Sept. 9, 1947. A. P. DE SANNO, JR 2,427,090

COATED ABRASIVE STRIP HOLDER

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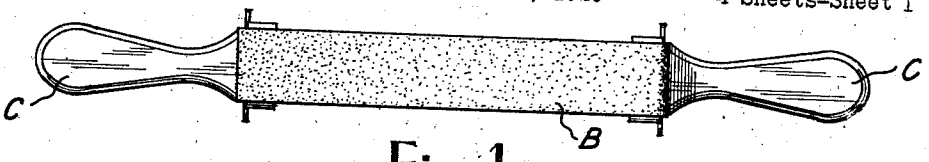


Fig. 1

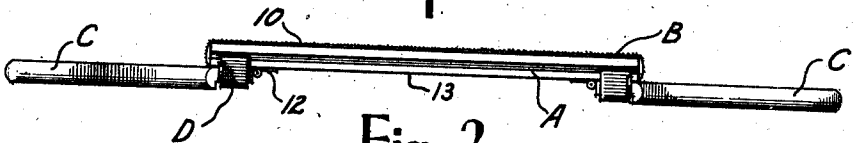


Fig. 2

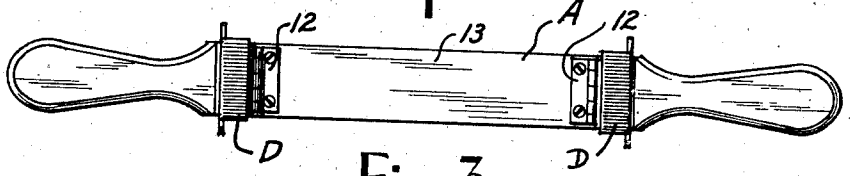


Fig. 3

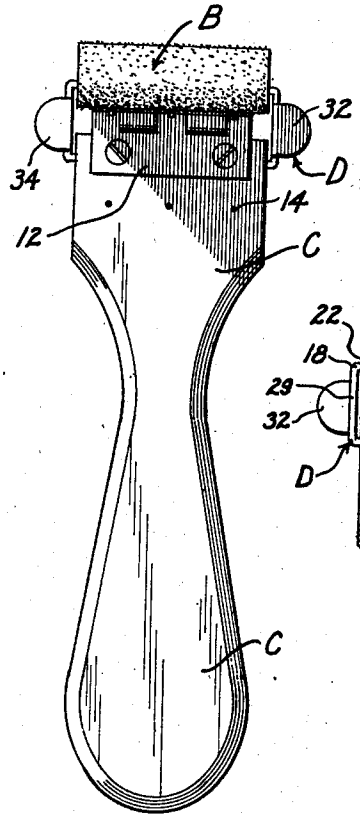


Fig. 5

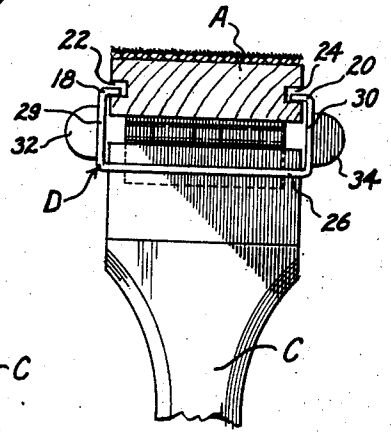


Fig. 6

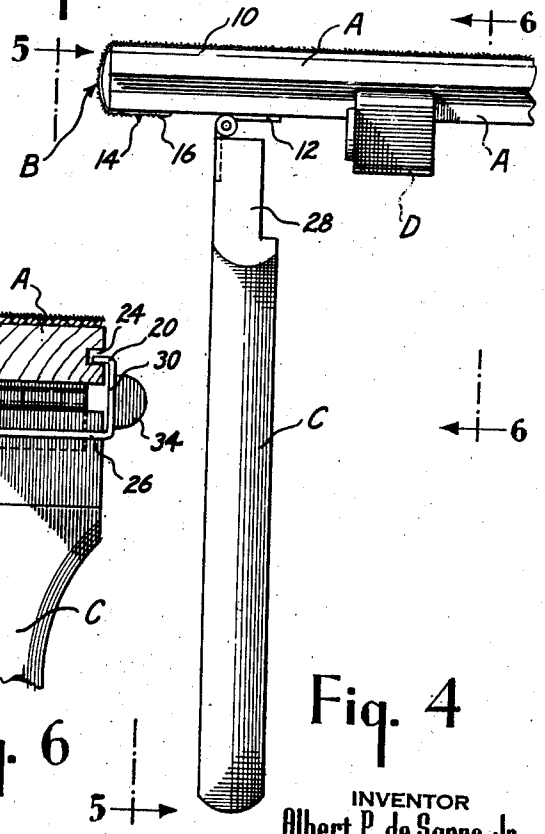


Fig. 4

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COATED ABRASIVE STRIP HOLDER

