



Remington: The Science and Practice of Pharmacy

Volume I

UNIVERSITY OF MICHIGAN
LIBRARY

19TH
EDITION

Remington: Practice of

ALFONSO R GENNARO

*Chairman of the Editorial Board
and Editor*

The Science and Pharmacy

1995

MACK PUBLISHING COMPANY

Entered according to Act of Congress, in the year 1885 by Joseph P Remington,
in the Office of the Librarian of Congress, at Washington DC

Copyright 1889, 1894, 1905, 1907, 1917, by Joseph P Remington

Copyright 1926, 1936, by the Joseph P Remington Estate

Copyright 1948, 1951, by The Philadelphia College of Pharmacy and Science

Copyright 1956, 1960, 1965, 1970, 1975, 1980, 1985, 1990, 1995, by The Philadelphia College of
Pharmacy and Science

All Rights Reserved

Library of Congress Catalog Card No. 60-53334

ISBN 0-912734-04-3

*The use of structural formulas from USAN and the USP Dictionary of Drug Names is by
permission of The USP Convention. The Convention is not responsible for any inaccuracy
contained herein.*

*NOTICE—This text is not intended to represent, nor shall it be interpreted to be, the equivalent
of or a substitute for the official United States Pharmacopeia (USP) and/or the National
Formulary (NF). In the event of any difference or discrepancy between the current official
USP or NF standards of strength, quality, purity, packaging and labeling for drugs and
representations of them herein, the context and effect of the official compendia shall prevail.*

Printed in the United States of America by the Mack Printing Company, Easton, Pennsylvania

phar

AC

Remington: The Science and Practice of Pharmacy . . . a treatise on the theory and practice of the pharmaceutical sciences, with essential information about pharmaceutical and medicinal agents; also a guide to the professional responsibilities of the pharmacist as the drug-information specialist of the health team . . . A textbook and reference work for pharmacists, physicians and other practitioners of the pharmaceutical and medical sciences.

RS

41

R41

.2

19

1

EDITORS

Alfonso R Gennaro, *Chairman*

Thomas Medwick

Grafton D Chase

Edward G Rippie

Ara Der Marderosian

Joseph B Schwartz

Glen R Hanson

H Steve White

Daniel A Hussar

Gilbert L Zink

AUTHORS

The 112 chapters of this edition of *Remington* were written by the editors, by members of the Editorial Board, and by other authors listed on pages x to xii.

Managing Editor

John E Hoover, BSc (Pharm)

Editorial Assistant

Bonnie Brigham Packer, RNC, BA

Director

Allen Misher 1985–1995

Nineteenth Edition—1995

Published in the 175th year of the
PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE

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.