Take a polished metallic surface of two feet or more, with a straight edge; a large hand-saw will answer the edge; a large hand-saw will answer the purpose. Select a windy day, whether hot or cold, clear or cloudy, only let it not rain or the air be murky—in other words, let the air be dry. Hold the metallic surface at right angles to the wind—that is, if the wind is north, hold your surface east and west-and incline it at an angle of forty-five degrees, so that the wind striking, glances and flows over the edge. Now sight carefully over the edge at some small but clearly defined object, and you will see the air flow over as water flows over a dam.

singular discovery reported A singular discovery reported in 1875 by Hourton and Thompson seems to be entitled now to rank as a "lost art." It was stated that on bodling ordinary phosphorous for five minutes with a strong solution of potash, then pouring off the alkaline solution and machine the phosphorous the latter. pouring off the alkaline solution and washing the phosphorous, the latter was obtained in a liquid form, which was retained for months at all temperatures above 40 degrees F. This substance did not oxidize in the air and gave off no light in the dark. Two American chemists, F. P. Venable and A. W. Belden, have tried to make it, but in all experiments although the strength of the potash solution and the ime of boiling were varied, the phosphorous has solidified after the second or third washing. While the liquid form is retained a long time under the alkais retained a long time under the alka II, these investigators are quite at a loss to understand how the liquid phosphorous could prove unalterable in the

Intense heat and sudden condensagreat pressure are supposed been the natural conditions have der which carbon has been crystallized into diamonds, and this has suggested to an Italian chemist named Majorana the idea of heating carbon to the highest temperature of the electric arc and jamming it, while it is being thus volatilized, between a projectile and a kind of targ fired at short target. The projectile find of target. The projectile was fred at short range from a mortar. The heat of impact was added to that of the electric arc, and on afterward examining fragments of the carbon minute crystals of diamond were found. Peace having come, our gunners may advance the cause of science, while keeping up farret protection. while keeping up target practice, by experiments in diamond-making. Warnings by sound to vessels in fog

Warnings by sound to vessels in fog are unreliable on account of the curi-ously uncertain effects of air currents, which often render inaudible the which often render inaudible the signals of nearby foghorns, while distant sounds are plainly heard. To detect approach to danger with greater certainty, Mr. Hermann Herberts, of New ark, N. J., proposed the use of the thermopile. This apparatus is capable of registering a change of temperature as small on the reliable to the second of the signal of of ture as small as the millionth centigrade degree, detecting the heat of a candle at a distance of a quarter of a mile; and by using two horizontally-rotated thermopiles, the two heat-collecting funnels pointing in opposite di-rections, it is believed that not only would the proximity of a vessel be shown by its heat radiations, but near ness of an iceberg, and even of land or a sunken wreck, would be indicated by the same law of radiation.

The Pintsch system of gas lighting is used on 85,600 cars and locomotives in the world, its use on locomotives, however, being almost entirely confined to 2,955 such machines in Germany.

The important of sanitary regulations for barber shorts is urged by a German cutton.

author, Herr Berger, who states that these places are responsible for the spread of many diseases in addition to

those of skin, hair and beard. The bar-ber himself should be free from epi-lepsy, spasms of any kind, drunkenness and infections diseases. He should pay special attention to cleanliness of his own hands and person, and should be instructed in the appearance of diseases of the skin, scalp and beard. Persons having contagious diseases of skin, hair, beard or other parts should be attended to at home with their own instruments. In shops, all combs and brushes should be of material capable of withstanding frequent disinfection, and should be cleansed with corrosive sublimate solution after each use; and shears, razors and clippers should be boiled or wiped thoroughly with alcohol after each use. Brushes to dust away hair cut from the neck should be forbidden. Balls, of abneck should be forbidden. Bails, of absorbent cotton, to be thrown away after once using, should be substituted for each placed for each person, or paper napkins substituted, and thrown away after being once used.

## SIXTEENTH IN THE FIGHT.

Andrew Kretchmeier, a corporal in Andrew Kretchmeier, a corporal in company C of the Sixteenth, returned to Fort Sherman today after having received a wound from a Mauser bullet which would have killed any ordinary man, says a correspondent of the Spo-kane Spokesman-Review. Though his right arm is in a sling and still causes him considerable pain, yet his jovial German nature asserts itself in his descriptions of his participation in the

fight.
"I wasn't scared at all, but my legs were a libile shaky several times and I expect a good many of the boys had the same complaint. It wasn't so bad when we were moving, but for about 20 minutes at one time we had to lie still in the open and wait, and the bullets playing a regular tune the whole time just over our heads. The Mausers would go zip, zip, zip, and the shrapnel would go ping, ping, ping, unless some poor chap would get in the way, when it was easy to tell that somebody was hit from the 'chuck' when they struck flesh and bone. How so many ever got through I can't figure out, for it was a perfect hell from the time we got within range until we got shot down, or got to the top. Well, as I said, my legs got pretty limber when I saw the boys getting it on both sides of me, but I got down on my hands and knees and managed to keep

