J. A. HAGERSTROM.

DISAPPEARING EDGE STRIP FOR DRAFTING TABLES AND THE LIKE.

APPLICATION FILED JULY 12, 1918.

1,314,060.

Patented Aug. 26, 1919.

2 SHEETS—SHEET 1.

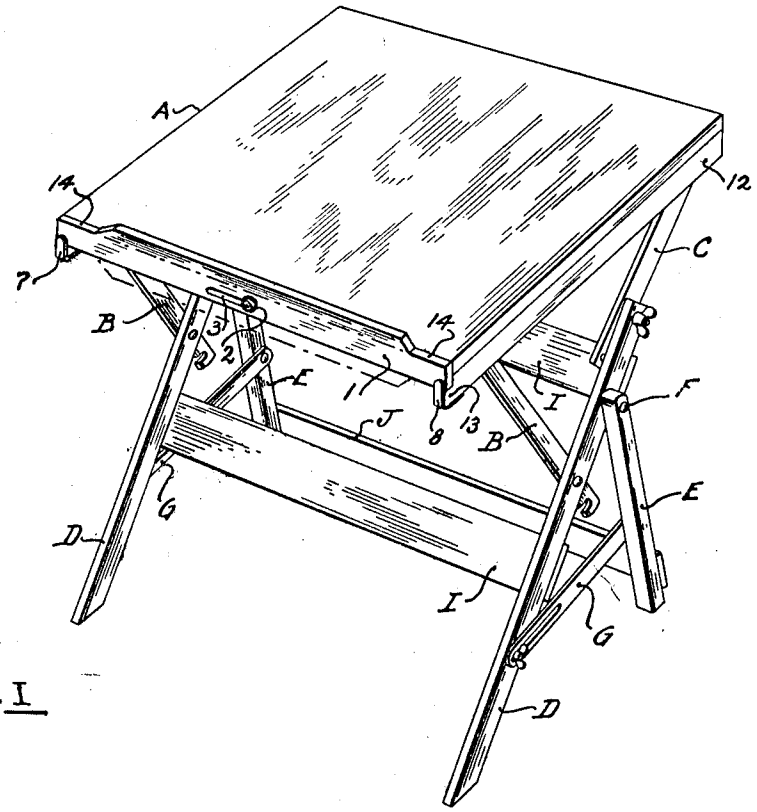


Fig. I

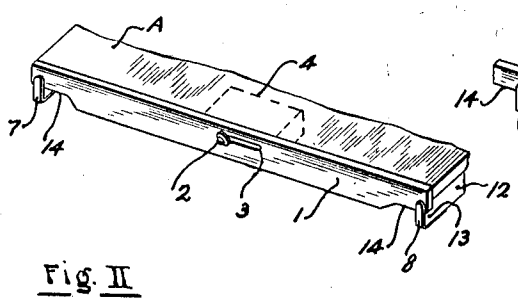


Fig. II

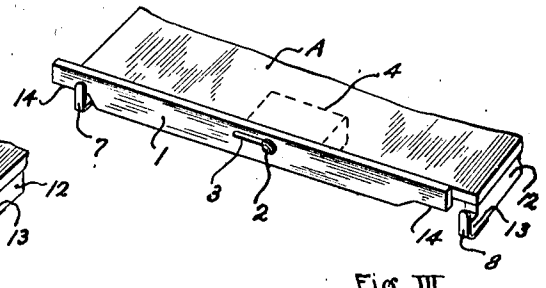


Fig. III

Inventor

John A. Hagerstrom

By his Attorney

H C Karlson

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

J. A. HAGERSTROM.

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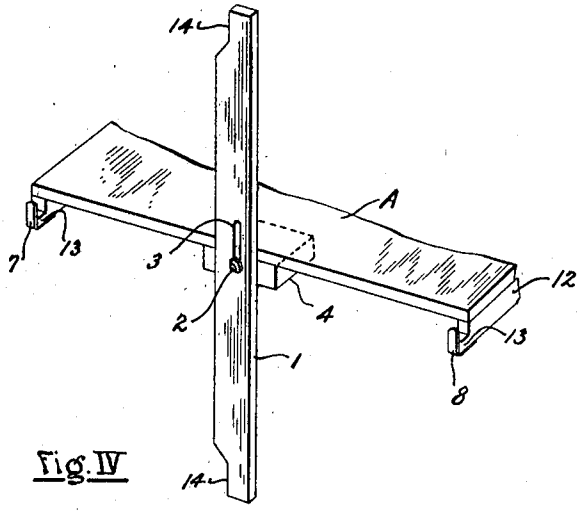


