

FORM 1

602836

SPRUSON & FERGUSON

COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952

APPLICATION FOR A STANDARD PATENT

Emhart Industries, Inc., incorporated in Connecticut, of 426 Colt Highway, Farmington, Connecticut, 06032, UNITED STATES OF AMERICA, hereby apply for the grant of a standard patent for an invention entitled:

Collar for Hand Tools

which is described in the accompanying complete specification.

Details of basic application(s):-

<u>Basic Applic. No:</u>	<u>Country:</u>	<u>Application Date:</u>
117,188	US	4 November 1987

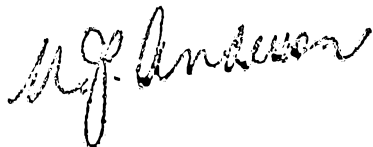
The address for service is:-

Spruson & Ferguson
Patent Attorneys
Level 33 St Martins Tower
31 Market Street
Sydney New South Wales Australia

DATED this EIGHTEENTH day of OCTOBER 1988

Emhart Industries, Inc.

By:



Registered Patent Attorney

TO: THE COMMISSIONER OF PATENTS
OUR REF: 73546
S&F CODE: 53781

REPRINT OF RECEIPT
6008023 18/10/88

APPLICATION ACCEPTED AND AMENDMENTS

ALLOWED 7. 8-90

COMMONWEALTH OF AUSTRALIA

THE PATENTS ACT 1952

DECLARATION IN SUPPORT OF A
CONVENTION APPLICATION FOR A PATENTIn support of the Convention Application made for a
patent for an invention entitled:

Title of Invention

Collar for Hand Tools

Full name(s) and
address(es) of
Declarant(s)

I/We John D. Del Ponti

of 426 Colt Highway, Farmington, Connecticut 06032, U.S.A.

do solemnly and sincerely declare as follows:

Full name(s) of
Applicant(s)

XX

(or, in the case of an application by a body corporate)

1. I am ~~XXXXXX~~ authorised by EMHART INDUSTRIES, INC., a Corporation of the State of Connecticut, having a place of business at 426 Colt Highway, Farmington, Connecticut 06032, U.S.A. the applicant(s) for the patent to make this declaration on its/their behalf.
2. The basic application(s) as defined by Section 141 of the Act was/were made

Basic Country(ies)

in the United States of America

Priority Date(s)

on November 4, 1987, bearing Serial No. 117,188

Basic Applicant(s)

by John Michael Stoner, Jr.

Full name(s) and
address(es) of
inventor(s)

XX
 XX

(or where a person other than the inventor is the applicant)

3. John Michael Stoner, Jr.

of 804 Nissley Drive, Middletown, Pennsylvania 17057, U.S.A.

(respectively)

is/are the actual inventor(s) of the invention and the facts upon which the applicant(s) is/are entitled to make the application are as follows: By an Assignment from the Inventor to Emhart Industries, Inc., dated November 3, 1987, granting to Emhart Industries, Inc., inter alia, the right to claim priority from the basic application

Set out how Applicant(s) derive title from actual inventor(s) e.g. The Applicant(s) is/are the assignee(s) of the invention from the inventor(s)

4. The basic application(s) referred to in paragraph 2 of this Declaration was/were the first application(s) made in a Convention country in respect of the invention(s) the subject of the application.

Declared at Farmington, this
Connecticut, U.S.A.

19th day of September 1988

EMHART INDUSTRIES, INC.

Signature of Declarant(s)

John D. Del Ponti, Assistant Secretary

11/81

To: The Commissioner of Patents

(12) PATENT ABRIDGMENT (11) Document No. AU-B-24023/88
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 602836

(Modified Examination)

(54) Title
COLLAR FOR HAND TOOLS

International Patent Classification(s)

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(51)⁵ A01B 001/22

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(56) Prior Art Documents
US 1662500
DE 641210

(57) Claim

1. A collar for use on hand tools of the type having an elongated socket to receive a tool handle, said collar comprising a molded plastic body having an outer wall defined by a first tapered portion extending lengthwise of the body from one end towards the middle thereof and a second tapered portion extending lengthwise of the body from the other end towards the middle thereof to form relatively thin wall portions at each end of said body and a relatively thick wall portion at the interface of said first and second tapered portions, with the inner wall of the collar being defined by a first relatively large diameter section and a second relatively small diameter section, with the interface of said first and second sections defining a radially extending flange-like surface, with the end of the

(11) AU-B-24023/88

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socket engaging the flange-like surface, the relatively large diameter section of the inner wall overlying the outer wall of the socket and the relatively small diameter section of the inner wall overlying the outer wall of the tool handle.

