THIRD PART.

# THE PITTSBURG DISPATCH.

PITTSBURG, SUNDAY,

QUANTITY AND PRESSURE.

oles together to make one positive pole,

and all the negatives to make one negative. Or, if we want increased pressure, we must add together the individual pressures of

each cell by connecting the positive pole of one cell to the negative of the next, and the positive of this to the negative of the next

following, and so on. We will then have following, and so on. We will then have leit one positive pole at one end of the series and a negative pole at the other end, and the total pressure will be the added pressures of the individual cells. Eact cell of a storage battery, no matter

how many or how few plates it contains, will

POWER OF THE BATTERY.

The amperes of current multiplied by the

volts of pressure will give the energy in watts, and it takes 746 watts to equal one

EQUAL TO THE EMERGENCY.

been described.

Arizona Miner.



WEITTEN FOR THE DISPATCH. ]

quiet little summer resort, and now, in the onesome time of the evening, we had gathcred on the veranda and were telling weird and ghostly tales to each other. The his 'kiss me good night.' She would surely talk was of dreams that came true with won-derful exactness or no less remarkable re-versal; of shadow forms that walked with-out apparent purpose to go anywhere, and o hurnting foutalls without even the visio haunting foottalls, without even the visible oceasion of a shadow; of strange coinci-



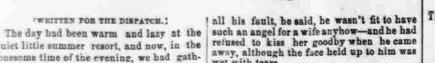
dences of dates and figures, and of warnings disregarded unto death. The night came down about us talking,

and the low swish-swash of the invisible ocean sighed up out of the darkness as though it might come from the fleshless lips of the myriad drowned. At length Tom Watson said: "I don't

know that ever I told you I was once a railroad conductor

The opportunity to smile was good for the creeping marrow of our spines. If there is a man of mature years and ordinary hearing to whom Thomas Watson has not told some way back of the train he stopped and story of those days when he was a conductor. that man should get introduced to Mr. Watson and no longer be a stranger in this big world.

"Well, I was," he continued, "and Jim Eastfall was my engineer for 11 years. Jim was a tough little runt of a fellow, not over 120 pounds, but 119 of it sand, with just a scant pound of skin for a wrapper. There was no kind of a chance that he wouldn't take in those days. Didn't believe in anything much but his steam gauge. Superons he laughed at. You might have



wet with tears. "He knew she wouldn't go to bed without came that one side of the Cork run cut had fallen in ahead of the Panhandle train, and we were not to wait any longer for it. Then

Jim climbed into the cab and let her go. "Run! It was enough to make a man's hair stand. He jerked us around the curves as if he was cracking a whip. Up grade and down, trestle, bridge or switch-crossing, he never slackened. The best his old engine could do was not fast enough. He jawed his fireman for not getting steam up faster, and finally took the shovel and showed him how to build a fire-'me,' as Bill said atter-ward, 'that had fired for him for three years and never a cross word.' "Then when the engine was doing all she

knew, panting and quivering like a blooded horse that had never felt the lash before, Jim leaned forward on his seat, bending and swaying with every vibration, trying to ride light, craning his neck and litting himself like a jockey in a desperate finish. "So at last we swept into the cut. Jim's

hand came off the throttle for the first time in 40 miles, and went up to the whistle cord. Oh, we would have put music into its cry that night, such as no organ chant could equal for the ears of the little woman he felt so sure was waiting. "His hand touched the cord—there was a s-w-i-s-h as though we had struck something soft, and the headlight went out.

"The signal whistle changed to a shriek,

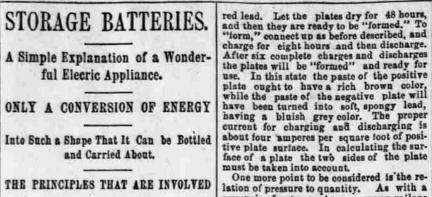
to a shriek tor brakes. Jim jerked the re-verse lever back, spilled the sand, and brought the train up with a joit that flung people out of their seats. I knew where we were to a yard, and I grabbed my lantern

and sprang to the ground. "Jim was coming back with a torch, looking along the gutter beside the track. The sweat had størted into great black drops upon his smutty face, and he was

trembing all over. "It was back here a little ways she struck," he gasped, hoarsely; 'I just had my hand up to whistle when the light went out." "The torch dropped from the nerveless hand that never shook before, but he staggered on. I followed with the lautern.

stooped over something lying in the ditch. When I came up he lilted it, and without a





