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(54) NAIL FILE ASSEMBLY AND METHOD OF UTILIZING SAME

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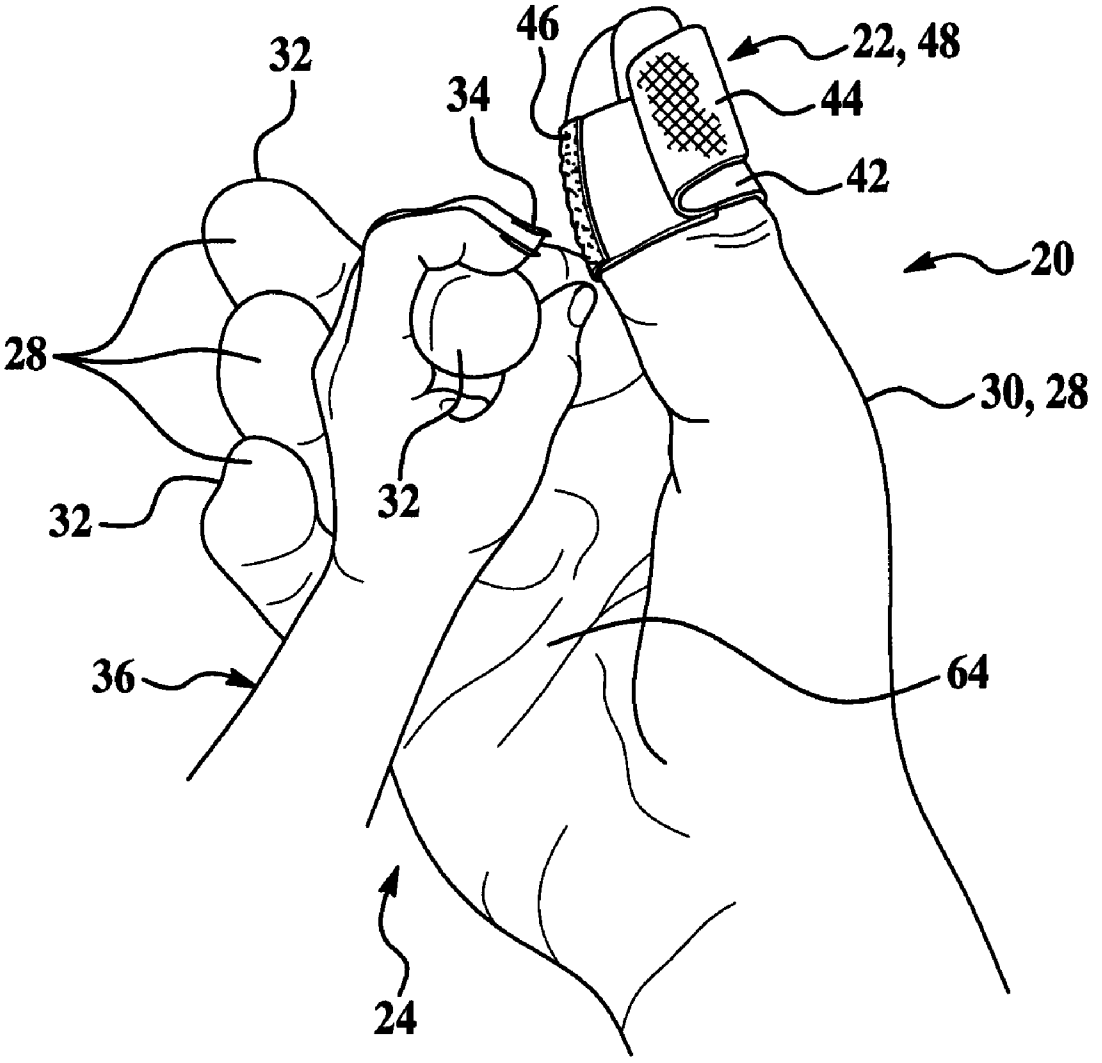
(57) **ABSTRACT**

A nail file assembly includes a file sub-assembly that secures preferably to an index of a human hand. The sub-assembly has a flexible sheet having an outer surface that carries an abrasive layer and an opposite inner surface that preferably carries at least in-part a fastener for securing the sheet to the index. With the sub-assembly secured to the index, the remaining indexes of the hand are free to manipulate and support the indexes of an uncooperative fauna that carry respective nails to be filed. When filing, the index of the assembly and which carryies the sub-assembly is free to pivot back and forth across the nail of the fauna.



