1855, 1858, 1871, 1873, 1878 (mortality 872); Jackson, 1853, 1854, 1878 (mortality 86), 1898; Holly Springs, 1878 (mortality 309); Greenville, 1878 (mortality 301); Grenada, 1878 (mortality 326); Canton, 1878 (mortality 180). Our record does not include numerous smaller places which suffered during the epidemic of 1878, Ocean Springs, 1897, Edwards, 1897.

Louisiana.—The first recorded epidemic in New Orleans was in the year 1769; other outbreaks prior to the last century were in 1791, 1793, 1794, 1795, 1796, 1797, 1799. The prevalence of the disease in this city subsequent to the year 1800 is given in the table. Baton Rouge, 1817, 1819, 1822, 1827, 1829, 1837, 1843, 1847, 1853, 1858, 1878 (mortality 193), 1898, 1899; Opelousas, 1837, 1839, 1842, 1853; St. Francisville, 1811, 1817, 1819, 1823, 1827, 1829, 1839, 1843, 1846, 1848, 1853; Shreveport, 1853, 1873 (mortality 759); Port Hudson, 1839, 1841, 1843, 1853, 1878; Thibodeaux, 1846, 1853, 1854, 1878; Washington, 1837, 1839, 1852, 1853, 1854, 1867; Morgan City, 1878 (mortality 109). Numerous smaller places during the epidemics of 1873 and of 1878; Franklin, 1898, Alexandria, 1898.

Texas.—The epidemics at Galveston are included in our table. Houston, 1839, 1844, 1847, 1848, 1853, 1854, 1858, 1859, 1864, 1867, 1870; Huntsville, 1867 (mortality 130); Hempstead, 1867 (mortality 151); Indianola, 1852, 1853, 1858, 1859, 1862, 1867 (mortality 80); La Grange, 1867 (mortality 200); Matagorda, 1862 (mortality 120); Navazota, 1867 (mortality 154); Rio Grande City, 1867 (mortality 150); Victoria, 1867 (mortality 200); Brenham, 1867 (mortality 120); Calvert, 1867 (mortality 250); Chapel Hill, 1867 (mortality 123); Columbia, 1867 (mortality 132); Brownsville, 1853, 1858, 1862, 1882; Laredo, 1903.

Tennessee.—Memphis, 1828, 1853, 1855, 1867, 1873 (mortality 1,244), 1878 (mortality 5,000), 1879 (mortality 485); Chattanooga, 1878 (mortality 135); Brownsville, 1878 (mortality 212); numerous smaller towns in 1878.

Arkansas.—Columbia, 1853; Fort Smith, 1823, Little Rock, 1873, Napoleon, 1853.

Kentucky.—Bowling Green, 1878; Hickman, 1878 (mortality 153); Louisville, 1878 (mortality 64).

Ohio.—Cincinnati, 1871, 1873, 1878 (mortality 17); Gallipolis, 1796, 1878 (mortality 18).

Illinois.—Cairo, 1873 (mortality 17), 1878 (mortality 51).

Missouri.—St. Louis, 1854, 1855, 1878 (mortality 16): New Design, 1797 (mortality 57).

Great Epidemics in the United States. 1793.—The city of Philadelphia, after enjoying an immunity from yellow fever for thirty-one years, suffered in 1793 a devastating epidemic. This epidemic, no doubt, resulted from importation, although a clear history of its introduction was not made out at the time, and the leading physicians of the city were inclined to attribute it to local origin, as a result of unsanitary conditions in connection with an unusually high temperature. La Roche says: "Dr. Rush and others laid great stress on a quantity of damaged coffee which was exposed, during the latter part of July, in a place (on a wharf and in the adjoining dock) and under circumstances which favored decomposition. Its smell was highly putrid and offensive, insomuch that the inhabitants of the houses in Water and Front streets, who were near to it, were obliged in the hottest weather to exclude it by shutting the doors and windows. Even persons who only walked along those streets complained of intolerable fetor, which, upon inquiry, was constantly traced to the putrid coffee."

