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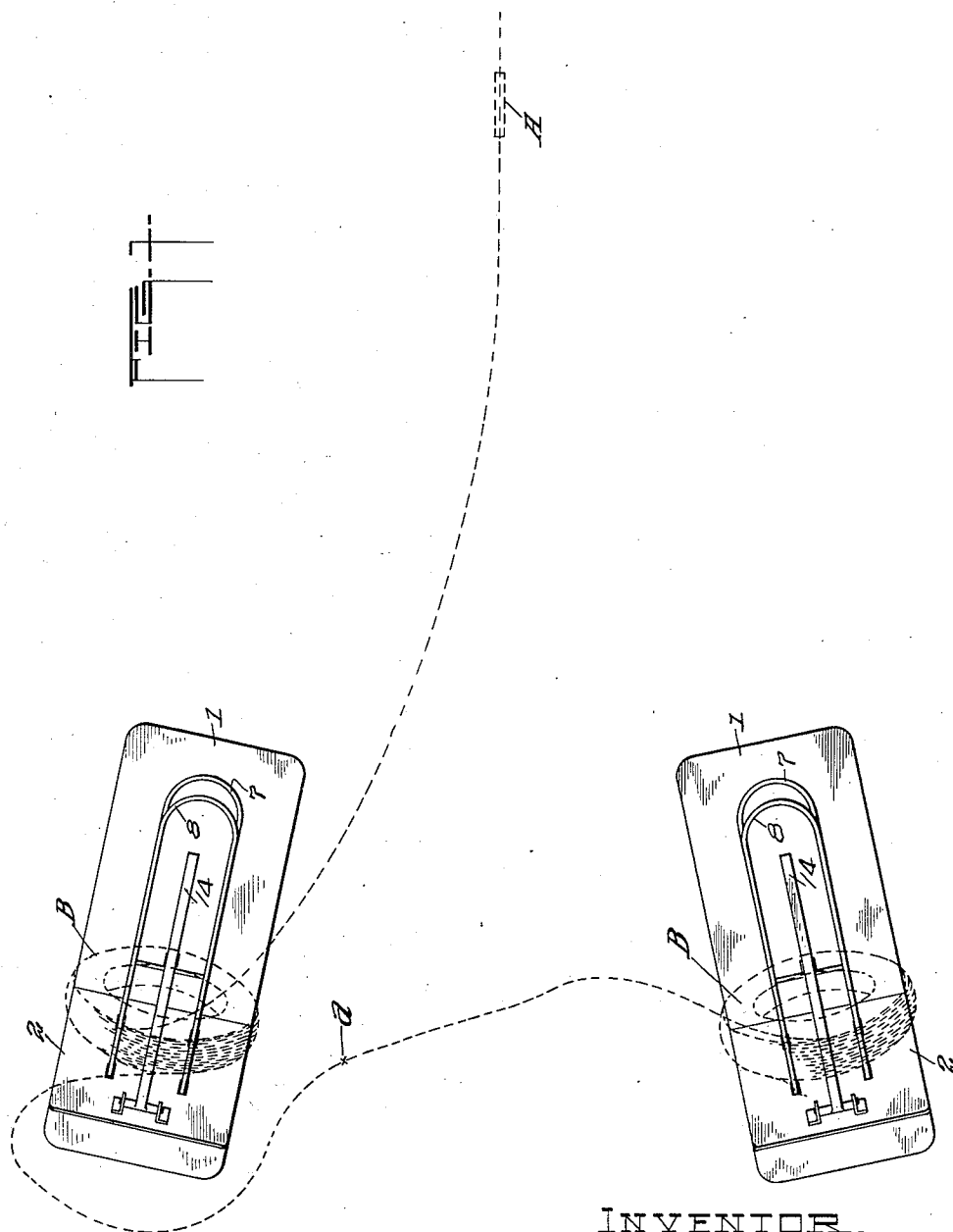
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METHOD AND APPARATUS FOR CONTINUOUS WIRE FEEDING

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## METHOD AND APPARATUS FOR CONTINUOUS WIRE FEEDING

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This invention has reference to a method for continuous wire feeding and to the apparatus by means of which the method may be successfully carried on.