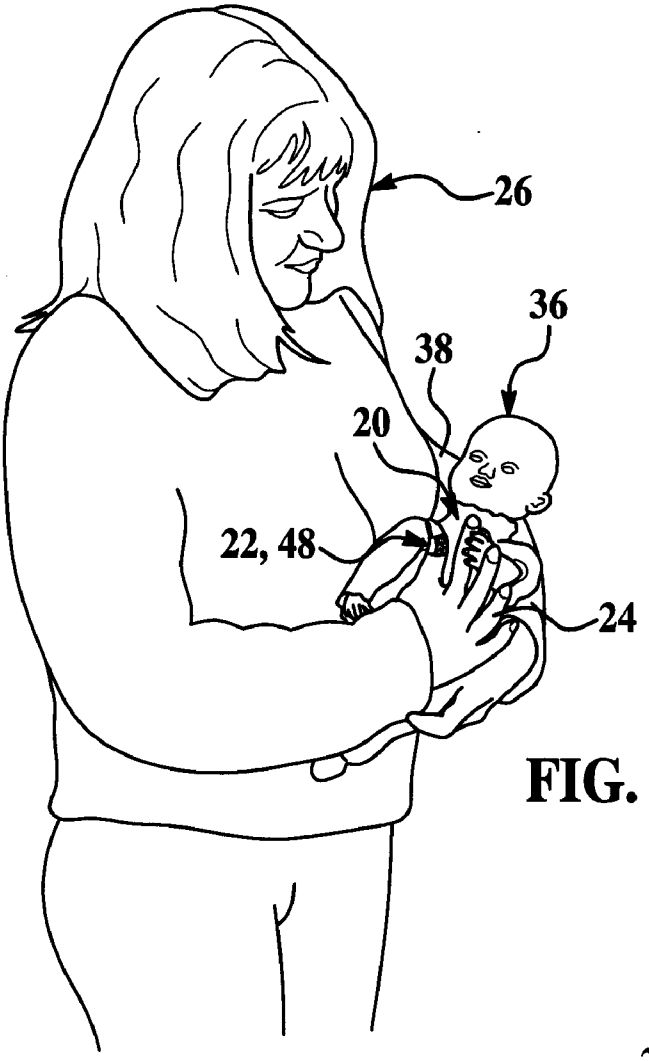


FIG. 1

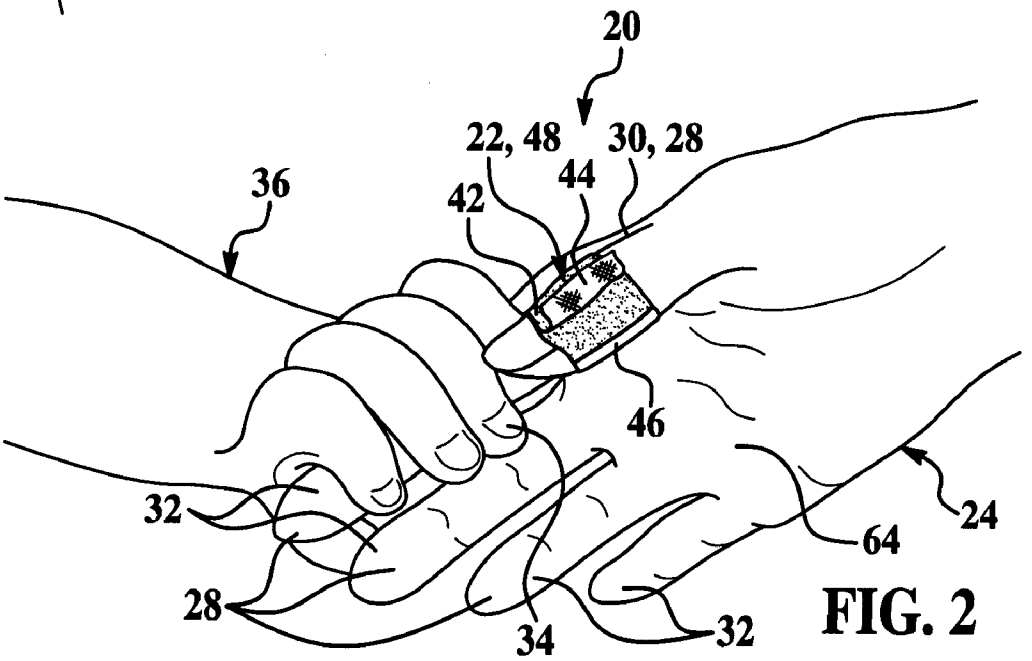


FIG. 2

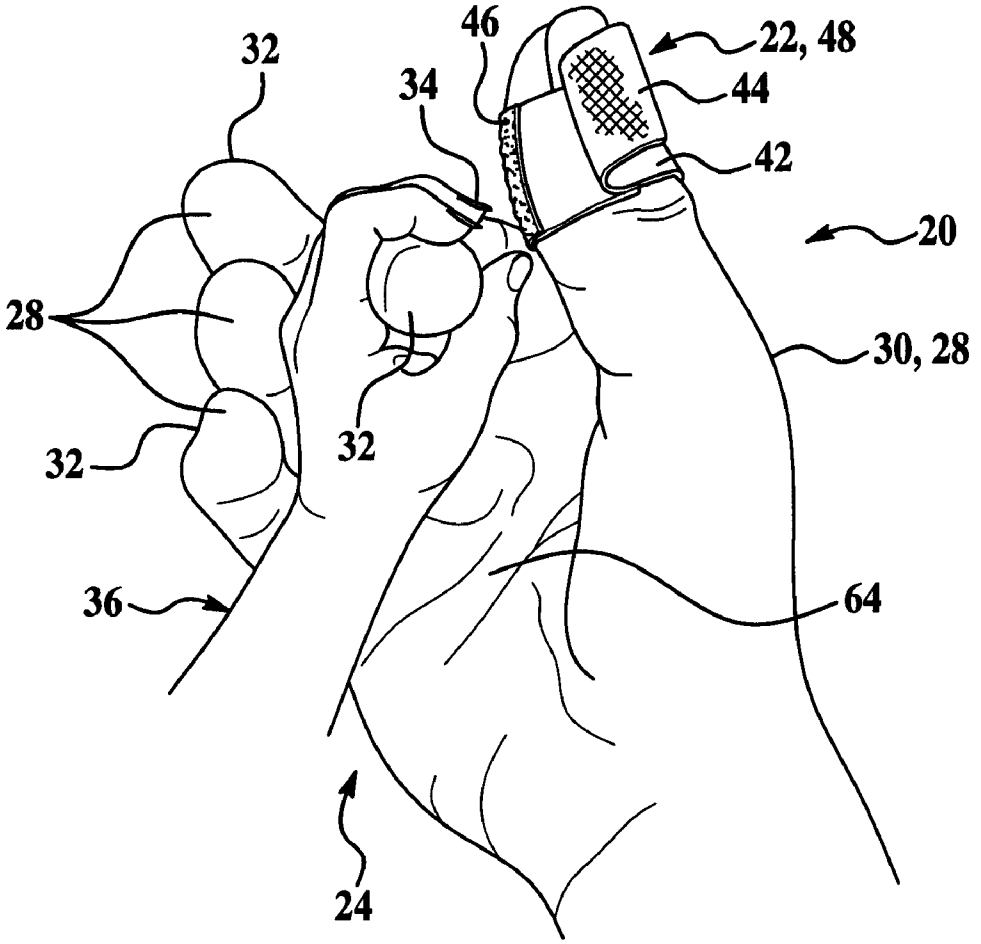


FIG. 3

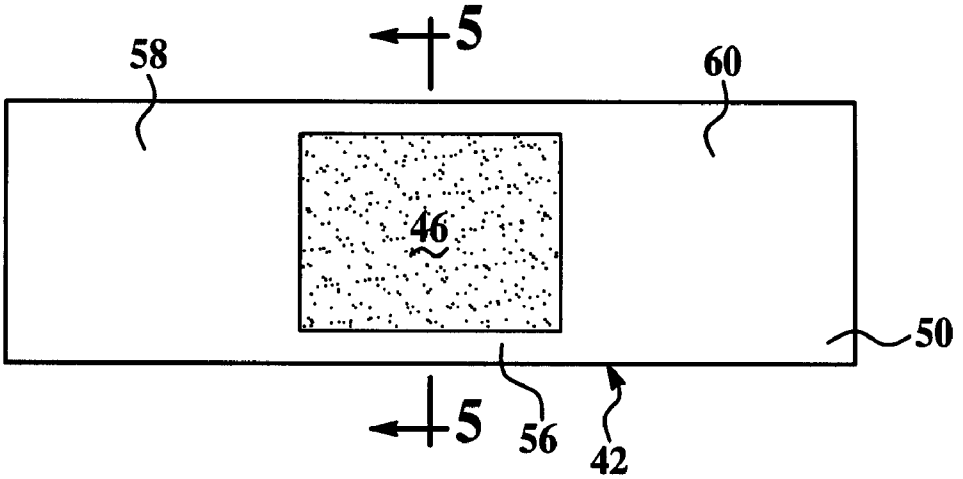


