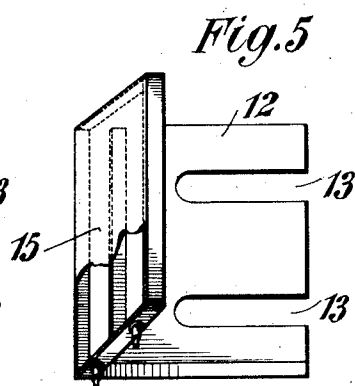
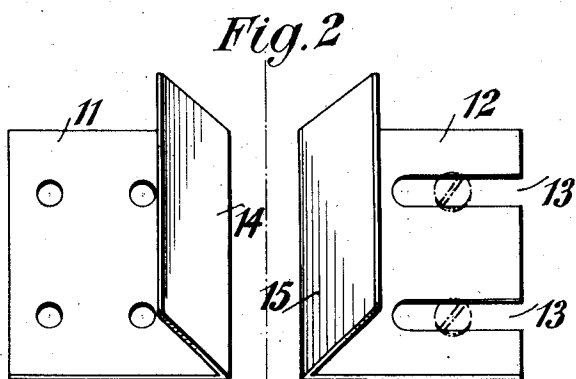
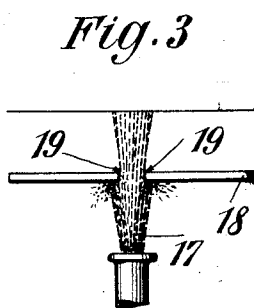
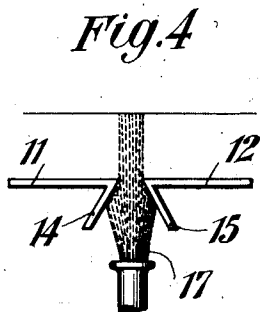
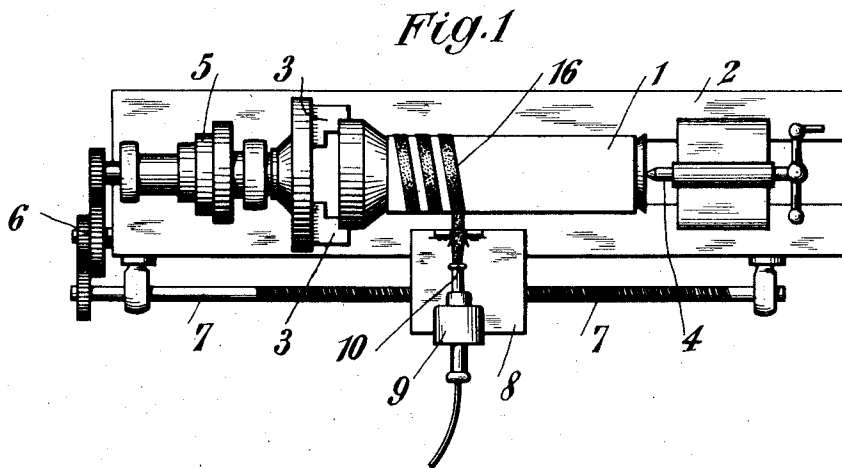


M. U. SCHOOP.
 PROCESS AND MECHANISM FOR THE PRODUCTION OF ELECTRIC HEATERS.
 APPLICATION FILED JULY 3, 1916.

1,256,599.

Patented Feb. 19, 1918.



Inventor:

Max Ulrich Schoop,
 By *Henry J. [Signature]*
 atty.

UNITED STATES PATENT OFFICE.

MAX ULRICH SCHOOP, OF HÖNGG, SWITZERLAND.

PROCESS AND MECHANISM FOR THE PRODUCTION OF ELECTRIC HEATERS.

1,256,599.

Specification of Letters Patent.

Patented Feb. 19, 1918.

Application filed July 3, 1916. Serial No. 107,411.

To all whom it may concern:

Be it known that I, MAX ULRICH SCHOOP, a citizen of the Republic of Switzerland, residing at Höngg, Canton of Zurich, Switzerland, have invented certain new and useful Improvements in Processes and Mechanisms for the Production of Electric Heaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to a process and a mechanism for the production of electric heaters by means of the known process of metallically plating or coating articles. According to my process the metallic jet is projected upon a revolving tubular body by means of a sprayer or atomizer, which is moved parallel to said body, the jet being delimited laterally by means of a guiding templet having surfaces diverging toward the sprayer.

The accompanying illustrative drawing shows by way of example one convenient mode of carrying the invention into effect. In this drawing

Figure 1 is a plan view of the mechanism; Fig. 2 shows the guiding templet on a somewhat larger scale;

Fig. 3 shows the strewing of the jet, when a templet of the hitherto known type is used;

Fig. 4 shows the sharp delimitation of the jet passing through a templet of novel construction, and

Fig. 5 shows a detail.

