TREATMENT FOR INTERMITTENT FEVER.

Perhaps some of our readers in malarial districts may profit by the following treatment described in the *Sanitarian* by Dr. J. R. Black. He says an orthodox doctor is very apt to treat a chronic intermittent thus: A mercurial cathartic to clean out the abdominal viscera, then quinine in large doses, and if this does not succeed, then in larger and yet larger, to destroy or neutralize the hypothetical malaria in the system. Cases have I seen by the score who had received such treatment for weeks and months unavailingly, who had taken quinine and iron until they were, as they expressed it, almost blind and deaf, and yet the disease persisted, with very brief cessations. As a hygienic therapeutist, and as one who has had a large experience with chronic intermittents, I unhesitatingly affirm of this latitude that scarcely a case of intermittent fever need ever become chronic, and that even when so, proper management will hold the symptoms under control until the tendency is wholly overcome. The outline of the method is as follows: Inquire carefully into the history of the case, and whether acclimated or not, directing special attention to each of the abdominal organs, and, if much deranged, administer the best active corrective at once. Then anticipate the next paroxysm with 12 grains of quinine, divided into three doses, beginning its administration 18 hours before the time of the expected chill. Repeat this amount of quinine every seventh day for four consecutive weeks, but at no other time, except when the patient's indiscretion brings on an irregular paroxysm. During the intervals administer daily gentle remedies appropriate to correct the functions that show the most derangement. These remedies should be such as will keep the organs mainly at fault up as near as possible to the standard of healthy action, and no more, never allowing the secretions or excretions of any organ to sink far below the healthy standard, nor causing them to rise much above it. The diet should be strictly hygienic, and so also of the exercise, not permitting the vital energy to be spent in toil that should be devoted to recuperation. To guard against external variations of temperature, especially in the unacclimated, flannel should be worn next the skin. The grand condition of success lies in the method and means for keeping all the abdominal organs during every day, and for several weeks, up to the standard of healthy action, and thus triumphantly raise the health above the ague point. Quinine is invaluable for the arrest of periodicity, but nothing more. By these means my success in treatment has been immediate and invariable, even in those cases in whom improper management had led to serious derangement of the liver.

Life on Mars.—According to the *Iron Age*, Prof. Lockyer is of the opinion that human life on the planet Mars may be very much like life on the earth, the light cannot be so bright, but the organs of sight may be so much more susceptible as to make the vision quite as good; the heat is probably less, as the polar snows certainly extend further, but by no means less in proportion to the lessened power of the solar rays. He agrees with others, that several very remarkable seas, including inland seas, some of them connected and some not connected by straits with still larger seas, are now definable in the southern hemisphere, in which, as is the case also with the earth, water seems to be much more widely spread than in the northern hemisphere. There is, for example, a southern sea exceedingly like the Baltic in shape; and there is another and still more remarkable sea, now defined by the observations of many astronomers, one near the equator, a long straggling arm, twisting, almost in the shape of an S laid on its back, from east to west, at least a thousand miles in length and a hundred in breadth.

SURPLUS SHIPS.

Those who have crossed the bay frequently during the last few months have noticed the large number of ships idly waiting for charters and have concluded that the ocean freighting business must be dull. Thus it is all over the world and the *Maritime Journal* quotes an extract from a speech of a Bristol, England, shipowner, which states facts and draws conclusions. He said: Last month more than 50,000 tons of shipping were lying idle in Bombay. In Calcutta, ships had been lying 12 months, during which time there had been from 80,000 to 100,000 tons disengaged and constantly pressing on the market, with freights averaging about one-half the paying rate. The China seas and the Straits are full of ships. In Australia, a friend has had a ship waiting for three months for a chance to load some. In San Francisco, there were in July 100,000 tons lying in port. The explanation of the present condition of the shipping trade is no new or intricate story. Free trade increased the volume of exchange in the world—in other words, the volume of the carrying trade of the world—so immensely in proportion to the then existing supply of shipping, that high profits were the rule for many years. Ship building was actively stimulated, and all the arts connected with it were energetically spurred on. The history of the building of iron ships is the history of a constant series of discoveries and inventions, involving a rapidly progressive facility of production, and leading by changes of form and new systems of management, to such a reduction of cost and extension of accommodation as would have seemed, only a year or two before each improvement, to be fabulous and incredible. Hence a perpetual temptation to fresh tonnage; and hence two million pounds sterling of shipping are lying idle in the Indian ports at this moment.—*Pacific Rural Press.*

