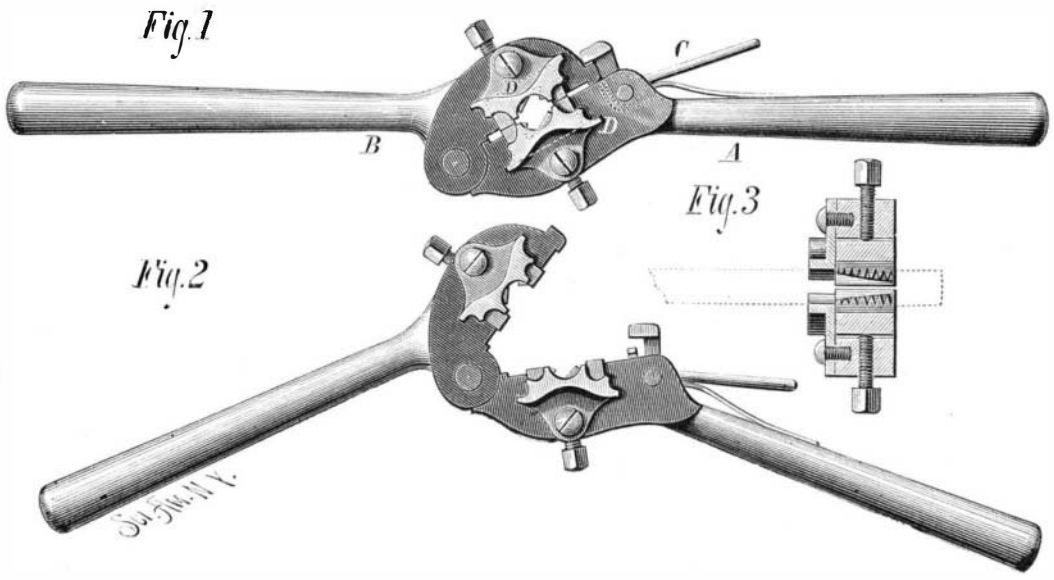
IMPROVED DIE STOCK.

The engraving shows an improved stock for holding screw-cutting dies which affords all the advantages of a solid die as well as the desirable features of a separable die. It saves about half the time and labor usually required in screw cutting, as the die can be removed from the work after cutting the screw without running it back.

The two parts, A B, of the stock are hinged together and join each other diagonally. A spring catch, C, on one half engages a projection on the other half when the stock is in use. The die is of the usual pattern, except that it is divided instead of being solid. It is retained in mortises in the stock, and to each half of the stock is pivoted a segmental guide piece, having in its edge semicircular recesses, the opposing recesses forming a circular sleeve or guide which fits the rod or pipe to be threaded. The recesses vary in size to adapt the guides to different sizes of pipe or rod. While cutting a thread the stock and die are used in the ordinary way, but when the thread is completed the part, A, is released from the part, B, by pressing on the long arm of the catch, C, when the two parts are separated as shown in Fig. 2, and removed from the work. Fig. 3, which is a transverse section of the stock and die, shows the relative position of the stock, die, and guide.



WALKER & WILLIAMS' DIE STOCK.

With this tool threads can be made quickly and easily, and also more perfectly than with the solid die, as all the difficulties arising from the clogging of the die by chips, and tearing the threads in efforts to remove the clogged die in the usual way, are avoided.

This invention is now on exhibition at the American Institute Fair. The patentees, Messrs. Walker & Williams, of Sing Sing, N. Y., should be addressed for further information.

A NOVEL TENT.

A convenient tent, adapted to the wants of excursionists, tourists, sportsmen, etc., is shown in the annexed engraving. It is light, portable, and easily set up and taken down, and affords a convenient and desirable shelter or shade.

