

July 2, 1935.

F. KÄPPLER

2,006,678

FOLDING BOX

Filed Nov. 6, 1933

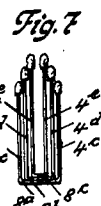
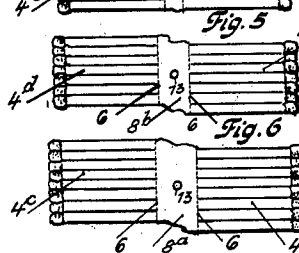
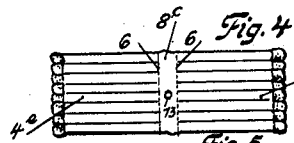
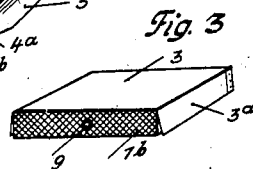
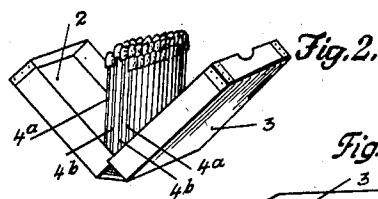
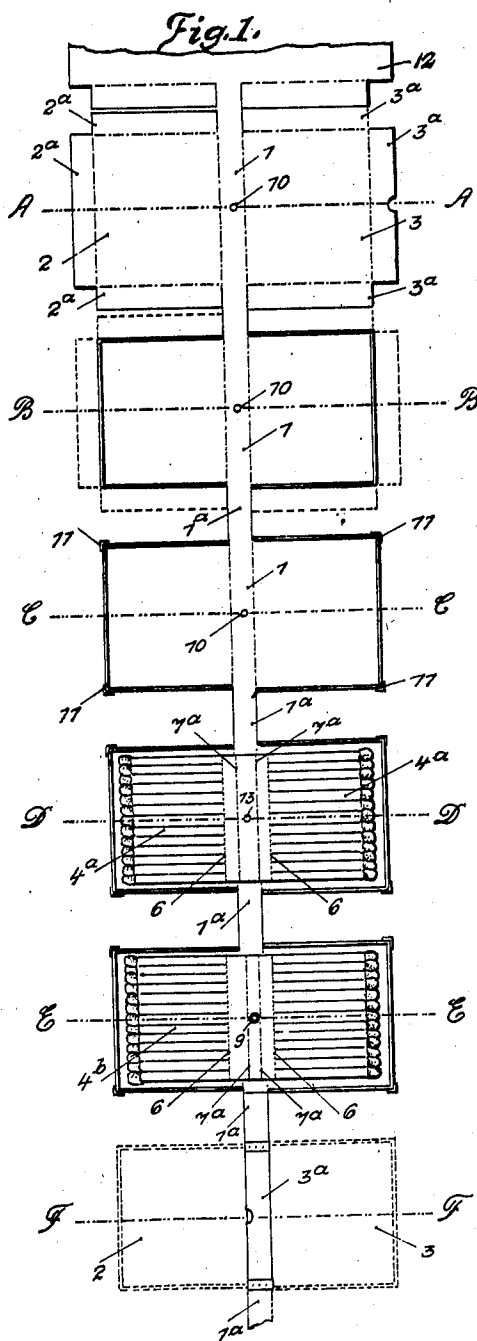


Fig. 8

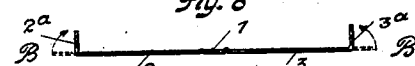


Fig. 9

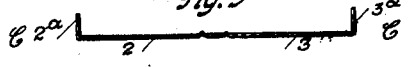


Fig. 10

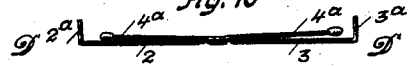


Fig. 11

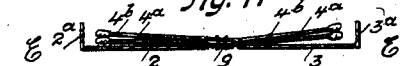


Fig. 12



Inventor:

Felix Käppler

## UNITED STATES PATENT OFFICE

2,006,678

## FOLDING BOX

Felix Käppler, Freiberg in Saxony, Germany

Application November 6, 1933, Serial No. 696,862  
In Germany December 14, 1932

3 Claims. (Cl. 206—29)

This invention relates to a folding box containing rows of attached matches made of paper, board, cardboard, wood or other suitable materials.

5 Folding and sliding boxes as well as boxlike wrappers in which strips of matches are arranged are known already, but the box according to the invention differs from these known devices insofar as on the opening of the box all matches are positively placed in a position which facilitates the removal of a match and as the closed box discloses a high degree of strength, owing to the match strips secured to the rear wall thereof.