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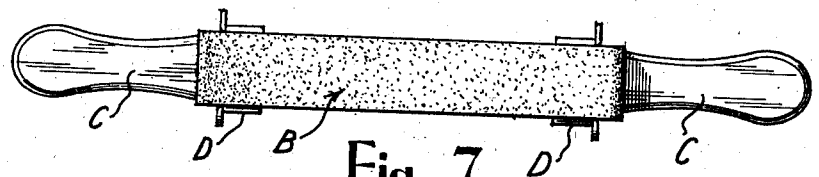


Fig. 7

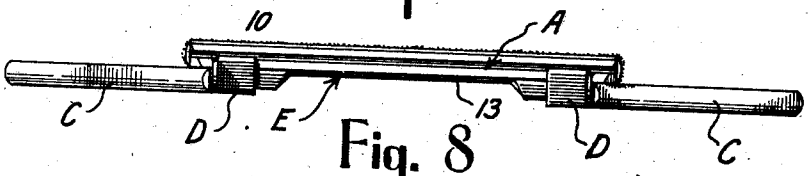


Fig. 8

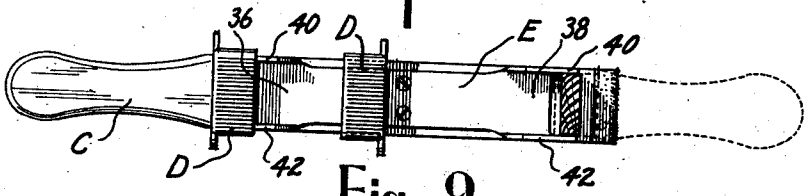


Fig. 9

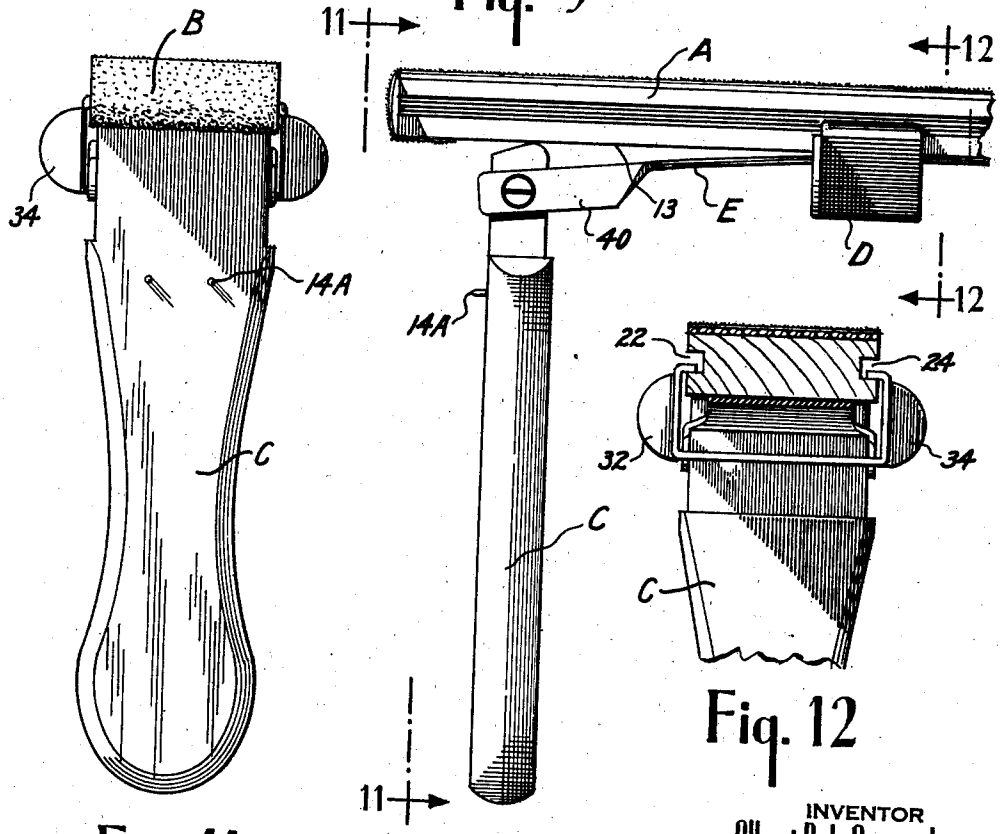


Fig. 11

Fig. 10

Fig. 12

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COATED ABRASIVE STRIP HOLDER