"One thing that kept our nerve up was the bravery of our officers and especially Captain Allen of our company. Fight? Well, didn't he, though! Why, you would have thought he was on parade to have seen him there, and not have was the down but he was the a boy was shot down but he was the first to notice it and give directions for assisting him to the rear if the poor chap had any chance of living. Our company under the influence of such a gallant leader was the first to reach the firing line, where the Sixth had halted and were awaiting our support. Just as we reached them the enemy's fire from rifle and machine guns be-came hell itself and a number of them were wavering and giving back when the captain jumped into their midst, sword in hand, and by his coolness averted what might have been a panic.

"You ought to have heard him talk to those fellows, 'Steady, boys,' he yelled, 'if there is any cowards among you, if there is any cowards among you, don't disgrace the regulars by retreating from any white-livered Spaniard; stand up, d—n you, and take your medicine like men. So help me, God, I'll make a skimmer of the first one that turns his back.' And he meant it, too, and it seemed to stiffen all our backs and trembling knees to watch him. "Colonel Theaker, too, was a regular

horse all through the fight and was right in the front row all the time. I remember once while the fight was hottest and our entire line had halted for a moment, he showed up just in front of us and called out, 'What company is this?' 'Company C' was the answer. 'You are the company I am looking for; keep a moving,' he said, and we moved and kept a moving. Just at the devilish barbed wire trap they fixed for us I got it and was smashed down about the same as if I had run against a locomotive. The last thing I remember was Captain Allen openagainst a locomotive. The last thing I remember was Captain Allen opening my haversack and taking out some letters as he said, 'Poor devil, he got it sure.' Some of the boys took me to the rear and the next thing I knew I was in the hospital. The bullet had struck me in the right shoulder, shattering my arm, passed through my right lung and came out at the small of my back. I spit blood and was completely paralyzed for several weeks, but finally pulled through and if the chance ever comes my way am ready chance ever comes my way am ready to take another crack at the Span-

## PREACHERS RESOLVE.

Manti, Utah, August 30, 1898. The doors of the First Presbyterian the doors of the First Presbyterian church of Manti are again closed after an extended session of the State teachers' association of that denomination. and the regular semi-annual meeting of the State Presbytery. At nearly all of the sessions interesting and instructive papers have been read, and able edu-cational talks made by ministers and teachers. And the interest taken by the people of Manti at the opening of the people of Manti at the opening of the meetings, did not wane as they progressed, as was well evidenced by the regularly large attendance. But whatever good impressions the visiting divines may have created at first, were very readily dissipated by their actions during the last few hours of their stay at Manti. The meeting on Monday merring was given up almost entitled. at Manti. The meeting on Monday morning was given up almost entire-ly to a discussion of "The Situation in Utah," under which heading, resolutions were adopted.

The resolutions, as framed by a committee of which Rev. Mr. N. E. Clemenson was chairman, were radical enough, and sufficiently venomous to suit nearly all of the assembled minis-ters, but there was at least one very notable exception in the person of Rev. Dr. A. P. Rankin of Brigham City. This reverend gentleman seemed determined upon even more direct st ments, if that were possible, than ments, if that were possible, the resolutions contained. Considerable animation was shown when the part relating to the Church in politics and questions of polygamy came up. When the latter was broached, the gentleman the latter was broached, the gentleman mentioned became particularly full of explosives. To prove the assertion that explosives. To prove the assertion that polygamy was resumed, he paraded one of the leaders of the Church of the Lat-ter-day Saints, living at Brigham City, ter-day Saints, fiving at Brignam City, the first counselor to the Stake presidency of the same place, who received particular attention, one of the councilors of the Brigham City Sabbath school and the president of one of the leading educational institutions of the State concluding by sanguaging leading educational institutions of the State, concluding by announcing a readiness on his part to make his statements under oath. To the credit of those present, be it said that something akin to disguist grew out of this dissertation. Otherwise the discussion was marked by dignified deliberation.

The resolutions were as follows:
"This paper is published in response
to a general demand and many urgent requests. Individuals and presbyterles alike are eager for information on this subject. This is not unnatural. It is what might be expected in view of the past history and recent profess and promises of the people of State. That which affects the nat professions That which affects the nation-