

(No Model.)

G. M. WRIGHT.
APPARATUS FOR GALVANIZING WIRE.

No. 518,048.

Patented Apr. 10, 1894.

Fig. 1.

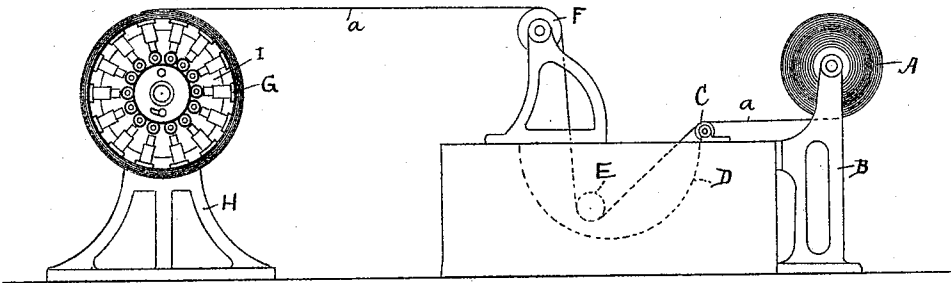


Fig. 2.

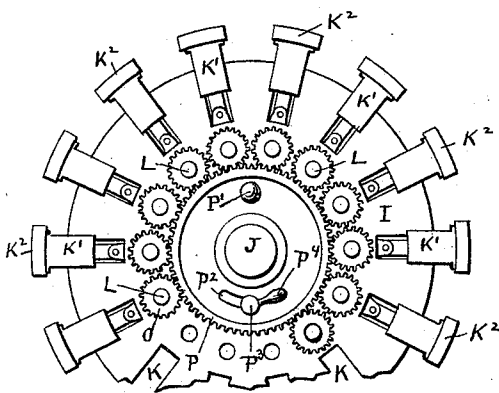


Fig. 3.

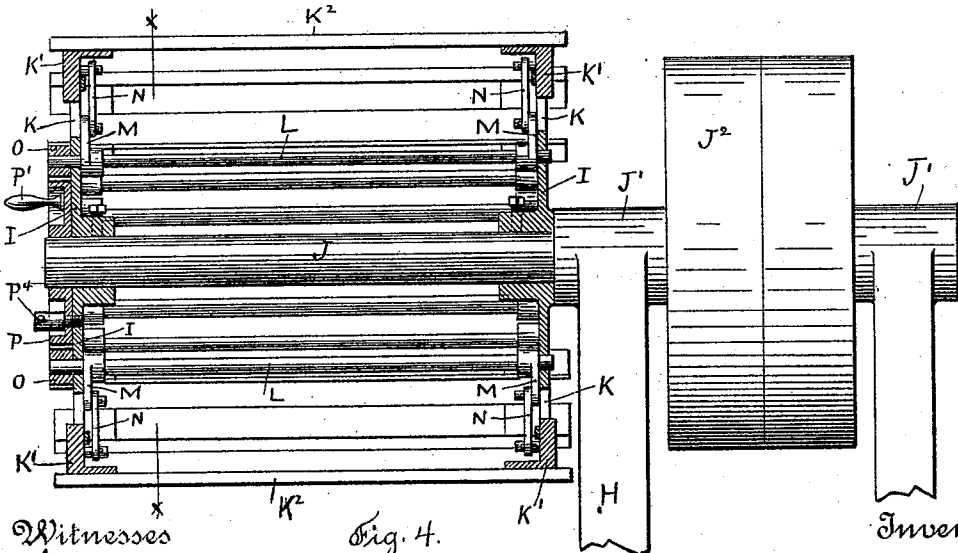
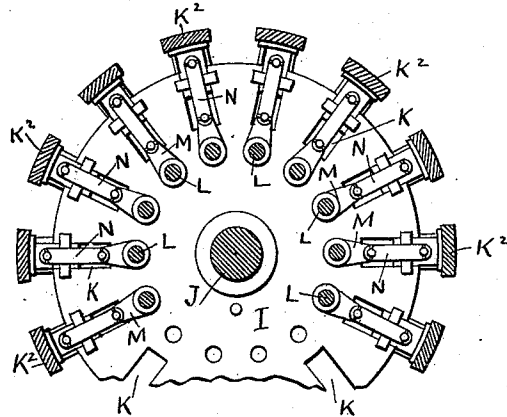


Fig. 4.

Inventor

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By his Attorney

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UNITED STATES PATENT OFFICE.

GEORGE M. WRIGHT, OF WORCESTER, MASSACHUSETTS, ASSIGNOR OF
ONE-HALF TO THE WRIGHT & COLTON WIRE CLOTH COMPANY, OF
SAME PLACE.

APPARATUS FOR GALVANIZING WIRE.

SPECIFICATION forming part of Letters Patent No. 518,048, dated April 10, 1894.

Application filed July 10, 1891. Serial No. 399,101. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. WRIGHT, a citizen of the United States, and a resident of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Apparatus for Galvanizing Wire, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same, and in which—

Figure 1, denotes a side elevation of a galvanizing apparatus embodying my invention. Fig. 2, is an end view upon a larger scale of the expansible drum, upon which the wire after being galvanized is wound. Fig. 3, represents the same part of the expansible reel as is shown in end view in Fig. 2, but in sectional view on line X, X, Fig. 4, and Fig. 4, is a central longitudinal sectional view of the expansible reel.