FIG. 4

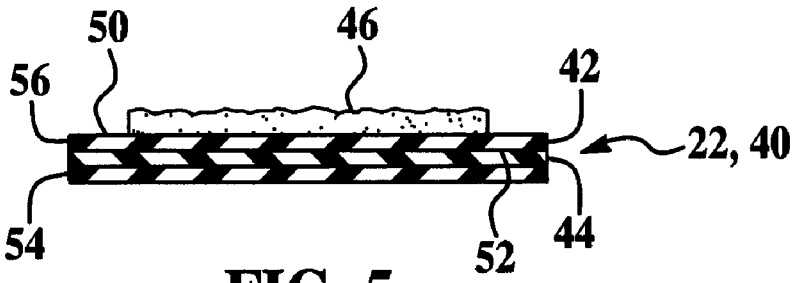


FIG. 5

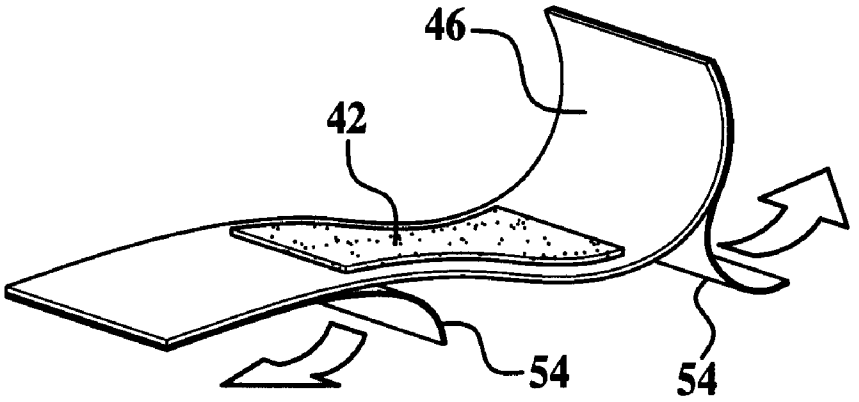


FIG. 6

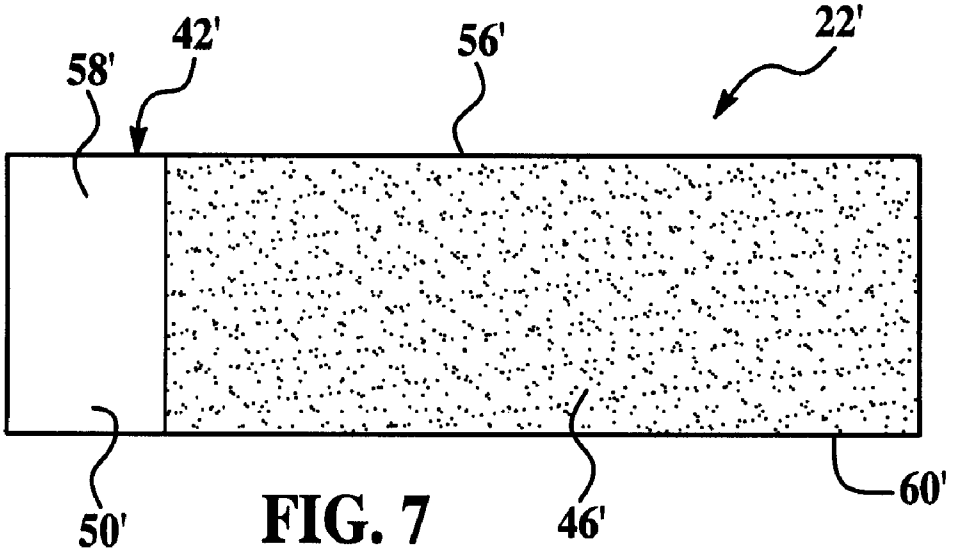


FIG. 7

