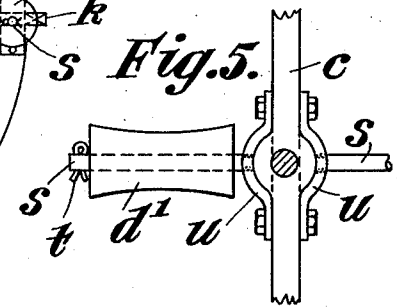
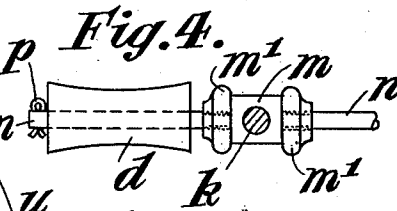
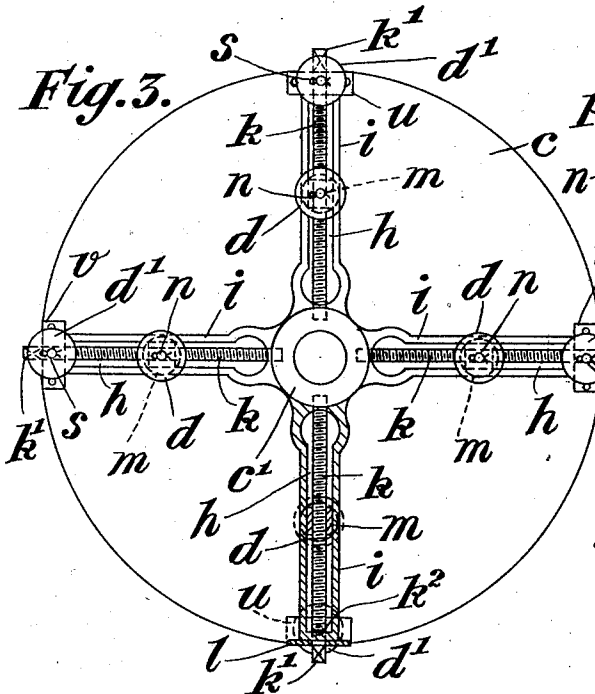
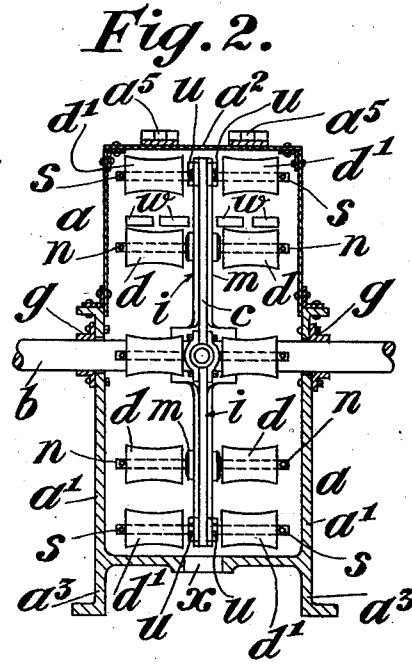
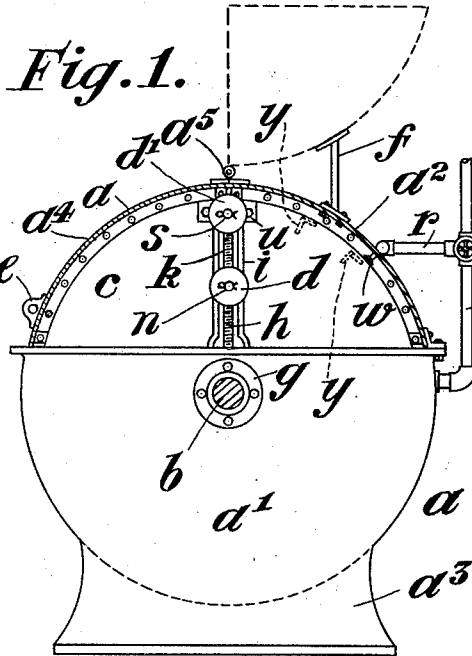


R. W. BURGESS & A. CLARK.
 APPARATUS FOR CLEANING WIRE.
 APPLICATION FILED AUG. 27, 1910.

1,016,473.

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WITNESSES
H. P. Dieterich
L. Rouville

INVENTORS
Robert William Burgess,
Alexander Clark
By Wiedersheim & Fairbanks.
 ATTORNEYS

UNITED STATES PATENT OFFICE.

ROBERT WILLIAM BURGESS AND ALEXANDER CLARK, OF GOVAN, SCOTLAND.

APPARATUS FOR CLEANING WIRE.

1,016,473.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed August 27, 1910. Serial No. 579,231.

To all whom it may concern:

Be it known that we, ROBERT WILLIAM BURGESS and ALEXANDER CLARK, both subjects of the King of Great Britain, and residing at Govan, Renfrewshire, Scotland, have invented certain new and useful Improvements in Apparatus for Cleaning Wire, of which the following is a specification.

10 This invention relates to an improved machine or apparatus for cleaning wire.

Under our invention the wire (in the form of coils or hanks) is placed on supports rotatably mounted in a suitable vessel which is supplied with the cleansing liquid. The supports, with the wire thereon, are rotated until the wire is washed and, thereafter, the cleansing liquid is run off and the supports again rotated, but at a higher speed, so as to dry the wire by centrifugal action after the manner of a hydro-extractor.

Water is or may be sprayed on to the wire while the cleansing liquid is being run off.

25 The means for supporting the wire, preferably, consists of bobbins carried at each side of a disk fixed upon a transverse and rotatable shaft mounted in the vessel. The cleansing liquid is, preferably, supplied to the vessel through a suitable inlet pipe having in conjunction therewith spraying jets and the vessel is also provided with a suitable discharge pipe or opening.

