

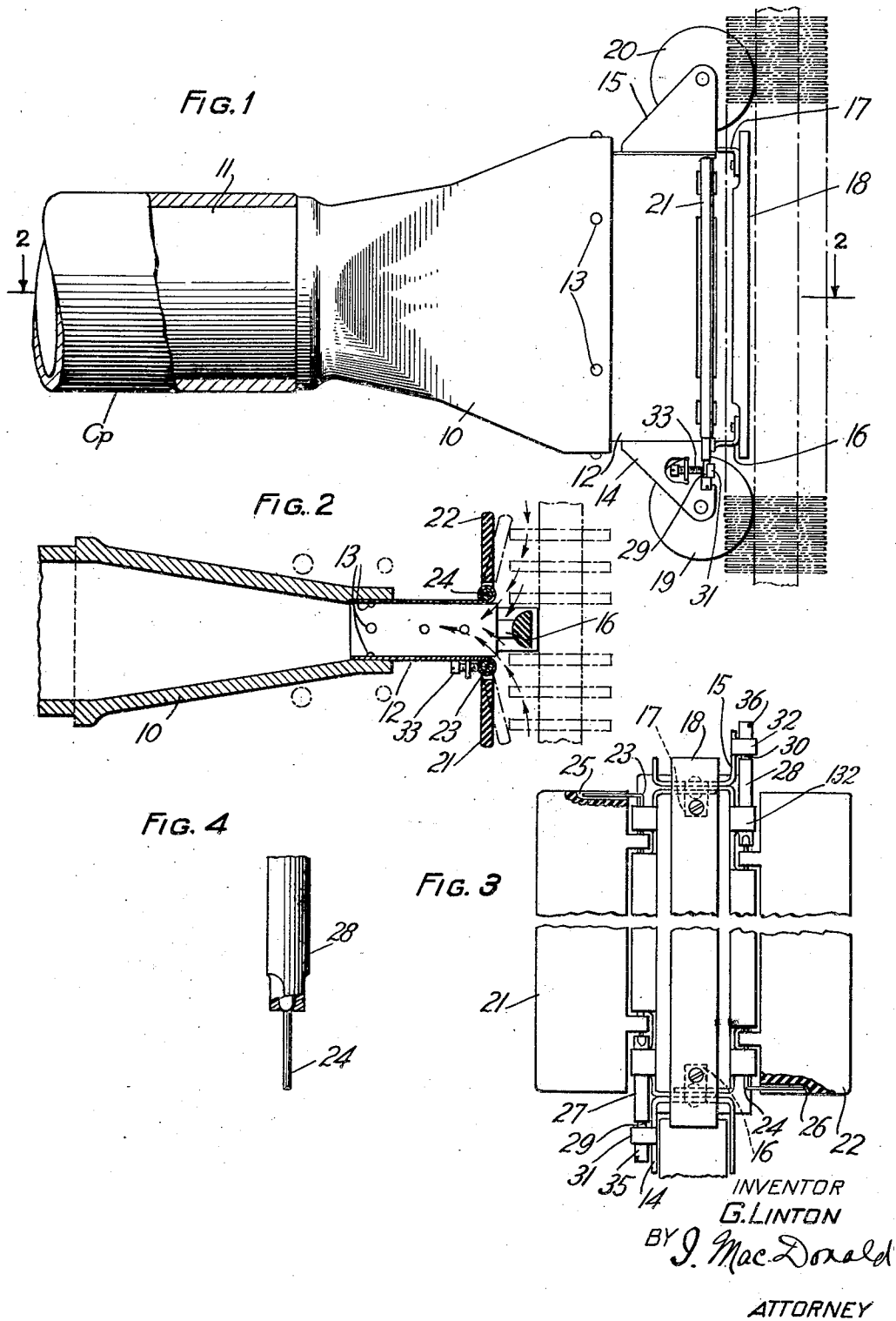
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VACUUM CLEANER ATTACHMENT

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UNITED STATES PATENT OFFICE

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VACUUM CLEANER ATTACHMENT

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This invention relates to vacuum cleaner devices and more particularly to an attachment for use in connection with such devices for cleaning banks of contacts in telephone exchanges or the like.

