E. H. HILL.

Apparatus for Finishing Zinc-Coated Wire.

No. 204,571. Patented June 4, 1878.

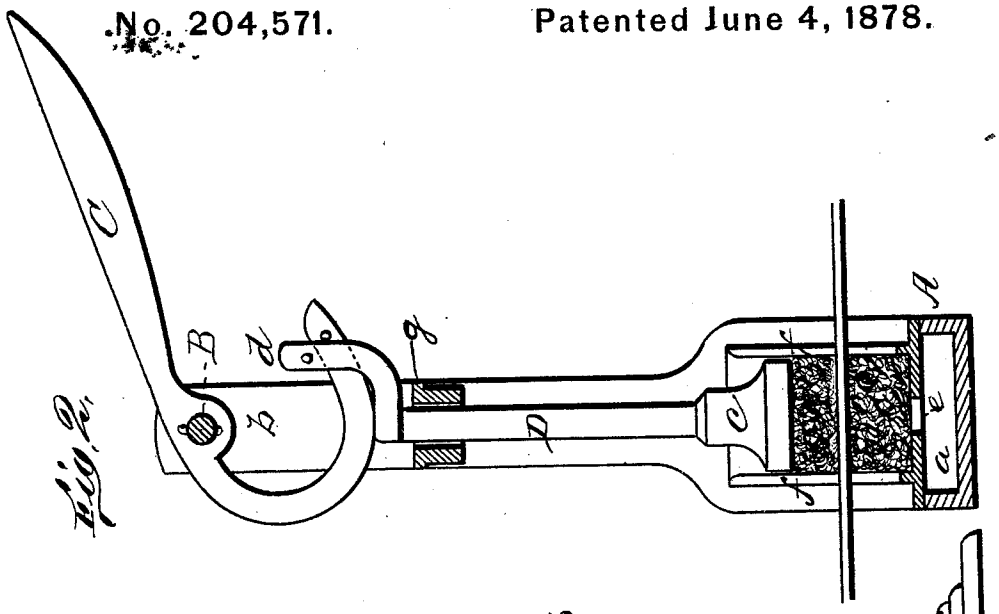


Fig. 2.