1 denotes a tubular body of refractory material, such as refractory clay, bauxite and the like. This body is fixed in a lathe-like device 2, it being supported at one end in a chuck 3 and at the other end by a dead center 4. 5 denotes the cone pulley adapted to transmit the drive to the chuck 3. A toothed wheel gearing 6 transmits the motion of the cone pulley 5 to a guide spindle 7, on which is movably mounted a carriage 8. On this carriage is fixed the spraying apparatus 9, which may be constructed in the same manner as the apparatus shown and described in the Patent No. 1,100,602. In front of the nozzle 10 of the spraying-apparatus 9 and at a certain distance from said nozzle and the tubular body 1 is dis-

posed a guiding templet consisting of two jaws 11 and 12. The jaw 12 (Fig. 2) has slots 13 for varying the distance between the jaws 11 and 12. Each jaw 11, 12 is provided with a surface 14 and 15, respectively, diverging toward the spraying apparatus 9. The jaws 11 and 12 may be made of steel sheets, marble, slate and the like, and their surfaces 14 and 15 are burnished and made somewhat greasy.

Upon the starting of the lathe-like device and the setting into action of the spraying-device 9 a metallic strip 16 is formed along a helical line upon the tubular body 1. If the metallic jet 17 would only pass through a guiding plate 18 (Fig. 3) of the kind used for instance in connection with sand blast apparatus, the jet would strew laterally beyond the edges 19 of the aperture of the templet 18, or in other words, the metallic strip 16 would not be delimited laterally in a sufficient sharp manner; thus the danger could arise, particularly if the pitch of the strip 16 having the shape of a screw-thread is small, that the material spread out laterally forms an electric connection between the single threads of the strip 16. This would prevent the use of the body 1 as an electric heater.

As shown in Fig. 4, the faces 14, 15 of the guiding templet shown on an enlarged scale in Fig. 2, prevent such a lateral strewing of the jet, so that the edges of the strip 16 become very sharp. By adjusting the jaw 12 it is possible to vary the width of the strip 16. By changing the ratio of the relative movement between the chuck 3 and the carriage 8 it is possible to obtain strips of a screw-thread like shape having different pitches. The greasing of the surfaces 14 and 15 has the effect to prevent the metallic parts projected upon these surfaces from adhering thereto.

According to the arrangement shown in Fig. 5, the diverging part 15 of the templet is made hollow, to permit a water-cooling of this part. This has been found to be very advantageous, as it prevents the atomized metal from depositing on these surfaces, 14 and 15.

What I claim is:

1. The process of producing electric heaters by means of the process for metallically plating or coating articles, which consists in imparting to the work-piece a revolving movement, projecting a metallic jet through

a jet restricting opening directly upon said work-piece and producing relative movement between said metallic jet and the work-piece, so that a metallic strip is formed on the work-piece along a helical line.

2. The process of producing electric heaters by means of the process for metallically plating or coating articles, which consists in imparting to the work-piece a revolving movement, projecting a metallic jet directly upon said work-piece, moving said jet along the work-piece parallel to the longitudinal axis of the latter, so that a metallic strip is formed on said piece along a helical line, and deflecting the lateral rays of the jet toward its central rays for the purpose of laterally delimiting the jet.

3. A mechanism for producing electric heaters by means of the process for metallically plating or coating articles, comprising means for fixing and revolving the piece of work, a carriage, means for moving said carriage parallel to the piece of work fixed in said first mentioned means, a spraying device fixed to said carriage, and means secured on said carriage opposite the spraying device and between the latter and the work-piece adapted to guide and delimit laterally the metallic jet.

4. A mechanism for producing electric heaters by means of the process for metallically plating or coating articles, comprising a lathe for fixing and revolving the piece of work, a guide-spindle operatively connected to said lathe, a spraying device movably mounted on said spindle, and a guiding templet arranged opposite the spraying device between the latter and the piece of work and adapted to be moved by means of said spindle at the same speed as the spraying device.

5. A mechanism for producing electric

heaters by means of the process for metallically plating or coating articles, comprising a lathe for fixing and revolving a tubular piece of work, a guide-spindle operatively connected to said lathe, a spraying device movably mounted on said spindle and a templet arranged in front of said spraying device and having two surfaces diverging toward the spraying device.

6. A mechanism for producing electric heaters by means of the process for metallically plating or coating articles, comprising a lathe for fixing and revolving a tubular piece of work, a guide-spindle operatively connected to said lathe, a spraying device movably mounted on said spindle, a templet arranged in front of said spraying device and having two surfaces diverging toward the spraying device and adjustable means for varying the distance between said diverging surfaces.

7. A mechanism for producing electric heaters by means of the process for metallically plating or coating articles, comprising a lathe for fixing and revolving a tubular piece of work, a guide-spindle operatively connected to said lathe, a spraying device movably mounted on said spindle, a templet arranged in front of said spraying device and having two surfaces diverging toward the spraying device, said surfaces being hollow and provided with means for supplying and leading off cooling water.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

MAX ULRICH SCHOOP.

Witnesses:

CARL GUBLER,
ARNOLD LEHNER.