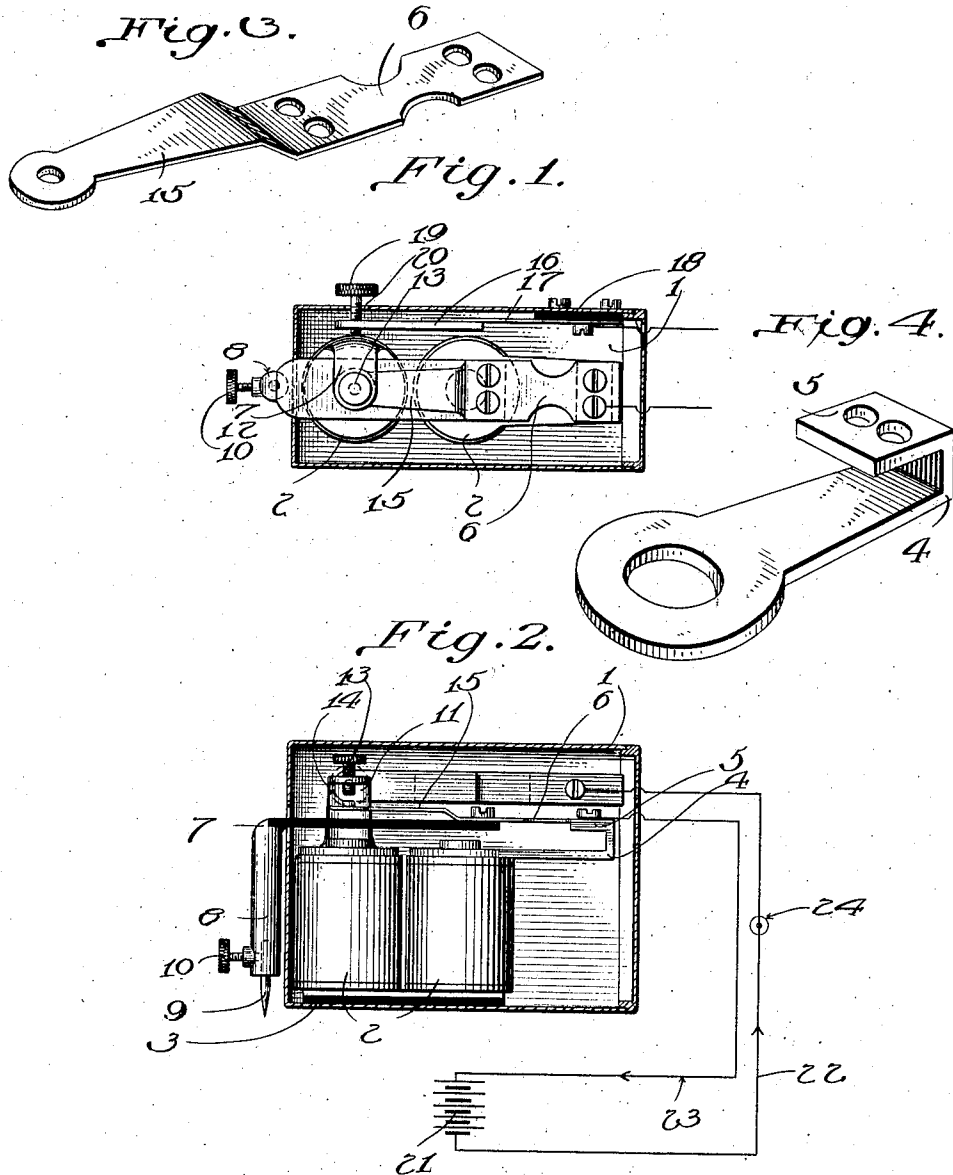


W. J. KOSTER.
ELECTRIC PAPER PERFORATOR.
APPLICATION FILED MAY 25, 1912.

1,053,301.

Patented Feb. 18, 1913.



WITNESSES
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WILLIAM J. KOSTER, OF PETERBORO, ONTARIO, CANADA, ASSIGNOR OF ONE-HALF TO
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ELECTRIC PAPER-PERFORATOR.

1,053,301.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM J. KOSTER, a subject of the King of Great Britain, residing at Peterboro, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Electric Paper-Perforators, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to perforating machines, and has for its object the production of an efficient electro-magnetic perforator, which may be conveyed from place to place, and efficiently operate upon a sheet of paper for facilitating the tearing of the paper according to the desire of the operator.

