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Selling Massachusetts Medicines

J. Worth Estes

Lowell, Lynn, and Boston were among the nation's major drug manufacturing and distributing centers in the late nineteenth century. For instance, in 1897 Lowell boasted thirteen patent medicine factories, although only two were very large firms. The combined payrolls (\$243,460) and raw material purchases (\$621,158) for all thirteen that year came to only forty percent of their products' market value (\$2,157,237).¹ They were very profitable businesses indeed. The 1906 Pure Food and Drug Act was prompted in part by repeated observations, some of them well-publicized, that many over-the-counter remedies were ineffective as cures or even hazardous. Actually, most were not patented at all, because the patenting process required disclosure of the remedies' ingredients, and manufacturers usually preferred to guard their formulas as valuable trade secrets. Besides, patents provided legal protection for only seventeen years, while the benefits of registered trade marks were virtually permanent.² Thus, most "patent medicines" were really proprietary medicines, manufactured and sold under distinguishing trademarks by their inventors or by proprietors who had purchased exclusive marketing rights from the original inventors.

Colonists brought true patent medicines with them from England at least as early as 1708. Their advertising promoted them as panaceas for disorders of all the body's organs. The first American patent for a medicine was issued in 1796 to Samuel Lee, Jr., of Windham, Connecticut, for his "Bilious Pills."³ Twenty-five years later William Swaim of Philadelphia began to sell his "Panacea" of which the major ingredient was sarsaparilla, later to become the basis of several patent medicine fortunes in Massachusetts and elsewhere.⁴

Although today we sometimes amuse ourselves by ridiculing the so-called patent medicines of a century ago—for their legendary unpalatability as well as for their ineffectiveness—large quantities of them were sold. One reason our ancestors bought them for their families was the drugs' general promise of relief from many aches, pains, and illnesses, an expectation still inherent in all medicines. And it seems unlikely that Americans would have spent the millions of dollars they did on "bitters" as home remedies if such drugs had been completely offensive to their palates. High alcohol concentrations minimized the unpleasant tastes of some remedies. Other manufacturers, like John C. Ayer of

[Adapted from a poster presentation at the American Association for the History of Medicine annual meeting at Durham, N.C., 15-18 May 1985]

Lowell, developed more temperate methods, like sugar-coatings, for disguising the disagreeable raw ingredients they used.⁵

An often overlooked reason for the patent medicines' success was the public's understanding of just how they affected the sick body. Advertising copy could be as explicit in describing the drugs' presumed modes of action as in proclaiming their efficacy. Advertisements exploited pathological and pharmacological concepts that were familiar to consumers; many of these same notions were also embedded in contemporary professional medical practice. Some symptoms were seen as secondary to disturbances in the equilibria of individual organs, resulting in weak stomachs, livers, or nerves, or in kidney obstructions; others were related to generalized weakness or debility. In turn, such imbalances were said to be caused by a variety of external factors, most of which were irrelevant to the public pharmacology of drug advertising. For instance, even the discovery of bacteria as the ultimate cause of many diseases made little difference to patent medicine promotions because the drugs were aimed at the body's responses to the invading organisms, not at bacteria themselves.

If few pathological processes were held to be responsible for most illnesses, there were not many more recognizable drug classes for treating them. One important group consisted of the tonics, drugs thought to stimulate and strengthen the body by increasing its tone and its innate strength. Blood purifiers were supposed to remove potential poisons and to improve the distribution of vital nutrients. Drugs that added oxygen to the body had clear medical usefulness, as did drugs that stimulated the nerves of weak or paralyzed patients. Finally, many medicines were promoted as cathartics for cleansing the bowels and, as a result, the rest of the body. Although ads for some remedies did not mention that they also had laxative effects, consumers were not surprised that they did because, following a tradition that began in ancient Egypt, patients recognized catharsis as a desirable method of restoring internal equilibria, no matter what had upset the balances in the first place.

