This invention relates to refuse receptacle holders for use in vehicles. The discarding of waste litter such as cigarettes, paper tissues, napskins and the like upon our highways and streets is attributable to some extent to the absence of suitable refuse receptacles in automobiles. motorists who are frequently careless with respect to discarding litter from automobiles would be apt to avoid littering the highways and streets with unsightly trash if such automobiles were equipped with conveniently located refuse receptacles.

The primary object of the present invention is to provide an adjustable refuse receptacle holder of the type adapted to be mounted on the dash panel of an automobile, which is designed to utilize an inexpensive paper or plastic container such as a milk carton to hold waste material discarded by motorists. My receptacle holder is adapted to support refuse receptacles of either cylindrical or rectangular cross-sectional shapes in positions within easy reach of the driver and passengers of an automobile, thereby making it convenient to dispose of waste material of various kinds without throwing it onto the highway. One of the important features of the present invention is the adjustability of the receptacle holder which makes it possible to adjust the receptacle horizontally as well as vertically.

The present invention contemplates the use of inexpensive refuse receptacles of the type made from discarded paper or plastic milk cartons which can be easily mounted on or attached to the frame and which involve very little or no expense, since they are usually an expendable item, having no particular use when emptied of their contents.

Other and further objects of my invention will be pointed out hereinafter or will be obvious to one skilled in the art upon an understanding of the present disclosure. For the purpose of this application, I have elected to show herein certain forms and details of a litter receptacle holder which is representative of this invention; it is to be understood, however, that the embodiment of my invention herein shown and described is for purposes of illustration only and that therefore it is not to be regarded as exhaustive of the variations of invention in the art.

In the accompanying drawings:
FIG. 1 is a perspective view of my invention;
FIG. 2 is a side elevational view of my invention;
FIG. 3 is a plan view of my invention;
FIG. 4 is an enlarged detail view of one of the parts of the receptacle holder assembly;
FIG. 5 is an enlarged detail sectional view of the part shown in FIG. 4;
FIG. 6 is a plan view of the receptacle embracing frame constituting a part of the assembly;
FIG. 7 is a sectional view taken on the line 7-7 of FIG. 6;
FIG. 8 is a perspective view of another embodiment of my invention; and
FIG. 9 is a perspective view of still another embodiment of my invention.

Referring to the drawings, the numeral 1 designates a spring clip formed from a strip of spring steel or suitable plastic material and comprising an upper jaw 2 connected by a curved spring 3 to a lower jaw 4, the said opposed jaws being adapted to clamp onto the lower edge portion of an automobile's dash panel A. The lower jaw 4 is connected to a downwardly extending portion 5 which extends forwardly to provide a substantially horizontal member 6 to which is pivotally connected as by a rivet or pivot pin 7 a semi-circular or other suitably shaped plate 8. The plate 8 is adapted to be pivotally adjusted horizontally about the substantially vertical pin 7 in either direction. Secured to the forward edge of the plate 8 is a transverse member 9 which is preferably, although not necessarily, of substantially cylindrical shape, the said member having an outwardly projecting axial projection 10 on each end as well as a number of radial serrations or protuberances 11. Underlying the lower jaw 4 and secured thereto as well as to the downwardly extending portion 5 is a triangular reinforcing member 12. Adjustably mounted on the transverse member 9 is a receptacle supporting frame or bracket comprising two (2) opposed arms 13, 13 which are adapted to embrace firmly the opposite sides of a four (4) sided receptacle B having an open top and a closed bottom. The receptacle B may be of any suitable shape and construction, but preferably it is made from an empty milk carton by removing as by means of a knife the top portion thereof. The upper edges of the receptacle B are preferably turned outwardly to provide a flange C for preventing the carton from slipping downwardly to a released position with respect to the arms 13, 13. The arms 13, 13 are structurally rigid, but they are sufficiently resilient to permit the adjustment thereof outwardly from their normal converging positions, as shown in FIG. 6, to generate sufficient tension therein to embrace the sides of the receptacle firmly. The forward ends of the arms are preferably turned outwardly as at 14 to engage the forward side of the receptacle. The rear ends of the arms are secured to a rigid transverse element 15 which normally extends in parallel relation to the transverse member 9. The frame is provided with two (2) structurally rigid but flexible, adjustable side members 16, 16 which normally converge rearwardly, the said members being adapted to be manually adjusted outwardly to substantially parallel positions with respect to each other so they may be tended to engage firmly with the ends of the transverse member 9. The rear end portions of the members 16, 16 are provided with openings 17 to receive the axial projections 10 of the transverse member 9, and the inner sides of the said members 16, 16 are formed with radial serrations or protuberances 18 which are adapted to engage with the radial serrations 11 of the transverse member 9 to hold the frame and the receptacle supported thereby in a suitably adjusted position. It will be noted that the frame and the receptacle may be adjusted horizontally in either direction about the vertical pivot pin 7, and that these elements may also be adjusted upwardly or downwardly about the axial horizontal projections 10 on the transverse member 9. The spring clip 1 makes possible the easy attachment of the refuse holder to or its detachment from the dash panel, or other part of a vehicle without the necessity of using screws, bolts or other means requiring a tool for its application.

