

Feb. 12, 1935.

R. I. FLEMING

1,990,936

AUTOMATIC TORCH LIGHTER

Filed Aug. 2, 1934

2 Sheets-Sheet 1

Fig. 1.

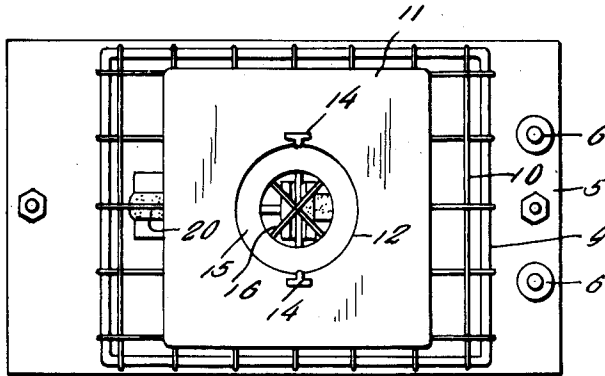


Fig. 4.

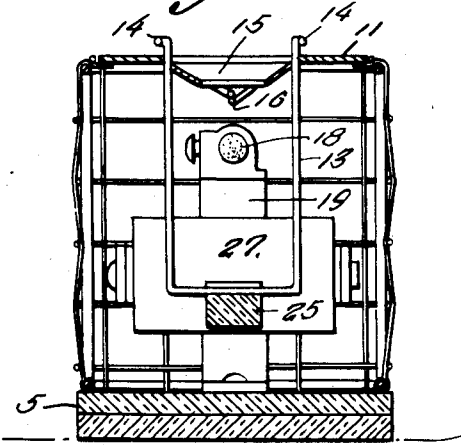


Fig. 6.

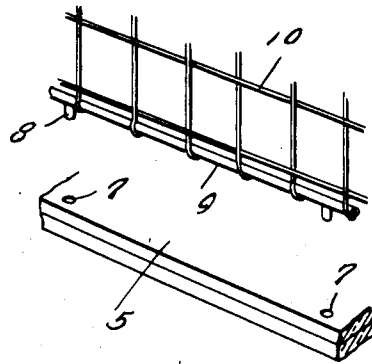
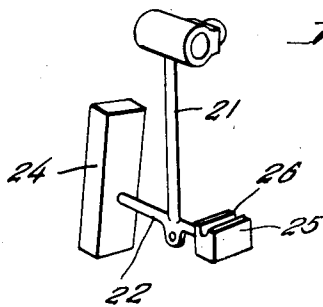


Fig. 7.



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2 Sheets-Sheet 2

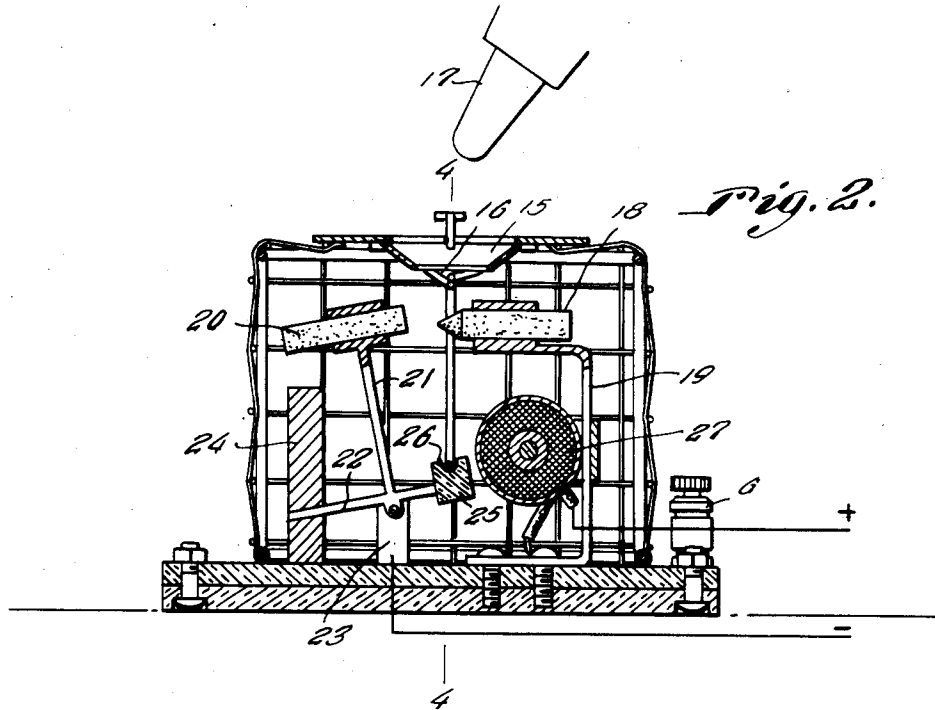


Fig. 3.

