

Typhoid Fever Successfully Treated with Milk.

Alexander Yule, M. D., communicates, to the *Medical Times and Gazette*, the following paper:

There is nothing new about the treatment of this fever by milk. As such treatment may not, however, be the general one adopted, I have been induced to offer my testimony as to its efficacy. It stands to reason that people, suffering from disease, quite as much require food as those in health, and much more so in certain diseases where there is rapid waste of the system. Frequently all ordinary food in certain diseases is rejected by the stomach, is loathed by the patient. Nature, ever beneficent, has furnished a food that in all diseases is beneficial—in some directly curative. Such a food is milk. In the twenty-six cases we have treated of typhoid fever, its great value was apparent.

To be sure our number is not large, yet sometimes the small indicates the resultant on a large scale. The indications we followed were—1. To check diarrhoea; 2. To nourish the body; 3. To cool the same.

With regard to the diarrhoea in typhoid fever, we believe it ought, if possible, to be checked, or at least restrained; for you might as well think of leaving a sore-throat in scarlatina to take its course (being eliminative of fever poison), or irritate it a little, as of encouraging diarrhoea in typhoid fever. Astringents were used in all cases (with occasional doses of ipecacuanha), diluted sulphuric acid being found the most serviceable. The acid was used from beginning to end of the fever. We imagine that, in those cases which recover where diarrhoea is encouraged, the patient got well in spite of the treatment; for we believe that nothing so much tends to extending of ulceration, to hæmorrhage, peritonitis, and protracted convalescence as the use of salines or such like remedies. Who would think of healing an ulcer by irritating it by not allowing rest, for the reparative powers of Nature to do their work? An ulcer in the ileum requires rest quite as much as one in the leg.

When diarrhoea became violent, the most powerful astringents were used, and, when the bowels were once "locked up," they were so maintained for from ten to fourteen days, with not only no inconvenience, but with decided advantage. To cool the body and to nourish it were the other two indications:

1. AS TO NOURISHMENT.—That the body in fever wastes rapidly is evident; and from the accumulation of waste material in the blood, and the want of pabulum to feed the fever, the most disastrous results eventuate—resulting in death—from the fever drying up the very issues of life. Now, if pabulum can be afforded to repair the textures that, from the action in the fever poison, are being used up, one great, if not the greatest, object of treatment is attained; for fevers obey, like every thing else in this world, certain fixed laws. Like an object in vegetable life, there is the seed, the bud, the unfolding, the full leaf, the withering away and decadence—so with fevers and their incubation, ingravescence, etc. Now, if the body can be sustained until the fever has gone its course, health will result. Milk, of all things, seems best adapted for this purpose; for it is digestible, is relished by fever patients, contains all the requisite material for the nourishment of the entire body—the nervous system in especial, which in fever is always greatly affected. Furthermore, in fever there is great thirst, and patients ardently long for that which will cool the parched mouth. Thus, by interdicting the use of water *in toto* throughout the fever, nourishment can always be given in the shape of cold new milk. Cold beef tea is by no means to be despised, but is much less relished, and not unfrequently loathed when the fever is intense, while milk is then taken with much gusto. Again, cold milk, when the diarrhoea is severe, exercises a most kindly action upon the ileac ulcerations. The rule we adopted was to allow milk *ad libitum*. In some cases quantities, far beyond what could be absorbed by a stomach whose powers of absorption were reduced to a minimum, were taken, a portion of the milk passing in an undigested state from the bowels. This, however, far from, in my mind, being an objection, was a decided boon, for the milk, as it passed over the inflamed and ulcerated ileum, exercised a soothing influence.

2. TO COOL THE BODY.—Now, cold milk is an admirable agent for cooling the body (cold water would do as well, but then new milk nourishes and cools at the same time), and heat is a prominent symptom of fever (*ferreo, I boil*), and a measure of the activity of the fever changes in the body. Another agent used in all these cases was the diluted sulphuric acid, which aided in reducing temperature, in restraining diarrhoea, and, if the theory is to be credited, diminishing the alkalinity of the blood.

CONCLUDING GENERAL REMARKS.—Such were the measures relied upon in the treatment of twenty-six cases of typhoid fever. Six of the cases were adults over twenty-two years of age, ten between nine and twenty-two, the remainder being under these ages. Wine was given in no case during the active continuance of fever, as it increased the diarrhoea (when tried), and promoted delirium. When the fever had left, and the patient became exhausted and sleepless, then wine in three cases did well. Never more than six ounces was required *per diem*, and that only for a few days (in an adult). In two cases where there was great pain in ileum, blisters applied there did good. A few doses of tartar emetic and tincture of opium were used in one case to procure sleep, which it sufficed to do. We believe that milk nourishes in fever, promotes sleep, wards off delirium, soothes the intestines, and, in fine, is the *sine quâ non* in typhoid fever.

