

(12) United States Design Patent (10) Patent No.: US D704,582 S Muraoka et al. (45) Date of Patent: ** May 13, 2014

(54) HARDNESS TESTER

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- (**) Term: 14 Years

4,667,509 A *	5/1987	Tobolski et al 73/83
5,616,857 A *	4/1997	Merck et al 73/82
D394,015 S *	5/1998	Kellstedt et al D10/83
6,142,010 A *	11/2000	Merck et al 73/81
6,691,564 B2*	2/2004	Anderberg 73/81
7,139,422 B2*	11/2006	Hauck et al
D691,501 S *	10/2013	Schulz et al D10/83

* cited by examiner

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 USPC D10/83-85; 73/78-85, 760-860,
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 See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,442,705 A * 4/1984 Lang et al. 73/83

(57) CLAIM The ornamental design for a hardness tester, as shown.

DESCRIPTION

FIG. 1 is a perspective view of a hardness tester showing a first embodiment of our new design; FIG. 2 is a front view of the first embodiment; FIG. 3 is a rear view of the first embodiment; FIG. **4** is a left side view of the first embodiment; FIG. 5 is a right side view of the first embodiment; FIG. 6 is a top view of the first embodiment; FIG. 7 is a bottom view of the first embodiment; FIG. 8 is a perspective view of a hardness tester showing a second embodiment of our new design; FIG. 9 is a front view of the second embodiment; FIG. 10 is a rear view of the second embodiment; FIG. **11** is a left side view of the second embodiment; FIG. 12 is a right side view of the second embodiment; FIG. 13 is a top view of the second embodiment; and, FIG. 14 is a bottom view of the second embodiment.



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