Raising an Iron Bridge.—A Pennsylvania paper gives an account of raising an iron bridge of the Pennsylvania railroad which spans the Conemaugh at Johnstown. Hydraulic jacks of immense lifting power were used, and slowly but surely the superstructure was raised, span by span, just 13 inches. The spans were not disconnected at the piers, and the trains which crossed during the forenoon passed along in safety, although the western half of the bridge was so much lower than the eastern section, which had been taken up to its proper hight. The task was a delicate as well as a difficult one, but everything moved along like clockwork, and the ponderous weight was at last adjusted to the proper level. The object in making this change of elevation is for the purpose of removing the stringers upon which the rails now rest, and replacing the track on the crossties. It is contended by civil engineers of the road that the bridge is less liable to get out of repair in the latter case, as there is less danger of lateral motion and of swagging. When the string timbers are taken out, new cross-sleepers of oak will be laid, and on these the rails will be securely spiked. To overcome the difference of the thickness of the stringers, it was necessary to either change the grade approaching the bridge at the east and west ends, or raise the bridge to correspond with the present grade. It was thought best to pursue the latter course, and the work has been satisfactorily carried out. All the bridges on the division will be changed by the removal of string timbers from under the rails, the same as has been done with the Johnstown bridge.

Northern Pacific.—The heavy traffic on the 140 miles of the Northern Pacific railroad, between Brainerd and Fargo, is already beginning to tell on the iron rails laid down in 1872, and the directors have decided to commence replacing them with steel. An instalment of 500 tons is now being manufactured at Chicago. The pattern adopted weighs 56 pounds per yard, is four and a half inches high, and four inches base.

NOTE ON NARROW-GAUGE CONSTRUCTION.

At the recent Narrow-Gauge Convention, which we mentioned in a late issue, a report of a committee on construction was adopted, from which we quote as follows: The same requirements necessary in the location are necessary in the construction of narrow or broad gauge roads, that is, adaptation to the future traffic and work of the road. If heavy trains are to be run over the road, rail, ties and ballast must be in proportion. If trains are to run at a fast rate, and more stability is required, cross ties must be longer and ballast wider and deeper. If for passenger travel it requires a better finished and wider road bed than for a purely freight traffic, because passengers form their estimate of the safety of a road from the general appearance of it. It is not surprising to your committee that there should be so many of the traveling public averse to riding on narrow-gauge roads when they call to mind these characteristics of some of the roads: No ballast, ties laid down in the mud, joints in all shapes, embankments so narrow that the ties project; cuts not ditched, and almost rubbing the cars; tracks not aligned, etc., the consequence being that the train runs at about eight to ten miles per hour, swinging and swaying like a ship at sea. This is not calculated to soothe the timid passenger, and the worst of it is that, instead of the engineer or contractor getting the blame, the "system" obtains it all.

The location of a narrow-gauge road should be a matter of as much care and require the same engineering ability as the location of a broad-gauge road. Indeed, the location of the narrow-gauge, if anything, requires the most care and attention, as with the change in gauge new problems are introduced, resistance due to curvature are changed, proportions of paying to dead weight are altered, requiring or admitting of different grades and curves from those in use on broad-gauge roads suited to the same traffic.

Corrosion in Soil Pipes.—The *Canadian Mechanics Magazine* says: Cases of corrosion in lead soil pipes are common in the experience of every plumber. Sections of a drain will be found fairly honeycombed with holes, varying from the size of a pin-head to a quarter of a dollar. They are almost invariably located on the upper side of the pipe, and hence are difficult to detect, as there is no fluid leakage from them. Their origin has been laid to the over-use of disinfectants, particularly carbolic acid, but chemical analysis shows that sewer gas alone is sufficient to cause such corrosion in unventilated lead pipe. Proper ventilation will undoubtedly guard against the evil by carrying off the gas before it can do harm.

Lining for Boilers.—Mr. Franz Buettgenback gives the following recipe for the preparation of a coating for the inner surface of boilers to prevent the formation of scale. We quote from the *Manufacturer and Builder:* Gradually dissolve 5 pounds of a mixture of 25 parts of colophonium, 2½ parts of graphite, and 2½ parts of lampblack, in 40 pounds of boiling gas tar, adding about one pound of tallow. The solution is diluted with about 50% of the petroleum and applied in a warm state. It has a pungent smell and should be put on rapidly, the precaution of using closed lanterns being necessary. Its effect is to cause the scale to come off in large flakes when picked.

American Microscopes.—Prof. J. Gibbons Hunt, M. D., of Philadelphia, in a recent lecture, stated that, in his opinion (and he is one of the most experienced microscopists in this country), England, which first introduced cheap instruments, sits at the feet of America in respect to both lenses and mechanical appliances. He says it is affectation or stupidity for Americans to send to Europe for microscopes when they can purchase better ones at home.