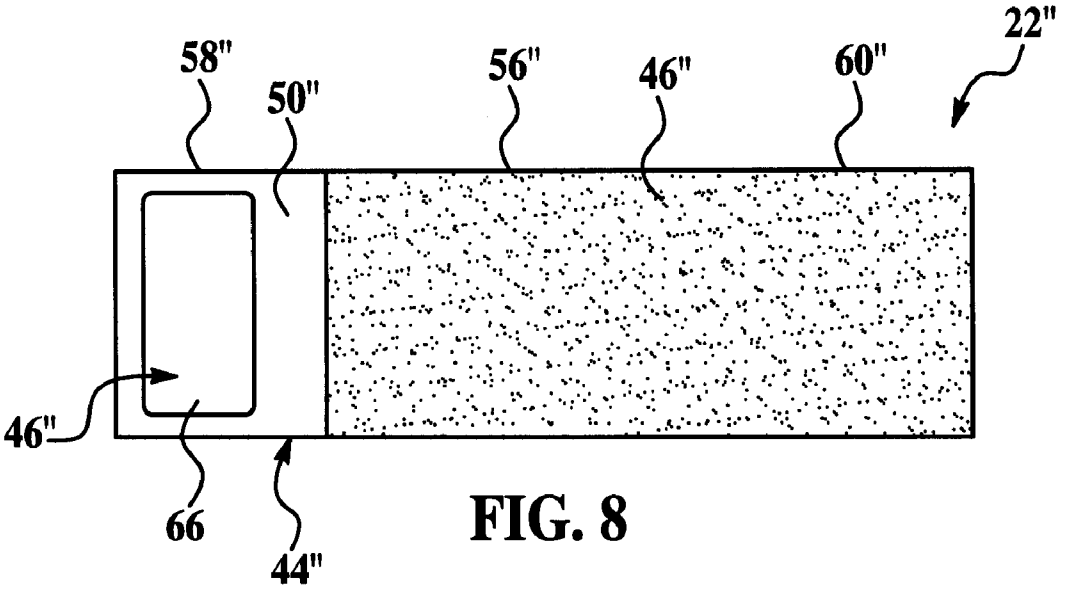


FIG. 8

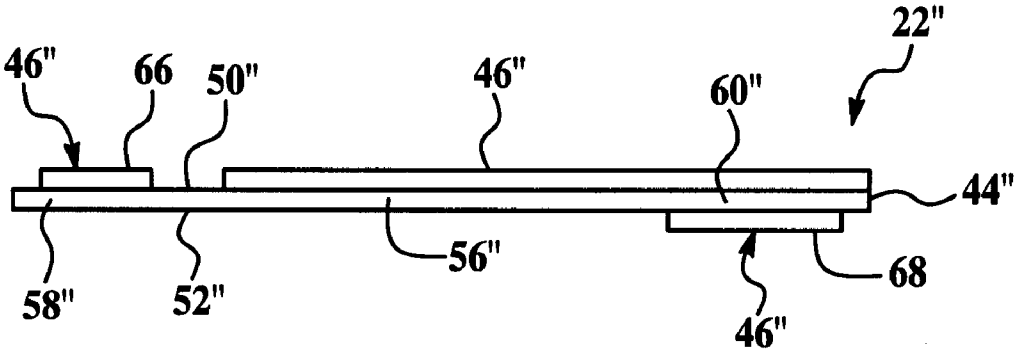


FIG. 9

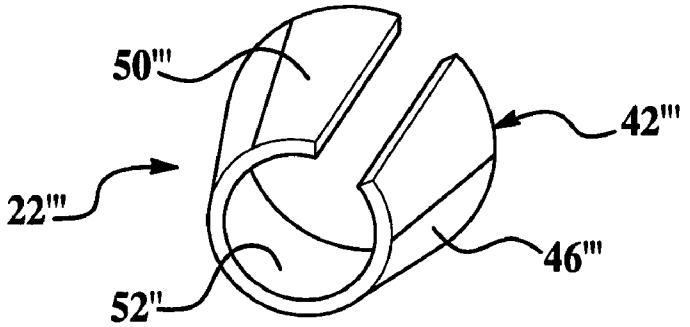


FIG. 10

NAIL FILE ASSEMBLY AND METHOD OF UTILIZING SAME

FIELD OF THE INVENTION

[0001] The present invention relates to a nail file and more particularly to a nail file assembly for use on an uncooperative fauna and method of utilizing the same.

