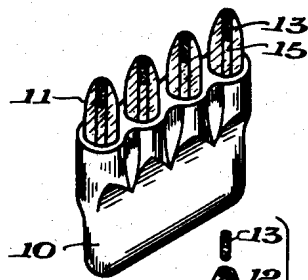


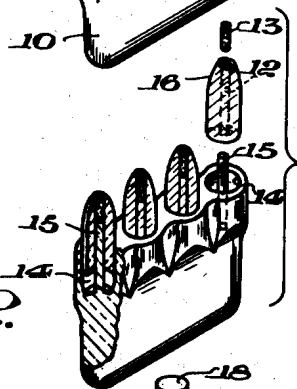
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FLINT DISPENSER  
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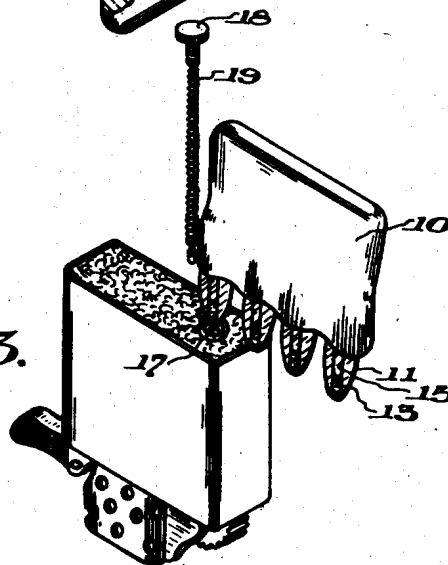
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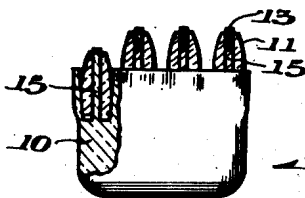
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*

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# UNITED STATES PATENT OFFICE

2,645,335

## FLINT DISPENSER

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3 Claims. (Cl. 206-42)

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This invention relates to a dispenser for the flints used in pocket lighters.

These flints are cylindrical objects of rather small size and it is therefore a tedious operation to pick one of them up with the fingers and insert it in the flint tube of a pocket lighter. This is especially true when a person is in a hurry.

The present invention provides a dispenser that may be carried conveniently in the pocket with the flints arranged in position for quick and convenient dispensing. The dispenser is provided with one or more dispensing tubes, which carry the flints in properly aligned position. These dispensing tubes are shaped to fit into the open end of the flint tube of the pocket lighter. The parts are so arranged that when a dispensing tube is placed in engagement with the flint tube a light manual pressure on the body of the dispenser pushes a flint into the flint tube. This operation can be performed very quickly and easily.

Further objects and advantages of the invention will become apparent as the description proceeds.

In the drawings:

Fig. 1 is an isometric view of a preferred form of the dispenser.

Fig. 2 is a view similar to Fig. 1 but with the left-hand end broken away to show the internal arrangement of the parts. At the right-hand end of this view the parts are shown exploded in order to more clearly illustrate the individual parts.

Fig. 3 is an isometric view showing the working body of a pocket lighter in filling position with the flint tube open and the dispenser about to be applied.

Fig. 4 is a side view of the dispenser after one of the flints has been ejected, the left-hand end being broken away to show in cross section the position of the parts after dispensing a flint.

### Construction

In the drawings, which illustrate a preferred form of the invention, reference numeral 10 indicates the body of the dispenser, which is formed to receive one or more dispensing tubes 11. In the form illustrated the body carries four of these dispensing tubes disposed in straight-line arrangement but obviously the body may contain one or more tubes disposed in any preferred arrangement.

Each of the dispensing tubes 11 is formed with a flint-receiving bore 12. The diameter of this bore is such as to receive with a snug sliding fit

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a flint 13 of standard size and shape. The dispensing tube 11 is longer than the flint so that the flint occupies only the upper end of the bore 12 as clearly shown in Figs. 1 and 2.

Each dispensing tube fits slidably into a cylindrical bore 14 formed in the body. As clearly shown in Fig. 4 the bore 14 is of less depth than the overall length of the dispensing tube 11 so that when the tube is in the outward position of Fig. 1 the bore 14 provides a space to permit inward movement of the dispensing tube.

An ejecting rod 15 is attached to the body in alignment with the flint-receiving bore 12. The ejecting rod is preferably moulded as an integral part of the body, but it may be a separate part moulded in the body. This ejecting rod is of such length that when the parts are in the loaded position of Fig. 1 the ejecting rod extends into the flint-receiving bore 12 and is in contact with the flint 13.

The outer end of each dispensing tube 11 is given a conical shape to form a nose piece 16 which is adapted to fit into the flint tube 17 of the pocket lighter.

The parts of the flint dispenser may be formed of any suitable materials. In the presently preferred form the body 10 is formed of a white opaque plastic and the dispensing tubes are formed of a red semi-transparent plastic which permits the flints to be seen. This combination gives the dispenser an attractive appearance.

### Operation

It will be evident from the description and drawings that the preferred form of the flint dispenser is a small article that may be conveniently carried in a pocket, handbag, or other convenient place.

Fig. 3 shows the flint dispenser applied to the working body of a "Zippo" (trade mark registered) type of lighter. When the lighter needs a new flint the working body is slipped from its case, and the screw plug 18 and follower spring 19 are removed from the flint tube. The flint dispenser is then placed in position with the nose piece of one of the dispensing tubes projecting into the open end of the flint tube. In this position the tapered nose piece of the dispensing tube holds the dispensing tube and the flint tube of the lighter in registering engagement during the dispensing operation.

The body of the flint dispenser is then pushed downwardly with a light pressure toward the pocket lighter. During this movement the dispensing tube 11 moves toward the bottom of its

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bore 14 permitting the ejecting rod 15 to push the flint out of the flint-receiving bore 12 into the flint tube of the lighter. During this operation the dispensing tube 11 moves from its forward loaded position of Fig. 1 to the discharged position shown at the left end of Fig. 4.

According to the provisions of the patent statutes, I have explained the principle, preferred embodiment and mode of operation of my invention, and have illustrated and described what is now considered to represent its best embodiment. However, I desire to have it understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

I claim:

1. A flint dispenser comprising a body formed with a plurality of bores, a dispensing tube slidably mounted in each of the bores, the dispensing tube having a flint-receiving bore and being of greater length than the body bore, the outer end of the dispensing tube having a conical nose piece adapted to fit within the entrance of a flint tube of a lighter, an ejecting rod fixed to the body in alignment with and projecting into the flint-receiving bore and beyond the body, the parts being

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designed to permit the dispensing tube to slide inwardly in the body bore and cause the ejecting rod to dispense a flint from the flint-receiving bore, said ejecting rod being at least as long as said dispensing tube.

2. A flint dispenser as specified in claim 1 in which the dispenser has a plurality of the said dispensing tubes in straight-line arrangement.

3. A flint dispenser as specified in claim 1 in which the ejecting rod is homogeneously integral with the body of the dispenser.

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