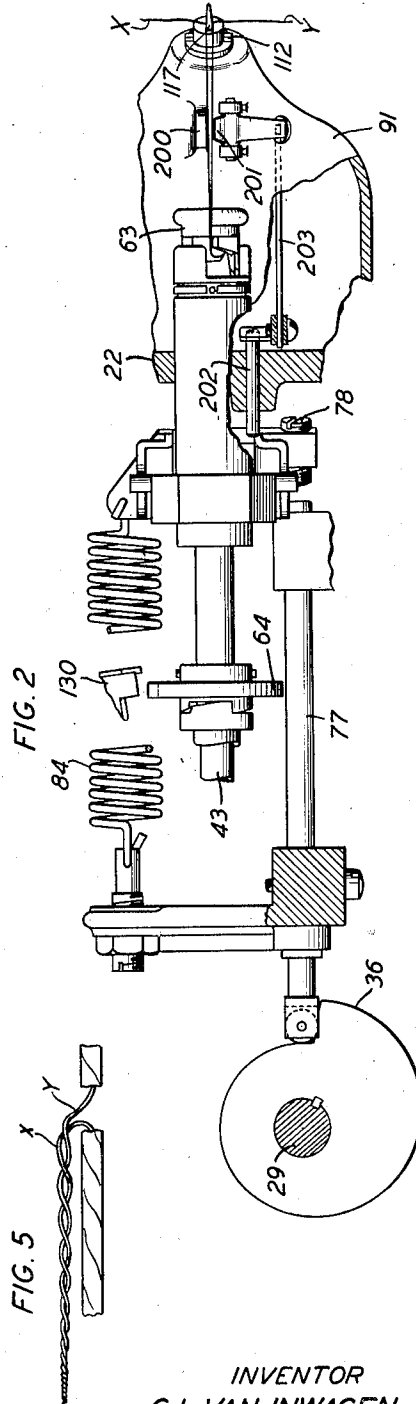
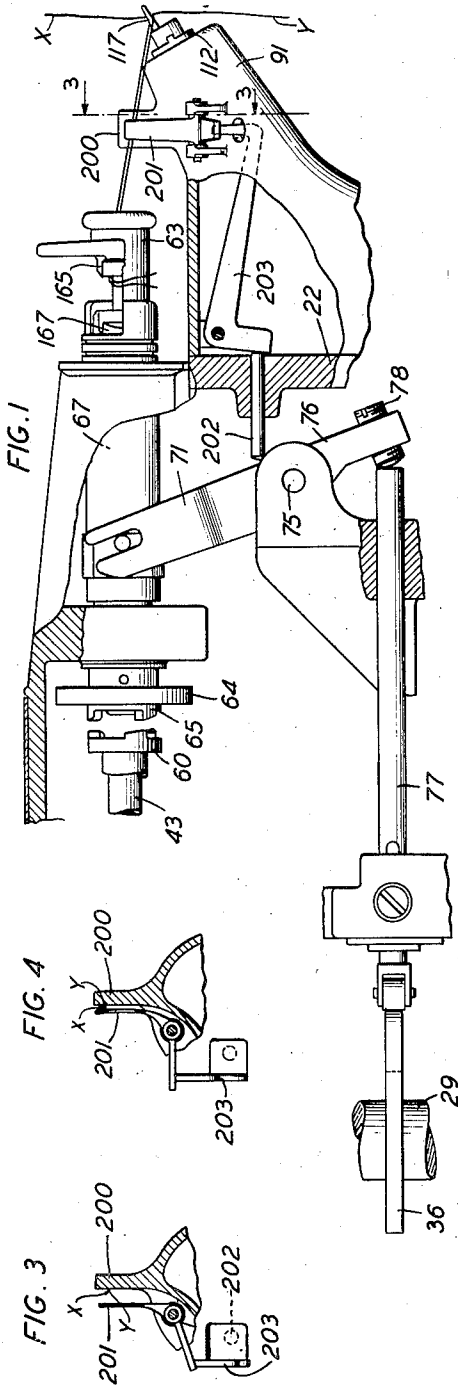
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1,982,844

WIRE SPLICING MACHINE

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WIRE SPLICING MACHINE

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Original application April 14, 1930, Serial No. 443,993, now Patent No. 1,895,828, dated January 31, 1933. Divided and this application November 30, 1932, Serial No. 644,948. In Canada March 20, 1931

6 Claims. (Cl. 140—119)

This invention relates to wire splicing machines.

It is a division of Patent No. 1,895,828 dated July 8, 1932.

5 In the machine of said application, the ends of a pair of wires are caused to twist with a variable pitch by a cam disposed at a point between the twisting spindle and an index member placed at a certain distance from the twisting spindle, 10 which distance limits the length of the completed joint.

The present invention provides a mechanism in which the ends of a pair of wires which are brought from the index member in parallel relation and adjacent to each other between the gripping elements of the twisting spindle are caused to twist with a variable pitch by means of a movable finger which is moved toward a stationary member by a lever which also serves to actuate the operating mechanism of the gripping elements preparatory to twisting the wires through the rotary movement of the spindle, the degree of pressure exerted on the wires by the movable finger being effective to control the character of the pitch of the twisted wires.

