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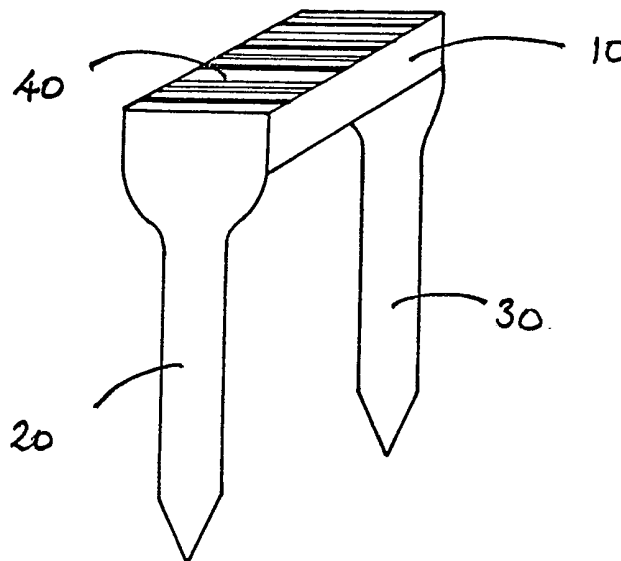
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B8F FBD FBG
U1S S1276

(56) Documents cited
GB 2075464 A EP 0248928 A1 US 4908503 A
US 3952438 A

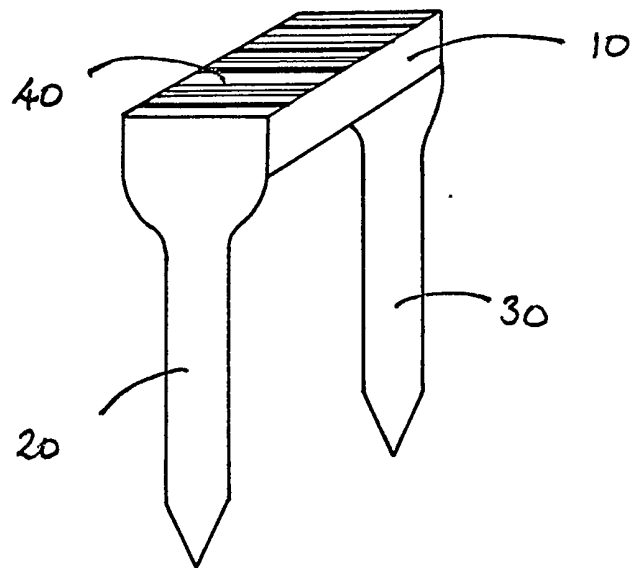
(58) Field of search
UK CL (Edition K) B8F FBB FBD, G4H HJ
INT CL⁵ G09F 3/00 3/04 3/12 3/18 3/20

(54) Marking system

(57) An identification marker for identifying the characteristics of timber or timber-based products comprises a body (10) carrying two pointed legs (20, 30). The upper surface of the body (10) carries a bar code (40) or other indicia. In use, the marker is mechanically or pneumatically driven into a piece of timber or a wood-based board material, whose characteristics can thereafter be determined by reading the bar code. The marker is preferably overdriven into the material so that the body (10) is recessed beneath the surface. This allows the surface of the wood to be planed without damage either to the plane or to the marker.



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MARKING SYSTEM

The present invention relates to a marking system, particularly although not exclusively for use with timber or timber based products.

A particular difficulty with timber and timber based products is that it may be difficult, once the timber has been machined and processed, to identify different types and grades of timber and treatments supplied to it. It is a purpose of the present invention to provide a method of identification and an identification marker. The marker and the method of identification are desirably used with timber and timber based products, but their use on other types of products is not excluded. The invention also extends to a commodity having a marker secured thereto.

According to a first aspect of the present invention there is provided an identification marker having a securing member adapted to secure the marker to a substrate by being driven into the surface of the substrate, the marker carrying identifying indicia adapted to be readable by a user when the marker is secured as aforesaid. The indicia are preferably encoded and are adapted for machine-reading.

According to a second aspect of the invention there is provided a substrate having secured to it an identification marker as previously defined.

According to a third aspect of the invention there is provided a method of identifying the characteristics of a commodity comprising driving into the surface of the commodity an identification marker, and reading identifying indicia on the marker.

According to a fourth aspect of the invention there is provided a raft of staples, each staple in the raft comprising an identification marker as previously defined.

The invention may be carried into practice in a number of ways and one specific embodiment will now be described, by way of example, with reference to the drawing which shows an exemplary identification marker in accordance with a preferred embodiment of the invention.

The identification marker shown in the drawing is of a one piece plastics material. It comprises a generally rectangular body 10 having first and second downwardly projecting pointed legs, prongs or spikes, 20, 30. On the upper rectangular face of the body 10 there is a bar code 40.

In use, the marker would be applied to each piece of machined timber or wood-based board material (for example plywood, chipboard, fibreboard, blockboard etc) in the producing mill or later in the supply chain. Application would be by means of a suitable mechanical or pneumatic machine, designed to drive and impale the marker in the surface of the wood or board. The machine will be capable of overdriving the marker into

the wood or board, so that the upper surface of the body 10, carrying the bar-code 40, is recessed beneath the wood or board surface. This has the advantage that the wood or board can subsequently be processed in the normal way, including being planed, without the information being removed.

No particular form of automatic machine for applying the markers is presently considered essential, but ideally there will be means for continuously feeding suitable markers, for example from a hopper. The markers could be precoded prior to securing to the wood or board, or alternatively a computer-controlled system for printing the appropriate individual code prior to application could also be envisaged.