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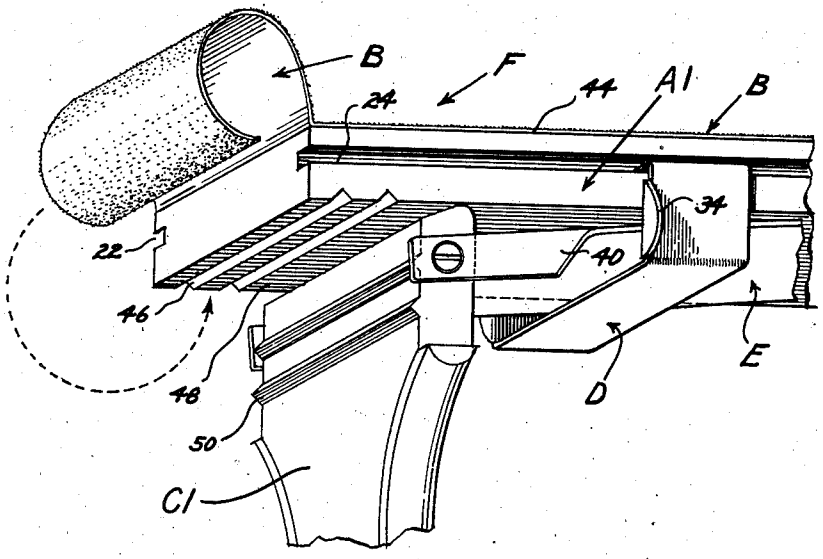


Fig. 13

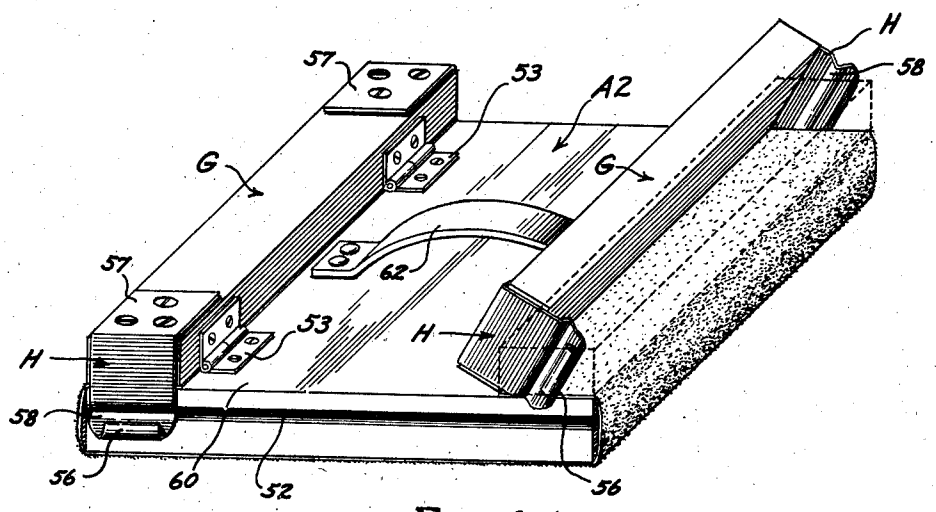


Fig. 14

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COATED ABRASIVE STRIP HOLDER

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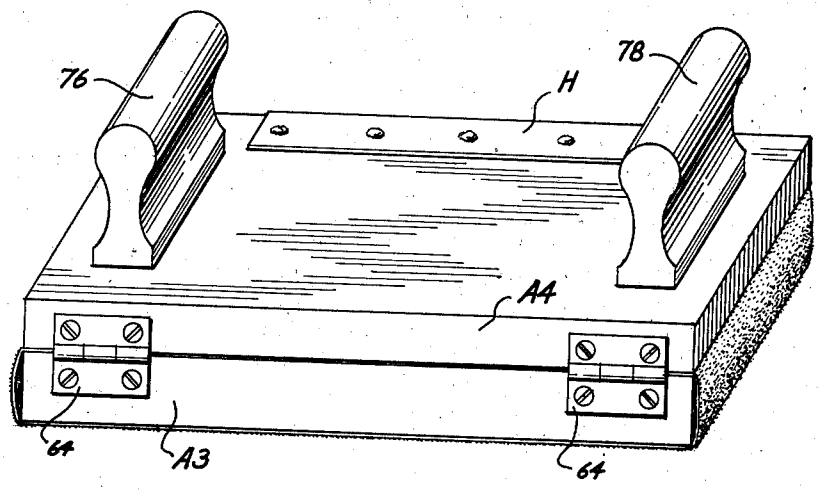