The development of inexpensive color lithography in the 1870s engendered lavish drug advertising campaigns. Most of the illustrations used here were trade cards printed in color on one side.⁶ The reverse usually provided the physiological information which induced Americans to purchase the drug advertised, usually for 25 cents, 50 cents, or \$1 a bottle or box, about one cent per teaspoonful or pill.

Because sarsaparilla was native to the New World, sometimes it was advertised as especially suitable for the diseases of Americans. But most ads, like the jigsaw puzzle promoting the C. I. Hood Company's brand (figure 1a and 1b), imply that the drug is a potent tonic ("Makes the Weak Strong"). Indeed, the Lowell-based Hood Company relied on generalized claims of efficacy—in cook books, coloring books, paper dolls, calendars, and newspapers, as well as in puzzles—rather than on detailed physiological explanations to sell drugs.⁷

By contrast, the company which John C. Ayer founded in Lowell in 1841 promoted its brand of sarsaparilla by summarizing its modes of therapeutic action (figure 2). Not only did his product purify the blood, it was an effective

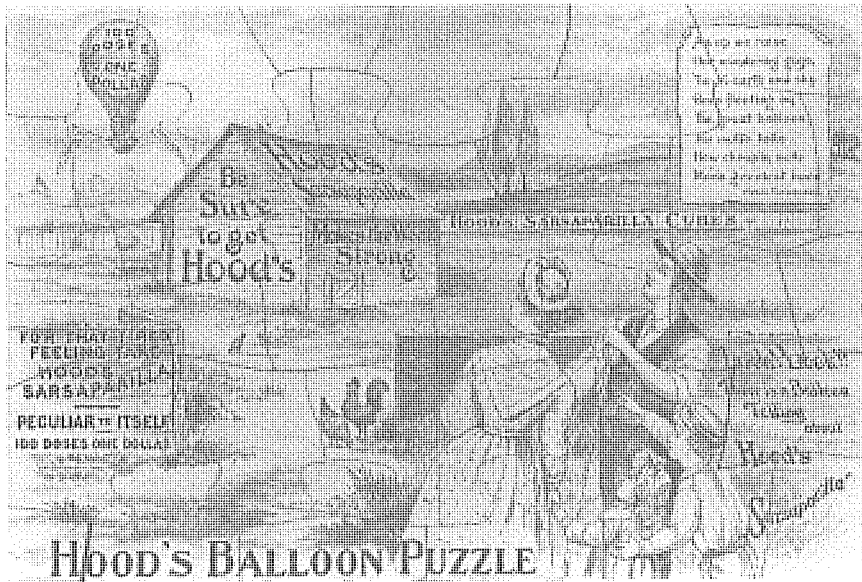
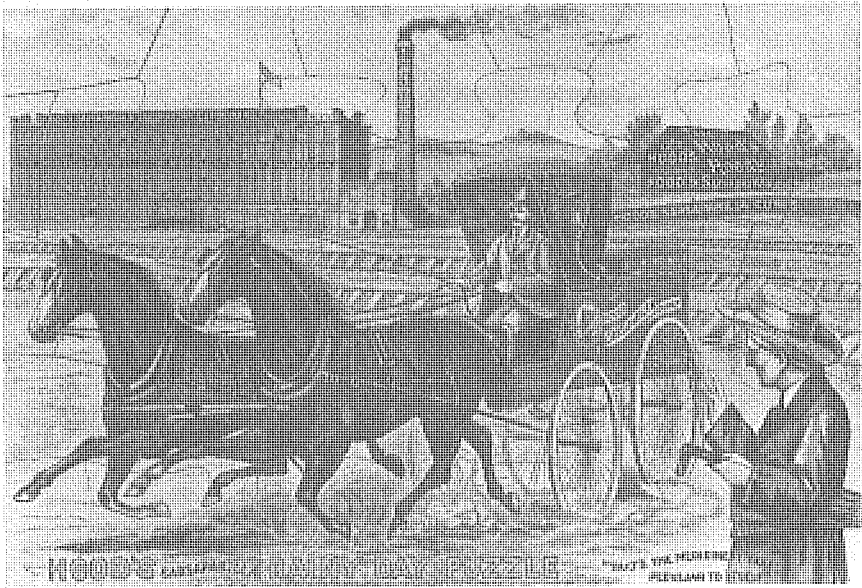


