(No Model.)

G. W. B. ELLIS & E. L. WARREN.

WIRE CLEANING APPARATUS.

No. 304,514. Patented Sept. 2, 1884.

FIG. 1.

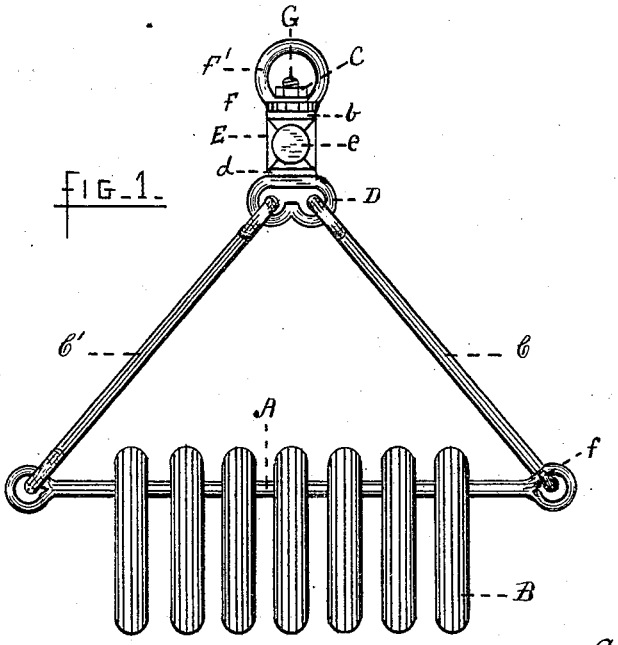


FIG. 3.

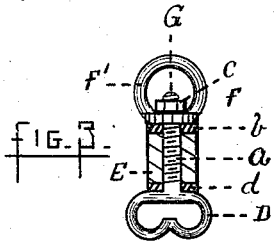
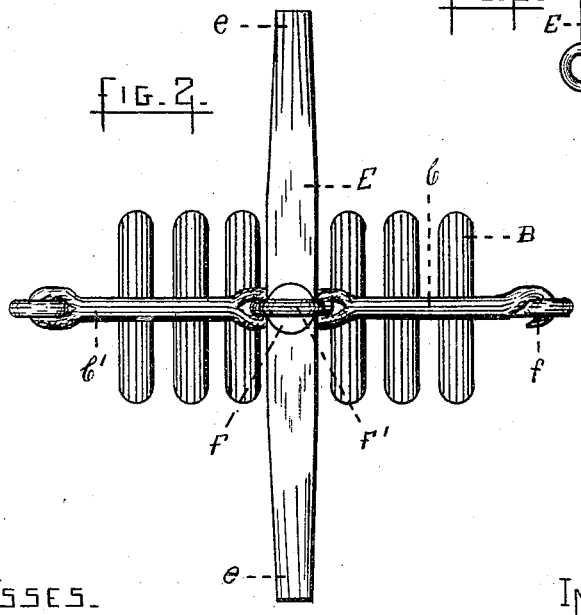


FIG. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

GEORGE W. B. ELLIS AND EDWARD L. WARREN, OF WORCESTER, MASSACHUSETTS, ASSIGNORS TO THE WASHBURN & MOEN MANUFACTURING COMPANY, OF SAME PLACE.

WIRE-CLEANING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 304,514, dated September 2, 1884.

Application filed July 30, 1883. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. B. ELLIS and EDWARD L. WARREN, citizens of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Wire-Cleaning Apparatus, of which the following is a specification.

Our invention consists in, first, a horizontal bar for supporting the coils of wire rods suspended at the ends by links from a ring or other means for attaching the hoisting-chain, the horizontal bar and the two links forming a triangle; secondly, in providing such a triangular lifting-frame with a cross-bar at the apex of the triangle, to rest on the sides of the cleaning-vat and to furnish convenient handles; and, thirdly, in the construction of the apparatus, as hereinafter described.

The accompanying drawings represent a wire-cleaning apparatus embodying our invention, in which Figure 1 is a front elevation; Fig. 2, a top view; and Fig. 3, a detached view, partly in section, showing the mode of attachment to the cross-bar, like letters referring to like parts in the several views.

A represents the horizontal bar upon which the coils of wire rods are strung, as at B. C C′ are two supporting-links; D, a ring or link at the top, to which the upper ends of the links C C′ are attached, and to which, in cases where no cross-bar is used, the hoisting-chain may also be attached. In our construction, however, we unite the upper ends of the links C C′ to an eyebolt, G, which has a screw-thread, *a*, and we pass the bolt through the cross-bar E, and on the end extending through the cross-bar we screw the nut F, to which the ring F′ is attached. This nut should be screwed down firmly upon the washer *b* on the top of the cross-bar E; and in order to prevent the ring F′ and nut F from becoming loosened by the turning of the triangular frame, we employ the check-nut *c* on the end of the bolt. We also put a washer, *d*, against the under side of the cross-bar E. This cross-bar we place at right angles to the horizontal bar A, although it may be placed parallel with the bar A, or at any intermediate angle therewith, and the ends *e e* we extend far enough to allow them to rest on the sides of the vat when the coils B are lowered into the cleaning-bath. The lower end of the link C has a hook, *f*, which allows the bar A to be unhooked at that corner of the triangle and the coils B put on or removed. We also in some cases form hooks at the lower ends of both of the links C and C′, so the bar A may be unhooked at either of the lower angles. We make the bar A and the links C C′ of copper or some metal or composition which will withstand the action of the acid bath ordinarily used for the purpose of cleaning wire rods; but we do not confine ouselves to the use of metal, as in many cases wood is preferable.

In case wood is used, instead of the eyes and hooks at the corners of the frame, we pass pins through the bars or strips of wood forming the sides of the triangle, so as to form hinged joints; or any known method of joining the angles which will allow the horizontal bar A to be detachable at one or both ends will equally serve the purpose.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a wire-cleaning apparatus, the triangular lifting-frame, consisting of the horizontal wire-supporting bar A, the links C C′, and means at the apex for attaching a hoisting-chain, as and for the purpose set forth.

2. In a wire-cleaning apparatus, the triangular lifting-frame, consisting of a horizontal wire-supporting bar, A, and links C C′, with means at the apex for attaching the hoisting apparatus, the said horizontal bar A being detachable at one or both ends from the links C C′, as and for the purpose set forth.

3. In a wire-cleaning apparatus, the combination, with the triangular frame composed of the bar A and links C C′, of a cross-bar, E, said triangular frame being connected with and suspended beneath the cross-bar, as and for the purpose set forth.

4. In a wire-cleaning apparatus, the combination, with the triangular lifting-frame, as described, of the eyebolt G, cross-bar E, nut F, with hoisting ring or link F′ attached thereto, and check-nut *c*, as and for the purpose set forth.

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Witnesses:
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