## THE PRINCIPLES THAT ARE INVOLVED

WRITTEN FOR THE DISPATCE.I A storage battery consists of a cell, usually of glass or rubber, diluted sulphuric acid and flat lead plates immersed in the acid. But a storage battery does not store electricity, as is commonly supposed by the uninitiated. Electricity is a kind or form the water in the reservoir. ot energy, and it is this energy-electrical energy-that is stored. Similarly with batteries; if we want quantity we must connect all the positive A waterfall is one of the many familiar

forms of energy, but we cannot store a waterfall. We can store its energy, however, by making it wind up a spring or pump water into a reservoir or compress air or lift a heavy weight. Then at some future time this stored energy can be used to do work. The wound-up spring, the water in the reservoir, the compressed air and the lifted weight, may each represent a part of the energy of the waterfall and can be made to do work. And so it is with a storage bat-

tery. In it we can store electrical energy. To bring out this important point more clearly let us further examine the example of the waterfall and the weight.

## CONVERSION OF ENERGY.

Here we have the energy of the waterfall lifting a weight, that is, separating two things-the earth and a weight that have a strong attraction for each other. The weight, when raised, is then said to have energy by virtue of its position, and if allowed to fall, it can do work and reproduce the exact amount of energy expended in raising it. As, for example, it could be made to pump the water back to the top or the and again raise this water could fall again and again time this is the weight. However, each time this is done a little of the energy is lost, by the friction of the machinery used and the air,

and presently our see-saw arrangement would come to rest just as any other see-saw

or swing. So it is with a storage battery. If we allow a current of electricity to flow through a storage battery, the electrical energy sepa-rates certain elements of the battery, which have a strong attraction (chemical attrac-tion or chemical affinity) for each other; and when these elements are allowed to

"fall," that is, resume their former or natural state, the stored electrical energy is reproduced in the shape of an electric cur-

A STRIKING RESEMBLANCE. Just as the falling water raised the weight and the falling weight raised the water, so

the electric current separates the battery elements, and the battery elements resuming their former and natural state reproduce an electric current. But here, too, as in the other case, energy is lost each time the change is made, and a state of rest is the final result. For continuous motion or power we must have an endless source of energy, and coal, wood and water/alls represent some of these sources of energy. The simplest form of storage battery can

be made in the following manner: Take a test tube or tumbler and fill it about threequarters full of water; then pour in sul-phurie acid slowly, stirring with a wooden

pole of the dynamo or source for purposes

FORMING A BATTERY.

If the storage battery be charged and dis

charged a good many times, the capacity of

the battery will be greatly increased-that is, a greater discharge can be obtained

compared with the charge. This process of charging and discharging is called "form-

ing,"and until a storage battery is "formed" it will return but a small proportion of the

current or energy used in charging. In dis-charging, the acid will become weak, but in

If a larger battery is needed, that is one

that will give a greater current, more lead

A POINT TO WATCH.

observe the following instructions:

the strength of the acid is wholly

A MOUNTAIN MATRON How Aunt Susy Parker Once Bluffed A Political Meeting.

SEPTEMBER 21,

ROUGH AND READY CHARACTER. Alice MacGowan Runs Against a Bifle Muzzle

in the Woods.

PEEPS INTO PRETTY MICA MINES reservoir of water, we have so many gallons of water flowing per minute under a press-ure of so many feet, so with electricity we have a certain number of amperes of current

flowing under a certain pressure in volts. With the reservoir, if we want a greater supply of water we must have a larger reservoir, or more of them. If we want a greater pressure we must raise the height of

State of the state

T

CORRESPONDENCE OF THE DISPATCE. 1 SPRUCE PINE, TOE RIVEE, N. C., ? September 18.

HIS is the coun. try of mica and 4 yes mica mines, in which I have business!' Bud never said no more, an' I

never seed him agin that night. But a been sojourning for some weeks. You will pass ''You Polk Sayles, come on,' says I. "The sher'ff aint, hyer 'th them papers h's occasionally got fer ye.' great heaps of "'Zeb Buckanan, th' aint no barns

further than this, and I had always been curious to know the conclusion. "What would you have done, Aust Susy -what did you expect to do, if they had attacked you?" "I'd a fit em, I reckon." "Well, what did they do? How did you

"Hoh! Hoh! Hoh! Hoh! Hoh!" Aunt Susy laughed with a sort of vocal bounce off of each syllable. It was inde-scribably jolly—like falling down a stair-way of laughter and sounding every step. "Why, we jest flummixed 'em out," said she, wiping her eyes. "That little feiler—I liked that little man, an' if some of the rest on 'em 'd stud by 'im like I did we'd a run 'tother crowd out, 'stid o' them runnin' us —that little feiler jest pulled off his coat

-that little feller jest pulled off his coat when he see hit looked like a fight, an' 'bout that time some un over in the fur cor-ner of the room hollered out, 'I'm in fur the source in the source

SHE WAS LOADED.