As usual, the early cases were not recognized as yellow fever. Dr. Rush says: "The report of a malignant and fatal fever being in town spread in every direction, but it did not gain universal credit. Some of those physicians who had not seen patients in it denied that any such fever existed, and asserted (though its mortality was not denied) that it was nothing but the common annual remittent of the city. Many of the citizens joined the physicians in endeavoring to discredit the account I had given of this fever, and, for a while, it was treated with ridicule or contempt. Indignation in some instances was exerted against me." History has repeated itself, in this particular, many times in subsequent epidemics. The early cases, even in cities like New Orleans, where the physicians are well acquainted with the disease, are frequently called by some other name—"bilious fever," "pernicious fever," "malarial fever," etc.—and the physician who first ventures to name the prevailing disease "yellow fever" is treated with ridicule or with indignation.

It was not until the middle of August that a rapid succession of fatal cases convinced the physicians of the city that the fatal West Indian pestilence was again present in Philadelphia.

The presence of the disease was officially recognized on the 22d of August, when the mayor of the city gave orders for the cleaning of streets and general purification of the city. The disease continued to extend until early in October, when it reached its height. It did not cease entirely until about the 8th of November. During this short season of prevalence it caused an enormous mortality, distributed as follows: "August, 325; September, 1,442; October, 1,976; November, 118" (La Roche).

The population of the city at this time is estimated to have been a little more than 40,000, which gives a mortality of ten per cent. of the total population (total mortality 4,040). As more than 12,000 of the inhabitants fled from the city, the proportion of those who were attacked is very great. La Roche estimates the total number of cases at 11,000.

1797.—The epidemic of this year in the city of Philadelphia was less extended and less fatal. The whole number of deaths is estimated to have been about 1,300. The disease, as usual, commenced in the vicinity of the wharves (about the end of July). Unsanitary conditions, described by physicians who were witnesses of the epidemic, furnished the favorable local nidus for the exotic germ, which, according to a report of the College of Physicians of Philadelphia made in response to a request from the governor, was imported by two vessels, one from Havana and the other from Port au Prince. In this report the College of Physicians, contrary to the prevailing popular opinion and that of many prominent physicians, took the ground that the unsanitary local conditions were simply secondary or accessory causes, and recommended "a more stringent system of quarantine regulations, as the most effectual means of preventing the recurrence of the disease" (La Roche).

1798.—The epidemic of 1797 was followed the next year by a still greater one, which was not confined to the city of Philadelphia alone. The disease prevailed also in Boston (mortality 200), in Portsmouth, N. H. (mortality 100), in Newport, R. I. (mortality 2), in New London, Conn. (mortality 81), in New York (mortality 2,080), in Wilmington, Del. (mortality 250), and in Charleston, S. C. The mortality in Philadelphia was 3,645, distributed as follows: August, 626; September, 2,004; October, 943; November (from the 1st to the 5th), 72. The mortality, in proportion to the number of cases, in the city of Philadelphia, was enormous, being, according to La Roche, about as 1 to 1.27 of those attacked, or nearly eighty per cent. This is accounted for partly by the fact that the better classes of the community left the city as soon as possible after the outbreak of the disease, and the cases which occurred were consequently among the poorer classes, who inhabited the worst portions of the city. The prevailing ideas as to the treatment of fevers by depleting measures, were doubtless responsible to some extent for the excessive mortality. "The College of Physicians, faithful to the theory so long entertained by it in relation to the cause of the disease, assigned to the epidemic this year, as it had done to those of preceding seasons, a foreign origin" (La Roche).

1802.—An epidemic of smaller proportions prevailed in the year 1802, causing a mortality in Boston of 60, in Philadelphia of 307, in Wilmington of 86, in Charleston of 96. The disease also prevailed "extensively" in Baltimore, but no record of mortality is given. The preva

lence of the disease at the seaports mentioned, especially before the time of railroad communication, is not to be ascribed to an extension from one to the others, or to "an epidemic constitution of the atmosphere"; but it doubtless occurred, for the most part, as a result of independent importation from the usual source of the disease—the West Indies. Thus we find that in 1802, while Boston and Philadelphia suffered epidemics, New York, lying between the two infected points, was free from the disease (two cases only are reported).