15 By way of example, the invention is illustrated in the accompanying drawing, in which Figure 1 is a plan of an endless strip of material from which the folding box is made; Fig. 2, a diagram of the folding box with matches in opened condition; Fig. 3, a diagram of the folding box with matches in closed condition; Figs. 4, 5 and 6 are views of match strips having center pieces differing in width; Fig. 7 is a view of superposed match strips; and Figs. 8, 9, 10, 11 and 12 are cross sections of the plan shown in Fig. 1.

25 Referring to the drawing, the folding box with attached matches comprises two halves 2 and 3, which fit into one another, and the common rear wall 1 to the inside of which one or several superposed match strips 4a and 4b or 4c, 4d and 4e are secured and which is provided on the outside with the friction surface 1b. The match strips 4a and 4b are separated in lengths corresponding to a desired number of matches from an endless band on which the matches are formed in known manner on both sides thereof and, owing to the perforations 6, arranged so as to be easily detachable.

35 To secure the match strips to the folding box, they are provided with central pieces 8a, 8b and 8c differing in width or, prior to being separated from the endless band, are provided with the scratches 7a and 7b which are parallel in longitudinal direction. The spaces between the scratches 7a and 7b must differ in width and are determined by the number of superposed strips in the box and, 45 further, by the matches which, during the folding of the box to the extent of 90°, are bent up on the scores 7a and 7b or on the perforating lines 6 and form in this condition with their tips a pyramid. If the matches are bent up on the 50 perforating lines 6, parallel scores are dispensed with, which means that the undivided central pieces must then be of different width. On the undivided central pieces 7a and 7b or on the spaces between them depends the height of the 55 rear wall 1 and the side walls 2a and 3a. The

width of the box depends on the length of the matches, while the length of the box may be chosen at will and depends on the larger or smaller number of matches on the strips on both sides.

5 Figs. 1, 2 and 3 show for instance a folding box holding 52 matches. The box consists of the two halves 2 and 3 and the rear wall 1 as well as of two match strips 4a and 4b containing each 26 matches and being firmly connected with the wall 1 by a sheet metal ring 9. Owing to their central 10 members located between the scores 7a and 7b, these strips reinforce the rear wall 1 to a very high degree.

The folding boxes and match strips required 15 for the box according to the invention are made from endless strips of material in known manner. The insertion of the match strips in the box and the application of the friction surfaces on the outer rear wall as well as the closing of the filled box are effected on the endless band during the manufacture of the folding boxes and is 20 rendered possible by the fact that the waste member 1a produced during the punching of the folding box cuttings together with the rear wall 1 serves as conveyor up to the final finishing of 25 the box and is only then separated from the boxes.

For example, a folding box with matches is produced by stamping out at A from the endless band of material 12 the folding box cutting provided with the guide hole 10, bending 30 up at B the side walls 2a and 3a, as indicated in Figs. 1 and 3, and at C fitting the side walls with the sealing corners 11, whereupon the lower match strip 4a is arranged at D and the upper strip 4b at E, the holes 11 of the strip together 35 with the hole 9 of the box serving as guides and receiving the sheet metal ring during stitching for firmly connecting the strips with the rear wall of the box. The halves 2 and 3 are finally 40 folded together at F while, simultaneously, the waste member 1a is separated. The rubbing-surface on the outside of the rear wall 1 has preferably been attached prior to the stamping of the cuttings by treating the endless band 12 45 accordingly.

Folding boxes can be made from ductile material also by drawing up the side walls 2a and 3a of the halves 2 and 3 while forming slightly rounded corners, and the match strips may be secured to the inside of the rear wall 1 by gluing or stitching by means of wire staples.

I claim:—

1. A cross-sectionally rectangular match box comprising a back and flaps connected to opposite sides of the back and foldable angularly with 55

respect thereto toward and from each other, and  
a match strip having a back and match flaps  
extending from opposite sides of the back, the  
back of the match strip being secured to the  
5 inner side of the back of the box and the match  
flaps of the match strip being bendable from the  
back of said match strip toward and from each  
other so that when the box is closed the flaps  
of the box move the match flaps of the match  
10 strip therewith to a position substantially at  
right angles to the back of said match strip, said  
back of the match strip being substantially of  
the same width as the back of the box and spacing the match flaps apart.

2. A match box as claimed in claim 1, including a number of the match strips arranged with the backs thereof in superposed relation.

3. A match assembly comprising a plurality of match strips each having a back and match flaps extending from one side thereof, said match strips being arranged with the backs thereof in superposed relation and the superposed backs of which match strips diminish progressively in width as they recede from the back of the assembly so that the matches of the flaps of the several match strips are spaced apart.

FELIX KÄPPLER.