The type of marker shown in the Figure, having two prongs 20, 30, is preferred but other arrangements having fewer or a greater number of prongs are not excluded. In one embodiment, each individual marker may take the form of a staple, and preferably the individual staples may, prior to securement to the wood or board, be joined together to form a "raft".

The preferred marker is made of a plastics material, and is of one piece. A metallic marker would be unacceptable for use in timber and timber based products, because of the possibility that such a marker might damage woodworking equipment. Additionally, a metal marker might present a hazard in the event that the timber is subsequently processed by high frequency heating.

To be used as envisaged, the marker with its coded information should be cheap enough to be applied to individual pieces of timber or timber-based material which may, themselves, each have a quite low market value. It should be possible to read the data accurately, preferably by hand held or fixed scanners, and the coded data should not easily be susceptible to corruption or accidental or deliberate erasure. A laser-read bar code system meets these criteria best at the present time, but alternatives are not excluded. Other means of carrying the information provided by the bar code 40 would be a magnetic stripe system, or an encapsulated microelectronic device.

An individual marker might perhaps be only a centimetre or so in length, and difficulties might arise in locating that marker on for example a large piece of timber or board. To alleviate that problem, it is proposed that "target zone" marks might be applied to the surrounding area of the timber or board to aid location of the marker.

The marker could be used on commodities other than timber and timber-based products.

Each individual marker will carry coded information on the characteristics of the product or commodity to which it has been secured. There would be a unique code for each commercially or statistically significant category of product, and for timber and timber-based products the marker could carry information such as the species of type of timber, the size, grade, mill identification, brand name, date,

glue bond type, customs identification code, details of chemical treatments, plant health data and so. The characteristics encoded may include details of the history and previous treatment of the product.

In conjunction with a suitable computerised codification scheme, the present invention may have applications in a large number of different fields, including for example inventory data, stock control, invoice preparation, technical data and point-of-sale information, health and safety data, plant health check statistics, import and trade statistics, processing and work in progress data, yield and productivity data, code enhancement information, building control approval, and quality systems data and implementation.

CLAIMS:

1. An identification marker having a securing member adapted to secure the marker to a substrate by being driven into the surface of the substrate, the marker carrying indentifying indicia adapted to be readable by a user when the marker is secured as aforesaid.
2. A marker as claimed in Claim 1 in which the indicia comprises a bar code.
3. A marker as claimed in Claim 1 in which the indicia are embodied in a magnetic strip.
4. A marker as claimed in Claim 1 in which the indicia are embodied in a microelectronic device.
5. A marker as claimed in any one of the preceding claims in which the indicia are erasable, the marker being arranged to be re-recordable with new indicia.
6. A marker as claimed in any one of the preceding claims in which the indicia are carried on a body of the marker, the securing member projecting from the body.
7. A marker as claimed in Claim 6 including two securing members, each projecting from the body.
8. A marker as claimed in any one of the preceding claims being made of a plastics material.

9. A substrate having secured to it an identification marker as claimed in any one of the preceding claims.

10. A substrate as claimed in Claim 9 comprising a piece of machined timber or a wood-based material.

11. A substrate as claimed in Claim 9 or Claim 10 in which the indicia are recessed below the surface of the substrate.

12. A substrate as claimed in Claim 9 or Claim 10 or Claim 11 including target zone marks on the substrate to aid location of the marker.

13. A method of identifying the characteristics of a commodity comprising driving into the surface of the commodity an identification marker, and reading identifying indicia on the marker.

14. A method as claimed in Claim 13 including updating the information embodied in the indicia by erasing and re-recording the indicia.

15. A method as claimed in Claim 13 including updating the information embodied in the indicia by driving a further identification marker into the surface of the commodity, the marker and the further marker being distinguishable.

16. A method as claimed in any one of Claims 13 to 15 including overdriving the identification marker into the commodity so that the indicia are recessed beneath the surface of the commodity.

17. A method as claimed in any one of Claims 13 to 16 in which the commodity is a piece of machined timber or a wood-based material.

18. A method as claimed in any one of Claims 13 to 17 including reading the identifying indicia a plurality of times during processing of the commodity.

19. An identification member substantially as specifically described with reference to the drawing.

20. A method of identifying the characteristics of a commodity substantially as specifically described.

21. A piece of machined timber, or a wood-based material, carrying an identification marker substantially as specifically described with reference to the drawing.

22. A raft of staples, each staple in the raft comprising an identification marker as claimed in any one of Claims 1 to 8.

Patents Act 1977
**Examiner's report to the Comptroller under
Section 17 (The Search Report)**

Application number

9205282.8

Relevant Technical fields

(i) UK CI (Edition K) B8F(FBB,FBD), G4H(HJ)

(ii) Int CL (Edition 5) G09F 3/00,3/04,3/12,3/18,3/20

Search Examiner

S R SMITH

Databases (see over)

(i) UK Patent Office

(ii)

Date of Search

8 MAY 1992

Documents considered relevant following a search in respect of claims

1-22

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2075464 A (LATSCHBACHER) see particularly lines 38 to 50 of page 1	1,6,7,8, 9,10,13, 17,18
X	EP 0248928 A1 (LATSCHBACHER) see particularly Figure 2	1,2,3,6, 7,9,10, 13,17
X	US 3952438 (PROPST) see lines 45 to 68 of column 3 and lines 58 to 68 of column 5	1,2,3,6, 8,9,13
X	US 4908503 (LEUVREY) see lines 49 to 67 of column 2, lines 42 to 46 of column 3, lines 24 to 44 of column 5 and lines 20 to 28 of column 6	1,2,8,9, 10,11,12, 13,17,22

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

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X	US 3952438 (PROPST) - See lines 45 to 68 of column 3 and lines 58 to 68 of column 5	1,2,3,6, 8,9,13

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- P: Document published on or after the declared priority date but before the filing date of the present application.
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