Fig. IV

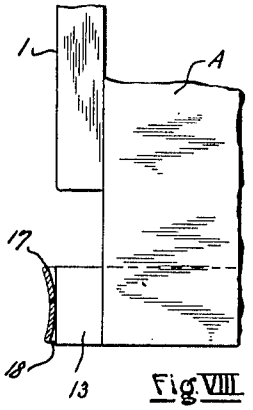


Fig. VIII

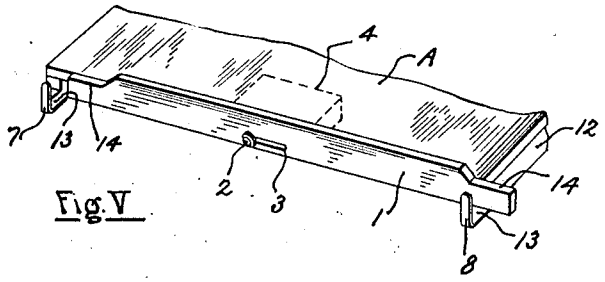


Fig. V

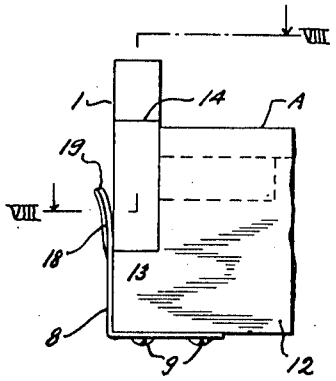


Fig. VII

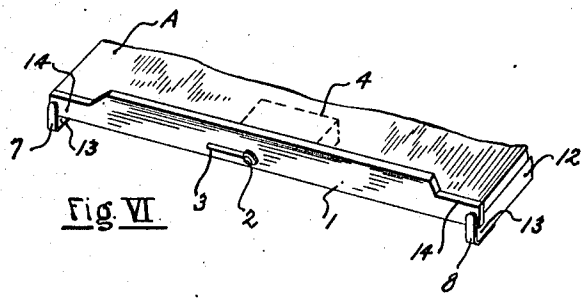


Fig. VI

Inventor
John A. Hagerstrom

By his Attorney
H C Karlson

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN A. HAGERSTROM, OF SCRANTON, PENNSYLVANIA, ASSIGNOR TO TECHNICAL SUPPLY COMPANY, OF SCRANTON, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

DISAPPEARING EDGE STRIP FOR DRAFTING-TABLES AND THE LIKE.

1,314,060. Specification of Letters Patent. Patented Aug. 26, 1919.

Application filed July 12, 1918. Serial No. 244,574.

To all whom it may concern:

Be it known that I, JOHN A. HAGERSTROM, a citizen of the United States, and a resident of the city of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Disappearing Edge Strips for Drafting-Tables and the like, of which the following is a specification.

This invention relates, in general, to a certain class of supporting surfaces, such as drafting-tables, easels, book or music holders, desks, racks, and stands, whether adjustable or permanently set in position; and it particularly appertains to retaining devices attached to the said surfaces at the edge thereof for the purpose of preventing various articles from sliding or rolling off the same.

One of the objects of the invention is to produce a supporting surface of the character described, provided with what may be termed a disappearing edge-strip, which can be used at option, in either one of two positions, to wit, by causing it to project upwardly from the surface, or else by reversing it so that the projection thereabove will no longer exist.

Another object is the provision of means whereby the said disappearing edge-strip can be changed from one to the other of its said positions without altering the length or width of the surface to which it is applied.

A further object is to provide an improved edge-strip of the nature set forth, which shall be easily attachable or detachable, positively acting, expeditiously operable, conveniently manipulated, and amenable to low cost of manufacture.

Other objects and advantages will become apparent as the specification proceeds.

