

(12) **United States Patent**
Horii et al.

(10) **Patent No.:** **US 7,089,597 B2**

(45) **Date of Patent:** **Aug. 15, 2006**

(54) **CLOTHES FOR THE UPPER HALF OF BODY**

(75) Inventors: **Katsuko Horii**, Kyoto (JP); **Makoto Oyama**, Kyoto (JP); **Toshiko Murakami**, Kyoto (JP)

4,698,847 A * 10/1987 Yoshihara 2/69
 4,731,882 A * 3/1988 Ekman 2/69
 5,109,546 A * 5/1992 Dicker 2/70
 5,606,745 A * 3/1997 Gray 2/69
 5,708,976 A * 1/1998 Dicker 2/69

(73) Assignee: **Wacoal Corporation**, Kyoto (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 119 days.

FOREIGN PATENT DOCUMENTS

JP	61-124611 A1	6/1986
JP	61-239002 A1	10/1986
JP	62-117802 A1	5/1987
JP	3019336 A1	10/1995
JP	09-250008 A1	9/1997
JP	3046785 A1	12/1997
JP	10-292209 A1	11/1998

(21) Appl. No.: **10/432,060**

(22) PCT Filed: **Aug. 9, 2002**

(86) PCT No.: **PCT/JP02/08188**

§ 371 (c)(1),
 (2), (4) Date: **May 14, 2003**

* cited by examiner

Primary Examiner—Gloria M. Hale
 (74) *Attorney, Agent, or Firm*—Darby & Darby

(87) PCT Pub. No.: **WO2004/014166**

PCT Pub. Date: **Feb. 19, 2004**

(57) **ABSTRACT**

(65) **Prior Publication Data**

US 2004/0133959 A1 Jul. 15, 2004

An upper body garment which selectively supports the muscles used during inhalation without hindering the movement of the spinal column. The upper body garment is constructed by stitching, to a shirt that adheres closely to the body, a plurality of band-form fabrics having a stretchability lower than that of the shirt. The stitching of the band-form fabrics occurs along several defined anatomical lines such as: the first lines that extend from the left and right acromia to a portion that corresponds to the center of the sternum, second lines which extend from this portion corresponding to the center of the sternum, pass beneath the breast area, and extend to the left and right armpit areas, and third lines which connect the left and right armpit areas of the second lines to each other on the back surface.

(51) **Int. Cl.**
A41B 1/20 (2006.01)

(52) **U.S. Cl.** 2/69; 2/106

(58) **Field of Classification Search** 2/69,
 2/44, 79, 115, 108, 105, 106, 2.11, 459, 461,
 2/467, 16, 92, 125, 133, 134, 95, 85; 602/19,
 602/60-63, 75; 482/124

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,186,412 A 6/1965 Kurland

14 Claims, 7 Drawing Sheets

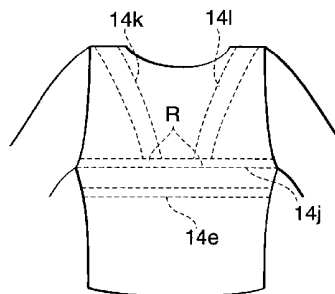
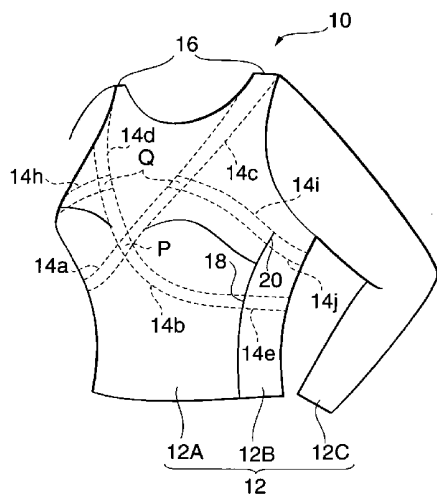


