

Early Stage of Inebriety.

There are found in all parts of the country men and women who use alcohol regularly and in limited quantities. To the casual observer they go on for years in this state and are apparently no worse, and finally die at last of some common disease, leaving the reputation of having lived what the inebriate would call an "ideal life" of moderate drinking. Why they drink is not clear. If they have any reasons, it is always sustained by their unbounded faith in the capacity to abstain at any time at will. These cases are inebriates in every respect, except in the prominence and intensity of the symptoms. There is no difference between the chronic case of the lowest type and the highly respectable, moderate drinker, except one of degree.

Both are suffering from a positive physical disease. In one case the disorder is developed, in the other it is in the incipient stage. In the latter, from some obscure reason, the case never goes on to full development, but is always on the "border land," awaiting the action of some exciting cause, which may or may not be applied. A repelling power exists, which builds up and neutralizes the injuries received from alcohol to a certain extent. It is not will power which makes the difference between the inebriate and moderate drinker. It is physiological and pathological conditions of the brain and nervous system, which the possessor ascribes to will power. Alcohol cannot be used in moderation without grave injuries to the nerve centers.

The moderate drinker is always diseased, although to the non-expert there are no clear symptoms or coarse lesions that can be seen. A careful study will reveal physically an irritable condition of the heart, with stomach and digestive troubles, also changing and disordered functional activity of all the organs, at times. Psychically the disposition, habits, temper, and mental state slowly and gradually degenerate and become more unstable. The higher mental forces drop down or give place to lower motives and ambitions. No matter what his position of life may be, or his objects or plans, the moderate use of alcohol will alter and break down both physical and psychological energy and precipitate destruction. Moderate users of alcohol always die from diseases provoked and stimulated by this drug. They always transmit a legacy of defective cell energy and exhaustion, which most readily finds relief in any alcohol or narcotic.

But only a small per cent of moderate drinkers remain so until death. The disease goes on to full development in inebriety, in a vast majority of cases. The boasted will power to stop at all times is powerless before its peculiar exciting cause. Those who never go beyond this moderate use have simply never been exposed to this peculiar exciting cause. The moderate use of spirits for a lifetime is a mere accident in the order of nature, and the ability to stop, resting in the will power, is a popular fallacy. A certain number of cases have signs of incipient phthisis, which may never burst out into the full disease.

A small number of cases exposed to small pox, or any infectious disease, never take it; but these are the rare exceptions, whose causes are unknown, from which no deductions can be drawn. Moderate drinking that does not go on to inebriety is also the exception. The chain of exciting causes that bring on these extreme stages may or may not be understood, but they always break out sooner or later in the history of the case. Practically the study of this early stage of inebriety is of the utmost value in the treatment. Here remedial measures can be made of the greatest avail in checking and preventing any farther progress of the disease. When inebriety is fully recognized as a diseased condition, requiring study and medical care, this prodromic period of moderate drinking will receive the attention it deserves.

In the mean-time, as scientific men, we must continue to call attention to this early beginning of inebriety, so full of indications and hints of the march of disease, whose progress and termination can often be predicted with positive certainty.—*Journal of Inebriety.*

Heathen Chinese Telegraphs.

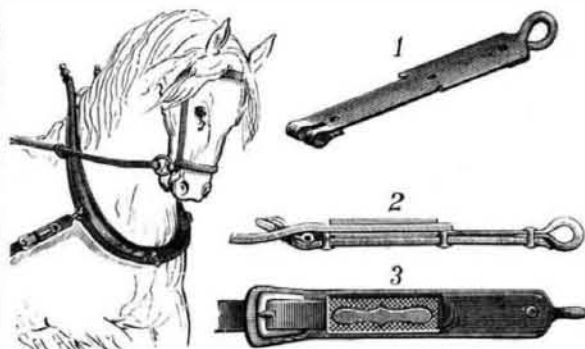
Owing to the peculiarity of the Chinese characters, each of which represents a word, not a letter, as in our Western tongues, the Danish Telegraph Company (the Great Northern) working the new Chinese lines have adopted the following device. There are from five to six thousand characters or words in ordinary Chinese language, and the company have provided a wooden block or type for each of these. On one end of this block the character is cut or stamped out, and on the other end is a number representing the character. The clerk receives a message in numbers, and takes the block of each number transmitted and stamps with the opposite end the proper Chinese character on the message form. Thus a Chinese message sent in figures is translated into Chinese characters again and forwarded to its destination. The sending clerk, of course, requires to know the numerical equivalent of the characters or have them found for him.