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FORM 10

COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952

COMPLETE SPECIFICATION

(ORIGINAL)

FOR OFFICE USE:

Class Int Class

Complete Specification Lodged:

Accepted:

Published:

Priority:

Related Art:

This document contains the
amendments made under
Section 49 and is correct for
printing.

Name and Address
of Applicant:

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Sydney, New South Wales, 2000, Australia

Complete Specification for the invention entitled:

Collar for Hand Tools

The following statement is a full description of this invention, including the
best method of performing it known to me/us

COLLAR FOR HAND TOOLS

BACKGROUND OF THE INVENTION

This invention relates to hand tools such as shovels, rakes, and the like, and in particular, to
5 a collar comprising a molded plastic body encompassing the socket-handle interface.

Hand tools such as shovels, rakes, and the like typically include a socket portion extending from the tool head for receiving the tool handle. Some
10 handles are formed with shoulders towards one end thereof for mating with the end of the socket to provide a generally smooth transition at the socket-handle point of attachment or interface. Other handles are generally uniformly tapered along their
15 entire length whereat the end of the socket forms a generally flange-like surface at the socket-handle interface. This abrupt transition between the handle and socket, besides not being aesthetically pleasing, also forms a moisture collecting surface
20 which can result in corrosion of the socket.

Accordingly, it is an object of this invention to suitably encompass the interface of the socket-handle so that the socket-handle transition is aesthetically pleasing and in addition corrosion resis-
25 tant.

SUMMARY OF THE INVENTION

The foregoing object and other objects of the invention are attained in a collar for use on hand tools of the type having an elongated socket to
30 receive a tool handle, said collar comprising a molded plastic body having an outer wall defined by a first tapered portion extending lengthwise of the body from one end toward the middle thereof and a second tapered portion extending lengthwise of the

body from the other end towards the middle thereof to form relatively thin wall portions at each end of said body and a relatively thick wall portion at the interface of said first and second tapered portions; 5 the inner wall of the the collar being defined by a first relatively large diameter section and a second relatively small diameter section, with the interface of said first and second sections defining a radially extending flange-like surface, with the end 10 of the socket engaging the flange-like surface, the relatively large diameter section of the inner wall overlying the outer wall of the socket and the relatively small diameter section of the inner wall overlying the outer wall of the tool handle.

15 BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view, partially in section, illustrating the invention as employed on a hand tool;

20 Figure 2 is an elevation view, with the collar of the present invention taken in section;

Figure 3 is a sectional view of the collar of the present invention illustrating details thereof; and

25 Figure 4 is an end view of the collar, taken from the socket end thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to drawing, there is disclosed a preferred embodiment of the present invention. In referring to the various Figures of the drawing, 30 like numerals shall refer to like parts.

Hand tool 10, such as a shovel, rake, or the like, generally includes a socket portion 14 formed integral with the tool head, such as blade 18 of a shovel. Handle 12 of hand tool 10 is secured within



socket 14 as is well known to those skilled in the art. Handle 12 may include a stepped portion at the end which engages the socket to provide a rather smooth transition from the outer wall of the handle to the outer wall of the socket. Alternatively, handle 12 may be uniformly tapered from one end to the other which results in a rather abrupt transition from the outer wall of the handle to the outer wall of the socket. In fact, since the diameter of the socket is somewhat greater than the diameter of the handle at the point of attachment, the end of the socket defines a radially inwardly extending flange-like surface. It has been found that such radially inwardly extending surface is not aesthetically appealing and more importantly, may act as a moisture collecting surface. The moisture collected at the surface causes corrosion and reduces the useful life of the hand tool.