1853.—Passing over the minor epidemics, for the most part limited to a single city, or by coincidence merely to two or more distant seaports, we come to the epidemic of 1853, which extended through portions of the States of Florida, Alabama, Louisiana, Mississippi, Arkansas, and Texas. The towns which suffered in *Florida* were Pensacola, Milton, and Tampa. In *Alabama*, Mobile (mortality 115), Cahawba, Citronelle, Demopolis, Fulton, Hollywood, Montgomery (mortality 35), Selma (mortality 32), were the principal towns visited by the scourge. In *Louisiana* the disease prevailed at New Orleans, with a mortality of 7,970, at Alexandria, Algiers, Bay St. Louis, Bayou Sara, Centreville, Clinton, Coultierville, Franklin, Opelousas, Pattersonville, Plaquemine, Shreveport, Thibodeaux, Trenton, Washington, and various smaller places. In *Mississippi*, Biloxi, Brandon, Clinton, Grand Gulf, Greenwood, Jackson, Natchez, Pascagoula, Pass Christian, Port Gibson, Washington, Woodville, Yazoo. In *Arkansas*, Columbia, Grand Lake, Napoleon. In *Texas*, Brownsville, Cypress City, Galveston, Hockley, Houston, Indianola, Liverpool, Richmond, Saluria.

1867.—The epidemic of this year was widely extended in the State of Texas. The first recognized case in New Orleans occurred on the 10th of June. The total mortality in this city was 3,093. Other towns visited in Louisiana were New Iberia and Opelousas. In *Texas* the first cases occurred at Galveston on the 26th of June, and the total mortality in this city was 1,150. Other places visited by the epidemic were Alleyton, Anderson, Austin, Bastrop, Brenham, Calvert (mortality 250), Chapel Hill (mortality 123), Corpus Christi, Danville, Goliad, Hempstead (mortality 151), Huntsville (mortality 130), Independence, Indianola (mortality 80), La Grange (mortality 200), Liberty, Millican, Navazota (mortality 154), Oldtown, Port Lavacca, Rio Grande City (mortality 150), Victoria (mortality 200).

1873.—Florida, Alabama, Mississippi, Louisiana, and Texas again suffered from an epidemic of yellow fever in the year 1873. At Pensacola, Fa., the first recorded cases occurred August 6th, and the total mortality was 61. In *Alabama* the disease appeared at Mobile on the 21st of August, and the total mortality was but 27; Montgomery suffered a loss of 102. In *Louisiana* the mortality in the city of New Orleans was only 225, although the epidemic had its origin in this city. It was imported by the Spanish bark *Valparaiso*, which sailed from Havana, June 15th, in ballast; arrived at the New Orleans quarantine station June 24th; was detained two days, and came to the city June 26th. The first case was the mate of this vessel, who was taken sick on board July 4th, while she was lying at the wharf. But for the sickness and death of the mate of the *Valparaiso*, the origin of this epidemic would have remained obscure, and the believers in the local origin of the disease would have had a strong case, for no other cases of the disease occurred on the *Valparaiso*. This is explained by the fact that the crew consisted of acclimated Spaniards, and the mate seems to have been the only susceptible person on board who could serve as a test of the infection of the vessel at her port of departure. From New Orleans the disease was carried to Memphis by the river steamer *Bee*. It caused a mortality in this city of 2,000. River steamers from New Orleans also carried the disease to Shreveport, La., where the mortality was 759. From Shreveport a refugee fled to the town of Calvert, Texas, where he was taken sick and died; an epidemic followed with a total mortality of 125. The disease was also introduced by refugees to the town of Marshall, Texas, where 36 deaths occurred. The epidemic of this year at Pensacola, Fla., was due to an independent importation, by the ship *Golden Dream*, and Montgomery, Ala., became infected through refugees from Pensacola.