The Yellowstone Geysers.

The London *Times* says "that at the first glimpse it is uncertain whether the scene around the Yellowstone geysers resembles more a factory or visions of the Inferno. The roads are toilsome and perilous. The alkali, lime, and sulphur dust is knee deep. The hotels are gypsy encampments with the prices of Saratoga palaces, and without their civility. Anything like a picnic in this seared and scarred land appears equally out of place with a picnic by the Dead Sea."

HAME TUG.

The hame tug clip, Fig. 1, is folded at its forward end to form the eye in which the ring of the hame of the harness is placed. At its rear end the clip is folded under and slotted for receiving the buckle that holds the draught tug, as shown in Fig. 3. The rear part of the clip is made narrower than the fore part, for the purpose of enabling the offsets to be formed at the edges of the clip in order to prevent the box loop from forward movement when in place upon the hame clip. The box loop is prevented from back-

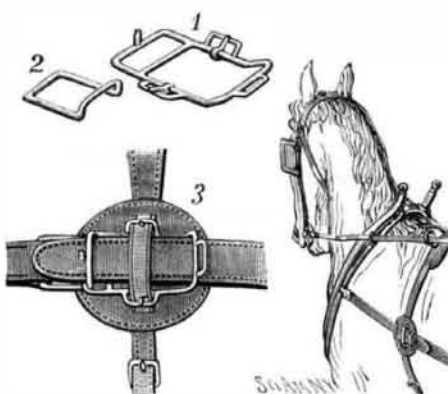
**LELIE'S HAME TUG.**

ward movement upon the hame clip by coming against the folded part. The leather lining of the hame clip is secured by rivets which hold the folded end of the clip. The lining is cut away at its rear end to form an opening, through which the draught tug passes to the buckle, which is supported by the lining so that it will not come in contact with the tug, to wear and cover it with rust. The tug is easily and quickly made, and no skill is required in putting it together. Fig. 2 is a longitudinal section of the hame tug.

This invention has been patented by Mr. E. C. Lelie, of St. Genevieve, Missouri.

TRACE BUCKLE.

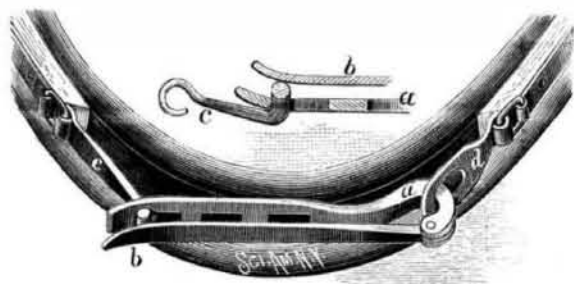
This buckle is adapted to hold the trace and the front trace strap, and also the back strap and belly band. The

**HARBISON'S TRACE BUCKLE.**

buckle is formed of a frame having buckles secured to its upper and lower sides, for holding the back strap, which passes through both buckles over the trace and has the belly band attached to it. At its forward end the frame is formed with a stud, as shown in Fig. 1, which holds the trace, the bent loop, Fig. 2, of the front trace strap serving as the keeper, as will be understood from Fig. 3. The rear end of the frame of the buckle is formed with a loop for receiving the side straps of the harness. Behind the buckle is a chafe leather held by the back strap and belly band to protect the body of the animal from being rubbed. This invention has been patented by Mr. D. T. Harbison, of Duncanville, Illinois, who should be addressed for further information.

HAME FASTENER.

The main bar, *a*, of the fastener has three mortises made through it, and one end terminates in a bifurcated hook be-

**JONES' HAME FASTENER.**

tween the members of which the hook lever, *b*, is pivoted by a rivet or bolt. The bar, *d*, is formed with a mortise and hook as shown, the hook being intended to pass through and be secured to the link at the bottom of the ordinary iron, or wood bound, hame. The hook may be lengthened and twisted, or turned at a right angle to the mortise, and made so as to pass through the holes in a common wooden or plow hame. At *c* is represented a bar formed with a toggle at one end and a hook at the other, the hook serving the same purpose as the hook on the bar, *d*. The toggle is

used to connect the bar, *c*, with the main bar, *a*, and for bringing the hames nearer together at the bottom by passing it through one or the other of the mortises. Both the bars, *d* and *c*, may be made of folded and bent round wire. To use the fastener the hooks of both bars are passed through the links at the bottom of the hames, the toggle is placed in one of the mortises, and then the lever, *b*, is passed through the mortise in the bar, *d*, and brought down against the main bar, drawing the hames together.