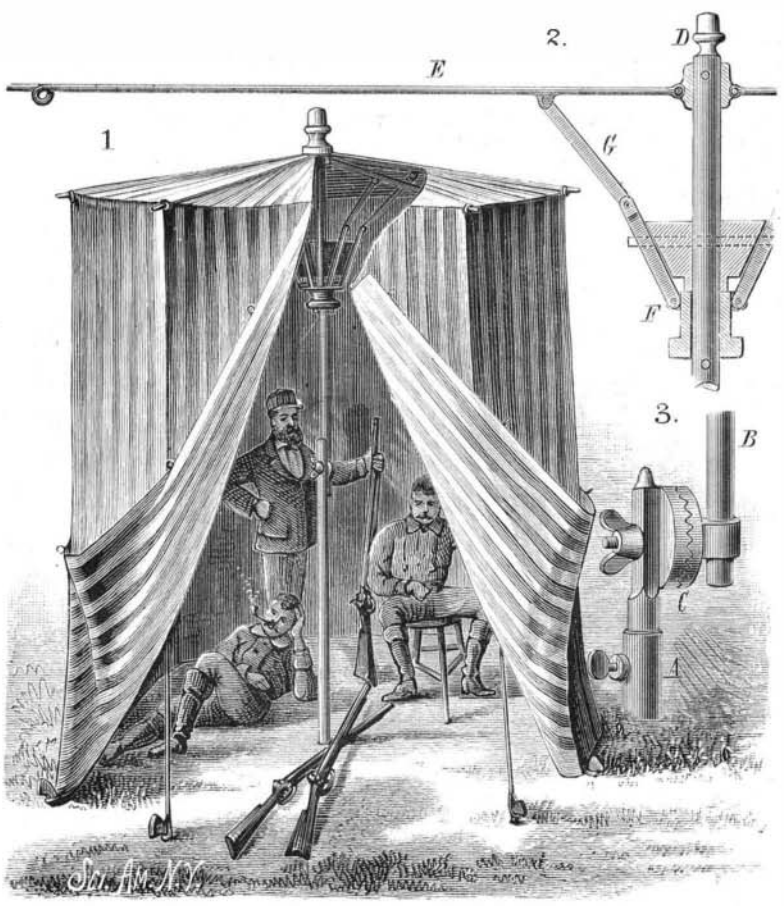
The construction of the frame is very simple, being somewhat similar to an umbrella frame. The tent is shown complete in Fig. 1, and Figs. 2 and 3 are detail views of various parts of the tent frame.

The tubular standard, A, which receives the pole, B, has a pointed end to facilitate driving it into the ground. The pole, B, has an adjustable joint, C, by means of which the frame may be inclined at any desired angle, and securely fastened by turning the wing nut. The upper end of the pole is provided with a head block, D, to which are pivoted the ribs or arms, E, which support the canvas forming the top of the tent. A slider, F, is connected with the ribs by braces, G, which are jointed in the middle to facilitate folding and packing the frame. The ends of the ribs, E, have an eye formed in them for receiving a cord to assist in supporting and stretching the tent covering.

When it is desired to use the tent in a hall or upon a platform, the lower end of the standard, A, is inserted in a cross-shaped foot formed of two pieces of plank fastened together at right angles to each other.

This tent forms a convenient shade and shelter for working animals while at rest, and will often be found convenient for covering goods of various sorts when piled out of doors.

This invention was recently patented by Mr. A. E. Shemeley, of Jamesburg, N. J., who should be addressed for further information.



SHEMELEY'S IMPROVED TENT.

Talk Over What you Read.

Nearly forty years' experience as a teacher, says a writer in the *Christian Union*, has shown me how little I truly know of a subject until I begin to explain it or teach it. Let any young person try the experiment of giving in conversation, briefly and connectedly, and in the simplest language, the chief points of any book or article he has read, and he will at once see what I mean. The gaps that are likely to appear in the knowledge that he felt was his own will no doubt be very surprising. I know of no training superior to this in utilizing one's reading, in strengthening the memory, and in forming habits of clear, connected statement. It will doubtless teach other things than those I have mentioned, which the persons who honestly make the experiment will find out for themselves. Children who read can be encouraged to give, in a familiar way, the interesting parts of the books they have read, with great advantage to all concerned. More than one youth I know has laid the foundation of intellectual tastes in a New England family, where hearty encouragement was given to children and adults in their attempts to sketch the lectures they had heard the evening previous. The same thing was done with books.

Centrifugal Force in Millstones.

An accident, notable by reason of its rare occurrence, took place at the City Flour Mills, Pittsburg, on the morning of the 7th of September. It was the bursting by centrifugal force of a French burr millstone, resulting in the instant death of Mr. Manning, one of the oldest millers in the country. The stone was made in Buffalo, N. Y., and had been in use only two years, was banded and put together in apparently first-class style. No defect was evident upon investigation. At the time of the accident the supply of grain had become exhausted, and though the only person competent to throw light upon the circumstances was killed, it is believed that this failure in the feed so increased the speed and heat of the burr as to produce the fatality described. The usual rate of speed for this stone was 200 revolutions per minute.