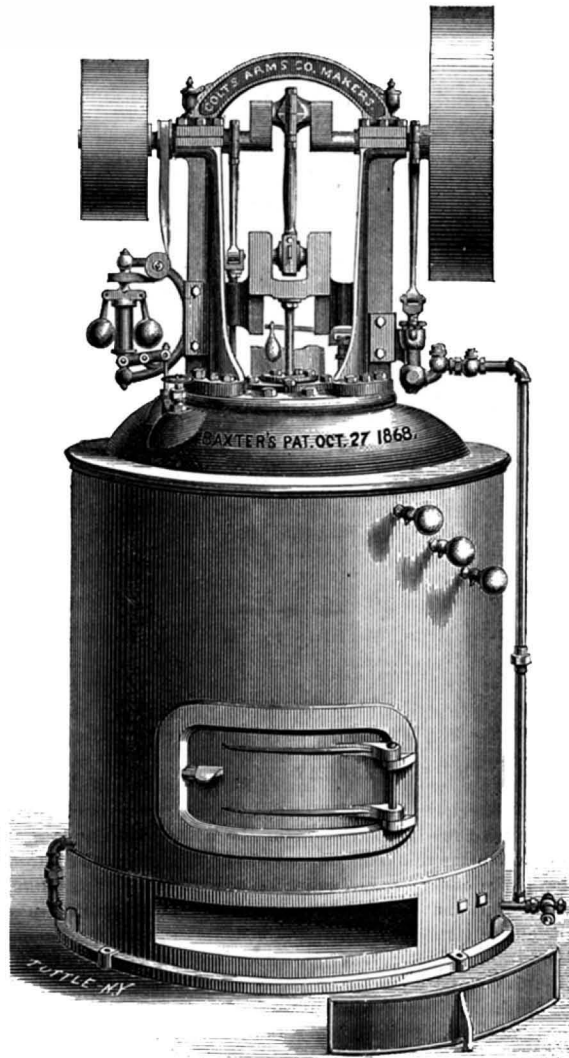
THOUGH a taste of pleasure may quicken the relish of life, an unrestrained indulgence leads to the inevitable destruction.

EVERY man's life lies within the present; for the past is spent and done with, and the future is uncertain.

BAXTER'S PORTABLE STEAM ENGINE.

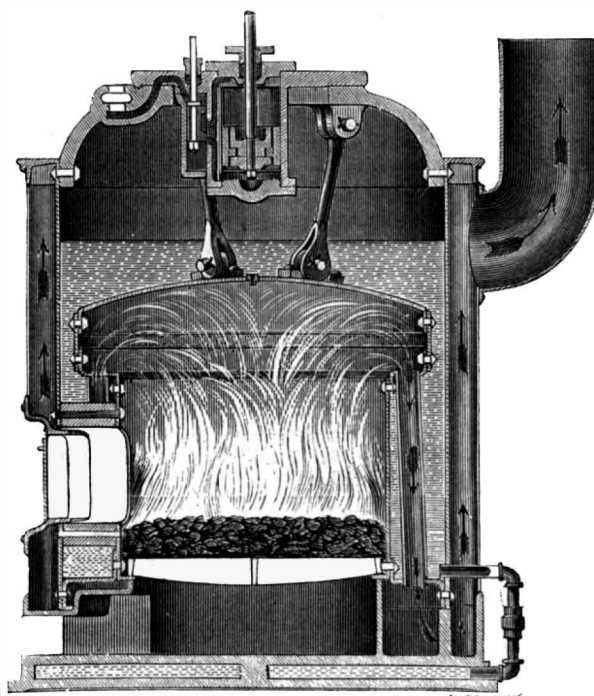
Very few inventions in modern steam engineering have so rapidly won their way into public favor as has this engine, since its first introduction to the public in an illustrated descriptive article published on page 353, Vol. XX. of the SCIENTIFIC AMERICAN.

FIG. 1.



But though as there described, it had sufficient merit to at once command wide attention, the short time which has elapsed since that notice has developed important improvements, not only in the construction of the engine itself, but in the method of its manufacture, the improvements being, as well as the original design, the result of long experience in steam engineering, which has enabled the inventor to combine, in a very efficient manner, the settled and well understood scientific principles of steam as a motive power, in an engine which, while it is free from novel complications likely to perplex the inexperienced, is still such as commends itself to the minds of experts.

FIG. 2.



A very compact, simple, and economical engine, one that could be taken down, transported, and set up with the utmost ease, and which, within a very small compass, should furnish from two to ten horse power, easily attended and run by those who know little of steam engineering, safe from explosion, and not increasing the risk of fire in small manufactories, printing offices, farm buildings, etc., was the aim of the inventor. The success attained in each of these particulars will be set forth in the description which follows.