The present invention overcomes the prior art defects by providing an aesthetically appealing transition from the tool handle to the tool socket and in addition eliminates the moisture collecting surface which results in the hand tool being more resistant to corrosion.

The present invention comprises a collar 16 formed from a suitable plastic material such as poly vinyl chloride such as manufactured by B. F. Goodrich Company and sold under the product designation Geon 83008. Other suitable plastic material may be substituted for the poly vinyl chloride material used in the preferred embodiment. Collar 16 includes a first tapered portion 20 extending lengthwise of the body of the collar from one end towards the middle. Collar 16 further includes a second tapered portion 22 extending lengthwise of the collar body from the other end of the collar

towards the middle thereof. Portion 20 defines the outer surface of a relatively thin wall section 34. Likewise portion 22 forms the outer surface of a relatively thin wall portion 32. The interface 24
5 of tapered portions 20 and 22 define a relatively thick wall portion 24.

The inner wall of the collar is partially defined by a first relatively large diameter section 28 and a second relatively small diameter section
10 26. The interface of the first and second sections 26 and 28 define a radially extending flange-like surface 30. The end of socket 14 rests against flange-like surface 30 as illustrated in Figure 2.

Small diameter section 26 terminates in a radi-
15 ally extending flange-like surface 35. The distance between inner edge 38 and outer edge 36 of surface 35 is approximately 0.05 of an inch. Similarly large diameter section 28 terminates in a flange-like surface 33. The distance between the inner and
20 outer edges respectively 42 and 40 of surface 33 is also approximately 0.05 of an inch.

As illustrated in Figures 1 and 2, collar 16 encompasses the interface between handle 12 and socket 14. Since the walls of the collar taper
25 outwardly from each end towards the middle of the collar, the transition between the socket and handle is not abrupt but rather becomes aesthetically pleasing. In addition, as collar 16 is formed from plastic material, and the collar encompasses the
30 interface between the handle and socket, the radially extending flange of the socket is consequently covered by the collar. Since the collar is waterproof, the foregoing results in an increase to the corrosion resistance of the tool.

35 The plastic material used to manufacture collar 16 is also somewhat resilient. Thus, the inner wall



of the collar will conform to any irregularities on the outer wall of the socket to maintain the integrity of the waterproof enclosure about the handle-socket interface.

- 5 While a preferred embodiment of the present invention has been described and illustrated, the invention should not be limited thereto, but may be otherwise embodied within the scope of the following claims:

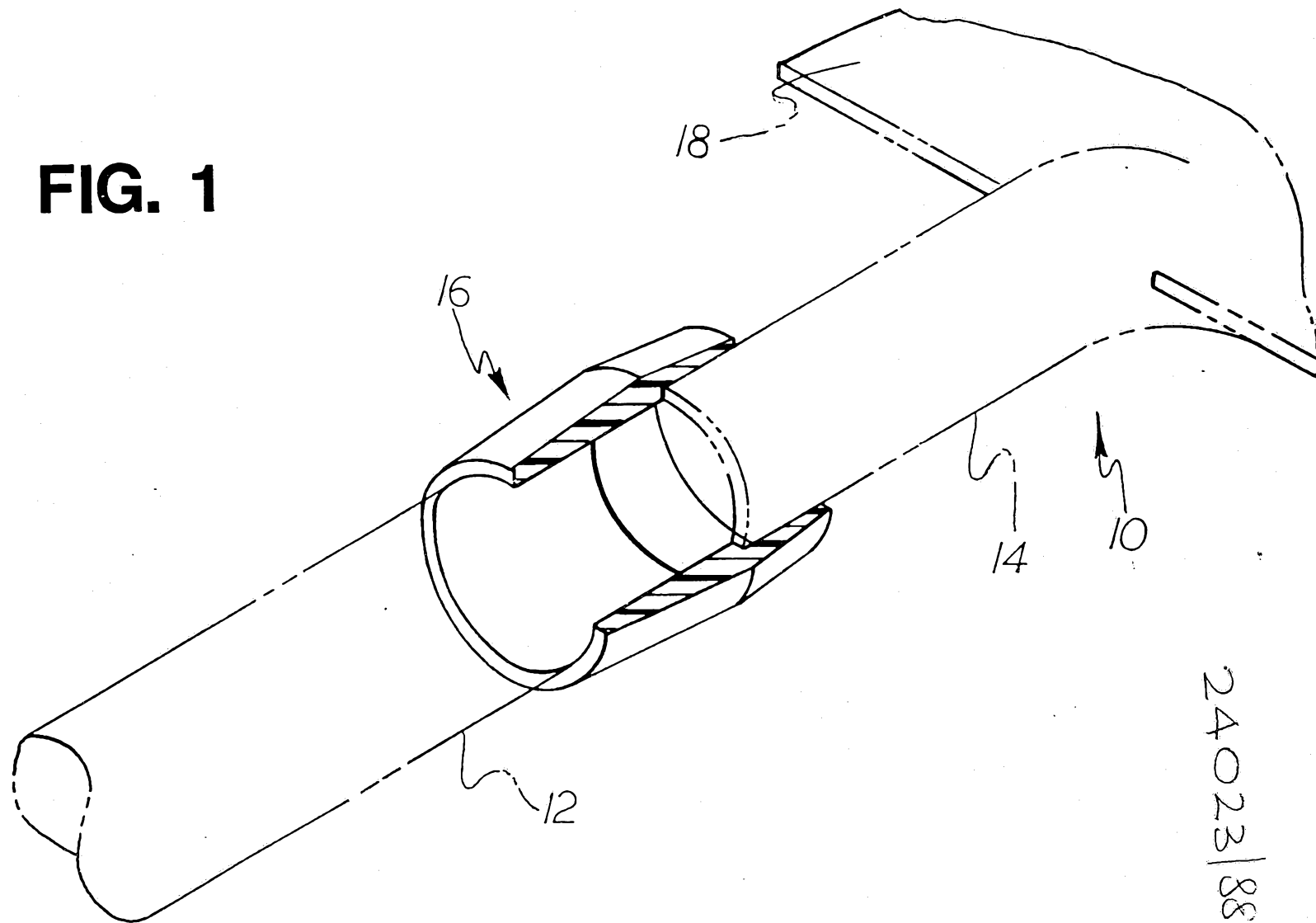
CLAIMS The claims defining the invention are as follows:

1. A collar for use on hand tools of the type having an elongated socket to receive a tool handle, said collar comprising a molded plastic body having an outer wall defined by a first tapered portion
5 extending lengthwise of the body from one end towards the middle thereof and a second tapered portion extending lengthwise of the body from the other end towards the middle thereof to form relatively thin wall portions at each end of said body
10 and a relatively thick wall portion at the interface of said first and second tapered portions, with the inner wall of the collar being defined by a first relatively large diameter section and a second relatively small diameter section, with the interface of
15 said first and second sections defining a radially extending flange-like surface, with the end of the socket engaging the flange-like surface, the relatively large diameter section of the inner wall overlying the outer wall of the socket and the rela-
20 tively small diameter section of the inner wall overlying the outer wall of the tool handle.
2. A collar as defined in Claim 1 wherein the surface defining the first section of the inner wall conforms to irregularities in the outer surface of the socket.

DATED this EIGHTEENTH day of OCTOBER 1988
Emhart Industries, Inc.