5 The invention has for its principal object a method for continuous wire feeding which consists in providing coils or bundles of wire; feeding off the wire from the front of one coil or bundle and during such feeding weld 10 the end of the wire at the rear of said coil or bundle to the end of the wire at the front of another coil or bundle, whereby when one coil or bundle of wire is depleted the wire is fed from the other coil or bundle, and successively 15 adding coils or bundles of wire as each is depleted and welding the wire of one coil or bundle to the wire of another coil or bundle and alternately and continuously feeding the wire from alternate coils or bundles.

20 This method of continuous wire feeding is especially applicable in connection with machines for making welded wire fabrics, such as are used in concrete reinforcing and where the fabric is composed of a series of spaced 25 longitudinal wires and spaced stay wires which are fed from a continuous feed wire across the longitudinal wires and welded thereto at their intersections. By this method, interruptions in the feed of the stay feed 30 wires are substantially, if not entirely, done away with and when used will increase the capacity of the machine to such a great extent that the cost of operations is reduced to a minimum. This should be perfectly obvious, 35 since the operator can supply new and additional coils or bundles of wire during the feeding operation and, also, during said feeding operation and without any disturbance he can weld the wire of one coil or bundle 40 to another and successively and alternately supply his feed wire continuously from alternate coils or bundles.

The apparatus by means of which the method is made effective, comprises a stand 45 or support provided with superimposed pivoted arms over which a bundle or coil of wire may be placed, the upper arm provided with means for adjustably determining its angularity with respect to its support and 50 lower arm, and the lower arm adapted to rest

on the base of the support, whereby to restrain, to a certain extent, the wire as it is fed from the coil or bundle; and in the provision of overlying means to prevent more than one coil from leaving the bundle and 55 the arms, at a time.

That the invention may be more fully understood, reference is had to the accompanying drawings forming part of this description, illustrating a preferred embodiment of 60 the invention, in which:—

Fig. 1 shows in plan and in a more or less diagrammatic way a pair of supports on which have been placed coils or bundles of wire with the end of the wire at the rear of 65 one coil or bundle welded to the end of the wire at the front of another coil or bundle, and the end of the wire at the front of the first mentioned coil or bundle being fed forward by suitable feeding rollers or equivalent means, so that when one coil or bundle 70 is depleted the wire being continuously fed will be drawn from alternate coils or bundles;

Fig. 2 is an enlarged plan view of the apparatus; 75

Fig. 3 is a side view of Fig. 2, with one of the members being shown in full and dotted line positions, and

Fig. 4 is detail in plan, partly in section, 80 as the same would appear if taken on the line 4—4, Fig. 3.

Like characters of reference denote corresponding parts thruout the figures.

An apparatus constructed in accordance 85 with my invention would comprise a stand or support, including a base member 1, an inclined rest 2 extending up from said base and braced by means of a standard 3. The rest is provided with, preferably two sets of 90 spaced and substantially overlying slots 4 and 5 and centrally thereof and therebetween with an additional slot 6.

7 denotes, what will be termed the lower arm and 8 denotes, what will be termed the 95 upper arm. Both these arms are bowed and the free ends of the lower arm pass thru slots 4 in the rest 2 and are pivotally connected to clips or hinge plates 9 secured on the rear side of said rest, while the free ends 100

of the lower arm pass thru slots 5 in said rest 2 and are pivotally connected to clips or hinge plates 10, also, secured on the rear side of said rest 2, see Figs. 3 and 4. The upper arm 8 is provided with a cross-brace 11 provided with ears 12 to which one end of a ratchet bar 13 is pivoted and the ratchet end of said bar extends rearwardly and downwardly and passes thru the slot 6, with the ratchet teeth adapted to have an adjustable ratchet relation with the lower edge of the wall forming the said slot 6. With this arrangement the front end of the arm 8 may be raised or lowered and its angularity in relation to the rest and the lower arm fixed in different positions. Also, said upper and lower arms may be moved toward each other to facilitate the easy placing of a coil or bundle of wire thereon and the lower arm dropped and the upper arm supported in a diverged relation thereto to support the bundle or coil of wire resting against the rest 2. The front end of the lower arm 7 will restrain, to a certain extent, the wire as it is drawn or fed from the coil or bundle.

