June 18, 1935. F. S. SCHADE 2,005,474

COMBINED FLY STRIP AND RULER FOR RING BINDERS

Filed Sept. 27, 1933

Fig. 1.

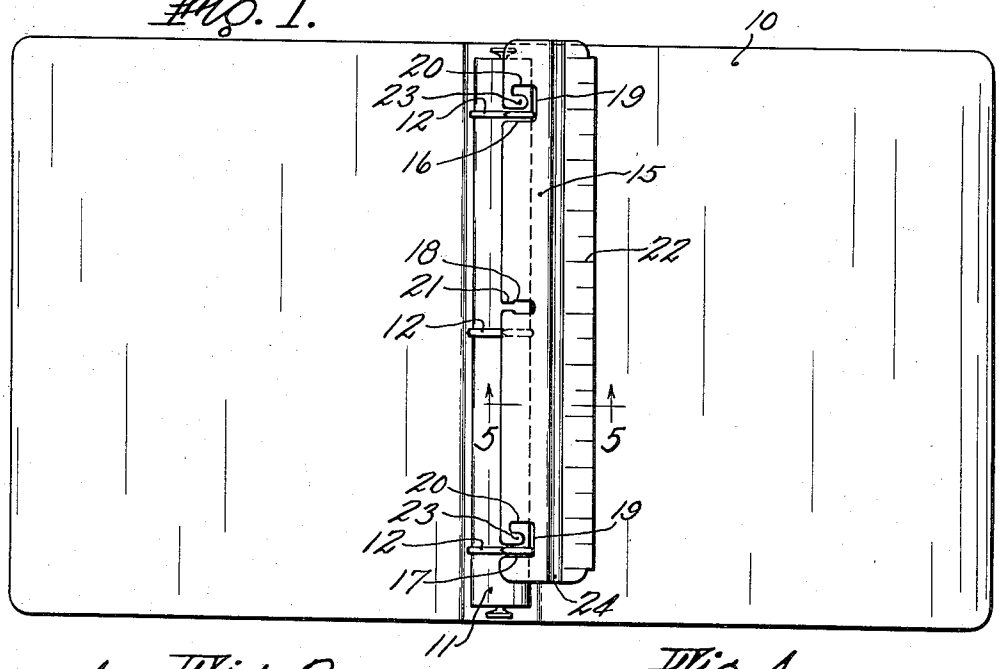


Fig. 2.

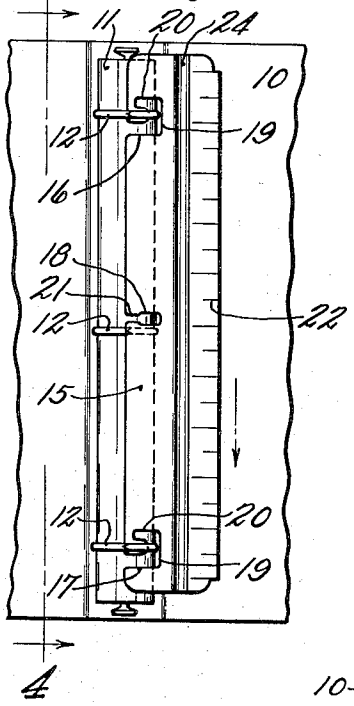


Fig. 4.

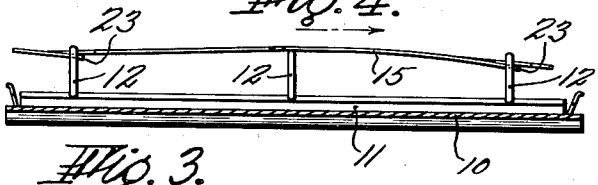


Fig. 3.

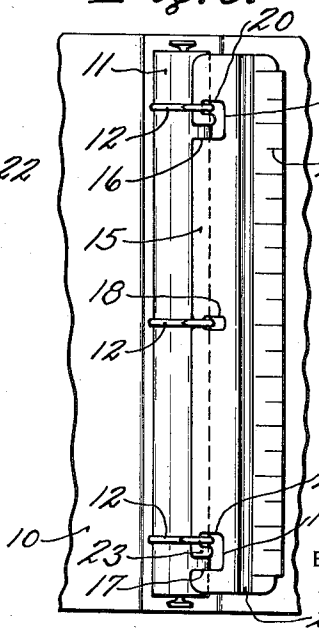
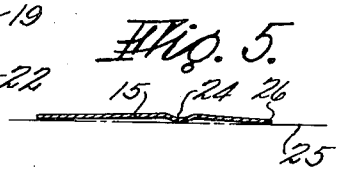


Fig. 5.



INVENTOR
FRANK STANLEY SCHADE
BY
Chapin & Neal
ATTORNEYS

Patented June 18, 1935 2,005,474

UNITED STATES PATENT OFFICE

2,005,474

COMBINED FLY-STRIP AND RULER FOR RING BINDERS

Frank Stanley Schade, Holyoke, Mass., assignor to National Blank Book Company, Holyoke, Mass., a corporation of Massachusetts

Application September 27, 1933, Serial No. 691,138

3 Claims. (Cl. 129—1)

The object of the present invention is to provide an improved fly-strip for ring binders, so constructed that it will perform its usual function as a fly-strip and may have an additional utility when removed from the binder. A fly-strip having this external utility must be capable of quick detachment from the rings of the binder while being incapable of accidental removal. Furthermore, when the external utility given to the fly-strip requires that it be flat in use, as when it is intended to be used as a ruler, provision is desirable to prevent bad effects from the natural distortion due to repeatedly putting the strip on and taking it off the rings. All of these results have been attained through a construction of great simplicity and cheapness, which will now be described.