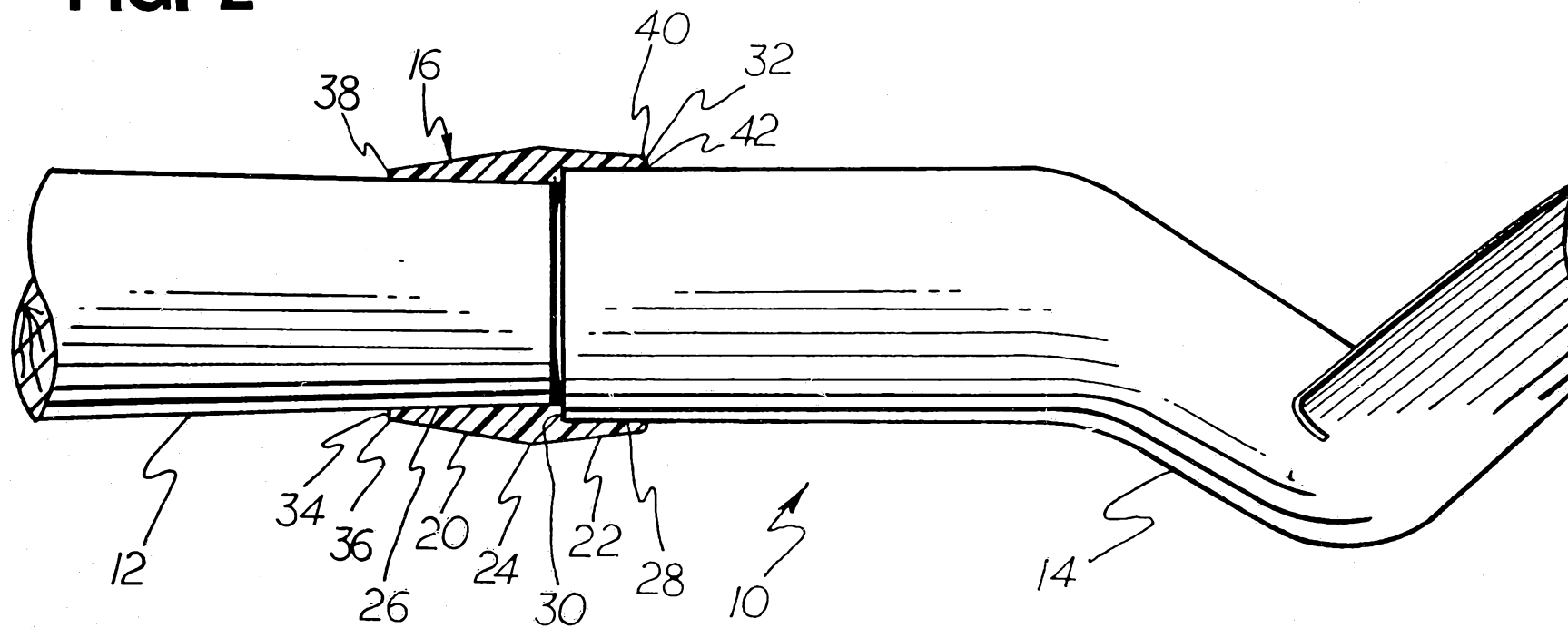
Patent Attorneys for the Applicant
SPRUSON & FERGUSON

FIG. 1



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FIG. 2



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FIG. 4

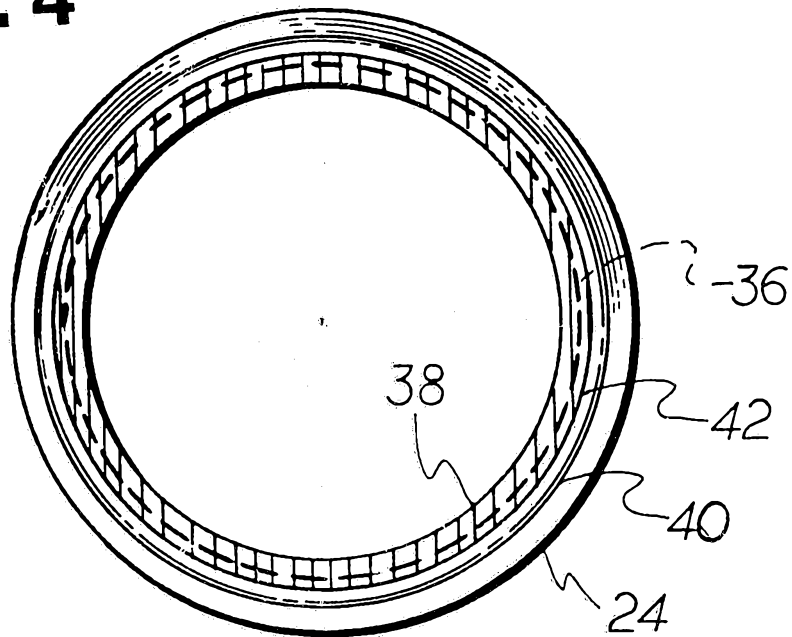


FIG. 3