I provide, in addition, a means to prevent more than one coil of wire leaving the bundle, at a time. This means comprises a bar 14 pivoted at 15 to a removable support 16 on the rest 2. The point of pivoting the bar 14 is at a suitable distance above the pivoted ends of the arm 8 so that said bar normally extends forwardly and downwardly, overlying the cross-brace 11, and when a bundle or coil of wire is on the arms 7 and 8, the free end of said bar overlies or overhangs the bundle, whereby to retard the coils as they are unwound and allows only one coil to pass off the arms 7 and 8, at a time, and as will appear, as each coil is reeled off of the arms 7 and 8 the bar 14 will rise to allow the same to pass therefrom, and falling again in time to engage the next and succeeding coil.

By hinging or pivoting the arms 7 and 8 on the rear side of the rest 2, it is obvious that there are no obstructions or projections on the front side of the rest on which a coil of a bundle may get caught, and thereby retard or slow up operations of feeding. Furthermore, attention is called to the fact that it is comprehended herein to change the size or weight of the flipper bar 14 to meet conditions resulting from feeding different gauges of wire. A light bar will serve for light gauges of wire but the bar must be heavier when feeding the heavier gauges of wire.

Fig. 1 discloses the method of continuous wire feeding by the use of the apparatus shown and described. In this figure, feed rolls or equivalent means are indicated as A and two of the apparatus described are placed in relation to each other and to the said feed rolls so that wire fed from coils or bundles

sustained on each apparatus may be directed therefrom and to the said feed rolls without hindrance.

Each apparatus is shown supplied with a coil or bundle of wire B, and with the end of the wire from the rear of one coil or bundle having been welded at *a* to the end of the wire from the front of the other coil or bundle. From the front of the first mentioned coil the wire is being fed by the feed rolls, and when this coil or bundle is depleted it is obvious that the feeding operation goes on continuously, but the supply will now come from the other coil or bundle. During this latter operation, the operator will supply a new coil or bundle, placing it on the apparatus just depleted of its wire and weld the wire at the front of its coil or bundle to the end of the wire at the rear of the other coil or bundle. Suffice it is to say, therefore, that the continuous feeding operation may be carried on by feeding the wire alternately from one coil or bundle and then another and by replacing each coil or bundle as fast as it is depleted and welding the wires of the respective coils or bundles in the manner described.

What I claim is:—

1. The method for continuous and uniform wire feeding which consists in providing a plurality of spaced and independent bundles of coiled wire; welding the end of the wire at the rear of one bundle to the end of the wire at the front of another bundle; feeding off the wire from the front of the first mentioned bundle and when the wire of said bundle is completed automatically transferring the feeding of wire to the other bundle, and continuing such method of feeding by supplying additional bundles of coiled wire and welding the wires of the respective bundles together and alternately furnishing a continuous supply of wire by transference of feed from one bundle to the other.

2. The method for continuous wire feeding which consists in providing a plurality of spaced and independent bundles of coiled wire; feeding of the wire off of the front of one bundle and during such feeding welding the end of the wire at the rear of said bundle to the end of the wire at the front of another bundle, whereby when one bundle is depleted of its wire the feeding is transferred to the other bundle, and successively adding other bundles of coiled wire as each bundle is depleted and welding the wire of one bundle to the wire of another bundle and alternately and continuously feeding the wire from alternate bundles of wire.

3. The method of continuous wire feeding from alternate spaced and independent bundles of coiled wire, which consists in connecting the wire in one bundle to the wire in another bundle; feeding off the wire from one bundle and when such bundle is depleted automatically transferring the feeding off of

the wire to the other bundle, without stoppage of the feeding, and successively supplying new bundles of coiled wire for each depleted bundle, connecting the wire of each successively placed bundle to the wire of another bundle and continuously feeding of the wire from alternate bundles.

4. In an apparatus of the character described, the combination of a support having an inclined rest, upper and lower arms pivoted to the rear side of said rest and extending thru and forwardly of said rest, means on the upper rest adapted to coact with said rest to change its angularity with respect thereto and to said lower arm, and a bar pivoted to said rest above said upper arm and extending forward and adapted to coact with a bundle of coiled wire supported by said arms.

5. In an apparatus of the character described, the combination of a support having an inclined rest, means to support a bundle of coil wire against said rest comprising a pair of spaced upper and lower arms, the lower arm adapted to restrain the wire uncoiled from such a bundle, means to adjust the angularity of the upper arm in respect to the rest and said lower arm, means pivoted on the rest and overlying such a bundle of wire to prevent more than one coil of wire uncoiling from the bundle, at a time, and means to allow for changing of weight of said last named means for bundles of wire of different gauge.

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