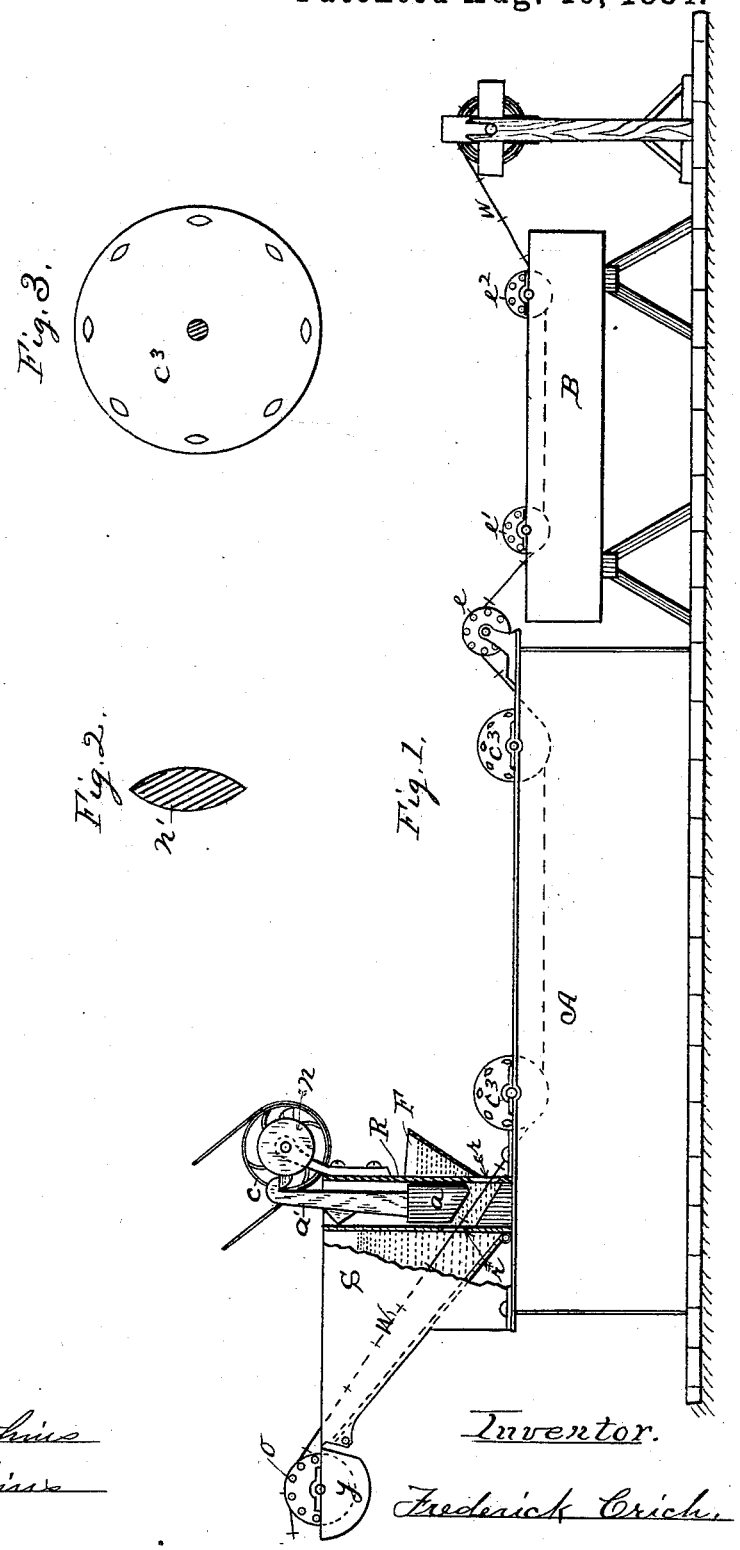
(No Model.)

F. CRICH.

APPARATUS FOR GALVANIZING BARBED WIRE.

No. 303,710. Patented Aug. 19, 1884.



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APPARATUS FOR GALVANIZING BARBED WIRE.

SPECIFICATION forming part of Letters Patent No. 303,710, dated August 19, 1884.

Application filed March 22, 1884. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK CRICH, a citizen of the United States of America, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Apparatus for Galvanizing Barbed Wire, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a side elevation; Fig. 2, a cross-sectional view of one of the bars or spindles of the lantern-wheel c^3, and Fig. 3 an end view of the lantern-wheel c^3.