Figure 1a and 1b. Hood's Balloon Puzzle (1891), obtained in return for sending three Hood's Sarsaparilla wrappers to the company. The obverse (1a) is a chromolithograph. The C. I. Hood Co. factory is still standing in Lowell, substantially unchanged from its appearance here, although it now houses a discount outlet. The reverse (1b) was printed in blue on white. (Courtesy of the Boston Medical Library.)

tonic (“infuses New Life and Vigor throughout the whole system”). Ayer listed the medicine’s ingredients on the reverse of another trade card. They included sarsaparilla (*Smilax aristolochia* from Mexico or *Aralia hispida* or *A. nudicaulia* from North America), queen’s root (*Stillingia sylvatica*), mandrake (really the may apple, *Podophyllum peltatum*), yellow dock (*Rumex crispus*), and potassium iodide. All were listed in contemporary editions of the *U.S. Pharmacopoeia*, which might have been taken as official sanction for the recipe. However, the 1880 *National Dispensatory* stated that the effects of sarsaparilla “are not seen in usual medical dosage.” Still, most of the ingredients were recognized by the medical profession as capable of stimulating several of the body’s secretions and, therefore, as capable of adjusting disturbed equilibria in a variety of organs.⁸



Figure 2. Trade card advertising the Dr. J. C. Ayer Company’s Sarsaparilla. (Courtesy of a private collector and the Boston Medical Library.)

A number of proprietary medicine manufacturers published annual almanacs. The Ayer Company, one of the earliest, began giving them away in 1855; by the 1890s it was distributing about sixteen million a year, in twenty-one languages. The booklets alternated pages of astronomical information and jokes with pages of medical and promotional therapeutic information. For instance, the 1870 *Ayer’s American Almanac* described scrofula as “a vitiation of the vital forces [which] makes sickly the central power of life.” It was said to be the underlying cause of many different symptoms and diseases which were accompanied by weakness, as illustrated by the prostrate woman shown in figure 2. Consequently, conditions as diverse as disorders of the stomach, liver, and kidneys, as well as tuberculosis, tumors, rheumatism, female weaknesses, sterility, syphilis, and pimples were all described as manifestations of scrofula and, therefore, curable by Ayer’s Sarsaparilla, the multi-purpose tonic.

The same trade card shows that Ayer also considered his wonder drug to be a blood purifier. His company’s 1889 *Almanac* proclaimed: “Whenever you have reason to suppose that your blood is depraved, lose no time in seeking the most