In telephone exchanges, terminal banks of the type disclosed in Patent 918,503 for example, are used wherein vertical rows of contacts are swept by a number of brushes mounted on power driven rods establishing telephone connections. In such switching devices, however, it is necessary to maintain the terminals of the bank free from dust in order to assure positive contact between the terminals and the brushes.

The object of this invention is the provision of a vacuum cleaner attachment which will be simple, cheap to manufacture, convenient in use and efficient in operation.

According to this invention a vacuum cleaner attachment is provided having one end portion arranged to fit the air pipe from the cleaner and its other end terminating in a reduced rectangular shape or nozzle to which a guiding member and a pair of wheels are mounted. The wheels are provided for reducing the frictional resistance of the nozzle on the bank and to assist the guiding member in holding the device in position between the rows of terminals. Flap members or plates which are hinged on each side of the nozzle cooperate with the guiding member to form an air path on each side of the nozzle opening in order to draw the air from adjacent rows of terminals thereby assuring substantially the entire removal of the dust which may have been deposited thereon. The flap members are so hinged on resilient hinge pins in a manner to permit the nozzle to pass between closely spaced brush rods of the switch when placing or removing the device before and after each cleaning operation and to automatically return the flap members to their original positions at right angles with respect to the length of the device. Means is provided which permits the adjustment of the hinge pins and the flaps carried thereby in their proper relation to the nozzle and with respect to the front ends of the terminals in the bank.

In the drawing, Fig. 1 is a side assembly view of the vacuum cleaner attachment shown in position on the terminal bank;

Fig. 2 is a sectional view taken approximately on line 2—2 of Fig. 1;

Fig. 3 is an end view showing a number of operating parts with portions cut away; and

Fig. 4 is a detailed view of the hinge pin used in this device.

In Figs. 1 and 2 of the drawing, 10 indicates a casting which is preferably made of aluminum. This casting has at one end a tubular portion 11 for interfitting with an ordinary cleaner pipe CP as shown in Fig. 1. The casting 10 terminates at its other end in the form of a rectangular opening in which a similar shaped piece of tubing 12, which is preferably made of sheet metal, is mounted and secured therein by a number of rivets 13 as shown in Figs. 1 and 2. On opposite ends of the sheet tubing 12 there are securely mounted the brackets 14 and 15 which carry the wheels 19 and 20, respectively. These brackets are provided with extensions 16 and 17 to which an insulating guide member 18 is secured. On each side of tube member 12 there are hinged on pins 23 and 24 the flap members 21 and 22. One end of each pin 23 and 24 is bent at right angles and these bent portions engage respective slots 25 and 26 in the flap members 21 and 22 as shown in Fig. 3. On the other end of each hinge pin 23 and 24 is mounted a bushing 27 and 28 which bushings are held securely thereon by pressing the ends of the bushings on flattened end portions of the hinge pins 23 and 24 as shown in Fig. 4. Bushings 27 and 28 have each a recessed portion 29 and 30 engaging arms 31 and 32 provided for holding them and the hinge pins which are carried thereby in adjusted position in their respective slots in the flaps 21 and 22. Screws such as 33 shown in Figs. 1 and 2 are provided for securing the hinge pins in adjusted positions, which adjustment can conveniently be made by turning the bushings 27 and 28 by inserting a screw driver in the slots 35 and 36 at the ends of these bushings.

In operation when the device is put in position on the bank of terminals as shown in Figs. 1 and 2, the operation of the vacuum cleaner is effective to cause the flaps 21 and 22 to automatically move against the torsional resiliency of the hinge pins into the position as shown by the dotted lines in Fig. 2 in order to cause the air to pass through the layers of terminals in the rows adjacent the guiding member 16 thus assuring substantially the complete removal of the dust particles which may have been deposited on the terminals and consequently assuring positive contacts between the brushes and the terminals in the bank.

What is claimed is:

In a vacuum cleaner attachment, a tubular member having an air inlet opening, a guiding member mounted on said tubular member on the front of said opening, a pair of wheels mounted on said tubular member at each end of said opening for permitting free longitudinal movement of said device on the surface to be cleaned, plates supported by said casing adapted to form an air path on each side of said opening, said plates normally occupying a position at right angles to the length of said tubular member, and retracting means for each of said plates.

In witness whereof, I hereunto subscribe my name this 26th day of February, 1930.

GRANT LINTON.