Fig. 15

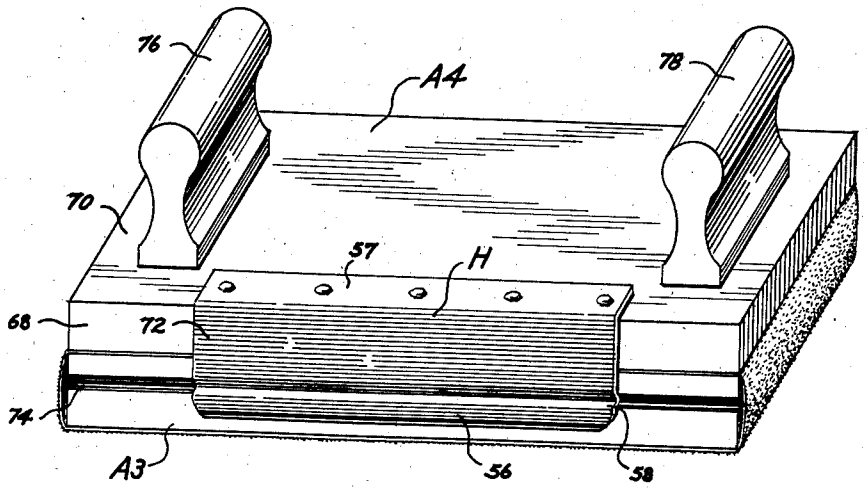


Fig. 16

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UNITED STATES PATENT OFFICE

2,427,090

COATED ABRASIVE STRIP HOLDER

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Application January 31, 1945, Serial No. 575,481

2 Claims. (Cl. 51—187)

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My invention relates to a device for holding sand or abrasive paper, and relates particularly to the use of a coated abrasive strip holder wherein the abrasive strip is used upon small articles for filing or polishing.

Heretofore, it has been customary to take a piece of coated abrasive strip place it upon a block and hold the abrasive strip to the block by hand while rubbing the coated abrasive strip upon the article. Others have used holders for the coated abrasive strip but in most cases the holders have not provided easy release of the abrasive strip for replacement purposes.

It is, therefore, an object of my invention to provide a coated abrasive strip holder wherein the abrasive strip may be easily inserted or removed.

Another object of my invention is to provide an abrasive strip holder which will have handles so that the user's fingers will not be injured, cut, or bruised by burrs or sharp edges; and wherein the abrasive strip may be easily changed.

Other objects of my invention are to provide an improved device of the character described, that is easily and economically produced, which is sturdy in construction, and which is highly efficient in operation.

With the above and related objects in view, my invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawings, in which:

Fig. 1 is a plane view of an abrasive strip holder with a handle at each end thereof.

Fig. 2 is a side elevational view of the device of Fig. 1.

Fig. 3 is a bottom view of the device shown in Fig. 1.

Fig. 4 is a fragmentary side elevational view on an enlarged scale of the holder shown in Fig. 1.

Fig. 5 is a view taken along the line 5—5 of Fig. 4.

Fig. 6 is a view taken along the line 6—6 of Fig. 4.

Fig. 7 is a modification of an abrasive strip holder embodying my invention.

Fig. 8 is a side view of the modification.

Fig. 9 is a bottom view of the modification shown in Fig. 7.

Fig. 10 is an enlarged fragmentary view, with the handle down and wherein the abrasive strip is to be inserted of the modification shown in Fig. 9.

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Fig. 11 is a view taken along the line 11—11 of Fig. 10.

Fig. 12 is a sectional view taken along the line 12—12 of Fig. 10.

Fig. 13 is a fragmentary perspective view of a coated abrasive strip holder whereby the body of the holder and the handles have complementary interfitting recesses and projections which lock the ends of the abrasive strip between said recesses and projections when the handle is securely held to the body of the holder.

Fig. 14 is a perspective view of another modification of my invention wherein spring clamps lock a pivoted holding member to the body of the holder.