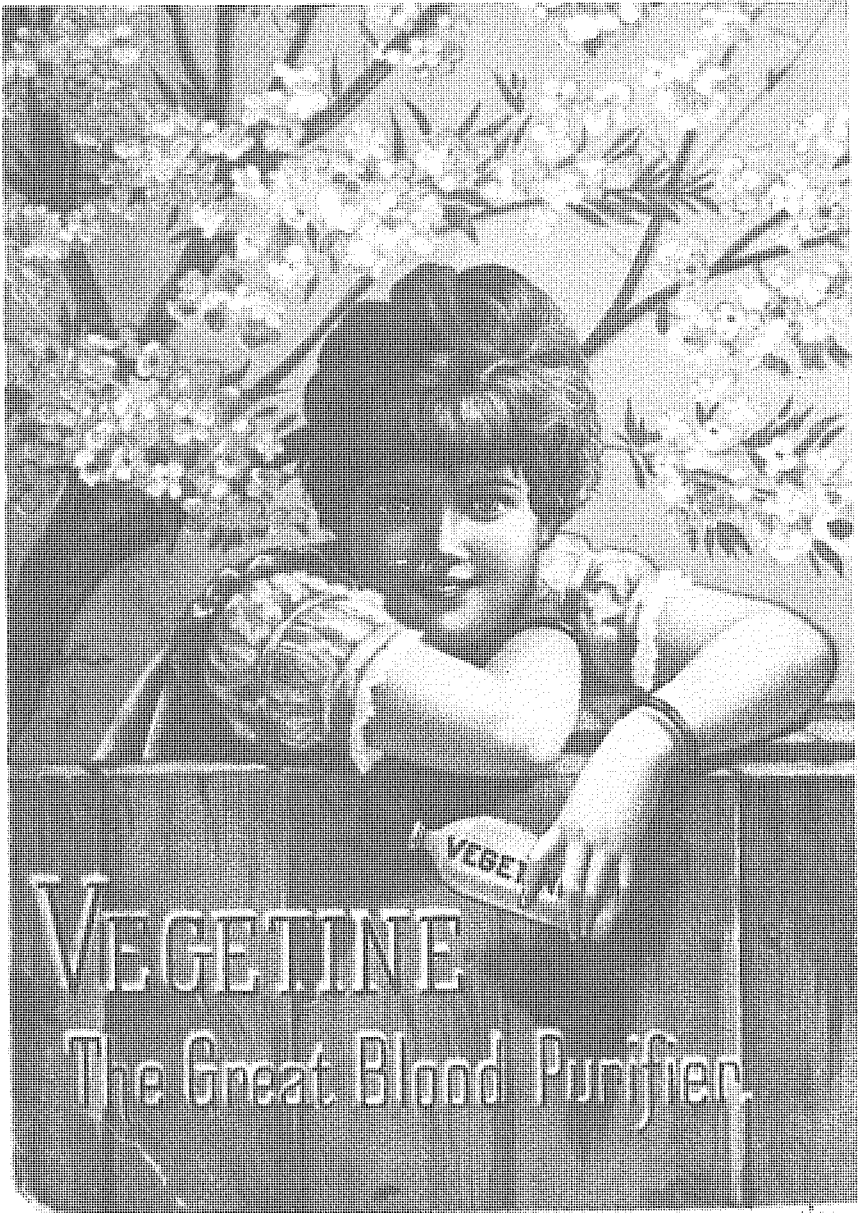


Figure 3. Trade card advertising the H. R. Stevens product Vegetine. (Courtesy of a private collector and the Boston Medical Library.)

effective remedy”—Ayer’s Sarsaparilla. This claim was based on a rather loose translation of William Harvey’s 1628 announcement of his discovery that the blood circulates within the cardiovascular system: “The circulation is continually casting off worn-out and effete particles and acquiring new elements supplied



Figure 4. Monochrome (sepia) trade card advertising the Lydia E. Pinkham Medicine Company's Vegetable Compound on the reverse. (From the author's collection.)

by the food If the blood becomes impure [from such particles], it carries disorder to every part of the body." Sarsaparilla would, of course, prevent such disorders from arising in the blood.

H. R. Stevens of Boston advertised Vegetine chiefly as a blood purifier (figure 3). One explanation of its action derived from the 1844 discovery that the protein fibrinogen, which becomes the structural material of blood clots, was also responsible for one of the characteristic laboratory findings in the blood of rheumatoid arthritis patients. Stevens claimed that Vegetine could cure joint disease because it cleansed the blood while emptying the bowels; presumably the catharsis removed excess fibrinogen from the blood by something like osmosis and flushed it out with the stools. Indeed, Vegetine was thought to cure a wide spectrum of diseases precisely because it could eliminate many different toxic substances from the blood.