Fig.1A

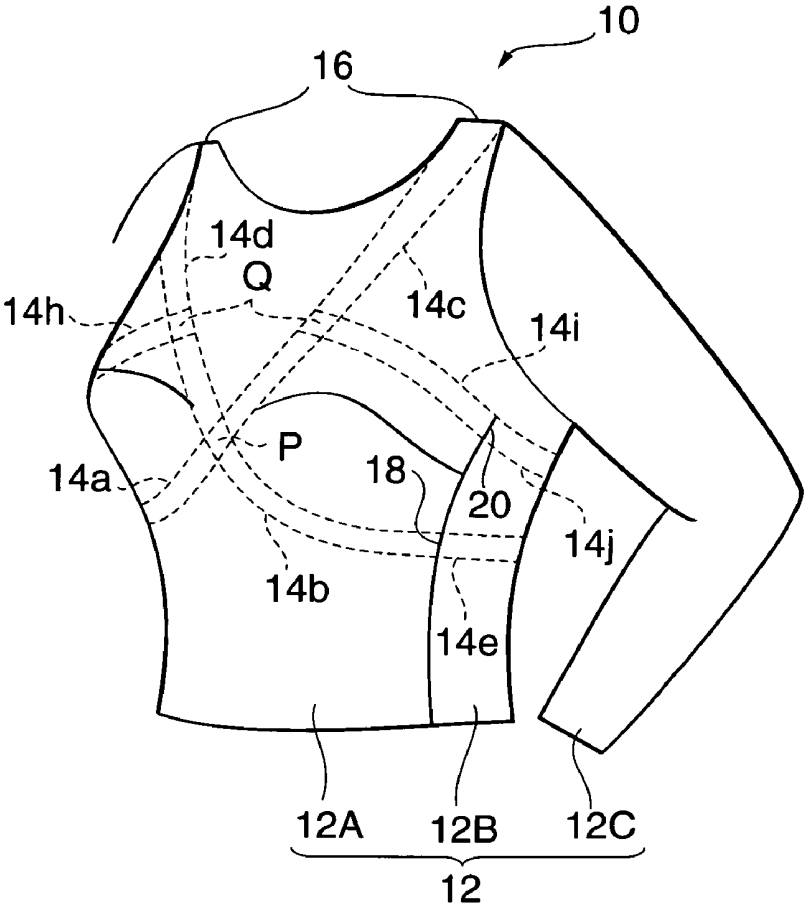


Fig.1B

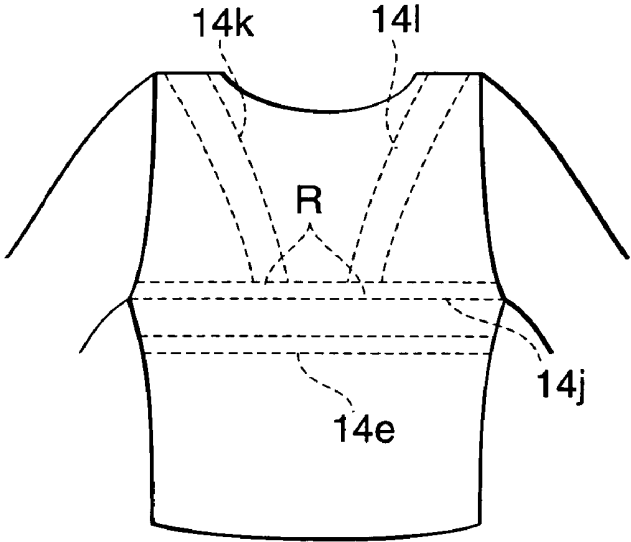


