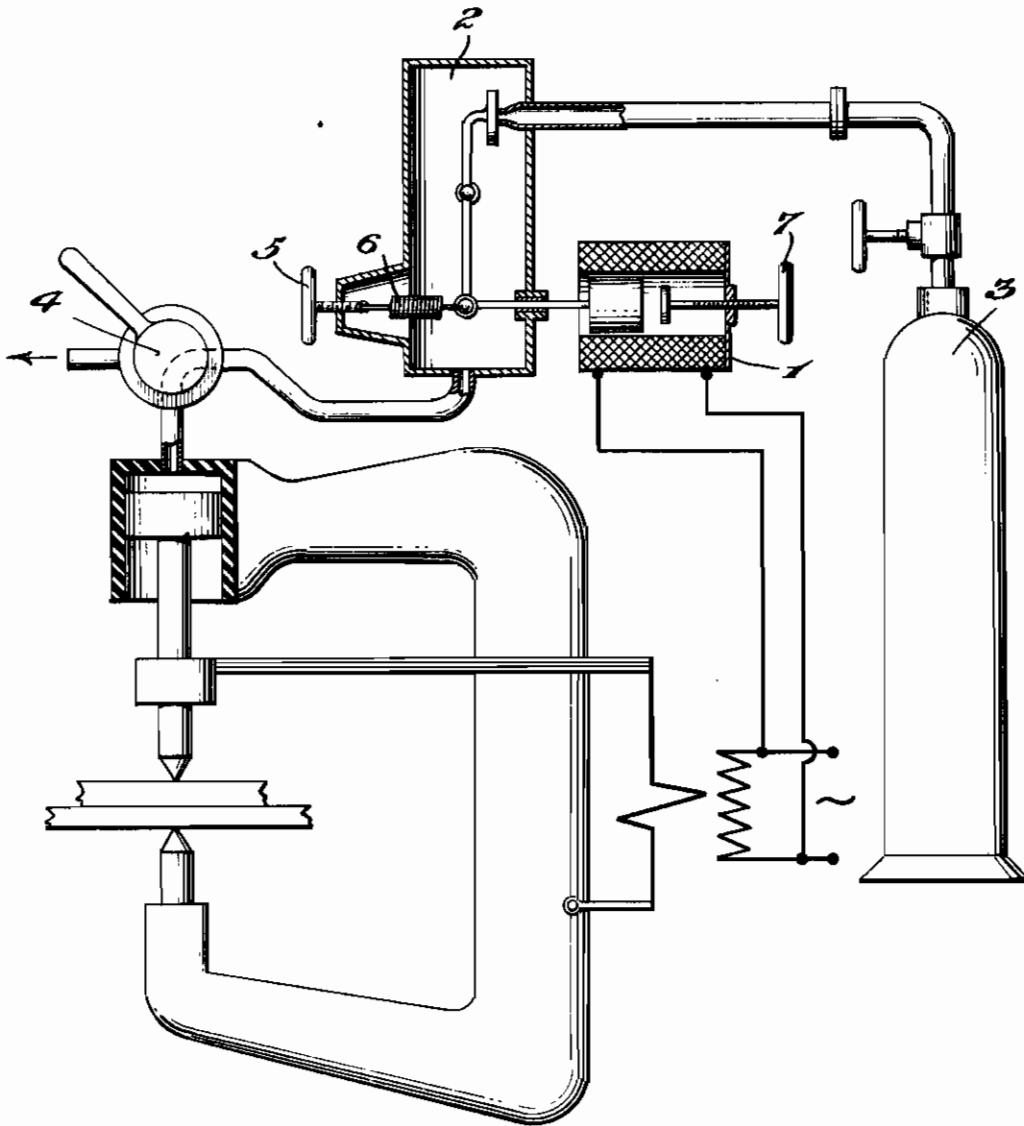


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METHOD OF AND DEVICE FOR ELECTRIC
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METHOD OF AND DEVICE FOR ELECTRIC RESISTANCE WELDING

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The invention relates to a method for electric resistance welding characterized by the fact that for the neutralization of the electro-dynamic forces, occurring in the secondary current circuit of the welding transformer, causing the lifting off of the electrodes from the work parts, there are exerted, apart from the welding pressure, additional mechanical, pneumatic or hydraulic counter forces, starting simultaneously with the welding current and acting on the electrodes and that these counter forces are released by the time switch, the welding current or another factor connected therewith. The device for the electric resistance welding is characterized by the fact that in generating the electrode pressure by compressed air the transformer tension, the transformer current or other factors affecting the welding current, for example, the control currents of the time switch, cause increase of the pressure in the compressed air lead, starting as far as possible simultaneously with the welding current, for example, by means of an electro-magnetically operated additional plunger, or by adjusting the pressure regulating valve.

It will often be of advantage, in particular in the case of already existing plants, which as a

rule do not permit of extensive rearrangements, to use for compensating the harmful forces, not electro-dynamic counter forces, but mechanical, hydraulic or pneumatic counter forces acting on the electrodes simultaneously with the starting of the welding current. Of importance is in particular that the starting takes place simultaneously, as only in that case lifting off of the electrodes from the work parts is reliably avoided. This method permits also of other possibilities of use in practical application.

The invention is elucidated in detail in the following mode of construction. The drawing shows a plant for electrical resistance spot welding. The increase of pressure in this case is taking place, for example, by means of an electromagnet 1, acting on the pressure reducing valve 2 by way of a lever gear and excited by the transformer current or the transformer tension. Part 3 represents a compressed air container, part 4 a two-way cock, part 5 a regulating screw, and part 7 regulation of the additional pressure by way of a stop. The time switch, controlling the welding current, may also be caused to act directly upon the pressure reducing valve.

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