Among the best known American proprietary medicines was the one invented by Lydia Estes Pinkham of Lynn. Her Vegetable Compound was made of unicorn root (*Aletris farinosa*), life root (*Senecio aureus*), black cohosh (*Cimifuga racemosa*), pleurisy root (*Asclepias tuberosa*), and fenugreek (*Trigonella foenum-graecum*) seeds, all suspended in nineteen percent alcohol. Mrs. Pinkham derived the details of her advertising from Dr. John King's *American Dispensatory* of 1876. In it the first four ingredients listed were said to correct female complaints such as uterine inflammation, leucorrhea, amenorrhea, dysmenorrhea, prolapsed uterus, and labor pains.⁹ As for the alcohol, it was widely regarded at the time as a general stimulant, that is, as a tonic.¹⁰ Mrs. Pinkham added the fenugreek seeds as her own contribution, for reasons we do not know. Of all her ingredients, only black cohosh and pleurisy root were also in the 1870 *U. S. Pharmacopoeia*. Other contemporary authorities described them not as tonics, but as sedatives.

The Lydia E. Pinkham Medicine Company's first trade cards featured her photograph, made when she was sixty (figure 4), not the colorful lithographs favored by other proprietors. Later Pinkham cards were of the more conventional kind. On the reverse of this early card the Vegetable Compound was said to cure kidney disease in both men and women, but Mrs. Pinkham abandoned that claim when she realized that women wanted their own female-selective medicine, and that they did not want to share it with men. In general, its efficacy in curing women's diseases was attributed to its activity as a blood purifier with special affinities for the female organs. Its other chief selling point, the trade mark registered in 1876, was the grandmotherly face of the Compound's inventor. Her visage continued to instill confidence in the product well into the twentieth century.

Eben Norton Horsford was the Rumford Professor of Applied Science at Harvard from 1847 to 1863. In 1857 he and two others founded the Rumford Chemical Works in Providence, for studying and manufacturing baking sodas and other cooking products. Horsford resigned from Harvard when he realized that manufacturing his culinary discoveries was more profitable than teaching chemistry. In 1866 he invented an Acid Phosphates mixture (figure 5). It included the phosphate salts of calcium, magnesium, sodium, potassium, and



Figure 5. Trade card advertising the Rumford Chemical Works' Acid Phosphate invented by Harvard Professor Eben N. Horsford. (Courtesy of a private collector and the Boston Medical Library.)

iron, as well as free phosphoric acid. He had learned about the nutritive value of phosphates while studying in Germany. This concept was supported by experiments cited in the *National Dispensary*, which described phosphates as valuable tonics for the central nervous system, although the authors concluded there was little good evidence that phosphates were truly effective in the treatment of any disease. Still, they noted that recent chemical analyses of brain tissue supported the theory that phosphates *should* be effective nerve tonics. Probably because the formula for Professor Horsford's remedy could have been unravelled in any chemistry laboratory, he patented it. He further expanded its market by noting at the bottom of this trade card that "it makes a delicious drink" all by itself, even if you did not have a medical need for it.

Among other popular nerve tonics was the Peruvian Syrup made by J. P. Dinsmore in New York and distributed by Seth W. Fowle & Son of Boston. It was compounded chiefly of cocaine and iron, a combination said to "vitalize and enrich the blood, tone up the system, make the weak strong, build up the broken-down, invigorate the brain, and, as a result, cure a long list of conditions [including] all disease originating in a bad state of the blood, or accompanied by debility or a low state of the [nervous] system." A Boston doctor provided a testimonial for a virtually identical product: "I have had the most unfailing success [with it] among hundreds of my broken-down and nervous lady patients."