Referring to the drawing:

Fig. 1 is a plan view of an open ring binder showing the improved fly-strip in its initial position for application to the rings;

Fig. 2 is a similar view showing the strip in a condition of partial application to the ring;

Fig. 3 is a similar view showing the strip completely applied;

Fig. 4 is a section on line 4—4 of Fig. 2; and

Fig. 5 is a section of line 5—5 of Fig. 1.

The ring binder case 10 carries the usual loose leaf structure 11 embodying rings 12, all of which may be standard and thus requires no explanation here. The fly-strip 15 is formed with a series of three slots 16, 17, and 18 entering from its rear edge. As shown in Fig. 1, these slots are not spaced the same distances apart as the rings with which they are to cooperate; so that when the strip is initially applied to the rings some but not all of the slots can be brought into alignment with their respective rings. Different arrangements will of course be made depending upon the number and spacing of the binder rings; but in the example shown, where three equally spaced rings are used, the outer slots 16 and 17 operate together and are arranged asymmetrically with respect to the single central slot 18.

Each outer slot has a cooperating longitudinal slot 19 which merges into a transverse blind slot 20 extending towards the edge of the strip, the whole forming what is known as a bayonet slot. The central slot 18 may be plain, but it is preferably formed with a slightly constricted neck 21 which gives the strip a tendency to remain engaged with the central ring while making it freely removable when desired. When the strip is to be engaged with the rings it is placed on top of them as in Fig. 1 with the slots 16 and 17 registering with their respective rings. The ends of the strip are now bent down as in Fig. 4 and the strip moved along in the direction of the arrows in that figure and in Fig. 2 to cause the longitudinal slots 19 to pass along the rings. As soon as the ends of these longitudinal slots have been reached the central slot 18 has been brought into register with the central ring and slips into place as in Fig. 3. The end rings are now located in the blind portions of the bayonet slots and the strip cannot be removed acidentally. To take it off the rings it is necessary to reverse the steps given, first flexing the strip in the middle and then shifting it endwise to bring the open portions of the bayonet slots into registry with the rings.

The structure described above has particular utility when the strip 15 is provided with graduations 22 which permit it to serve as a ruler when removed from the rings. In connection with this use one additional refinement is desirable. It will be observed from Fig. 4 that when the strip is being taken from or replaced on the rings the L-shaped portions 23 adjacent the bayonet slots are slightly distorted out of the normal plane of the strip. If the strip is taken out for use as a ruler sufficiently often to cause this distortion to become permanent the strip will not be flat upon the paper and its utility as a ruler will accordingly become lessened. To overcome this trouble it is preferred to form the strip with a longitudinally extending downwardly curved bend or rib 24. This will serve as a means for stiffening the strip longitudinally, and will also act as a rest or abutment to contact the paper surface 25 as shown in Fig. 5. It will be clearly apparent from that figure that as far as the ruler action of the strip is concerned the flatness of its contact with the paper surface is determined by its forward ruling edge 26 and by the bottom of the rib 24, avoiding any ill effect from the distortion of the rear edge. It will further be seen that the portion of the ruler between the rib and the forward edge is spaced somewhat from the paper, making it possible to bring the ruling edge into very tight contact with the paper by a slight pressure of the fingers at this point. Such a tight contact is frequently desirable in the practical use of the device, and the construction described adds greatly to its utility.

I claim:

1. A fly-strip for loose leaf ring binders adapted for use as a ruler when removed from the binder rings, said strip having graduations at its forward edge, slots at its rear edge for attach-

ment to the rings of the binder, and an intermediate longitudinal stiffening rib serving also as a bearing when the strip is pressed down upon a paper sheet for use as a ruler.

2. A fly-strip for loose leaf ring binders adapted for use as a ruler when removed from the binder rings, said strip having graduations at its forward edge, a plurality of ring receiving slots at its rear edge, some of which are shaped in bayonet lock form with a blind terminal slot, and at least one of which is substantially straight in form with a constricted opening, said straight slot and the blind portions of the other slots being spaced apart at intervals corresponding to the spacing of the binder rings, whereby the strip can be removed from the binder rings by flexing it to free the straight slot from its binder rings, sliding the strip longitudinally until the open portion of the bayonet slots are aligned with their respective rings, and then disengaging the bayonet slots from the rings, and an intermediate longitudinal rib serving as a bearing when the strip is pressed down upon a paper sheet for use as a ruler, and eliminating the effect of distorted portions of the strip adjacent the slots.

3. A fly-strip for three-ring loose leaf binders comprising a relatively stiff strip of moderate flexibility having a pair of similarly shaped L-shaped ring receiving slots each of which is formed with a blind terminal slot extending transversely of the strip, the lateral openings of said ring receiving slots and the blind terminal slots being each spaced apart a distance corresponding to the spacing of the end rings, and a straight ring receiving slot positioned between the L-shaped slots and having a restricted opening, said straight slot being so positioned as to be in registration with the central ring when the end rings are in registration with the blind terminal slots; whereby the strip may be applied to the rings by first engaging the L-shaped slots with their respective rings while the central portion of the strip is flexed over the central ring, and the constricted portion of the central slot can be snapped over the central ring when the blind terminal slots have been brought into registration with the end rings, the strip being thereby held against accidental removal.

FRANK STANLEY SCHADE.