"'That's you, Bud Snipes, is it?' says I. 'Ef yo're wantin' to talk so bad jes' come out an' tell us the hull o' that hog stealin

When ye've hooped us out yo kin go home an' have er big dinner off 'n yer neighbor's

chickens and roas'en yers." "'Don't be hangin' back, Si Gutredge, ye

low-down, wife-beatin', drunken scoun'll

throwin' 'im out the winder!'

"Hoh! Hoh! Hoh! Hoh! Hoh!"

ome out?"

great heaps of waste mica by the roadside, or on a stream-edge like piles of silvery hoar-frost

Zor gleaming stores of moon-Vg beams; and I have ridden to so 213

give two volts of pressure. Two cells con-nected in "series," as above, will give four volts and so on. But the quantity of cur-rent depends upon the number and size of the plates in each cell and upon the number come tired of shying at the queer looking works, and even refused the other day to of cells with similar poles connected, as has have any hysterics over the steam whistle.

horse-power. One hundred pounds of a good storage battery, including acid and cells, ought to give one horse-power for one hour. will reawaken, and things will be lively To keep storage battery in good order never let the battery stand idle more than hereabout once more. These mines seem to the outsider odd little three or four days at a time. Keep the plates well immersed in the acid, adding one-horse affairs, and run in a one-horse sort of mica glittering like diamonds from the snowy, frosty feldspar in which it is em-bedded. It looks like a fairy grotto in the fined by using glass covers. SCIRE FACIAS.

Some of the largest and best mines show unmistakable evidence of having been worked-by some people entirely before the time of the Indians-the mound builders it

Mexico, showing that this great and myterious people once had a commerce as vast as the country they inhabited.

remarked regretfully that I had not been good friend to the helpless or distressed, a still. valuable champion to any cause she es-



PAGES 17 TO 20.

A NOVEL DEALING WITH COTEMPORARY LIFE. WRITTEN FOR THE DISPATCH. BY WILLIAM BLACK,

Author of "A Princess of Thule," "Sunrise," and Many Other Stories of the Highest Reputation on Two Continents.

#### SYNOPSIS OF PREVIOUS CHAPTERS.

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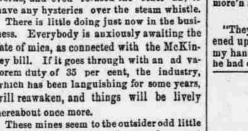
#### CHAPTER XII. INTERPOSITION.

Yes, she had come near-so near that she seemed to absorb his very life. He could think of nothing but her. As he walked away down through the dark streets he imagined her to be still by his side; he tried to fancy he could detect some faint perfume of sandalwood in the surrounding air; his tortured himself with vague alarms, and wondered how the long night was to be got through, before he could go up to her in the morning, and challenge her to speak. All the future was filled with her; and there again he saw himself by her side, the strong and confident protector of this poor alien waif. And yet if he had mistaken that by name, sorter scattered out and melted off; the rest wux decent sort o' folks, an', gen-tle-men, we had a plum out-an'-out good speakin! My little man sent his hat round mute little declaration of hers? What if, after all, it was merely a timid expression, mongst the boys airterwards an' raised the money to buy me a nice black alpacky dress -I've got it yit. Hoh! Hoh! Hoh! Hoh! Ho! Them wuz great times, shore!" involuntary and unpremeditated, of her friendship, her kindness, her gratitude?

Omaha; Maisrie's birthplace was not dis-tinguished by any difference of type, and yet he regarded those five letters with a curious interest and fascination. He recalled his having stood on the heights of Council Bluffs, and looked across the yellow Mis-souri; and now he marveled that he could have contemplated the wide, straggling city with comparative indifference. Perhaps, by right hand tingled yet with the touch of diligent seeking on the morrow-for the her warm, interclasping fingers. And if at one moment his heart beat high with the assurance that she had confessed her love and given herself to him, the next he tortured himself with yagne alarms and station many a time!" or "Maisrie must often have looked up to the spire of the High School, there on the hill. To think that he had been twice in Omaha-without caring-without knowing! And so his eyes rested on this little word in the middle of the big map; but his imagination was far

on their long-projected tour. He turned to a map of the United States, and sought out

away. "Well, the longest night must have an end; and yet the new dawn brought no sur-cease to his anxieties; for how was he to have an opportunity of speaking with Mais-rie alone? He was up in the little Mayfair street betimes, and made some pretense of beginning work; but that was soon abandoned. He could not keep his eyes on any book or paper when there were those two windows over the way. When would she a maddening thing, he resolved to seek re-lief and distraction. As soon as he got to his own room down in Grosvenor Place he take flush reveal all he might not some tell-



fittul light of the little lamps

How Shorty Smith Succeeded in Recover-ing His Valuable Mule.