Another object of this invention is the production of a simple and efficient device which is so formed as to accommodate a small amount of space, and which may effectively operate upon a sheet of paper for allowing the same to be perforated.

With these and other objects in view this invention consists of certain novel constructions, combinations, and arrangements of parts as will be hereinafter fully described and claimed.

In the drawings:—Figure 1 is a central horizontal section taken through the casing showing the operating mechanism in top plan. Fig. 2 is a central vertical section taken through the casing. Fig. 3 is a detailed perspective of the conducting bracket which overhangs the electro-magnets and supports the perforating arm. Fig. 4 is a detailed perspective of the insulating bracket which supports the conducting bracket illustrated in Fig. 3.

By referring to the drawings by numerals, it will be seen that the device consists in a casing 1 in which casing is carried a plurality of electro-magnetic induction coils 2 supported upon an insulated base 3. An insulated bracket 4 is carried by one of the electro-magnets 2 and projects to the rear thereof, and is provided with an angle end 5, which angle end supports a vibrating conducting member 6. This conducting member 6 projects from the angle end 5, and engages the rear end of the perforating arm 7, which arm is insulated from the conducting member 6. The perforating arm 7 is provided with a downwardly extending point retaining portion 8, which carries a perfo-

rating point 9 adjustably held in engagement with the downwardly extending portion 8, by means of a thumb screw 10.

A conducting bracket 11 is supported by one of the magnetic coils 2, and is provided with an overhanging end 12 which contains adjusting screw 13. This adjusting screw 13 may be so adjusted upon the bracket 11 as to regulate the distance between the outer contact end 14 of the vibrating end 15 of the conducting bracket 6.

A conducting arm 16 is carried by a spring arm 17, which is insulated from the casing by means of an insulating block 18. This conducting arm 16 carries an adjusting screw 19 which forms a contact between the conducting arm 16 and the bracket 11 for conducting the electric current through the adjusting screw 13 to the conducting arm 16. Of course, it should be understood the vibrating end 15 is made of spring metal to facilitate the ready vibration of the end 15. Of course, it should be understood that the entire arm 7 is of such material as to be readily acted upon by magnetism, although the same is insulated from the arm 6. The adjusting screw 19 passes through an enlarged aperture 20 formed in the casing 1 for preventing the adjusting screw 19 from short circuiting upon the casing 1. The spring arm 17 is electrically connected to a battery 21, by means of a lead wire 22, and the bracket 4 is electrically connected to the battery 21 by means of a lead wire 23.

A push button 24 may be employed in the electric circuit as indicated in Fig. 2 for opening and closing the circuit or causing the perforating arm 7 to operate. It will be seen that when the circuit is closed, the current will pass from the battery 21 up through the lead wire 23, through the arm 6, through the adjusting screw 13 and back to the battery by means of the conducting arm 16, spring arm 17, and lead wire 22. Of course, the electro-magnets 2 will be energized so as to cause the arm 7 to vibrate in the usual manner which is the case with a vibrating mechanism.

From the foregoing description, it will be seen that a very efficient and durable device has been produced which may allow the perforation of a sheet of paper, and is especially adapted for use in connection with perforating wall paper of any design

required for facilitating the easy tearing thereof, especially when placing borders upon a wall.

It will be further seen from the foregoing description that a very simple and efficient device has been produced which may be conveniently carried from place to place, and which may be easily handled so as to cause the perforating point 9 to effectively operate upon the paper to be cut.

It should be understood that by having the contact formed between the conducting member 16 and the bracket 11 by means of the adjusting screw 19 the electro-magnets may be removed from the casing 1 without removing the conducting member 16.

What is claimed is:—

A paper perforating device of the class described comprising a casing, a plurality of electro-magnets carried by said casing, an arm carried by one of said electro-magnets, a conducting member carried by said arm and provided with a forwardly extend-

ing spring vibrating end, a perforating arm carried by said conducting member, a bracket carried by one of said electro-magnets and overhanging said forwardly extending spring end, an adjusting screw carried by said bracket adapted to regulate the distance between said vibrating end and said bracket, a conducting member carried by said casing and provided with an adjusting screw for regulating the contact between said conducting member and said bracket, electrical means coöperating with said last-mentioned conducting member and said bracket for causing an electric circuit to pass through said electro-magnets, and a push button associated in said electrical means.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WILLIAM J. KOSTER.

Witnesses:

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I. L. HOPWOOD.