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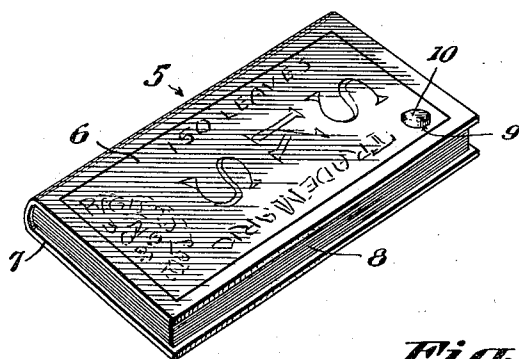
S. K. SAYLES

2,284,071

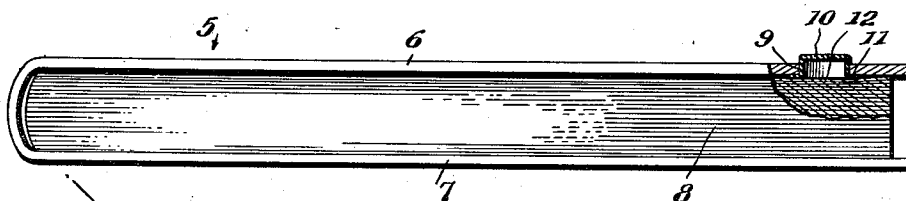
SHEET SEPARATOR

Filed Jan. 2, 1941

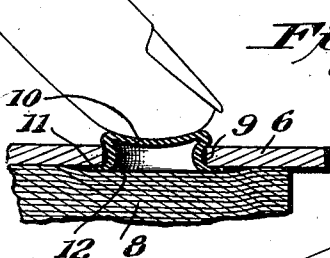
*Fig. 1.*



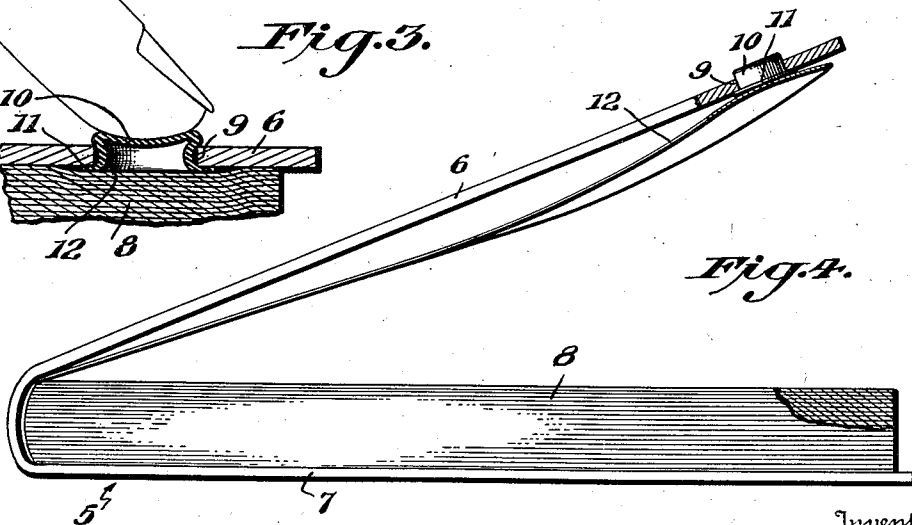
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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## UNITED STATES PATENT OFFICE

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## SHEET SEPARATOR

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## 1 Claim. (Cl. 206—57)

My invention relates to means for separating or lifting sheet material from a pack or support.

Considerable difficulty is experienced in removing or separating a single sheet of relatively thin material, for instance, paper, from a pack of the same due to the fact that the sheets are prone to adhere slightly to each other which condition often results, during ordinary removal of a sheet, in the wrinkling, tearing or defacing of the sheet or sheets.

It is one of the principal objects of my invention to overcome the aforementioned difficulties and disadvantages and to make the task of removing a single sheet from its pack a simple one.

Another object of my invention is to provide means, disposed adjacent an outermost sheet of a pack, so constructed and arranged whereby the same will, when brought into coactive engagement with the outermost sheet, facilitate the separation of the sheet from the pack without defacing any of the sheets.

A further object of my invention is to provide means of the above described character so constructed and arranged whereby the same may be operated with minimum effort on the part of the operator.