BACKGROUND OF THE INVENTION

[0002] Nail files are used to round, shorten and define nails most commonly on the feet and hands of *homosapiens*. Known nail files typically have an abrasive layer or coating mounted on opposite sides of a rigid and elongated member. Often, the member is made of an inexpensive material such as plastic and the abrasive layer has a limited useful life generally making the nail file disposable. Slightly more expensive nail files utilize an abrasive pad, as oppose to a coating. This pad has a cushioning effect for improved filing in some applications. Other nail files have a member made of metal with an abrasive surface integrated into opposite side of the metallic member itself. The abrasive surface may even be impregnated with diamond particulate to enhance filing efficiency. The metallic nail files often have a handle at one end with the abrasive surfaces on the other end, and are typically more expensive than the disposable nail files but have a longer useful life.

[0003] Known nail files are typically used on oneself. For instance, when filing the fingernails of one's left hand, the thumb and at least one finger of the right hand must grasp the nail file. In other situations, most common in nail salons, a cooperative client of the salon will hold his/her hand and/or foot out for a nail technician to work on the nails. In these situations, for instance, the nail technician will grasp the nail file with the thumb and at least one finger of the right hand, brace the hand or foot of the client with the left hand of the technician and pursue filing of the client's nails.

[0004] Unfortunately, when the nail filer or technician is filing the nails of another, one hand of the nail filer is dedicated to grasping the nail file. The other hand is generally dedicated to bracing of the indexes of the hand or foot of the person having the nails to be filed. When a person or fauna, in general, is uncooperative, the nail filer is limited in ability to further control or brace the subject. Moreover, although disposable nail files are inexpensive with respect to more durable files, it would still be desirable to reduce manufacturing costs further while improving upon the cushioning effect of some known files.

SUMMARY OF THE INVENTION

[0005] A nail file assembly includes a file sub-assembly that secures preferably to an index of a human hand. The sub-assembly has a flexible sheet having an outer surface that carries an abrasive layer and an opposite inner surface that preferably carries at least in-part a fastener for securing the sheet to the index. With the sub-assembly secured to an index, the remaining indexes of the hand are free to manipulate and support the index of an uncooperative fauna that carries a nail to be filed. When filing, the index carrying the sub-assembly is free to pivot back and forth across the nail of the fauna.

[0006] Preferably, the fastener is an adhesive layer that covers an inner surface of the sheet. When in a stored state, the adhesive layer is protected by a removable release film. With the release film removed, the flexible sheet may be wrapped about any one of the indexes of the hand so that the adhesive layer is adhered directly to the selected index.

[0007] Objects, features and advantages of the present invention include the ability to file the nails of an uncooperative fauna with one hand that both supports and manipulates the nails to be filed and performs the actual filing. Other advantages include the ability to cradle an infant with one arm which performing the filing method with the hand of the other arm. Moreover, the design is relatively simple and inexpensive to manufacture.

DESCRIPTION OF THE DRAWINGS

[0008] These and other objects, features and advantages of this invention will be apparent from the following detailed description, appended claims, and accompanying drawings in which:

[0009] FIG. **1** is a perspective view of a nail file assembly of the present invention in an applied state and in one of it's intended environments;

[0010] FIG. **2** is an enlarged perspective view of the nail file assembly in the applied state;

[0011] FIG. **3** is a second enlarged perspective view of the nail file assembly in the applied state;

[0012] FIG. **4** is a top view of a nail file sub-assembly of the nail file assembly in a stored state;

[0013] FIG. **5** is a cross section of the nail file sub-assembly;

[0014] FIG. **6** is a perspective view of the nail file sub-assembly;

[0015] FIG. **7** is a top view of a second embodiment of the nail file sub-assembly;

[0016] FIG. **8** is a top view of a third embodiment of the nail file sub-assembly;

[0017] FIG. **9** is a side view of the nail file sub-assembly of the third embodiment; and

[0018] FIG. **10** is a fourth embodiment of a nail file sub-assembly.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0019] Referring now to FIGS. **1-3** of the drawings, a nail file assembly **20** of the present invention is illustrated having a nail file sub-assembly **22** and preferably a human hand **24** of a nail filer **26** having a plurality of indexes **28** that preferably has a thumb **30** and four fingers **32**. The assembly **20** is utilized to file nails **34** of a generally uncooperative fauna **36** such as a human infant or baby. As illustrated, the filer **26** may be a mother holding her baby being the fauna **36**. The thumb **30** of the right hand **24** of the mother **26** preferably carries the file sub-assembly **22** leaving the fingers **32** of the right hand **24** free to manipulate, grasp and/or brace the index(s) of the baby **36** that has the nail **34** to be filed. With the right hand **24** performing both filing and bracing functions, a left arm **38** of the mother **26** is free to cradle and support the baby **36**.