30 In order that the invention may be clearly understood, we have hereunto appended an explanatory sheet of drawings, whereon we have shown by way of example one mode of carrying out our invention.

Figure 1 is a side view of the wire cleaning machine, the upper part being in section, and the hinged cover being shown, by broken lines, in its open position. Fig. 2 is a front view of Fig. 1, but showing the hollow vessel or casing in section. Fig. 3 is an enlarged side view of the rotatable disk, part being shown in section. Figs. 4 and 5 are detail views of the wire supporting bobbins.

On the drawings, the same reference letters are used to indicate the same parts.

35 The machine comprises an outer casing or hollow vessel a , a transverse and rotatable shaft b , a disk c fixed upon the shaft, and bobbins d , d^1 , carried by the disk and upon which the wire is wound. The outer casing or vessel a is, preferably, cylindrical, as shown on the drawings, and consists of a lower part a^1 of cast iron and an upper part

a^2 of sheet metal, the part a^1 having extended sides a^3 adapted to form a pedestal or support for the machine, and the upper part a^2 having a hinged part a^4 whereby access may be gained to the interior of the vessel, the part a^4 being hinged at a^5 to the fixed part a^2 and being provided with a suitable exterior handle e . The hinged part a^4 may be supported, when open, by means of a rest f , bolted to the upper part a^2 . The transverse shaft b is supported in bearings g in the lower part a^1 of the vessel, said bearings being removable or otherwise renewable when worn. The shaft b may be driven from any suitable source of power. The disk c is keyed or otherwise secured upon the shaft and is provided with a series of radial slots h , preferably four, the disk being formed with strengthening ribs i in which the slots are formed. Each slot is provided with a screw k having a squared end k^1 for the reception of a key, the screw being supported at one end in a recess in the boss c^1 of the disk and at its other end passing through a plate l in the disk, the screw being prevented from displacement by means of a collar k^2 thereon (Fig. 3). The nut m is threaded upon each screw k , this nut working in the slot h and having side bosses or flanges m^1 (see Fig. 4) forming guides for the nut and which are internally screwed to receive projecting arms or rods n adapted to project at right angles to the plane of the disk c , and upon which may be fitted bobbins d , secured thereon by split pins p . Secured to the disk at the outer end of each slot h is a second pair of bobbins d^1 , these bobbins being fitted upon rods s (Fig. 5) and secured by split pins t , the rods s being secured to plates u bolted to the disk.

The hanks or coils of wire are placed upon the pairs of bobbins d , d^1 , and the adjustable bobbins d are then moved, by rotating the screws k , until the hanks are drawn taut between the pairs of bobbins d , d^1 . If desired, more than one pair of bobbins may be provided on each side of each radial slot h .

Water or other cleansing liquid is supplied to the vessel a by way of an inlet pipe o having a branch pipe r and a three-way cock v , the branch pipe r terminating within the vessel in a series of spraying jets w . x is a discharge opening in the vessel which is provided with a valve communicating with a discharge pipe.

Baffles y may be fitted in the vessel.

The operation of the machine is as follows:—The hanks or coils of wire are placed upon the pairs of bobbins *d*, *d'*, and are tightened by means of the screws *k* as before described. The water or other cleansing liquid is then supplied to the vessel *a* by way of the inlet pipe *o* and thereafter the disk *c* is rotated. The disk having made a suitable number of revolutions, the liquid in the vessel is run off, carrying with it the dirt washed off the coils or hanks of wire, and, as the water is being run off, the sprayer *w* is brought into operation, which tends to further wash away any loose dirt that may remain in the coils or hanks of wire. After having used the sprayer for a short time the water is turned off and the disk is thereafter made to revolve at a much higher speed, the machine thereby acting as a hydro-extractor, and the water being thrown off the wire which is dried by centrifugal action.

In lieu of water we may employ any known chemical or other cleansing agent.

Having now fully described our invention what we claim and desire to secure by Letters Patent is:—

1. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft, laterally projecting arms on the body and rollers on the arms.

2. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft, arms on the body and means for adjusting the same.

3. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft and having radial slots therein, arms projecting laterally from each side of the body, and screw means working in the slots for adjusting certain of the arms.

4. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft, fixed arms

projecting laterally from each side of the body, movable arms projecting laterally from each side of the body, rollers on the arms and means for adjusting the movable arms.

5. A machine for cleaning wire comprising, in combination, a casing for the reception of cleansing liquid, a shaft mounted in the casing, a body on the shaft and having radial slots therein, fixed arms projecting laterally from each side of the body, movable arms sliding in said slots and projecting laterally from each side of the body, rollers on the arms and means for adjusting the movable arms.

6. A machine for cleaning wire comprising, in combination, a cylindrical casing having a cover, means for admitting cleansing liquid to the casing, a shaft rotatably mounted in the casing, a body with slots therein carried by the shaft, a set of fixed arms arranged at each side of the body and projecting laterally therefrom, a set of movable arms working in said slots and arranged at each side of the body and projecting laterally therefrom and screws for adjusting the movable arms.

7. A machine for cleaning wire comprising, in combination, a cylindrical casing having a hinged cover, means for admitting cleansing liquid to the casing, means for spraying liquid into the casing, a shaft rotatably mounted in the casing, a body carried by the shaft and having radial slots therein, a series of fixed arms projecting laterally from each side of the body, a series of movable arms adapted to work in the said radial slots, means for adjusting the movable arms, rollers movably fitted upon the arms and means for holding the rollers in position on said arms.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT WILLIAM BURGESS.
ALEXANDER CLARK.

Witnesses:

SAMUEL BURGESS,
WILLIAM CARRUTHERS.