An important object of my invention is to provide a means of the character described which is simple in construction, durable in use, efficient in operation and economical in manufacture.

Other objects and advantages will be apparent from the following description, appended claim and annexed drawing.

Referring to the drawing wherein like reference characters designate like parts throughout the several views:

Figure 1 is a perspective view of a book of cigarette papers having my invention applied thereto.

Figure 2 is an end elevation, partly in section, and illustrating the book in closed position.

Figure 3 is a detail sectional view of one end of the book and illustrating a step in the operation of my invention.

Figure 4 is a view similar to Figure 2 but illustrating the cover in raised position and with the outermost sheet or leaf of the book being in coupled relationship with the cover and separated from the other sheets.

In teaching my invention, I employ a conventional type of cigarette paper, book or pack 5, the latter comprising a pair of hinged covers or members 6 and 7 respectively and between which is interposed a pack of separable cigarette papers or sheets 8.

The member 6 is formed, adjacent one of its outermost corners, with an aperture or opening 9 through which is disposed a pneumatic or vacuum cup 10, the latter being constructed of resilient material, for instance, rubber.

The material is of a sufficient resiliency to normally maintain the cup against collapse and in pneumaticity or filled with air. One end of the cup 10 is formed with a mouth or opening communicating with the chamber therein and which mouth or opening is defined by an outwardly disposed circumferential flange 11. The flange 11 is connected in appressed relation, by means of glue or the like, to the inner face of the member 6 circumjacent the aperture 9. If desired, the circumferential wall of the cup may be connected, by means of glue or the like, to the wall defining the aperture 9.

The flange 11, when the book is in closed condition, is disposed in proximity with the adjacent outermost sheet 12 of the pack 7. The opposite end of the cup 9 extends at an appreciable distance beyond the outer face of the member 8, as clearly illustrated in the drawing, whereby a finger of an operator may be readily applied thereto effecting collapse of the cup to evacuate air therefrom for establishing a coupled relationship between the outermost sheet 12 and the adjacent member 6 as hereinafter more fully described.

In operation, the finger of the operator is applied to the cup 9 and pressure exerted thereon to effect collapse of the cup and coactive engagement of the flange 11 with the outermost sheet 12 as clearly illustrated in Figure 3. When pressure is thus applied, air from the cup will be exhausted therefrom. When pressure on the cup is released, that portion of the outermost sheet 12 disposed within the flange will be drawn slightly within the mouth and with the circumjacent portion of the outermost sheet forming a seal with the flange thereby establishing coupled relationship with the respective member 6.

Movement of said member 8, away from the adjacent sheets of the pack, serves to effect separation of the outermost sheet 12 with respect to its coadjacent sheet as clearly illustrated in Figure 4 of the drawing.

While I have shown and described my invention in connection with a book of cigarette papers or sheets, it is to be understood that the same may be utilized for separating or lifting stacked sheets of any character to which it may be adaptable, for instance, sheets of carbon paper disposed in stacked relation within a container or

holder having a liftable cover or enclosing member.

Without further elaboration the foregoing will so fully explain the invention that others may, by applying current knowledge, readily adapt the same for use under various conditions of service. Moreover, it is not indispensable that all the features of the invention be used conjointly since they may be employed advantageously in various combinations and sub-combinations.

It is obvious that the invention is not confined to the herein described use therefor as it may be utilized for any purpose to which it is adaptable. It is therefore to be understood that the invention is not limited to the specific construction as illustrated and described as the same is only illustrative of the principles of operation, which are capable of extended application in various forms, and that the invention comprehends all construction within the scope of the appended claim.

What I claim is:

In a cigarette paper book, a pack of separable cigarette papers, a cover for said pack of papers including hingedly connected substantially rigid cover panels and one of said panels having an opening adjacent one corner thereof, a suction element of cup formation positioned in said opening and having the mouth thereof disposed next to the pack of papers, said suction element protruding a limited distance beyond an outer face of the last mentioned panel to be manually compressed for displacing air therefrom to bring about securing of a cigarette paper to said latter-named panel for movement therewith and away from the pack of papers, and a marginal flange formed on the suction element about the mouth thereof to provide a surface for the cigarette paper to contact and secured to an inner face of the latter-named panel to prevent displacement of the suction element from the opening.

STEWART K. SAYLES.