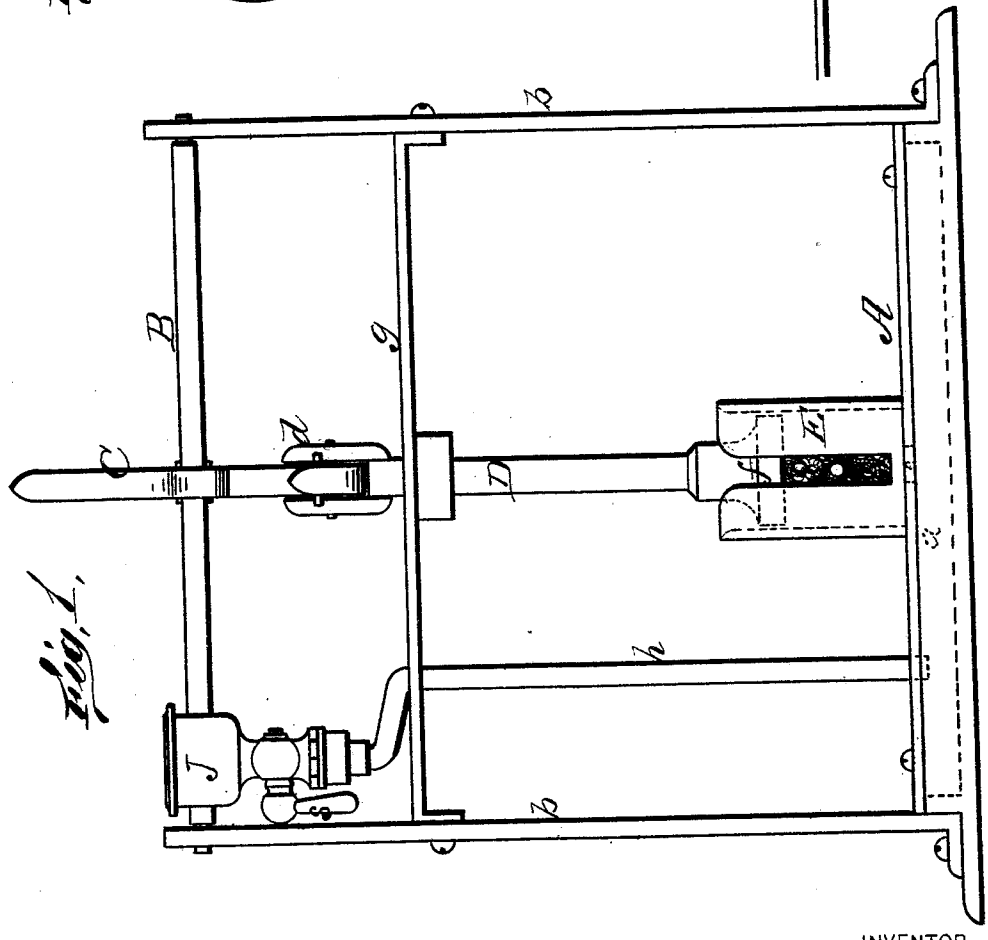


Fig. 1.

WITNESSES

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EDWIN H. HILL, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR FINISHING ZINC-COATED WIRE.

Specification forming part of Letters Patent No. **204,571**, dated June 4, 1878; application filed May 18, 1878.

To all whom it may concern:

Be it known that I, EDWIN H. HILL, of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and valuable Improvement in Apparatus for the Finishing of Zinc-Coated Wire; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved zinc-coated wire-finishing machine, and Fig. 2 is a vertical transverse section thereof.

This invention has relation to improvement in machines for finishing zinc-coated wire; and the nature of the invention consists in a cup, tube, or chamber, slotted to allow the passage of the wire on emerging from the bath of melted zinc, and designed to contain asbestus or other non-inflammable fibrous substance, compressed therein.

It also consists in combining with the said cup, tube, or chamber containing asbestus or other fibrous non-inflammable material, and slotted to receive the wire, a plunger actuated by a suitable mechanism, and pressing the packing down upon the wire in a hard, compact manner.

It also consists in combining with the said tube, cup, or chamber a chamber communicating therewith, and designed to contain oil, spirits of turpentine, or other lubricant, and a reservoir connected with the said chamber and feeding the lubricant thereto, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a preferably metallic base containing a chamber, *a*, and carrying two spaced uprights, *b*, that afford bearings in their upper ends to a shaft, B, upon which is fulcrumed a cam-lever, C. The weight end of this lever is of hook form, and engages the slotted upper end *d* of a metallic plunger, D, having on its lower end a foot, *c*, fitting snugly in a metallic cup, E, upon the base. This cup communicates at its bottom with the chamber *a* by means of an orifice or orifices, *e*, and is slotted on directly opposite sides, as shown at *f*, for the purpose of admitting the wire. This cup is partly filled with asbestus or other suitable fibrous and non-inflammable material. The end of the wire is then passed through the slots *f*, aforesaid, and covered by a suitable quantity of the said material.

By depressing the power end of the cam-lever C the plunger-head enters the cup E and forcibly compresses and hardens the packing therein. As the wire is drawn through the cup after leaving the bath of melted zinc, all surplus zinc is wiped off therefrom, and it leaves the said cup in a highly-polished, smooth, and finished condition, being also lubricated by the oil drawn up by the asbestus from the chamber *a* by capillary action.

Instead of the cam-lever above mentioned, I may use an ordinary screw to raise and depress the plunger, or any of the usual mechanical expedients commonly used for similar purposes. The plunger is guided during its movements by being passed through a brace, *g*, connecting the frame-uprights.

The chamber *a* is supplied with the lubricant used from an oil-cup, J, above it, and connected therewith by a pipe, *h*, the supply being regulated or cut off entirely by means of a stop-cock, *s*.

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

1. In a machine for finishing zinc-coated wire, the chamber, tube, or cup E, having slots *f* and designed to contain asbestus or other non-inflammable material, properly compacted, substantially as specified.

2. The combination, with the tube, chamber, or cup E, slotted to receive the wire and designed to contain asbestus, of a plunger, fitting in said tube, chamber, or cup, and a mechanism for actuating the same, substantially as specified.

3. The combination, with a chamber, cup, or tube, a plunger, and its actuating mechanism, of a chamber designed to hold oil, and communicating with the asbestus-receptacle, and an elevated oil-vessel feeding said chamber, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EDWIN H. HILL.

Witnesses:
JOHN PHILIP STYFFE,
JAMES A. LAZELL.