Briefly outlined, the invention consists in applying to the edge of a supporting surface of the class mentioned a strip joined thereto by means of an intermediate pivot-and-slot connection, which is so placed relatively to the surface that it enables the strip to project upwardly from the edge in one position, and to be level with the same when inverted. The ends of the strip are made to engage keepers that maintain it firmly positioned along the edge after adjustment, and which are open both upwardly and laterally to permit retraction and rotation of the slotted strip on its pivot to effect a change of position. Either movement of the strip is accomplished without causing it to deviate from its own plane by the edge of the supporting surface. To reverse the strip merely involves the withdrawal and turning thereof in the opposite direction.

A practical embodiment of the invention is exemplified in the drawings hereto annexed, wherein—

Figure I is a perspective view of a drafting-table to which the improved edge-strip is attached, the latter being shown in full lines as projecting upwardly from the surface of the table, while its inversion relatively thereto is indicated by dotted lines;

Fig. II is a fragmentary perspective view, representing the forward portion of the drafting-table, with the strip turned so as to project downwardly from the edge thereof;

Fig. III is a view similar to the preceding, but shows the strip retracted from one of the keepers, prior to being swung on its pivot and disengaged from the other keeper to return it to original position;

Fig. IV is another fragmentary perspective view, illustrating the oscillation of the strip about the pivot thereof while being transferred from either one to the other of its positions, the view in the present instance particularly indicating one step in the mode of operation followed in returning the strip to the upwardly-projecting position represented in Fig. I, from the opposite position depicted in Fig. II.

Fig. V is still another fragmentary perspective view, showing the strip turned around on its pivot so that it reëngages the keeper from which it was first withdrawn in Fig. III. and now can be slid into the other one of the keepers;

Fig. VI is a view of same type as Figs. II to V, both inclusive, and shows the strip reinstated in the position which it originally occupied in Fig. I;

Fig. VII is an enlarged elevation, showing a corner of the supporting surface, with the strip thereon in an upwardly-projecting position, this figure, particularly exemplifying the preferred form of keeper used in connection with either end of the edge-strip; and

Fig. VIII is a top plan view of the same

corner of the supporting surface, with the edge-strip retracted from the adjoining keeper, the latter appearing in section, which is taken on the line VIII—VIII of Fig. VII.

The drafting-table shown in Fig. I is of typical manufacture, well adapted to the purpose which it is designed to subserve, and generally giving satisfaction. It is for these reasons that it has been selected, among a large number of other available articles of furniture, to demonstrate the application of the improved edge-strip herein disclosed. As the said drafting-table is a standard article in its line, universally known in the trade and to the craft, a few words will suffice to describe its construction.

Referring then to Fig. I, it will be seen that the drafting-table above spoken of comprises a work-surface A, of ample dimensions, and preferably of quadrangular configuration. This work-surface constitutes the table properly so called, upon which the drawing paper, bristol board, tracing cloth, or the like is spread. It can also be used as an easel upon which an artist may unfold his canvas, and recourse may be had to it for numerous other purposes of similar import. The said work-surface or table A is supported at the desired altitude through the medium of link-bars, as B and C, from a sub-structure including legs D and E, of different lengths. The link-bars are detachably connected to the longer legs D, and are longitudinally adjustable, so that the surface A may be set at any convenient incline, like that shown in Fig. I, for instance. The shorter legs E are placed at an angle relatively to the legs D, with which they have a pivotal connection, as at F, enabling the two pairs or sets of legs to be brought nearer together or put farther apart, according to the height at which the user wishes to locate the work-surface. Adjustable stays G are employed to hold the legs D and E in their respective positions after the proper elevation of the work-surface has been determined. Transversely-disposed boards or slats I and J are further utilized to impart appropriate rigidity to the legs pertaining to each pair or set, D and E. Thus constructed, the drafting-table possesses all the necessary strength, stableness, and capability of adjustment. Furthermore, it will be noted that this table is of a collapsible nature, and can be folded in a small compass, for purposes of storage and transportation.