is supposed. In the great mounds at Chilicothe, and at Marietta and various points in Ohio and Wisconsin, there have been found beautiful and ornate cups, vases and weapons of copper and silver, side by side with shells from the Gulf, mica from North Carolina and obsidian and porphyry from "Shorty" Smith, the boss packer of the Bradshaw Mountains, while driving his pack train up the Del Pasco hill, had a very exciting experience last week. Part of the males were loaded with a Frue concentrator. One of the mules, the largest in the train, One of the mules, the largest in the train, was loaded with the long side sills of the con-centrator, one on each side, and when the train had got half way up the hill and on the steepest part of the trail, the mule with the timbers gave a lurch sideways and landed about 100 feet down the hill and lodged suspended in the air between two or the terms that the fact from the mured

The next day just as I was about to leave Aunt Susy Parker is a striking example of our type of pioneer women. Strong in of our type of pioneer women. Strong in body, stout of heart, fearless, not a stickler in small matters of any kind, she is a right road feind to the helpless or distances and states and had never seen a "blockaded"

"Lor' love ye, honey! Why, I k'n jest and a dreaded adversary. She is t-hold on a min'it." figure in local affaire-her energy, capabil-ity and general combatitiveness making her prominent in all church and political maters, and quite overshadowing Uncle Billy, gave me long and intricate directions to an who, married to any ordinary woman out-of-the-way place far up in the mounwould be a good deal of a fellow. tains. "When ye git that tell Bob he's to fill the heroic character, the vigor and capacity of our New England foremothers, with the drawling accents, free-handed generosity and hospitality, hearty laugh, and, in genthat agin fer Aunt Susy Parker, an't I said show you the still an' it'll be all right." IN FRONT OF A GUN. eral, the more easy-goingness of the South Well, I was charmed at the prospect. I had a delightful ride. We were going ahead ata good pace, I whistling with great abandon and enjoyment, when Phebe sud-SHE COULD BEAT JIM. I went over to see Aunt Susy the other day. I found her plowing corn. She in her black calico sunbonnet, and her one old denly lifted a fine car distrustfully, then steer hitched to a plow of primitive design, made up a quaint and picturesqu - group. stopped altogether. "Now, look here, Phebe," said I "you "I wouldn't do such work, Aunt Susy, said I, "you're getting too old. Why don have the advantage of me in being born Why don' and raised in the mountains, and you ought you stay in the house, and let Jim do the plowing and field work?" not toplowing and field work?" "I say, Jim," subted Aunt Susy with scorn, "my shadder's wuth more in the fiel'n Jim. Thishyer's some o' Jim's corn. Miz-zabul, sorry little pore stuff! Mighty nigh-Just then I heard a small, quick rustle near us, a rolling of loose stones and saw a man with a saw in his hand slip down the side of the ravine, run to a tree where i gun was leaning, snatch it up and level itet up long o' weeds. I say, Jim! I o'n do more in one day weth old Longstreet 'n Jim'll do in two, with a good pa'r o' at me! It was the first time I had ever had a gun aimed at me in broad daylight, in dead earnest, and by a determined looking man, mules." I thought best not to argue the case furand my sensations were extremely un-pleasant. Indeed, I was soared. I couldn't ther. "I'll be done in a mighty few minutes," said she, "time I get these four las' rows run. I'm goin' to dig a mess o' sweet 'taters-ther's some big enough over yander think of anything in the world, and ant staring at that gun muzzle, an hour it secened to me, when a second man suddenly emerged from nowhere, and scream-ing, "Sakes a mighty, Eph! It's a woman! Hold on," ran to my murderer, struck up -and then we'll go the house for dinner.' To expedite matters I dug the potatoes, under Aunt Susy's instructions, she mean while "laughing consumedly" at my awkthe gun barrel just as the thing went off; i wardness, and we went to the house. Annt kicked, and they both went over onto the ground. No. 1 jumped up and bawled out: "Hol' up yer han's, and ride out into the Phebe had already "rid out into open!" open!" Pnece nad already in the the nuled the open," so, as soon as I get her hauled up, I held up my hands. Both men were roaring with laughter. "Lord o mercy! Ye mighty nigh skured