1878.—The last extensive epidemic of yellow fever in the United States is that of 1878, which invaded 132 towns, and caused a mortality of 15,934, out of a total number of cases exceeding 74,000.

The origin of this epidemic was traced by the president of the Louisiana State Board of Health (Chopin) to the steamer *Emily B. Souder*, which arrived from Havana May 23d, and was moored at the foot of Calliope Street, New Orleans. Dr. Chopin says: "The first cases of yellow fever in New Orleans in 1878 were, undoubtedly, two of the officers of the above steamship, namely, Clarke, the purser, and Elliott, one of the engineers. Infected centres were developed in the vicinity of the houses in which these men were sick, but not until after an interval of several weeks, during which, probably owing to unfavorable conditions as to temperature, the 'germs' remained dormant, or at least multiplied so slowly as not to cause an outbreak of the disease."

Fortunately, this great epidemic has been carefully studied by a "Board of Experts, authorized by Congress," and we have a very complete history of its geographical extension, and of the deadly results which marked its course. The following data are from the report of this "Board of Experts."

Louisiana.—New Orleans mortality, 4,600; Allemands Station, 17; Baton Rouge, 193; Bayou Cypre, 7; Berwick City, 7; Buras Settlement, 3; Clinton, 15; Delhi, 34; Delta, 47; Donaldsonville, 71; Gretna, 53; Hammond, 5; Henderson, 18; Houma, 6; Jesuits Bend, 2; Labadieville, 24; La Fourche, 26; Lagonda and other plantations, 42; Morgan City, 100; Napoleonville, 8; Paincourtville, 15; Pattersonville, 47; Pilot Town, 17; Plaquemine, 125; Ponchatoula, 3; Port Eads, 13; Port Hudson, 11; St. Bernard Parish, 7; Tangipahoa, 50; Thibodeaux, 65; Teche Country plantations, 81.

Tennessee.—Bartlett, 9; Brownsville, 212; Chattanooga, 135; Colliersville, 56; Germantown, 35; Grand Junction, 74; La Grange, 37; Martin, 40; Mason, 24; Memphis, 5,000; Milan, 12; Moscow, 35; Nashville, 6 (all imported cases); Paris and suburbs, 23; Somerville, 57; White Station, 50; Williston, 11.

Alabama.—Decatur, 44; Florence, 50; Huntsville, 12; Leighton, 1; Mobile, 90; Stevenson, 6; Town Creek, 4; Tuscaloosa, 2; Tuscumbia, 31.

Mississippi.—Bay St. Louis, 82; Benton, 1; Biloxi, 45; Bolon, 34; Bovina, 7; Brown's plantations, 4; Canton, 180; Vicinity of Canton, 47; Dry Grove, 41; Friar's Point, 7; Gainsville, 2; Goodrich Landing, 12; Greenville, 301; Grenada and vicinity, 343; Horn Lake, 2; Handsboro, 16; Hernando, 80; Holly Springs, 309; Iuka, 3; Jackson, 86; Lake, 86; Lebanon, 10; Livingston, 10; McComb City, 21; Meridian, 91; Mississippi City, 15; Ocean Springs, 30; Osyka, 45; Pass Christian, 23; Pearlington, 24; Port Gibson, 115; Country about Port Gibson, 150; Refuge Landing, 11; Rocky Springs, 38. Scranton, 20; Stoneville, 15; Spring Hill, 6; Sulphur Springs, 5; Senatobia, 7; Terrene, 4; Vicksburg, 872; Vicinity of Vicksburg, 300; Water Valley, 64; Winona, 3; Winterville and vicinity, 26; Yazoo City, 9.

Kentucky.—Bowling Green, 19; Hickman, 153; Louisville, 64 (mostly refugees).

Ohio.—Cincinnati, 17 (refugees); Gallipolis, 18.

Illinois.—Cairo, 51.