Fig.2A

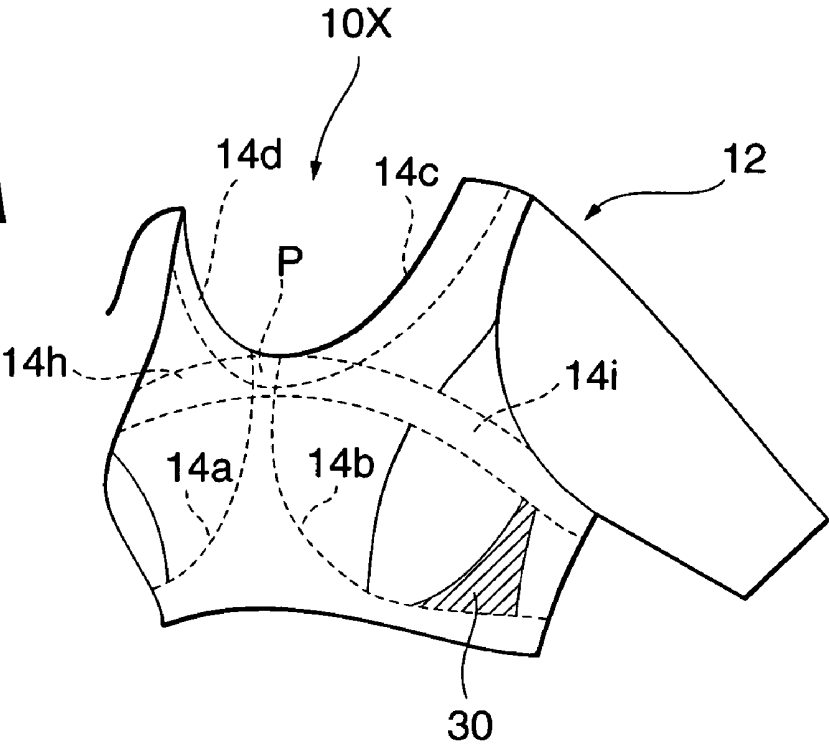
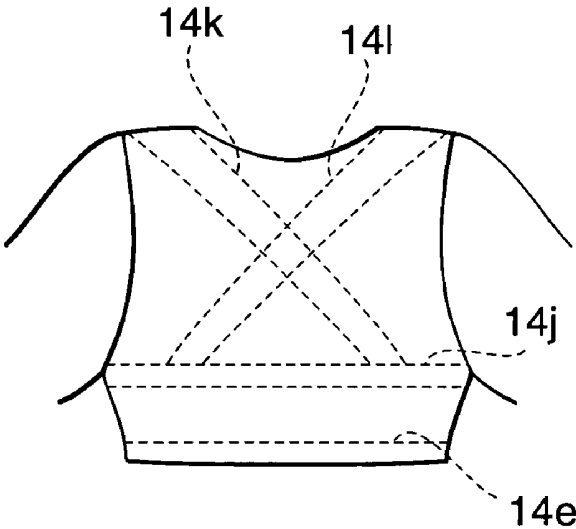