The reference numeral 1 denotes the improved edge-strip as a whole, which appears in every figure of the annexed drawings. As will be noticed, the work-surface A or a portion thereof is also shown in all of the figures. By preference, the strip 1 is made of a length equal to the width of the surface A, although it would imply no departure from the invention to vary these dimensions in a suitable measure. In width, it is deemed preferable to make the strip exceed the thickness of the work-surface at the edge, so that when applied to the edge the strip shall admit of being positioned in such a manner as to project from the surface while directed upward and to lie flush with it when turned in the opposite direction. The position is reversible, as clearly illustrated in the drawings, the strip projecting upwardly from the work-surface in Figs. I, V and VI, and lying flush therewith in Figs. II and III.

As shown, the strip 1 is conveniently attached to the edge of the work-surface A, through the instrumentality of a pivot 2, which may consist of a screw or pin, and traverses a slot 3, formed or cut into the strip in a longitudinal direction. The pivot pin or screw may be driven into a small block 4, secured to the underside of the work-surface at the edge, approximately in the center thereof, as indicated by full lines in Fig. IV, and by dotted lines in Figs. II, III, V and VI. The pivot is centrally situated, whereas the slot 2 extends outwardly from either side thereof, depending on which direction the strip is turned. Preferably, the slot is made of such length that one of its terminals will always abut against one side of the pivot, when the strip is set in position and the ends of the latter fall in line each with one side of the work-surface. Thus the pivot not only affords a fulcrum or bearing point upon which the strip is adapted to revolve when transferred from one position to the other, but moreover constitutes an abutment which renders the strip self-adjusting, to the extent that the person setting the same in the desired position need not pay attention to any alinement of the ends of the strip with the sides of the work-surface, if aware of the fact that the mere contact of the pivot with the adjacent terminal of the slot will automatically effect the alinement.

Keepers 7 and 8 are provided for the ends of the edge-strip, forwardly of the work-surface, one at each side. These keepers may consist of angle-irons, fastened, for instance, by means of screws 9 to cleats 12 secured to the side edges of the work-surface, underneath the same. The screws are shown only in Fig. VII, as the other views are drawn on too small a scale to warrant their inclusion. Both keepers are turned in the same direction, being open upwardly and laterally, as indicated in all of the figures of the drawings. This is the preferred mode of construction, although it admits of some change or modification, as will be understood.

Taking the keepers 7 and 8 in the form

above described, it will be noted that they permit the ends of the edge-strip to pass into and across them and to be engaged thereby, upon sliding the strip so that the terminals of the slot 3 therein will alternately come into contact with the opposite sides of the pivot 2, as represented in Figs. III and V. If the strip be engaged by one keeper alone, it may be disengaged therefrom through oscillation on its pivot, as Fig. IV indicates. But, when the strip has been driven equally into both keepers, they engage it positively in such a manner that it can no longer be oscillated, which insures permanency to the position given the strip, whether it be arranged to project upward or downward from the work-surface. The front ends of the cleats 12 may be cut away or mortised, as at 13, to form smooth bearings for the opposite ends of the strip within the keepers, and thus preclude chafing. The ends of the strip are correspondingly cut down or chamfered, as at 14, which does away with projections at the corners of the work-surfaces. The slot and pivot hereinbefore described are situated in a plane intermediate of the upper and lower surfaces of the ends of the strip in its chamfered portions. The pivot and slot connection of the strip being thus located, it enables the ends of the strip to bear squarely upon the bottom part of the keepers or retainers 7 and 8, in whichever position the strip is turned, that is, as indicated in either of Figs. I, II or VI. It will be noted that the said keepers or retainers afford bearings for the ends of the strip to rest upon, and further supply means for grasping the same from opposite sides.

As an additional precaution to obviate chafing, and further to facilitate the sliding of the ends of the edge-strip into and out of the said keepers 7 and 8, the latter are beveled or turned outwardly at their free edges, as illustrated at 17, 18 and 19, in Figs. VII and VIII. Due to this construction and arrangement, the ends of the strip can at most come into contact with the central portions of the upwardly-directed ends of the keepers, on the inside.