The Ayer Company used both the tonic and the blood purifying properties of its Cathartic Pills (figure 6) to promote their sales, noting that the "pills reach the vital fountains of the blood, correct their action by removing obstructions, and strengthen the system by freeing it from elements of weakness." Cathartics, Ayer went on, would also "promote the proper distribution of nutriment throughout the body." When Ayer introduced this product in 1848, he made it with purified extracts of the castor bean (*Ricinus communis*), senna (*Cassia*



Figure 6. Trade card advertising Ayer's Cathartic Pills. (Courtesy of a private collector and the Boston Medical Library.)

acutifolia), aloes (*Aloe barbadensis*), and colocynth (*Citrullus colocynthus*), four ancient bowel stimulants.¹¹ Twenty years later he replaced the castor bean and senna extracts with the very potent cathartic jalap (root of *Exogonium purga*) and gamboge (*Garcinia hanburii*). The change didn't really matter, of course, because both formulas were quite effective—at least as cathartics—and all six were included in the *U. S. Pharmacopoeia*.



Figure 7. Trade card advertising Wistar's Balsam of Wild Cherry, manufactured by Seth W. Fowle & Son of Boston. (Courtesy of a private collector and the Boston Medical Library.)

The proper distribution of nutrients in the body was a frequent goal of patent medicines. The 1889 *Ayer's Almanac* explained that if digestion and absorption from the stomach were not well regulated and balanced, dyspepsia would result. Dyspeptic patients were described as debilitated and weak, and lacking “nervous energy.” Some manufacturers claimed that their tonics with laxative effects were best for treating dyspepsia because they restored the body's strength. Others, like the Ayer Company, said *their* cathartics were best because they would flush undigested and obstructing foods out of the bowels. Ayer's Sarsaparilla was recommended as additional treatment for people who developed dyspepsia secondary to underlying scrofula. Seldom were cathartics advertised as remedies for constipation.

Many companies sold pectoral drugs for the relief of all respiratory diseases. Indeed, John C. Ayer's first product, his Cherry Pectoral, was the mainstay of his product line. Wistar's Balsam of Wild Cherry (figure 7), made in Boston by Seth W. Fowle & Son, was a similar extract of wild cherry (*Prunus serotina*) bark. The *National Dispensary* regarded this ingredient as a tonic because it was bitter, but also as a “sedative” for inflamed lungs because it generated

cyanide when mixed with water. It was, then, recommended for consumption (tuberculosis) because “it improves the appetite and strengthens the digestion, while it palliates the cough and allays the irritability of the nervous system.”

The Ayer Company, like several other firms, made a cure specifically for ague, another name for malaria. The drug’s advertisement (figure 8) reinforced what everyone knew, that the disease arose “from the decomposition of vegetable matter in the midst of stagnant water or marshy grounds;” the essential role of the mosquito in transmitting the malaria organism had not yet been discovered. Ayer knew quinine was appropriate treatment for ague, but he also knew it could produce distressing side effects. He claimed his Ague Cure was an all-vegetable compound “hitherto unknown to medicine,” but his formula has not come to light. Because it contained no quinine, Ayer said, it had no side effects. He described its action only by noting that it “neutralizes and eradicates [the malarial poisons] from the system” and that it was “an active TONIC.” By the time “Dr.” Ayer died in 1878 his company’s products could be seen as meeting all of man’s known medical needs with the four remedies mentioned above, as well as Ayer’s Hair Vigor. Unlike some of his competitors, Ayer and his successors believed that their drugs were truly effective. Indeed, the Ayer Company resigned from the Proprietary Association of America in 1906 because its owners then felt that the labels of proprietary medicines should, as directed by the new Food and Drug Law, list their ingredients, a requirement which other proprietors were resisting.¹²

The concepts of pathology and pharmacology reflected in late nineteenth-century patent medicine advertising were, in retrospect, usually erroneous. Many of the errors could not have been avoided—many of them could have been. But they usually had solid foundations in concepts of how the body works in health and disease that were shared by much of the American public. The net effect of these pseudoscientific sites and modes of drug action was to encourage consumers to apply panaceas selectively to each of their aches, pains, and illnesses. Perhaps many of the proprietors knew that symptoms often simply disappear of their own accord—or maybe they didn’t.