Fig.2B



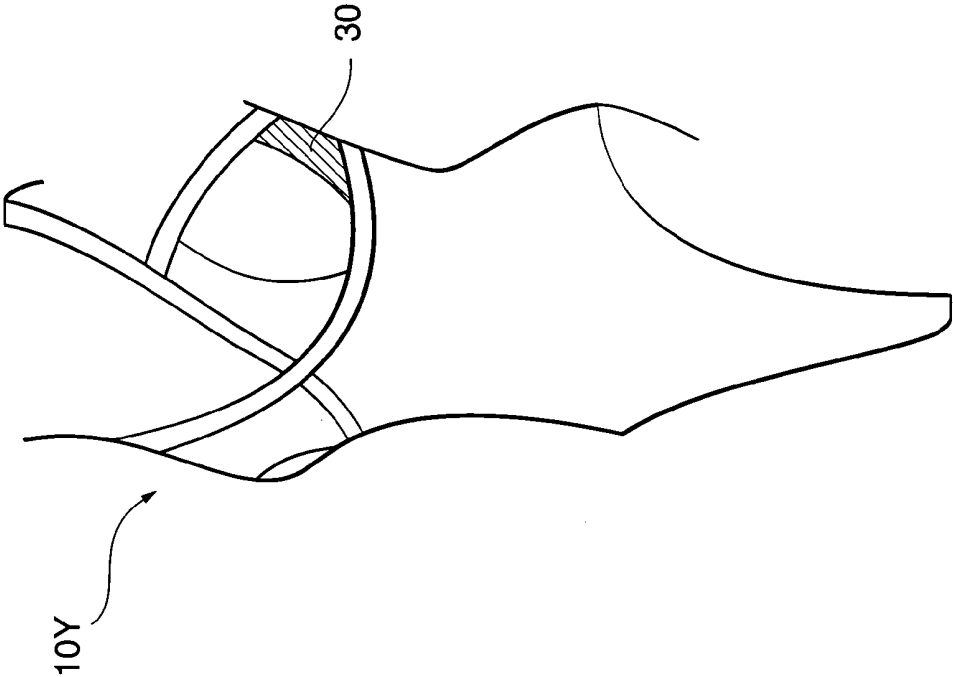


Fig. 3A

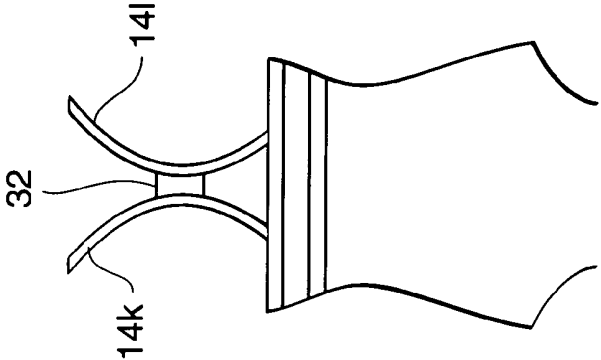


Fig. 3B

Fig.4A

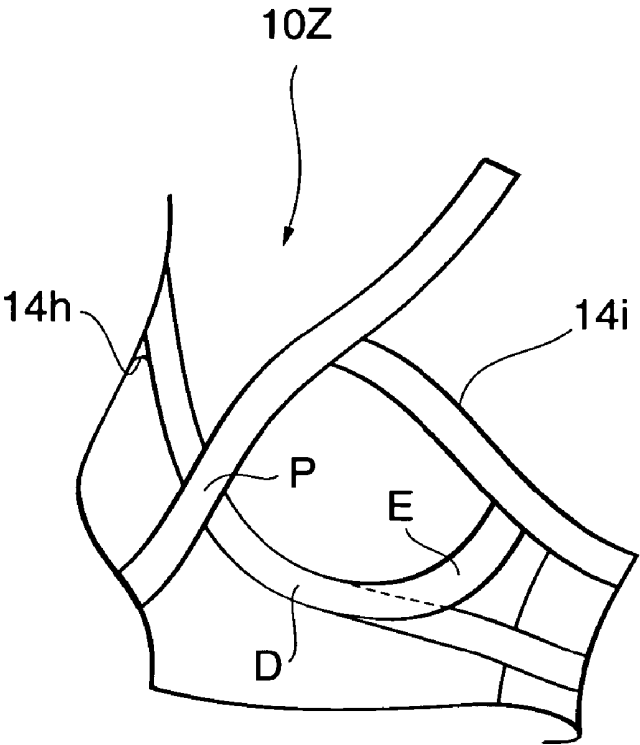
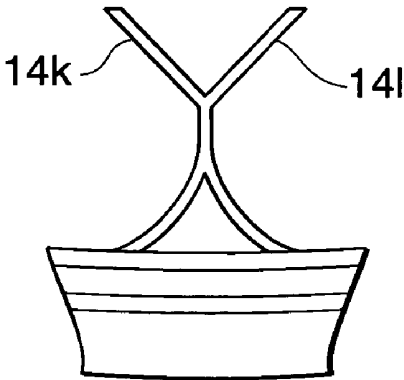


Fig.4B



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.