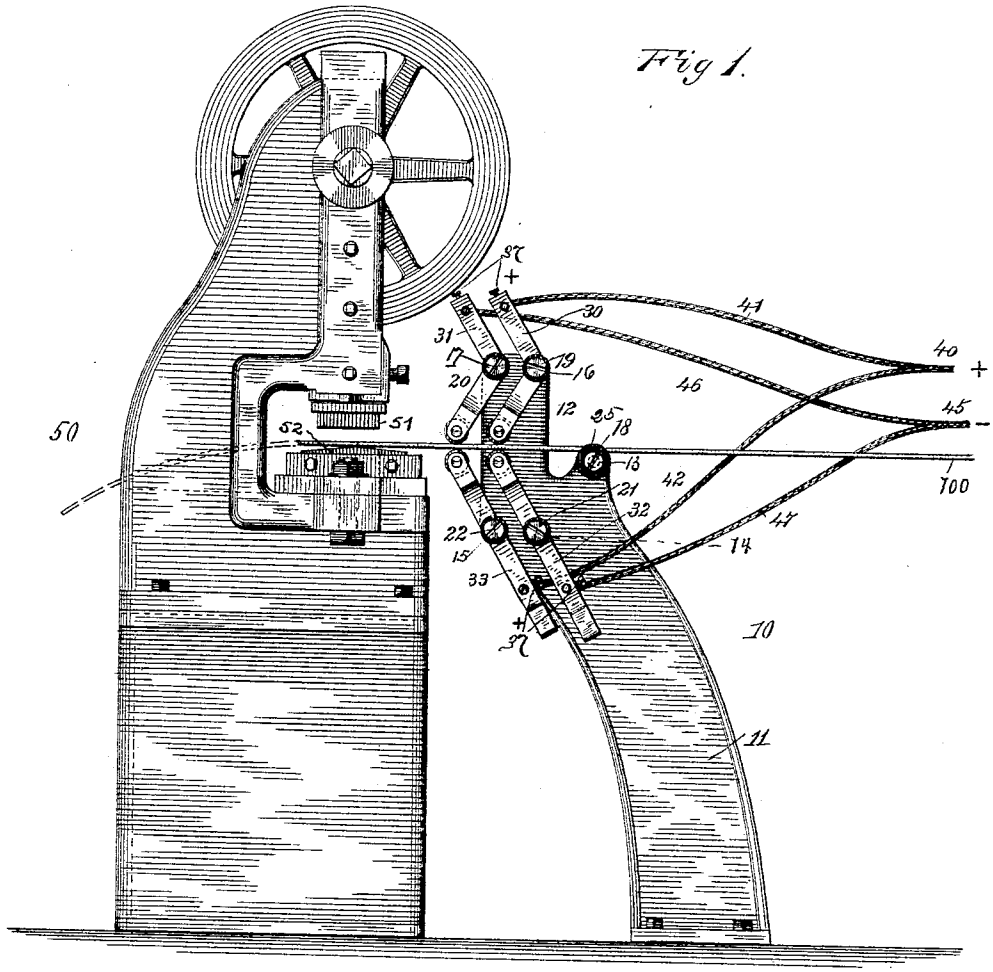
(No Model.) 2 Sheets—Sheet 1.

G. D. BURTON & E. E. ANGELL.

APPARATUS FOR MAKING BLANKS BY ELECTRICITY.

No. 496,591. Patented May 2, 1893.

Fig 1.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

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APPARATUS FOR MAKING BLANKS BY ELECTRICITY.

No. 496,591. Patented May 2, 1893.

Fig 2.

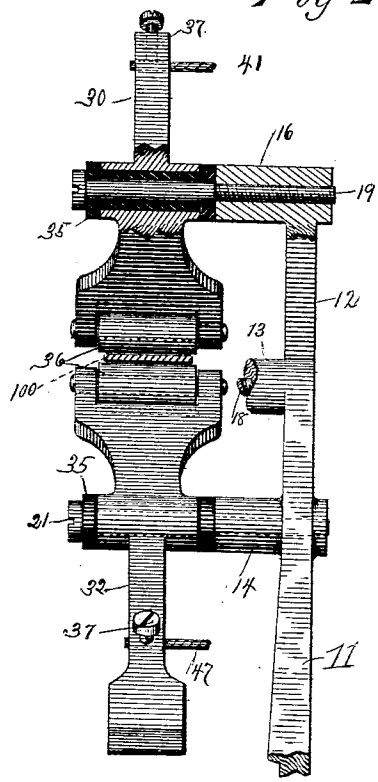

Fig 4

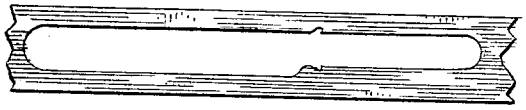

Fig 5.