This invention has been patented by Mr. B. F. Jones, of Beauregard, Miss.

"Can Human Blood be told from that of the Dog?"

BY C. H. STOWELL.

In a recent case on trial at Wellsboro, Pa., Dr. Thad. S. Up de Graff, of Elmira, N. Y., swore very positively on this point. The newspapers give Dr. Up de Graff the credit of convicting the prisoner. It is not the proper place here to determine whether the prisoner was guilty or not; it is in the precincts of this journal, however, to determine whether the expert testimony was according to facts. Dr. Up de Graff was given some of the stained clothing to examine, and by processes entirely unknown to the writer (according to all accounts seen), by decantations, washings, etc., some corpuscles were procured and measured. Dr. Up de Graff positively testified that this was human blood and not dog's blood. When asked if he was the only one who could tell this, he replied that "there were but four men in the world who could tell human blood from dog's blood;" and of course he was one of them. When asked why he could do so much better than others, the reply was, "On account of the superior character of his glasses, and that his microscope cost sixteen hundred dollars." The testimony of Dr. Up de Graff makes him give a positive size to the human red blood corpuscle. What do standard writers say on this subject?

Gulliver says they are the $\frac{1}{25000}$ of an inch.Flint says they are the $\frac{1}{30000}$ of an inch.Dalton says they are the $\frac{1}{37311}$ to $\frac{1}{30000}$ of an inch.Richardson says they are the $\frac{1}{3378}$ of an inch.Woodward says they are the $\frac{1}{30000}$ of an inch.Frey says they are the $\frac{1}{2840}$ to $\frac{1}{2630}$ of an inch.Welcker says they are the $\frac{1}{2250}$ of an inch.

Where is the exact size to judge by? The red corpuscles are also subject to change in size by the varying changes in the blood and by many drugs. Wagner, in his General Pathology, gives a long list of remedies that when administered change the size of this corpuscle. How delicate is it, also, to the various reagents used in microscopical work! I have seen red corpuscles as small as the $\frac{1}{5000}$ of an inch, and as large as the $\frac{1}{2800}$ of an inch. I have never measured red blood corpuscles in lots of fifty each and had any two exactly alike, although using a delicate cobweb eye piece micrometer and a one-fiftieth objective.

Listen to what Mr. Woodward, of Washington, says: "The average of all the measurements of human blood I have made is rather larger than the average of all the measurements of dog's blood. But it is also true that it is not rare to find specimens of dog's blood in which the corpuscles range so large that their average size is larger than that of many samples of human blood."

Human blood cannot be told from dog's blood, except under favorable conditions, and not invariably then. For the sake of microscopy it is a pleasure to know that only four men are ready to make such statements. There are a score of men in this country with glasses equal, at least, to Dr. Up de Graff's, who would testify directly opposite to him on this point. If Dr. Up de Graff is ready to receive a number of pieces of cloth, labeled and stained, respectively, with human and dog's blood, under favorable and unfavorable circumstances, this journal will see to it that said cloths are prepared with accuracy by competent parties. If he succeeds, he shall receive all the glory these columns can sound forth, but if he fails he will be referred gently to his Wellsboro testimony.—*The Microscope.*

Photography of Moving Objects.

The dry plate process and special arrangements of the camera, by which exceedingly brief exposures are possible, have enabled the photographer to take views of rapidly moving objects. With particularly sensitive plates some startling results may be obtained, and not only can moving animals and vessels be photographed, but the spokes of the wheel and the fast trotter can be shown with sharp and distinct outlines. Even views from the windows of a quick train can be obtained. The necessary time of exposure has been reduced to such a small fraction of a second that absolute steadiness of the camera itself no longer enters into the problem. The dry plates are gradually driving out the wet ones in the galleries, and those who pose in uncomfortable positions are no longer in danger of being tired out. The artist no longer finds it essential to tell his patrons to "look pleasant," but he aims to tell them something interesting, when the natural expression comes over the face and is instantly caught by the camera. The taking of the baby's picture is no longer accompanied by dread. Much of the best work done with the dry plate process has been by amateurs.

Sulpho-Carbonate of Soda for Bee Stings.

Dr. Thomas Edwards, in the *Lancet*, September 22, 1883, says that in a case of great swelling of the face from the sting of a bee he gave fifteen grains of this drug in an ounce of water every four hours, with most gratifying results.