We shall first notice the changes in construction made in the engine since our former article, referring to the engravings annexed, respectively a perspective view of the engine, a section, and a ground plan of boiler and furnace.

Foremost among these is the provision of a water bottom which serves a four-fold purpose. It prevents all danger of fire to the floor upon which the engine is placed. It furnishes a water heater, which utilizes the heat radiated downward, the water being forced into it on one side by the pump, and passing out, through a short pipe on the opposite side, to enter the lowest part of the boiler. It acts as an efficient mud drum, the slow passage of the water through it allowing the floating impurities to settle and be blown off as occasion may require. Lastly, it forms a substantial and ornamental pedestal for the boiler and engine, easily fastened down, and interfering in no way with the convenience of transportation.

The novel governor illustrated and described in our former article above referred to, in which the resistance of oil in a cylinder (the oil being forced through a small port from one side to the other of a plunger) was made to give a variable cut off, was found too complicated for common use, and has been replaced by one of the ordinary kind.

The pump, formerly placed between the uprights supporting the crank shaft, is now placed on the outside of these supports, so that now, to take down or set up the engine as it leaves the factory, the expanded head of the cylinder, to which all the upper working parts are attached, and to which the cylinder and steam chest are also attached, is released from the boiler by taking off the nuts from the bolts which hold it, and, with the parts attached, is packed for shipment, the valve being properly set, and all properly adjusted for work when it arrives at its destination.

A fire plug of lead is placed in the central and highest point of the crown sheet, which, should the water be allowed to fall so low as to endanger this sheet, will melt and allow steam to escape and extinguish the fire.

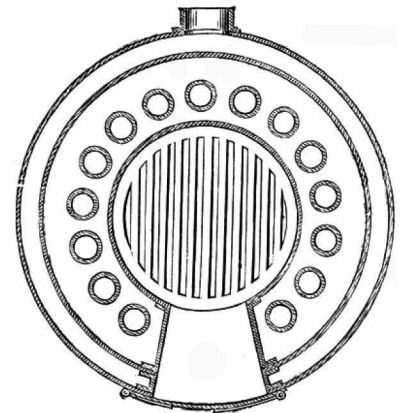
In the engine as first built there was no special steam chest, the steam entering the cylinder directly from the steam space in the boiler. As at present constructed, a steam chest is provided, shown in Fig. 2, which obviates all danger of water entering the cylinder.

The horse power of these engines is tested by dynamometer, with a pressure of 60 pounds in the boiler, and their power is rated accordingly. But though designed to run with 60 pounds, the boilers are tested by hydrostatic pressure to 180 pounds.

The tubes are easily cleaned by a scraper attached to a piece of wire rope, or any stiff brush attached to an elastic handle passed into the tubes from the furnace.

The one and two horse power boilers are made without tubes, but are cleaned in the same way as those with tubes.

FIG. 3.



These engines are made by the Colt's Arms Co., Hartford, Conn. Special tools are employed for all parts of the work, so that when it is desired to replace anything it can be ordered by number, and will be sure to fit.

It is now claimed that the economical production of power by these engines is unequalled by any in market, and any expert engineer, who examines them, must admit that the avenues of waste are closed almost as nearly as possible in the present state of engineering science. The steam is used expansively, in a cylinder jacketed by live steam, and the full theoretical economy of the expansion is thus secured. The exhaust is used in the smoke stack to assist the draft, and a very perfect combustion is thus maintained.

We are told that these engines are allowed in buildings, by the underwriters, without any increase of premium, they being regarded as safe as common coal stoves.

A very large number of them have been sold and are now in use, giving general satisfaction.

The features of the engine are covered by patents dated Oct. 27, 1868; April 13, 1869, and June 28, 1870. The engine was awarded a first premium at each of the Fairs of the American Institute, held in 1869 and 1870, and is or has been exhibited at all large fairs held during the present year.

For further information the Baxter Steam Engine Company, 18 Park Place, New York, may be addressed.

Stick to the Fence.

The *National Car Builder* is responsible for the following: For fifteen years daily, at Stamford, Ct., a man has sat on the fence and watched every railroad train as it passed. He is probably trying to make up his mind if it would be safe to ride in the cars. Old fellow, you stick to that fence! If the top rail is sharp, turn it over or put a cushion on it. Fit up a smoking department on the next panel, if you like, and rig a luxurious couch on the next one to that. Bring out your baggage, take a check for it, and hang it on a post. Buy a ticket, and punch it yourself. Ask yourself the distance to the next station, and get insulted. Secure, as your means will permit, all the luxuries of railroad travel, but don't get off that fence to enjoy them. So shall you die a natural death, and the good wife shall not expend the farm in fighting the life insurance companies over your cold corpse.