In the embodiment of my invention shown in FIG. 8, the receptacle supporting frame is provided with semi-circular or arcuate shaped resilient arms 18, 18 which are adapted to embrace the sides of a cylindrical refuse receptacle D. The arms are preferably serrated at their inner opposed sides, or they may be provided with roughened strips to prevent normally the receptacle from slipping downwardly and becoming detached from the said arms. The arcuate arms 18 are structurally rigid but sufficiently resilient to permit the tensioning thereof to embrace the sides of the cylindrical receptacle firmly.
The arcuate arms 18, 18 are suitably secured to the transverse element 15 as by welding, or if these elements are constructed from a suitable plastic material, they may be formed as a unitary structure in a suitable mold.

In the embodiment of my invention illustrated in FIG. 9, the transverse element 15 is provided centrally with a spring clip 19 which comprises a depending stationary rear jaw 20 and a forward movable jaw 21. The forward jaw is connected to a curved tension spring 22 which in turn is connected to the transverse element 15. The forward jaw 21 is normally held in tensioned engagement with the rear stationary jaw 20. In this embodiment, the entire structure comprising the transverse element 15, the side members 16, the jaws 20 and 21 and the spring element 22 may be formed integrally from spring steel or a suitable plastic material. In this particular embodiment of my invention, a paper bag or other suitable receptacle or a placard or the like may be adaptably supported by the spring clip 19.

What I claim is:

1. In a refuse receptacle holder for vehicles, a resilient unitary clip formed from a strip of spring material and comprising opposed upper and lower gripping jaws adapted to engage with opposite surfaces of a dash panel, the lower jaw having a forwardly extending portion disposed in a substantially horizontal position, an adjustable plate-like member mounted for lateral swinging movement on the said portion and carrying an elongated substantially horizontal transverse element, the said element having a pin-like projection on each end thereof, and a refuse receptacle supporting frame mounted for adjustment on the horizontal element about a substantially horizontal axis and having opposed rearwardly extending resilient members normally disposed in rearwardly converging relation to each other but adapted to be adjusted outwardly to provide tension therein, the said resilient members firmly gripping the ends of the transverse element and having openings to receive the pin-like projections on the ends of the element, the said resilient members being adjustable as a unit upwardly or downwardly about a substantially horizontal axis, the frame having opposed forwardly extending converging resilient members normally disposed in forwardly converging relation to each other but adapted to be adjusted outwardly to provide tension therein, and the said arms being adapted to embrace the sides of a refuse receptacle firmly.

2. A refuse receptacle holder as set forth in claim 1, wherein serrations are provided on the contacting portions of the transverse element and the resilient rearwardly extending members of the gripping jaws to engage with opposite surfaces of a retaining member, the lower jaw having a forwardly extending portion, an adjustable member mounted for lateral swinging movement on the said portion and having openings to receive the pin-like projections on the ends of the element, and the said arms being adapted to embrace the sides of a refuse holder.

3. In a refuse receptacle holder for vehicles, a resilient unitary clip formed from a strip of spring material and comprising opposed upper and lower gripping jaws to engage with opposite surfaces of a dash panel, the lower jaw having a forwardly extending portion disposed in a substantially horizontal position, an adjustable plate-like member mounted for lateral swinging movement on the said portion and carrying an elongated substantially horizontal transverse element having a pin-like projection on each end thereof, and a refuse receptacle supporting frame mounted for adjustment on the horizontal element about a substantially horizontal axis and having opposed rearwardly extending resilient members normally disposed in rearwardly converging relation to each other but adapted to be adjusted outwardly to provide tension therein, and the said arms being adapted to embrace the sides of a refuse receptacle firmly.

4. In a holder, a resilient unitary clip formed from a strip of spring material and comprising opposed upper and lower gripping jaws to engage with opposite surfaces of a supporting member, the lower jaw having a forwardly extending portion, an adjustable member mounted for lateral swinging movement on the said portion and having openings to receive the pin-like projections on the ends of the element, and the said arms being adapted to embrace the sides of a refuse holder.

5. In a holder for a refuse receptacle, a resilient unitary clip formed from a strip of spring material and comprising opposed upper and lower gripping jaws to engage with opposite surfaces of a dash panel, the lower jaw having a forwardly extending portion disposed in a substantially horizontal position, an adjustable plate-like member mounted for lateral swinging movement on the said portion and carrying an elongated substantially horizontal transverse element having a pin-like projection on each end thereof, and a refuse receptacle supporting frame mounted for adjustment on the horizontal element about a substantially horizontal axis and having opposed rearwardly extending resilient members normally disposed in rearwardly converging relation to each other but adapted to be adjusted outwardly to provide tension therein, and the said arms being adapted to embrace the sides of a refuse receptacle firmly.

References Cited by the Examiner

UNITED STATES PATENTS

4,582,329 1/49 Archer 248—313 X
2,380,748 4/58 Fahn 224—42.46
3,019,954 2/62 Fahn 224—42.46
3,117,673 1/64 Hatfield et al. 211—99

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