This invention relates to certain improvements in a device for galvanizing barbed wire, which improvements I will explain in the following specification and claims.

Referring to the drawings, A represents an ordinary galvanizing-bath for holding the molten galvanizing material.

B is an acid bath for the wire to pass through first before it enters the galvanizing-bath, to thoroughly clean it, so it will take the galvanizing material.

R is the wipe-box, which holds the wiping material through which the barbed wire is conducted. Apertures r in the sides of the wipe-box permit the passage of the barbed wire through it. The wipe-box is provided with a weight or pounder, a, for pounding down and compacting the wiping material. This weight a has vertical reciprocating motion given it by means of the wiper-wheel n, which engages with the upper hooked end of arm a', attached to said weight. Revolution of the wiper-wheel n will elevate the weight a and let it drop on the wiping material to compact it on and around the barbed wire as it is being drawn through it, so as to thoroughly wipe off the superfluous galvanizing material and smooth the wire. As the barbed wire draws through the wiping material, the wire and barbs of necessity carry some of it out of the wipe-box, and were it not replenished it would soon all be drawn out.

For the purpose of replenishing the wiping material, the wipe-box R is provided at one side with a hopper, F, for holding a quantity of the loose wiping material. An opening between the wipe-box R and said hopper F permits the loose wiping material in the hopper to enter and replenish the wiping material in the wipe-box as it is diminished in quantity by the passage of the barbed wire through it. The wiper-wheel n is rotated by means of a belt on the pulley c.

S is a sand-box for containing sand, through which the wire passes after it emerges from the wipe-box for the purpose of smoothing and more thoroughly cleansing and brightening it. The wire is drawn through the machine by any suitable means, over the drum o, which is rotated by its contact with the passing wire W. Near the upper end of the sand-box S is located a bath, y, to hold water, in which the drum o rotates, the said drum being so arranged that about one-half of it will be submerged in the water. The wire W in its passage along through the several vats A and B is held so as to be submerged in the acid bath and galvanizing-bath by means of the lantern-wheels or drums c^3, c^2, and c', as shown in Fig. 1, these wheels answering for sinkers. The bars or spindles n' of the lantern-wheels c^3 are formed in their cross-section as shown in Fig. 2, being lenticular in shape, and set in the two parallel heads of the wheel, as shown particularly in Fig. 3, so their sharpened edges will enable them to pass through the molten galvanizing metal more easily and by their lenticular form clean more readily as they pass through and out of the metal. The bars or spindles a' of the wheel c^3 are so arranged in said wheels as to permit the passage of the barbed wire without bending the barbs; and the said wheels may be in one section to extend entirely across the bath, or in several short sections arranged to conduct one or more strand-wires. The wheels c^3 and their spindles are intended to be coated with any fire-resisting material suitable for the purpose, for resisting the heat of the molten galvanizing material and to prevent it from adhering to the wheel.

I am aware it is not new to immerse a coil of barbed wire in a zinc bath to galvanize it after it has been removed from a spool; but I am not aware such a lantern-wheel as the one

described has ever been used in the manner and for the purpose set forth.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, to wit:

1. In a barbed-wire-galvanizing apparatus, a wipe-box, R, having a hopper, F, and communication between said hopper and the wiping-chamber of the wipe-box for continuously replenishing the wiping material, and a pounder, *a*, and means described for operating the same for compressing the wiping material on the wire in the wipe-box, as and for the purpose set forth.

2. The combination of the wipe-box R, having the apertures *r* and hopper F, weight or pounder *a*, having the hooked arm *a'*, wiper-wheel *n*, and means for operating the same, sand-box S, having the bath *y* at or near its upper end, drum *c'*, and means for operating the same, bath A, and lantern-wheels c^3, having the bars or spindles *n'*, being lenticular in form in cross-section, as and for the purpose set forth.

3. In an apparatus for galvanizing barbed wire, the wipe-box R, having the hopper F and apertures *r*, in combination with the weight or pounder *a* and means described for operating the same, as and for the purpose set forth.

4. In combination with a barbed-wire-galvanizing bath, the lantern-wheels c^3, having the bars or spindles *n'* lenticular in form in cross-section, as and for the purpose set forth.

5. In combination with a barbed-wire-galvanizing bath, the lantern-wheels c^3, having the bars or spindles *n'*, lenticular in form in cross-section, and covered or coated with a fire-resisting material, as and for the purpose set forth.

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