Missouri.—St. Louis, 16 (Quarantine near St. Louis).

In 1897 yellow fever again prevailed quite extensively in several of the Southern States. The epidemic had its origin at Ocean Springs, Miss. Cases occurred in 42 localities, the total number reported having been 4,325, with a mortality of 484. In Mississippi the largest number of cases occurred at Biloxi, Edwards, Scranton, and Ocean Springs; in Alabama the principal centres of infection were Mobile, Montgomery, Whistler, and Flouraton; in Louisiana New Orleans furnished by far the greater number of cases (mortality 275).

Although, in the light of our present knowledge, it would appear that the prevention of yellow fever should be a comparatively easy matter, and it has in fact been eradicated from the city of Havana, which for years was one of its principal endemic foci, a recent (1893) epidemic within the limits of the United States, at Laredo, Texas, indicates that the history of yellow fever in this country may not yet be completed. There can be no doubt, however, that the extension of this disease could be absolutely arrested if all infected individuals could be protected from the attacks of mosquitoes of the species (S. fasciata) which serves as an intermediate host for the parasite, or if all the infected mosquitoes could be promptly destroyed.

George M. Sternberg.

YELLOW FEVER: SYMPTOMATOLOGY, MORBID ANATOMY, TREATMENT.—DEFINITION.—Yellow fever is a communicable disease, traceable to populous centres of the littoral of the tropical Atlantic, and transmitted from man to man by the bite of the *Stegomyia* mosquito. The chief features of the disease are: (1) a fever of from two to seven days' duration, characterized by a sudden invasion and a fastigium of from one to four days' duration, followed by an irregular lysis which may be interrupted by a secondary exacerbation; (2) a steady fall of the pulse, commencing during the fastigium and leading to a remarkable slowing of the heart beat; (3) vomiting; (4) jaundice; (5) albuminuria; (6) a tendency to stasis of the circulation; and (7) to hemorrhages. The lesions consist of parenchymatous degenerations of the liver, kidney, and stomach.

GENERAL DESCRIPTION.—During the early hours of the morning the patient awakes with a slight rigor, and, on moving, experiences vertigo and numbness and heaviness of the lower extremities. This is followed by nausea, and in some instances by vomiting of the remains of the last meal; the temperature rises rapidly; frontal headache, rachialgia, and pains in the limbs develop, and the pulse becomes frequent. The face assumes an injected, turgid appearance; the eyes are red and moist. The patient looks like a person who has indulged in an alcoholic debauch. During the day the fever continues to rise and the patient complains further of discomfort, pain or burning in the epigastrium, with sensitiveness to pressure. The temperature rises to between 102° and 103° F. and the pulse to 100 or 110. After six or nine in the evening of the first day the temperature usually falls, remitting one or two degrees on the morning of the second day. After the initial elevation of the temperature the course of the disease may vary according to three different types: the descending or mild type, the continued type, and the remitting, complicated or secondary fever type. The vaso-motor erethism will begin to subside, together with the painful symptoms, after the diurnal elevation of temperature of the second day, and it is replaced either by the evidences of a gradual return to the normal, or by the signs of blood stasis with hemorrhages from the mucous membranes, or with the syndrome of a malignant icterus. The urine becomes albuminous on the second or third day of the disease. The mental attitude is usually one of alertness. Even when the patient is delirious the expression of the face is apt to be attentive, though the mind be utterly confused and the speech wild. In some cases there is somnolence. The pulse begins to fall on the second day, and continues to fall even though the temperature may rise. Recovery is usually rapid, and sequelæ are rare. Independently of the course of the temperature we may recognize certain types, such as the uncomplicated, the hemorrhagic, the icteric, the ataxic, and, as rarer forms, the anuric, the dystolic, and the fulminating. The various combinations of these, however, are of too frequent occurrence to give them any practical value. We shall find it of greater clinical import to study the symptoms in detail.