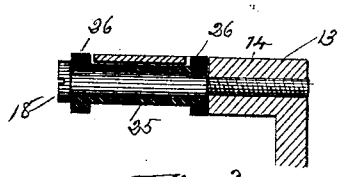

Fig 3.

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UNITED STATES PATENT OFFICE.

GEORGE D. BURTON, OF BOSTON, AND EDWIN E. ANGELL, OF SOMERVILLE, MASSACHUSETTS, ASSIGNORS TO THE ELECTRICAL FORGING COMPANY, OF MAINE.

APPARATUS FOR MAKING BLANKS BY ELECTRICITY.

SPECIFICATION forming part of Letters Patent No. 496,591, dated May 2, 1893.

Application filed February 20, 1891. Serial No. 382,236. (No model.)

To all whom it may concern:

Be it known that we, GEORGE D. BURTON, residing at Boston, in the county of Suffolk, and EDWIN E. ANGELL, residing at Somerville, in the county of Middlesex, State of Massachusetts, citizens of the United States, have invented certain new and useful Improvements in Apparatus for Making Knife and other Blanks by Electricity, of which the following is a specification.

This invention relates to the making of blanks for knife-blades, common knives, forks, spoons, scratch-awls, chisels, screw-drivers, and similar articles.

The object of the invention is to provide a simple apparatus for producing blanks of superior quality for the purposes mentioned by the aid of electricity.

In the accompanying drawings, Figure 1 represents a side elevation of this improved apparatus. Fig. 2 represents a front elevation partly in section of a portion of the electric heater constituting a part of this apparatus. Fig. 3 represents a section through the feed roll and its support. Fig. 4 represents a section of the metallic strip from which a knife blank has been punched. Fig. 5 represents a knife blank punched from said strip.

Similar numerals of reference indicate corresponding parts in the different figures.

This apparatus comprises an electric heater 10 and an ordinary stamping press 50 disposed adjacent to each other. The support of the electric heater may be in the form of a curved standard 11 attached at its lower end to the floor and provided at its upper end with an upright extension 12. A lateral arm 13 projects from said standard at its upper end, two similar arms 14 and 15 project therefrom at a point below the upper end, and two similar lateral arms 16 and 17 project from the top of the extension 12. These arms are provided with screw-threaded sockets in which headed screw-rods 18, 19, 20, 21 and 22 are secured. An insulating feed roll 25 having flanges 26 is journaled on the rod 18 and electrodes 30, 31, 32 and 33 are journaled in pairs on the other rods and insulated therefrom by bushings 35 of insulating material. The upper electrodes are extended at an angle above their pivots to cause them to press downward and the lower electrodes are weighted by their lower ends to cause them to press upward. The adjacent ends of these electrodes are provided with anti-friction contact rolls 36 composed of platinum or other suitable material, and their outer ends are provided with binding posts 37.

An electric cable 40 which may be connected to the positive pole of a dynamo is provided with branches 41 and 42 one of which is connected with the upper electrode 30 and the other with the lower electrode 33; and an electric cable 45 which may be connected to the negative pole has a branch 46 connected to the electrode 31 and a branch 47 connected with the electrode 32.

The stamping press 50 may be of any suitable construction and provided with dies 51 and 52 adapted to cut a blank of the desired shape for a metal strip.

In performing the method with this improved apparatus, a strip 100 of steel or other suitable metal, is fed by hand or mechanically onto the feed roll 25 thence between the rolls of the electrodes which automatically adjust themselves into contact with the strip and cause electric currents to pass transversely through the same. By changing the connections of the cable branches a current may be passed longitudinally of the strip through the section thereof disposed between the pairs of electrodes. The strip being thus heated to a proper temperature is fed so as to bring a new section between the electrodes and project the heated portion between the punching dies. These dies are then operated and punch out from the strip a blank of the proper shape.

A rheostat may be used as a part of the apparatus in order to determine and control the degree of heat necessary where blanks of different width and thickness are to be heated and stamped. The strip may be fed to the heater in separate pieces if desired corresponding to the blank-sections.

I claim as my invention—

The combination of a standard, two upper

lateral arms extending therefrom, two lower lateral arms extending therefrom, a lateral arm on an intermediate plane, two pivoted electrodes depending from the upper arms, two weighted electrodes pivoted to the lower arms, and extending upward therefrom, a feed roll on the intermediate arm, and electrical conductors connected with said arms and with the source of electricity.

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EDWIN E. ANGELL.

Witnesses:
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R. W. GALLUPE.