Laundry Machines.

The *National Laundry Journal*, which ought to know what improvements are needed in laundry establishments, thinks, while perfection in washing machines has been nearly reached, there is a field for improvement in other branches of the business. The washers, it says, are very near perfect, but there is much other apparatus used in laundry *operandi* that is susceptible of improvement, and if our inventive geniuses would give us something way ahead of anything at present in existence, we would not only give them a big obituary notice when they are called to climb the golden stair to Paradise, but we would almost be willing to guarantee them a fortune in the sale of their improvements.

The Pharmaceutical Association.

The twenty-eighth annual meeting of the American Pharmaceutical Association was held in Saratoga, September 14 to 18. A fine display of drugs and chemicals was an interesting feature of the meeting, over fifty leading druggists and manufacturing chemists being represented.

ENGINEERING INVENTIONS.

A traction engine, so constructed that the tracks may be carried forward by the drive wheels and kept securely in place, has been patented by Mr. David J. Havenstrite, of Newark, N. J.

Mr. Charles R. Simey, of Sunderland, England, has patented an improved steering gear, which consists of improved self-acting apparatus constructed and arranged to shut off the steam when, or just before, the helm attains the desired position. The position to be given to the helm is indicated by a pointer moved by the steersman, the actual movement of the helm being indicated by another pointer moved in turn by the machine itself, and the steam being automatically shut off when these two pointers coincide.

Mr. William Hadden, of Brooklyn, N. Y., has invented a novel electric signaling instrument, which is so constructed that the circuit closer will be stopped automatically as soon as the signal is given, and held in place until the signal is to be repeated. The invention consists in a block having a ring groove, in the bottom of which there are contact points connected with the circuit wire. A spring crank arm, connected with another circuit wire, is capable of touching all of the contact points in making one revolution. A stop arrests the arm at the end of the revolution, and a spring latch drops into a notch in the block and prevents retrograde motion. When a second signal is to be sent the crank arm is released from its stop by pressing it inward, when it may be turned until it again strikes the stop.

Bathing.

It is important to recognize that the only virtues of water as used by the bather are two—namely, its value as a cleansing agent, and as a surface stimulant. In this last capacity it simply acts as a medium affecting the temperature of the part to which it is applied, or which is immersed in it. Right views of fact in reference to this matter are important, because there can be no question that some persons overrate the uses of cold water, and run considerable risks in their pursuit of them. Every beneficial action that can be exerted by a bath is secured by simply dipping in the sea, or a very moderate affusion of cold water! Except in cases of high fever, when it is desired to reduce the heat of the body by prolonged contact with cold, a bath of any considerable duration is likely to be injurious. Then, again, it is necessary to recognize the risk of suddenly driving the blood from the surface in upon the organs. The "plunge," or "dip," or "shower," or "douche," is intended to produce a momentary depression of the temperature of the surface in the hope of occasioning a reaction which shall bring the blood back to the surface with increased vigor, and almost instantly. If this return does *not* take place; if, in a word, redness of the skin is not a very rapid consequence of the immersion, it is impossible that the bath can have been useful, and in nine cases out of ten when the surface is left white or cold it does harm. The measure of value is the redness which ensues promptly after the bath, and this reaction should be produced without the need of much friction, or the bath is not worth taking. The rubbing employed to recover the circulation lost by the bath would probably have done more good without it! Another effect of the bath when it acts properly is to stimulate the nervous system, through the vast series of its terminal fibers which are distributed in the skin. In this way also the action must be very rapid, or it is not efficacious. Unless the vigor of energy is quickly called out, the agent is useless; and if it produces either drowsiness or depression it acts mischievously, and lowers the power it is intended to stimulate and augment.

Bathers should bear these facts in mind, and be warned by them not to trifle with an agency which, if it is not of value, is worse than useless, and can scarcely fail to do harm.—*Lancet.*

WATERPROOFING CLOTH.—Cloth coated with linseed oil to which a little wax and litharge have been added, will be waterproof.