Similar letters refer to similar parts in the several figures.

My invention relates to a galvanizing apparatus for galvanizing wire, wire cloth, or wire netting and it consists in the construction and arrangement of the several parts as hereinafter described and specifically set forth in the annexed claims.

Referring to Fig. 1, A denotes a roll of wire, wire cloth, or netting mounted upon a suitable stand or support B, preparatory to its being galvanized.

The material to be galvanized is conducted over a small roll C, through a bath of molten zinc contained in a galvanizing pan or vat, indicated by the broken lines D.

The material to be galvanized denoted by α , is immersed in the molten metal by being conducted beneath a roll E, thence over the roll F, to a winding roll G, mounted upon the supporting stand H, the roll G, upon which the galvanized material α , is wound consisting of two heads I, I, attached to a rotating shaft J, journaled in the bearings J', J', and driven by a pulley J². The heads I, I, are provided at their edges with a series of radial recesses K, in which are fitted the sliding plates K', K', each capable of a radial sliding motion within the slots K, extending across the reel and attached to the sliding plates K', upon the opposite heads are bars K², upon

which the galvanized material is wound. Journaled in the heads I, I, are the shafts L, having attached thereto inside the heads I, the crank arms M, M, connected by links N, N, with the sliding plates K'. Attached to the shafts L, and outside one of the heads I, are pinions O, engaging a spur gear P, turning loosely upon the end of the shaft J. The gear P, is provided with a crank handle P', by which it can be conveniently rotated about the shaft J, and it also has a concentric slot P², through which passes a binding screw P³, entering the head I, and having a handle P⁴, by which the gear P, is clamped upon the head I, and held from rotation. The gear P, is rotated to bring all the crank arms M, upon the outer sides of their shafts L, and in a radial position, causing the plates K', and connected reel bars K², to be pushed outward in the position shown in Figs. 2, 3, and 4, to receive the galvanized material. The gear P, is then held from rotation by the tightening bolt P³, holding the plates K', and reel bars K², securely in position with the reel at its greatest diameter. When the coil of wire netting or cloth has been wound upon the reel G, the tightening bolt P³, is loosened and the gear P, rotated, thereby rotating the shafts L, by means of the pinions O, and drawing the plates and connected reel bars K², inward toward the center of the reel, reducing its diameter and allowing the coil of galvanized wire netting, or cloth to be drawn off over the end of the reel. The plates K', and connected reel bars K², are then expanded to their greatest diameter, as shown in Figs. 2, 3, and 4, and the operation repeated.

The use of an expansible reel, substantially as described, in connection with a delivering roll and galvanizing pan permits a large quantity of galvanized material to be wound upon the reel and readily removed by reducing the diameter of the reel.

I do not confine myself to the specific construction and arrangement of the operating mechanism by which the reel bars and their attached plates K', are moved radially in the heads I, I.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a galvanizing apparatus, the combi-

nation of the delivery roll, or mechanism by which wire, wire netting, wire cloth, or similar material, is delivered to a galvanizing vat, or pan, a galvanizing vat, or pan, through
5 which the material to be galvanized is passed, and an expansible rotating reel arranged to receive the galvanized material from the galvanizing pan, or vat, said expansible reel consisting of a rotating shaft, heads carried by
10 said shaft, reel bars extending between said heads and arranged concentrically with said rotating shaft, and actuating mechanism by which said reel bars are moved radially, substantially as described.

15 2. In a galvanizing apparatus, the combination of a galvanizing pan, or vat, a roll E within said galvanizing vat, a roll F journaled above said vat and an expansible winding reel G consisting of a rotating shaft J, heads
20 I, I, carried by said shaft, plates capable of sliding radially in said heads, and reel bars attached to said plates and extending between said heads, substantially as described.

25 3. In a galvanizing apparatus, the expansible reel upon which the galvanized material is wound, said reel consisting of the heads I, I, provided with a series of radial slots K, at their edges, sliding plates having a radial mo-

tion within said slots, reel bars connecting said sliding plates and connected actuating
30 mechanism by which said sliding plates and connected reel bars are moved in and out and the diameter of the reel varied, substantially as described.

4. The combination in an expansible reel
35 for winding galvanized wire, wire netting, or wire cloth, of the heads I, I, attached to a rotating shaft, shafts L, journaled in said heads, crank arms carried by said shafts, links connecting said crank arms with a series of plates
40 having a radial sliding motion in said heads, reel bars connecting said plates upon which the galvanized material is wound, pinions attached to said shafts L, and arranged concentrically around an actuating gear and an actu-
45 ating gear P, engaging said pinions, whereby the shafts L, are rotated and a radial sliding motion imparted to said plates and connected reel bars, substantially as described.

Dated at Worcester, in the county of
50 Worcester and State of Massachusetts, this 2d day of July, 1891.

GEORGE M. WRIGHT.

Witnesses:

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