[0020] Referring to FIGS. **2-5**, the sub-assembly **22** is illustrated in a stored state **40**. A sheet **42** of the sub-assembly **22** is generally located between a fastener **44** that is preferably an adhesive layer, and an abrasive layer **46**. The sheet **42** is preferably elongated and resiliently flexible and stretchable for efficient gripping and forming to the selected contours of the human hand **24**. With respect to the sub-assembly **22** being in an applied state **48**, as best illustrated in FIG. **2**, the abrasive layer **46** is secured to an outer surface **50** of the sheet

42, and the adhesive layer 44 is disposed on an opposite internal surface 52. When in the stored state, the adhesive layer 44 is located between the sheet 42 and a removable release film 54 for protecting and generally preserving the adhesive layer 44. Preferably, the sheet 42, the release film 54 and the adhesive layer 44 are made of materials known in the art of adhesive bandages commonly used to protect minor wounds.

[0021] The elongated sheet 42 has a mid portion 56 that extends longitudinally between a first end portion 58 and an opposite second end portion 60 of the sheet 42. The abrasive layer 46 generally covers all of the outer surface 50 at the mid portion 56. The outer surface 50 at the end portions 58, 60 are preferably not covered by the abrasive layer 46 for improved attachment of the sub-assembly 22 to any one of the indexes 28 of the hand 24 of the filer 26. That is, for instances where the indexes 28 of the hand 24 of the filer 26 may be damp or generally dirty, adhesion of the sheet 42 generally to the skin of any one of the indexes 28 may be limited. However, because the sheet 42 is wrapped longitudinally about the selected index 28, the adhesive layer 44 at one of the end portions 58, 60 will adhere to the outer surface 50 at the other of the end portions 60, 58 when the elongated sheet 42 is wrapped completely around the index 28 and overlaps itself. Moreover, the end portions 58, 60 are preferably resiliently elastic contributing toward gripping the selected index.

[0022] During application of the sub-assembly 22, the release film 54 is first removed from the sheet 42, thus exposing the adhesive layer 44. The sheet 42 is then wrapped preferably about the thumb 30 of the hand 24 of the filer 26 with the adhesive layer 44 facing toward and adhering to the skin and potentially the nail of the thumb. Preferably, the sheet is orientated so that the mid portion 56 of the sheet 42 is generally against the cushioning pad 62 of the thumb 30. This provides a cushioning effect when filing. One skilled in the art however would now know that the flexible sheet 42 with the adhesive layer 44 can be adhered in any variety of locations including the palm 64 of the hand 24.

[0023] With the sub-assembly 22 secured preferably to the thumb 30 of the hand 24, the infant 36 can be cradled in the arm 38 having the other hand. The fingers 32 of the hand 24 are then free to control and support the indexes carrying the nails 34 of the infant 36. With the nails 34 held steady by the fingers 32, the thumb 30 carrying the sub-assembly 22 may then be moved back and forth against the nail 34 to be filed. One skilled in the art, however, would now know that the fauna 36 can be any variety of subjects other than an infant. For instance, the fauna 36 could be a challenged adult or a pet animal that is not likely to cooperate with the filing procedure.

[0024] Referring to FIG. 7, a second embodiment of a sub-assembly 22' is illustrated wherein like elements to the first embodiment have like identifying numerals except with the addition of a prime symbol. Sub-assembly 22' has an abrasive layer 46' that covers the top surface 50 of an elongated sheet 42' at both the mid portion 56' and the end portion 60'. End portion 58', however, is not covered by the abrasive layer 46', hence, an adhesive layer retains the ability to adhere to the outer surface 50' at the end portion 58'.

[0025] Referring to FIGS. 8 and 9, a third embodiment of a sub-assembly 22" is illustrated wherein like elements to the first and second embodiment have like identifying numerals except with the addition of a double prime symbol. Sub-assembly 22" does not have an adhesive layer as a fastener, and instead utilizes a hook-and-loop fastener 44" having a hook component 66 secured to an outer surface 50" of an elongated sheet 42" at an end portion 58", and a loop component 68 secured to an opposite inner surface 52" at an opposite second end portion 60". Although the engagement ability of the hook-and-loop fastener 44" may not be as efficient as the previously described adhesive layer 44, the fastener 44" enables the sub-assembly 22" to be reused.