Duration.—The following table will give the duration of the fever in 275 carefully recorded cases:

Duration.	Recovered.	Died.	Duration.	Recovered.	Died.
Two days	2	0	Ten days	13	4
Three days	5	1	Eleven days	3	1
Four days	7	4	Twelve days	6	0
Five days	25	2	Thirteen days	6	1
Six days	39	16	Fourteen days	2	1
Seven days	56	13	Fifteen days	1	1
Eight days	27	7	Twenty days	0	1
Nine days	19	11	Twenty-three days	1	0

From the above table it will be seen that the duration of the cases that end in recovery is, in the majority of instances, seven days; and that fatal cases are more apt to terminate on the sixth day. Cases of more than ten days' duration are comparatively rare.

Temperature.—In the classical descriptions of yellow fever, dating from the period before the thermometer came into general use, we find it stated that a remission, occurring about the third day of the disease, is a prominent feature of the thermic curve of yellow fever. Some authors speak of this disease as a fever of two paroxysms separated by the so-called period of calm. If we disregard the readings of the thermometer we frequently are impressed with the accuracy of this description. As the vascular erethism of the period of invasion subsides, there is a marked change in the appearance of the patient. In grave cases there is a tendency to stasis; at the same time internal hemorrhages may be setting in. Hence the extremities become cold. Especially about the wrists we observe coolness of the surface with or without moisture. But all this does not coincide necessarily with a fall of the internal temperature. In yellow fever, as in other diseases in which definite lesions of an acute character set in during the first week, oscillations of the temperature, remissions, secondary fevers occur with more or less frequency. We are, therefore, not surprised to find that temperature charts of plague, scarlet fever, variola, and measles, resemble very closely those of yellow fever. The tropical form of malaria, in

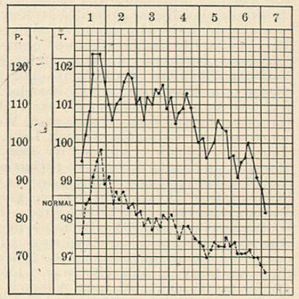

FIG. 5252.—Composite Chart of Eighty Cases of Yellow Fever, all Ending Favorably on the Seventh Day. Temperature, ——; pulse, ...

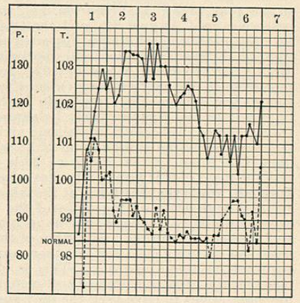

FIG. 5253.—Composite Chart of Twenty Cases of Yellow Fever, all Ending Fatally on the Sixth Day.

its primary manifestations, also frequently resembles the remitting type of yellow fever.

I have decided to present two composite charts of yellow fever. Such charts are usually of little value because the averages are obtained from cases that vary as to their intensity, their duration, and their termination. But with the large material at my disposal, I have been able to present two groups of the most common class of cases, namely, the cases terminating favorably on the seventh day, or morning of the eighth, and those terminating fatally on the sixth day (see Figs. 5252 and 5253).

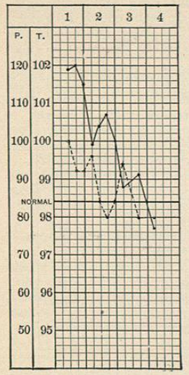

FIG. 5254.—Descending Type; Recovery.

As stated in the general description of the disease three types of thermic curve are found in yellow fever:

1st. *The Descending Type.*—It is usually mild. It is described by Finlay under the name of abortive type. It represents the inflammatory fever and the acclimating fever of creole physicians. The temperature reaches its acme on the evening of the first or second day, and descends in two, three, or four days through a down-grade series of oscillations. Occasionally such cases may end fatally on the third or fourth day without a secondary rise (see Figs. 5254 and 5255).

Remitting Type.—Usually severe. Many of the fatal cases present a secondary rise of the temperature which generally follows a depression caused by hemorrhage. The persistency of the hemorrhage may cause a second depression followed by a third rise of the temperature. Many cases of the remitting type end in recovery, and some may be quite mild (see Fig. 5256).