Other features of the invention will appear from the following description and by the claims appended hereto, reference being had to the accompanying drawing in which:

30 Fig. 1 is a partial assembly view of the splicing machine embodying the variable twisting mechanism of this invention;

Fig. 2 is a top view thereof;

35 Fig. 3 is an end view taken on line 3—3 of Fig. 1 showing the finger being in the non-operated position;

Fig. 4 is another end view showing the wires engaged by the finger; and

40 Fig. 5 is an enlarged view of the completed joint.

In the drawing, 43 is a shaft which drives the twisting spindle 63 upon the engagement of clutch members 60 and 65. 64 is a disc which cooperates with latch 130 shown in Fig. 2 for stopping the spindle 63 in its normal angular position. 67 is a sleeve which is mounted on the spindle 63 and carries the knife element 167 which engages the knife element 165 on the spindle for cutting and gripping the ends of wires X, Y which engage an index member 117 preliminary to the twisting of the wires.

55 The engagement of the knife elements 165 and 167 for cutting and gripping the wires is effected by the operation of lever member 71 under the

tension of spring 84 shown in Fig. 2 previously tensioned through the operation of a cam 36 provided to impart an axial movement to a rod 77 engaging a screw 78 in the downwardly extending arm 76 of lever 71. 202 is an axially movable rod journaled in a bearing portion formed integrally with a main casing 22. Rod 202 has one end disposed in operable relation with the lever 71 and its opposite end with a lever 203 pivoted on a casing portion 91 in turn securely mounted on the main casing 22.

Lever 203 has a vertically disposed projection extending through an opening in the casing portion 91 in engageable relation with a right-angled lever 201. This lever has an upwardly extending resilient arm for yieldably holding the wires X, Y against a stationary jaw member 200 formed on the casing portion 91. A motor (not shown) is provided for actuating the shaft 29 and the cam 36 carried thereby conjointly with the operation of spindle 63 through the engagement of clutch element 60 with clutch element 63 as above described.

In the operation of the machine, the wires X, Y which are bent at right angles around the index member 117 and their insulating covering stripped off at that point, are placed between the stationary and movable jaw members 200, 201, respectively. The ends of these wires are then passed between the knife elements 165, 167 to be cut and gripped upon the release of spring 84 effected by a small angular movement of cam 36 shown in Fig. 2. The movement of lever 71 from the position shown in Fig. 1 to position shown in Fig. 2 is effective to move the rod 202 axially for actuating lever 203 and thereby engaging the angled lever 201 with the wires for yieldably holding them against the stationary jaw member 200. The operation of shaft 43 and the engagement of clutch element 60 with clutch element 65 is effective to rotate the spindle 63 for twisting the wires X and Y along that portion defined between the end of the spindle 63 and the index member 117, but it is to be noted that the frictional resistance exerted by the yieldable jaw member 201 against the wires is effective to cause the wires to twist with a variable pitch as shown in Fig. 5.

Upon the completion of the twisting operation, that is, upon the breaking of the wires adjacent the end of the twisting spindle due to the high strain built up at that point, the wires thus twisted are disengaged from the index member 117 through the two-way movement of sleeve 112 under control of a mechanism described in 110

my parent application of which this case is a division.

By the use of the mechanism of this invention, it is obvious that by varying the pressure on the 5 wires, different pitches of twist can be obtained and that different pressures can be effected on the wires either through the extent of movement of lever member 203 or by changing the resiliency of the yieldable arm of lever 201.

10 What is claimed is:

1. In a wire splicing machine, the combination with means for twisting the wires, of a pair of jaw members, one of said members being movable for yieldably holding the wires against the 15 stationary jaw member to cause the wires to twist with a variable pitch, and means for actuating said movable member.

2. In a wire splicing machine, the combination with means for twisting the wires, of a resilient 20 member movable for exerting friction on the wires at a point along their twisting portions upon the operation of the twisting means for controlling the character of the twist, and means for operating said member.

25 3. In a wire splicing machine, the combination with means for twisting the wires, of a stationary member, yieldable means movable for frictionally holding the wires during the opera-

tion of the twisting means to cause the wires to twist with a variable pitch, and a lever mechanism for actuating said yieldable means.

4. In a wire splicing machine, the combination 80 with a twisting spindle and an index member, of a pair of jaw members, one of said members being resilient, and means for operating said resilient jaw member toward the stationary jaw member in engagement with the wires to cause 85 the same to twist with a variable pitch.

5. In a wire splicing machine, the combination with a twisting spindle having means for gripping and cutting the ends of the wires and a lever member for operating said means, of a 90 pair of jaw members, and means operated by the lever member for actuating said jaw members to cause the wires to twist with a variable pitch.

6. In a wire splicing machine, the combination 95 with a twisting spindle having means for gripping and cutting the ends of the wires and a lever member for operating said means, a pair of jaw members, one of said members being yieldable, and a mechanism operated by the lever member for moving said yieldable jaw against 100 the wires to cause them to twist with a variable pitch.

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