[0026] Referring to FIG. 10, a fourth embodiment of a sub-assembly 22'" is illustrated wherein like elements have like identifying numerals except with the addition of a triple prime symbol. Generally, the sub-assembly 22'" has no fastener because the sheet 42'" is a discontinuous ring preferably made of resiliently flexible plastic. The ring 42'" is sized to fit snugly about an index having a wide range of diameters. In order to achieve a snug fit, the ring is resiliently flexible. An abrasive layer 46'" that may include an integral cushioning pad (not shown) is secured to an outer surface 50'" of the ring 42'".

[0027] While the forms of the invention herein disclosed constitute presently preferred embodiments, many others are possible. It is not intended herein to mention all the possible equivalent forms or ramification of the invention. It is understood that terms used herein are merely descriptive, rather than limiting, and that various changes may be made without departing from the spirit or scope of the invention.

1. A nail file assembly comprising:
a flexible sheet having a first surface and an opposite second surface;
an abrasive layer secured to the first surface; and
a fastener carried at least in-part by the second surface.

2. The nail file assembly set forth in claim 1 wherein the fastener is an adhesive layer covering at least in-part the second surface.

3. The nail file assembly set forth in claim 2 further comprising a release liner for covering the adhesive layer.

4. The nail file assembly set forth in claim 2 further comprising:
a first end portion of the flexible sheet;
a second end portion of the flexible sheet located opposite the first end portion;
a mid portion of the flexible sheet; and
wherein the abrasive layer is secured to at least the mid portion.

5. The nail file assembly set forth in claim 2 wherein the abrasive layer is not secured to the first end portion.

6. The nail file assembly set forth in claim 5 wherein the adhesive layer covers the entire second surface and adheres to the first surface at the first end portion when the flexible sheet is wrapped about an index of a human hand.

7. The nail file assembly set forth in claim 1 wherein the fastener is of a hook-and-loop type.

8. The nail file assembly set forth in claim 7 further comprising:
a hook component of the fastener attached to the first surface at the first end portion; and
a loop component attached to the second surface at the second end portion.

9. The nail file assembly set forth in claim 7 further comprising:
a loop component of the fastener attached to the first surface at the first end portion; and
a hook component attached to the second surface at the second end portion.

10. The nail file assembly set forth in claim **1** wherein the flexible sheet is resiliently stretchable.

11. A nail file assembly for use on an uncooperative subject, the nail file assembly comprising:

a first human hand having a plurality of indexes;

a flexible sheet secured around only one of the plurality of indexes, the flexible sheet having an outer surface facing outward with respect to the finger and an inner surface facing toward the finger; and

an abrasive layer secured to the outer surface.

12. The nail file assembly set forth in claim **11** wherein the first human hand is not of the uncooperative subject.

13. The nail file assembly set forth in claim **12** further comprising:

a thumb of the plurality of indexes wherein the flexible sheet is secured to the thumb; and

at least one finger of the plurality of indexes being free of the flexible sheet for grasping the uncooperative subject.

14. The nail file assembly set forth in claim **13** wherein the uncooperative subject is a fauna having at least one nail.

15. The nail file assembly set forth in claim **14** further comprising:

a human being having the first human hand and an opposite arm not having the first human hand; and

wherein the opposite arm supports the fauna and the at least one finger grasps an index of the fauna having a nail of the at least one nail to be filed.

16. The nail file assembly set forth in claim **15** wherein the fauna is a human infant.

17. A method of utilizing a nail file assembly comprising the steps of:

securing a flexible sheet carrying an outward facing abrasive layer about a first index of a plurality of indexes of a first hand of a human being;

supporting an uncooperative fauna by an arm of the first human being, wherein the first hand is not located on the arm;

grasping the uncooperative subject with at least one of the plurality of indexes not being the first index; and

moving the first index so that the abrasive layer moves directly against a nail of the second human being.

18. The method of utilizing a nail file assembly set forth in claim **17** wherein the at least one of the plurality of indexes not being the first index grasps an index of the second human being.

19. The method of utilizing a nail file assembly set forth in claim **17** wherein the first index is a thumb.

20. The method of utilizing a nail file assembly set forth in claim **17** comprising the additional step of removing a release liner from the flexible sheet prior to securing to the first index.

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