It will be observed in Fig. 5257 that the remission occurs during the first night of the disease. This case is one of the experimental cases inoculated by mosquitoes at Las Animas Hospital in Havana. This early remission is certainly not the remission referred to in the classical descriptions of the disease. Other observers have not had the opportunity given us by the experimental cases to study the development of the fever during the first twenty-four hours. Now, this early remission, heretofore undescribed, occurs in quite a number of cases, and is, to me, a more striking phenomenon than the later remission so much insisted upon by many authorities (see Fig. 5257).

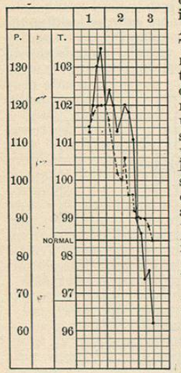

FIG. 5255.—Descending Type; Fatal on the Third Day. Suppression of urine, uræmia on the second day. Black vomit early the third day.

Continued Type.—Usually fatal. The temperature need not be very high, but it is maintained at the same level for several days with very small oscillations. The black vomit will appear late in the disease, when the fall of the temperature is well established, showing the relation that exists between the two symptoms. These cases are apt to terminate with uræmic convulsions, the amount of urine being large and of low specific gravity. The patients are restless (see Fig. 5260).

The diurnal oscillations of the temperature vary considerably, conforming in general with the normal type; the minimum is reached about 6 A.M., and the maximum between 3 and 6 P.M. A rapid rise or fall may present itself at irregular hours, but a regular *typhus inversus* is rarely met with.

The Pulse.—In the stage of invasion, and during the first and, perhaps, the second day of the disease, the pulse is similar to that of other acute febrile diseases. It is large, bounding, and frequent in proportion to the elevation of the temperature. But during the second or third day the frequency of the pulse diminishes, and may continue to drop until very slow readings are reached at the time of the defervescence. The fall of the pulse does not follow upon a corresponding fall of the temperature. The body heat, in fact, may rise or may continue at the same level while the pulse is falling. This deviation from the usual correlation between the temperature and the pulse constitutes one of the most characteristic features of the disease. The temperature and pulse charts that have been selected for this paper illustrate the point in question. Even when the general trend of the pulse line does not conform with the type I am describing, it will be noticed that at some time in the course of the disease, be it only for a few hours, a falling pulse will coincide with a rising temperature. It is quite rare to find a chart of yellow fever in which at least an occasional manifestation of this phenomenon does not show itself.

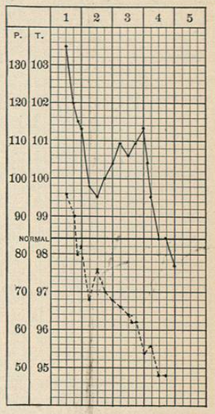

FIG. 5256.—Remitting Type; Recovery.

The pulse on the first day will rise to about 110. In the descending type of temperature the pulse will rapidly fall and may reach 45 or 50 with the defervescence. If there be a secondary rise of the temperature the pulse may be but slightly, or not at all, affected by it. In fatal cases, however, the pulse will become frequent in the last stages of the disease, and it is quite common to find under these circumstances a gradual or sudden fall of the temperature with a progressive elevation of the pulse—a symptom of very grave import.

The relatively slow heart beat in complicated cases, during the secondary rise of the temperature, may be deceptive to the inexperienced. He who has watched with apprehension the steady increase in frequency of the pulse in grave cases of pneumonia, typhoid, or the eruptive fevers, can scarcely suspect the signs of approaching

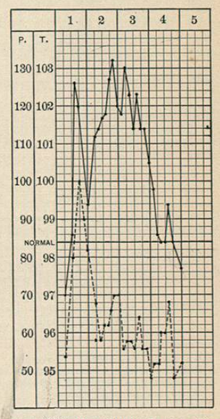

FIG. 5257.—Remitting Type; Recovery. Experimental case.