

Johns would be \$50, and to Pilley Island \$60. Similarly, very favorable terms can be obtained for other voyages, and the committee will be pleased to render all the assistance in its power in arranging the details of such excursions.

A reception to the association will be given by the Board of Trade of Washington in the parlors of the Arlington at the close of the president's address on Wednesday evening, Aug. 19.

THE CURABILITY OF PULMONARY PHTHISIS.

IN reference to the question of the curability of consumption, says Dr. T. Harris in the *Lancet* of May 2, we may recognize three classes of cases.

1. Cases of very limited tubercular disease of the lung, where the lesion is small, and is eventually replaced either by fibrous tissue and a completely calcified caseous focus. As far as our experience goes, such cases are always instances of very localized and very small foci, and the disease is never an extensive one. These cases are the only ones which can be considered as perfectly healed, and where the lesion (cicatrix or calcareous focus) which remains does not involve a risk to the possessor, such lesions, so far as we know, not being liable to set up either a local or general tuberculosis. These lesions are not unfrequently found in the lungs of persons who have died of various diseases and from injuries, but it is not known how frequently the tubercular change has been extensive enough to cause distinctive signs and symptoms of pulmonary tuberculosis. Probably the majority of the persons in whose bodies such foci of obsolete tubercle are found have at no period of their lives presented the usual signs or symptoms of consumption, the lesion having been very small.

2. Cases similar to the above, but where the remains of the tubercular disease is not at all or only imperfectly calcified. Although the physician, from the examination of the chest, and the consideration that all the symptoms of phthisis have disappeared, may regard such cases as cured, they cannot be so considered by the pathologist. The latter knows from the microscopical examination of such foci, and from the results of inoculation experiments with animals, that such foci are dangerous, and may at any time give rise to further destructive changes in the lungs or to the general miliary tuberculosis. They are cases, however, which, if the person remains under favorable conditions for preserving health, may pass on to a complete cure, and then deserve a place in Class 1.

3. Cases which run a prolonged course, often with periods when the disease remains quiescent, and which are characterized pathologically by the formation of much fibrous tissue. It is some of these cases which are so misleading to the medical man, and cause the hopes of the sufferer not only to be raised, but cause him to believe that he is cured. This feeling is a consequence of the disease having become temporarily arrested, or, as is probably more frequently the case, by its progressing extremely slowly and being associated with few physical signs and symptoms of extending disease. Very many cases of phthisis come under this heading, and it is rare for a case of chronic phthisis to be continually progressive. Nearly all such forms of the disease are associated with periods of relative good health when the disease appears to be quiescent. The fact that many cases of phthisis belong to this class renders any conclusions as to the good effects of any particular treatment so fallacious. The enthusiastic therapist is very prone to conclude that the favorable results are the consequence of the treatment adopted, and to forget that the favorable symptoms and signs may be explained as manifestations of the natural course of the disease. The history of the treatment of pulmonary tuberculosis is full of such fallacies.

From a consideration of the above classes it follows that some cases of phthisis are completely cured, but that the disease in such instances has never been a very extensive one. The majority of cases of phthisis we are compelled to consider belong to the last-mentioned classes, and consequently to be cases which often show a tendency to cure, but rarely perfectly attain that end. The tendency, however, in very many cases of phthisis is towards

arrest; and it is the evidence on this point, together with the absolute proof which we have, that in some cases a complete cure does result, that gives us encouragement to persist in treatment, and warrants us in holding out good hopes of recovery to the unfortunate sufferers in the early stages of the disease.

EXPERIMENTS ON THE FEEDING OF HOGS.

THE following is a summary of experiments made by the Illinois Experiment Station at Champaign during the years 1888, 1889, and 1890.

In eight trials in which corn only was fed, aside from salt and coal slack, pigs varying in average weight from 65 to 290 pounds and kept in pens or small lots without grass, gained at the rate of from 10.46 to 14.73 pounds per bushel (56 pounds) shelled corn, the average gain being 12.36 pounds. The rate of gain for food eaten, and the food eaten in proportion to weight, decreased after four to six weeks feeding with corn only. The corn eaten per day varied from 3.41 pounds, eaten by pigs averaging 65.58 pounds, to 10.71 pounds, eaten by pigs weighing 311 pounds. The corn eaten per day per 100 pounds live weight varied from 1.95 pounds eaten by pigs fed 84 days and averaging 207 in weight, to 5.19 pounds eaten by pigs averaging 65.58 pounds. In one case in the fourth week of pen feeding two pigs gained 3.21 pounds each per day — at the rate of 16.81 pounds per bushel of corn. This was the greatest gain per day, and was also the best rate of gain in any trial. There seemed to be no constant relation between the weight of the pigs or the season of the year, and the food eaten or the gains made.

In four trials, pigs fed all they would eat of shelled corn, with blue grass pasture, ate 4,216.5 pounds of corn and gained 905 pounds, which was at the rate of 12.04 pounds gain per bushel of corn. Pigs under like conditions, except that they were fed but half as much corn, ate 2,190 pounds of corn and gained 505 pounds, which was at the rate of 12.93 pounds per bushel. Pigs in dry lots, fed shelled corn, ate 4,207 pounds of corn and gained 790.5 pounds, which was at the rate of 10.52 pounds per bushel.

After periods varying from six to nine weeks, the pigs which had been fed a half ration of corn on pasture, were given a full feed of corn, the others being fed as before. In three trials lasting four or five weeks each, the pigs which had had a full feed of corn throughout ate 1,796 pounds of corn, and gained 339 pounds, which was at the rate of 10.11 pounds per bushel. Those which had been fed a half-feed of corn in the first part of the trials ate 2,075.5 pounds of corn in the second part, and gained 462.5 pounds, which was at the rate of 12.5 pounds per bushel. Those fed corn only ate 1,624.5 pounds of corn and gained 224 pounds, which was at the rate of 7.44 pounds per bushel.

In two trials pigs fed soaked corn ate more and gained more than those fed dry corn. In one trial they gained more, and in one less, in proportion to food eaten than those fed dry corn. The differences were not great in either case.

Two pigs in a pasture in which were three yearling steers were fed corn, gaining in 24 weeks 195 pounds. In a second trial two pigs with like conditions gained 231 pounds in 31 weeks. In neither case was the gain large. In each case the pigs at the close of the trial were in good condition for full feeding and made large gains when so fed.

A trial of apple pomace as food for pigs resulted unsatisfactorily. The pomace kept well. Chemical analysis of it showed an apparently good composition for feeding purposes; but the pigs ate very little of the pomace.

HEALTH MATTERS.

Morning Cold Baths.

IN the past few years several patients have come to me, says a medical writer in the London *Lancet*, complaining that they from time to time, especially in winter, in the early part of the day, have expectorated mucus tinged with blood. In each case there was no family history of phthisis, the temperature was normal, there were no bacilli discoverable in the sputa, there was no loss