Fig. 15 is another modification on my invention wherein the body of the holder for the abrasive strip is divided into two parts and the ends of the strip are sandwiched between the two parts of the body.

Fig. 16 is another modification of my invention wherein the body of the holder is made of two parts pivoted together on one side and held together by a spring clamp on the other side.

Referring now in detail to the drawings wherein similar reference characters refer to similar parts, I show a coated abrasive strip holder wherein a body, generally designated at A, is made of wood, Bakelite, or other synthetic resin material. The body A is of rectangular formation and has a flat front side 10, on which a coated abrasive strip, generally designated as B, such as sandpaper or emery cloth, may be placed. The grain side of the abrasive strip, of course, is exposed in order that the device may be rubbed on some body or object which is to be smoothed or finished or whose edges are to be rounded. I provide a longitudinally extending handle C at each end of the body A whereby the holder may be held as a file, or it may be pressed downwardly on work revolving in a lathe, or it may be pushed or pulled over a flat surface or upon a rounded surface. The handle C, Figs. 1 to 6 inclusive, has a thin portion so that it fits into the hand of the user.

Each handle C is pivotally connected to the body A by means of a hinge 12, and the portion of the hinge mounted upon the back of the body is located away from the end of the body A so that a portion of the handle C overlaps the rear surface or back 13 of the body A.

Each end of the abrasive strip B is held by it being pierced by short nails or short sharp projections 14 that are fastened in the body A and the projections protrude into the handle C.

Thus, when the handle C is pushed downwardly, an end 16 of the abrasive strip is pierced by the projections 14, and the end is positioned between a portion of the body A and a portion of the handle C.

I provide a slidable lock, generally designated as D, to keep the handle C and the block A firmly locked together. The lock D slides upon the body A and into locking relationship with the handle C. The lock has two inturned or hook ends 18 and 20, which slide within grooves 22 and 24, one of which is on each side of the block A, see Fig. 6, and the body 26 of the slide lock D is adapted to ride over the end 28 of the handle C adjacent to the pivotal end of the handle. Side connecting arms 29 and 30 of the slide lock D connect the central connecting portion 26 to the hook ends 18 and 20, respectively, which engage the side grooves 22 and 24, respectively. A pair of protruding ears 32 and 34 are integrally connected to the side arms 29 and 30, respectively, which ears enable the lock to be readily grasped by the fingers of the user to shift the lock from either open or closed position. Thus, it can be seen in view of the above explanation, that to insert an abrasive strip B, one end 16 of the abrasive strip is pushed upon the pins 14 and the handle C is moved to overlap the body A, as shown in Fig. 2, then the slide lock D is pushed to overlap the handle C, thus locking the handle to the body A.

The abrasive strip B, having one end locked, is pulled over the outer surface 10 of the body A and the same operation as hereinabove related is performed on the other end of the block A. To unlock the abrasive strip and to remove it from the holder, each of the slide locks D are moved toward the center of the body A thereby the handles C are released so that each handle may be oscillated about its pivot, and the abrasive strip may be removed from the pins 14.

In Figs. 7 to 12, I show another modification of my invention wherein an abrasive strip holder comprises a body A having a metal plate, generally designated as E, fastened to the back surface 13, and to each end of this plate E is pivotally mounted the handles C. I place and embed in the handles C, projecting points or pins 14A which pierce the abrasive strip B to hold the abrasive strip tightly in position against the body of the holder. The points 14A pierce the abrasive strip and embed themselves within the body of the holder.

The center of the back plate E is screw-held in position on the body A of the holder and the plate extends almost the entire length of the holder. Each of the ends 36 and 38 of the plate E has pivotally attached thereto one of the handles C. To operate my device, I slide the lock D into position to lock the body A after the handles C are in engagement with the body A so that the handles C and the abrasive strip are held together, similarly to the operation of the device illustrated in Figs. 1 to 6 inclusive.

The back plate E has integrally formed side flanges 40, 42 at each end thereof to which flanges the handle C is pivotally connected, in this manner the handle C is connected to the body A.

The modification of my abrasive strip holder, generally designated as F and illustrated in Fig. 13, comprises a body member, generally designated as A1, which is of a general rectangular shape wherein a flat surface 44 engages the back of an abrasive strip, B. The abrasive strip holder

of Fig. 13 is similar in construction to the holder illustrated in Figs. 10, 11 and 12 but differs therefrom in that the body A1 has a plurality of recesses or notches 46 cut in the rear surface 48 of the body A1 adjacent the ends, and the handle C1 has a plurality of ridges 50 which interfit with the recesses or grooves 46 so that when an end of the abrasive strip is placed over the recesses 46, the abrasive strip is pressed into the groove by the ridges 50, thereby locking one end of the abrasive strip. The sliding clamp D, whose hook ends slide in the side grooves of the body A1, locks the handle C1 and the abrasive strip to the body A1.