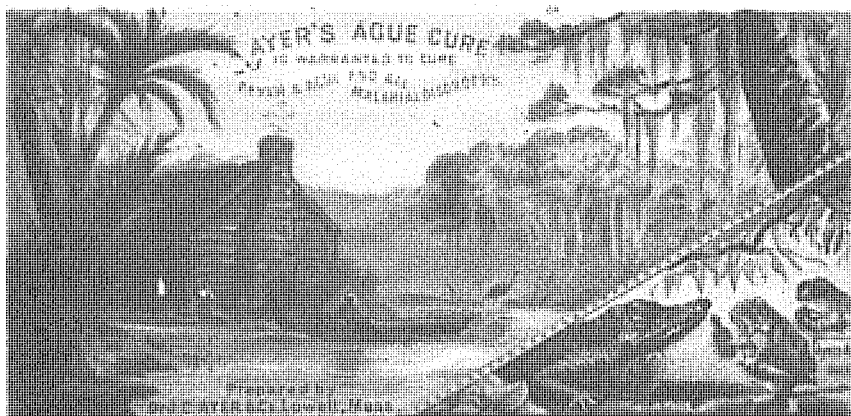


Figure 8. Trade card advertising Ayer’s Ague Cure. (Courtesy of a private collector and the Boston Medical Library.)

One major reason for the patent medicines' success in the marketplace may have been, as noted by one historian, that Americans are "highly susceptible to all forms of medical propaganda."¹³ But another has studied the apparent paradox of the efficacy of ineffective drugs more closely, and concluded that "Drugs reassured insofar as they acted and their efficacy was inevitably underwritten by the natural tendency toward recovery which characterized most ills."¹⁴ If that is true—and I think it is—then an 1896 poster promoting Hood's Sarsaparilla "In the light of its record of cures" cannot be taken merely as yet another example of an exaggerated therapeutic claim.¹⁵ That is, the accumulated experience of the Hood Company and its customers almost certainly did suggest that its sarsaparilla preparation, an all-purpose tonic, *was* effective treatment for the vast majority of people who took it. Similar experiences must have been shared by other proprietors and their publics, if only because many symptoms disappear of their own accord, regardless of any drugs taken.

NOTES

1. *Illustrated History of Lowell and Vicinity* (Lowell, 1897), p. 313.
2. David L. Dykstra, "The Medical Profession and Patent and Proprietary Medicines during the Nineteenth Century," *Bulletin of the History of Medicine* 29 (1955): 401-419.
3. James Harvey Young, *The Toadstool Millionaires: A Social History of Patent Medicines in America before Federal Regulation* (Princeton, N.J., 1961; reprint ed. 1972), pp. 32-33.
4. *Ibid.*, pp. 58-65.
5. James C. Ayer to unknown physician, n.d., but about 1850, in Boston Medical Library.
6. Most of the pharmacological information about the remedies discussed throughout comes from a private collection of trade cards which was lent to the Boston Medical Library for study in 1981; photocopies and color slides of the entire collection are in the library and in the author's files. Much other general information, including several formulas, is in Henry W. Holcombe, *Patent Medicine Tax Stamps* (Lawrence, 1979). The *Ayer's American Almanacs* cited throughout are in the author's collection.
7. A large sample of the C. I. Hood Company's advertising materials is in the University of Lowell Library Special Collection files.

8. This concept is elaborated on by Charles E. Rosenberg in "The Therapeutic Revolution: Medicine, Meaning, and Social Change in Nineteenth-Century America," *Perspectives in Biology and Medicine* 20 (1977): 485-506.
9. Sarah Stage, *Female Complaints: Lydia Pinkham and the Business of Women's Medicine* (New York, 1979), p. 89.
10. Rosenberg, "Therapeutic Revolution."
11. James C. Ayer to unknown physician.
12. Dykstra, "Medical Profession."
13. *Ibid.*
14. Rosenberg, "Therapeutic Revolution."
15. William Helfand, "The Pharmaceutical Poster," *Pharmacy in History* 15 (1973): 67-86.