The operation, as well as the method of application of the improved edge-strip, can easily be comprehended and followed by reference to the several figures of the drawings. As represented in Fig. I, the strip usually will be made to project upward when the work-surface is inclined from the horizontal, whereas the ordinary practice calls for the reversal of the strip, as in Fig. II, if the work-surface is brought down to a level plane. Assuming that the surface is set on an incline and that the strip has to be changed from the position indicated in Fig. II to that shown in Fig. I, the first step in the operation is to slide the strip to the left, as it appears in Fig. III. This causes disengagement of the right end of the strip from the keeper 8, while the left end thereof protrudes beyond the keeper 7. Simultaneously, one terminal of the slot 3 recedes from the corresponding side of the pivot 2, and the other terminal of the slot approaches the opposite side of the pivot. The left end of the strip can then be swung clear of the keeper 7, by turning down its right end, as shown in Fig. IV. By so doing, the strip is oscillated bodily about the pivot 2, but, as will be observed, it does not leave its normal plane. In other words, the strip in turning remains in close proximity to the edge of the working-surface, neither adding to nor subtracting from the length or depth of the latter. When the strip has been revolved fully around its pivot, the end thereof that was at the left in Figs. II and III is shifted to the right and drops into engagement with the keeper 8 on the same side, while the former right end now becomes the left and is in position for entering the keeper 7, all as represented in Fig. V. To slide the strip so that it will engage the keeper 7, and be evenly adjusted with relation to the keeper 8, is the last step in the operation. The edge-strip then assumes the position illustrated in both Figs. I and VI. To invert the strip, that is, to change it back to the position indicated in Fig. II, merely involves a reversal of the various steps in the operation as above recited.

While a certain preferred embodiment of this edge strip has been shown and described, it will be understood that changes in the form, arrangements, sizes, proportions and details thereof may be made without departing from the scope of the invention as defined by the appended claims.

Having described my invention what I desire to secure by Letters Patent, and claim, is:—

1. A guard for the edge of a work surface, consisting of a strip arranged to follow said edge and to project thereabove in one position, a substantially central pivot for said strip holding the same so that it can be inverted end for end to clear said work surface when reversed, and means adapted to maintain the strip in either of its adjusted positions.

2. A guard for the edge of a work-surface consisting of a strip arranged to lie along said edge so as to project upwardly therefrom when set in a certain position and to clear the edge upon being turned endwise in an opposite direction, means for pivoting said strip substantially nearer to one side than the other of its transverse dimension, and means for retaining the strip in either position beside the edge of the work-surface.

3. A guard for the edge of a work-surface consisting of an invertible strip having its

inner face constantly in contact with said edge and made to project for the greater part of its length either above or below said work-surface in one position, a pivot centered relatively to the ends of said strip but permanently eccentric with relation to the opposite sides thereof, said pivot enabling the strip to be turned end for end at the edge of the work-surface, and means for sustaining said strip along said edge in either one of its normal positions.

4. A guard for the edge of a work-surface consisting of a strip located longitudinally along said edge and having a slot extending lengthwise from the center toward one end thereof, and a pivot passing through the inner end of said slot to connect said strip centrally with said edge.

5. The combination with a work-surface of the character described, of a strip positioned at one edge thereof, and means enabling said strip to be inverted along said edge by rotation, said means comprising a substantially central pivot and a slot longitudinally offset with relation to the same, the arrangement being such that said slot is wholly on one side or the other of said pivot according to the position of the strip.

6. The combination with a work-surface of the character described, of a slidable strip reversible by turning it end for end along one edge of said surface, and retainers adapted to receive the ends of said strip before and after reversion.

7. The combination with a work-surface of the character described, of a slidable strip invertible by one edge of said work-surface, and retainers affording bearings for the underside and adjacent portions of said strip at the opposite ends.

8. The combination with a work-surface of the character described, of an edge-strip therefor having reduced end portions, a movable connection for said strip located substantially midway between said end portions in a transverse direction, and means affording an abutment for said reduced portions after said strip has been moved on its said connection.

9. The combination with a work-surface of the character described, of an edge strip therefor having reduced terminals, said strip being provided with a longitudinal slot offset from the center thereof, a pivot engaging said slot in such a manner as to enable the strip to slide thereon to a point centrally situated relative to said terminals, the latter extending equal distances on the opposite sides from said pivot in a transverse direction, and means for maintaining the terminals in their assigned positions.

10. The combination with a work-surface of the character described, of a strip having terminals reduced in depth at one edge thereof, a slot and pivotal connection located on said strip in a median plane between the opposite edges of said terminals, and retainers positioned to receive the terminals and support the same from either edge.

JOHN A. HAGERSTROM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."