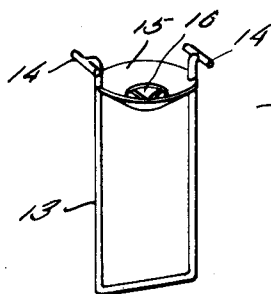
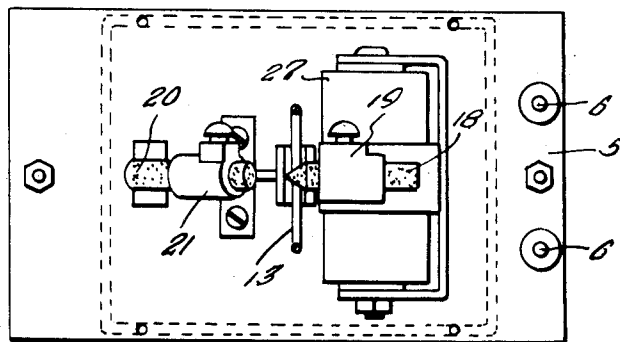


Fig. 5.

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UNITED STATES PATENT OFFICE

1,990,936

AUTOMATIC TORCH LIGHTER

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Application August 2, 1934, Serial No. 738,120

1 Claim. (Cl. 175—91)

This invention appertains to new and useful improvements in electrical ignition devices and more particularly to a novel igniter for welding torches.

5 The principal object of the present invention is to provide an igniter which will automatically become inflamed upon the torch being touched against a controlling element of the mechanism resulting in the immediate lighting of the torch.

10 Another important object of the present invention is to provide an automatic igniter of the type specified wherein the parts are of simple construction and not susceptible to the development of ready defects.

15 Other important objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:

Figure 1 is a top plan view of the device.

20 Figure 2 is a vertical sectional view through the mechanism.

Figure 3 is a top plan view of the mechanism with the cage and top structure removed.

25 Figure 4 is a vertical sectional view taken substantially on line 4—4 of Figure 2.

Figure 5 is a perspective view of the electrode driver.

Figure 6 is a fragmentary perspective view showing how the cage is assembled with the base.

30 Figure 7 is a perspective view of the movable electrode assembly.

35 Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 5 represents the base made up of separate plates of insulation.

40 Binding posts 6 are located at one end of the base and as is clearly shown in Figure 6, the base is provided with small recesses 7 for snugly receiving the teats 8 on the lower frame 9 of the cage 10 which is intended to encompass the apparatus to prevent damage thereto by heavy articles or the possibility of shock to attendants.

45 The top of this cage 10 is provided with an opening and furthermore the top of the cage is provided with a cover plate 11 having a central opening 12 therein. The cover 11 at the opening 12 is provided with notches through which ex-

tend the leg portions of the U-shaped driver 13, the upper end portions of which are provided with cross members 14 which act as stops against the top of the plate 11 when the driver 13 is depressed. This driver also consists of a frusto-conical shaped cup 15, the open bottom of which is provided with a mesh 16 so that when the torch 17 is pressed against the same, the driver 13 will be forced downwardly and upon the production of a flame, the flame can rise up through the open bottom of the cup 15 to reach the torch 17.

15 Numeral 18 represents the stationary electrode which is mounted upon the stationary bracket 19. Numeral 20 represents the movable electrode which is carried by the upstanding arm 21 on the rocker 22, which rocker is supported by the upright 23. Numeral 24 represents a weight at one end of the rocker 22 while at the opposite end of the rocker 22 is a di-electric block 25 having a groove 26 in the upper portion thereof to receive the bight portion of the driver element 13. Numeral 27 simply represents a resistance coil used in conjunction with the electrodes.

25 It can now be seen, that when the torch 17 is pressed against the cup 15, the driver 13 will be forced downwardly and tilt the rocker 22 so as to throw the electrode 20 toward the electrode 18 thus producing a flame which will immediately ignite the torch 17.

30 While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size, and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

35 Having described the invention, what is claimed as new is:

40 An igniter of the character described comprising a stationary electrode, a movable electrode, a rocker upon which the movable electrode is mounted, said rocker being provided with a weight at one end and a di-electric block at its opposite end, a tool engageable member, and a pusher element between the tool engageable element and the block.

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