In lieu of deep notches and ridges, I may roughen each of the adjacent surfaces on the body A1 and the handle C1.

Referring now to the modification of my invention illustrated in Fig. 14, I show an abrasive strip holder wherein the body, generally designated as A2, is substantially square in plan view and the body has side grooves 52 therein. At each end of the body is an abrasive strip holder, generally designated as G, which holder is pivotally mounted to the rear surface of the body A2 by hinges 53, 53. Each of the holders G retains one end of the abrasive strip to the block A2.

In order to lock the holder G to the body A2 of the holder, I place thereon at each corner, a spring clamp, generally designated as H, which has one end 57 screwed to the holder G and the other free end 56 has a concave surface 58 which engages in the side groove or slight recess 52 in the side of the block; hence when the end of the sandpaper strip B is placed between the holder G and the rear surface of the body A2, the holder G is rotated so that one of its surfaces is in engagement with the abrasive strip adjacent the rear surface 60 of the body A2. Spring clamp H retains the holder G securely to the body A2 by frictional engagement of the spring surface 58 to the groove 52. One or more of these snap or spring clamps H is at each end of the holder G; however, the clamp may be attached to the body of the holder so that it meets a complementary recess in the strip. A handle 62 is provided to hold and to move the device over the surface or member to be abraded.

Referring now to the modification of my invention illustrated in Fig. 15, I show a substantially rectangular abrasive strip body which is made of two parallel pieces A3 and A4 which overlap one another. The pieces A3 and A4 are pivoted together by virtue of a hinge 64 on one side and are locked together by virtue of a spring clamp H. Upon the upper surface of body piece A4, two handles 76 and 78 are fastened. The large snap or spring holding clamp H, similar to the clamp illustrated in Fig. 14, is located adjacent the side 68 of the clamp.

The clamp H has one end 57 fastened to the upper surface 70 of the upper body member A4 and the right angle portion 72 integrally connected to the fastened end 57, has a concave portion or ridge 58 therein, which concave portion 58 interfits with a side depression or groove 74 in the lower holder member A3 for locking the body pieces A3 and A4 together. The member 56, formed at the end of the spring clamp H, serves as a handle to release the clamp when necessary. The ridge 58 mounted on the resilient clamp H moves with the resilient body 72, the ridge 58 interfits tightly with groove 74 in the lower piece A3, thereby serving to lock the two

part of the body of the holder together. The type of handles which are used may vary, and different types of handles are illustrated, for example, in Figs. 15 and 16, vertical handles 76 and 78 are shown, whereas in Figs. 1 and 7, horizontal handles are shown.

Although my invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

I claim as my invention:

1. An abrasive strip holder comprising a longitudinally extending body member, an abrasive strip, a plurality of longitudinally extending handles, means for pivotally connecting said handles to said body, each handle having a portion overlapping one end of and a portion projecting away from said body, each end of said abrasive strip held between the overlapping portions of the handles and the body, and a plurality of hooked slidable clamps, each clamp slidable in a groove in said body member and being adapted to engage the handle in order to lock the handle and body together.

2. In an abrasive strip holder, an abrasive strip, a substantially rectangular body member, a handle pivotally connected to each end of said

body member, the ends of said abrasive strip being adapted to be held between said handles and said body, and a plurality of hooked slidable clamps, each clamp slidable on said body member and each being adapted to engage a handle in order to lock the handle and the body together.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
8,681	Copeland	Jan. 27, 1852
53,133	Fitch	Mar. 13, 1866
378,522	Prevost	Feb. 28, 1888
959,213	Ganz	May 24, 1910
975,590	Weber	Nov. 15, 1910
1,277,601	Katzke	Sept. 3, 1918
1,520,642	Giroux	Dec. 23, 1924
1,855,635	Kelley	Apr. 26, 1932
1,858,899	Montbriand	May 17, 1932
40,231	Barnes	Oct. 13, 1863
408,433	Prevost	Aug. 6, 1889
672,408	McAfee	Apr. 16, 1901
734,953	Reissmann	July 28, 1903
734,954	Reissmann	July 28, 1903