beams; and I have ridden to so many mines that Phebe has be-te queer looking the other day to base does beams; and I insyer's just the job for ye!' "I wuz bilin' mad, an' I didn't keer what I said, an' I fa'rly cussed 'em out. 'Come on, ye dogs! mizzable cowardly houns, all on ye! Thieves, an' cutthroats, an' drunkards, an' wile-beaters! Don't stan' back fer little more'n a boy, an' one ol' woman!' THE SPEAKING WENT ON. "They sorter stopped, an' our folks heart-ened up a little. Some'un put a pistol in my hand, I looked at my little man, an' seed he had one, too. Them fellers I'd called out

ness. Everybody is anxiously awaiting the fate of mica, as connected with the McKinley bill. If it goes through with an ad valorem duty of 35 per cent, the industry, which has been languishing for some years,

of manner. A man has a mine, so to speak, water to compensate for the loss due to evapin his back yard. A little steam engine, a oration-and never let the plates stand out of the soid long enough to dry. Complete charge is attained when gas is given off freely and to such an extent that the soid drill, some dynamite and two or three or more men, according to the size of the works, is the whole out it. The inside of a mica mine is a beautiful picture, with the facets ooks almost mild-white, due to the fine bubbles. In this state the cells will spray a ittle. This spray, however, is easily con-

WOLKED CENTURIES AGO.

tered his engine all over with No. 13s id he would have taken 13 cars out on a riday night and guaranteed he would up an hour's time between Pittsburg and Altoona and laugh at the new moo over his left shoulder. This was before the right I am going to tell you about.

I ought to have told you Jim had a wife that he couldn't have loved more if she had o his engine.

Whatever hour of the night we passed their house he always whistled for her, a short whistle and long one, repeated. They med to say 'all r-i-g-h-tl' good n-i-g-h-tl' Mally didn't often go to sleep without but sometimes we were very late and she had to (for senedules weren't then the regular things they are now). She heard it anyhow, she said, and it brought her pleasant dreams. She called it 'Jim's kiss me good night.

They lived just above the cut, out by Radebrugh tunnel, and when it wasn't too ate at night she used to come out to the edge of the cut with a lantern and swing it in answer to the whistle. It was never the safest place to stand, for the shale reanlways elipping down with the jar of be massing trains, especially after a rain, it there was no use talking to her of dan-"Jim's engine would never run over he she said, and then she would laugh, and pretend to be jealous of it, and say mayhe it would

"It had poured down rain all that day. There was a landslide out the Panhandle we had to wait two hours at Pittsburg for our western connection. Jim be-gan grumbling at 7 o'clock, which

Jim Swearing His Lungs Empty.

regular time to start. and before we got away he had cursed pretty much every cross-tie on the division. I had en him cranky before when some cub rubber had skipped a speck of dust on his engins, but never like this. After he had ex-pressed his opinion of me and the crew and he rain, the rolling stock and the officers of the road, he even swore at his engine. There was bound to be something bad wrong with

"At last I got it out of him, 'I wouldn't mind so much,' he said, 'but Molly 'll be ure to wait out at the cut for us to-night. "I started to tell him that not being a natural fool she wouldn't, but I didn't get

on far. "Don't you call my wile a fool, Tom Watson. We've been booked up together

Watson. We're been booked up together for many a year, you and me, bai just you keep your blasted tongue off that little woman's name or \_\_\_\_\_\_\_ oh!\_\_\_\_' "Here he pinged off into a fresh lot of specifications as to the inture eternal state of the engineer who was handing the train we were waiting on, so suddenly that I won-dered if old Jim hada's slipped an eccentric is bic beed. But he bain's When he had "the little" which are these: A duiter, uncleanness, lasci-acce, murders, drunkenness, revellings, and such like of which I tell you before, as I have also told you in past time, that they who do such thereft the kingdom of God. The reader will not fail to notice that the word not inas been omlitted after the word "shall "which would make it read "shall" in his head. But he hadn't. When he had sworo his lungs empty he dropped into an-other temper, and told me how he and Melly had had a bit of a quarrel that morning-

## other anywhere. the other plate in the same way to the other pole of the battery or dynamo and allow a small current to flow-about one or two amperes. If the source of electricity is too powerful place a resistance in the circuit, such as German silver wire or incandescent

lamp

of recharging.

charging

restored.

negative.

### Had a Bit of a Quarrel.

word turned around into the light of the lantern. It was-"Tom stopped, as though something was choking him, and then went on, though with a gurgle in his throat that guessed the meaning of-"It was a chunk of a tree top that had slipped down from the top of the cut and wiped the headlight off the engine."

There was no scund for a full minute, except that silly gurgling giggle in Tom's throat, but there was one of us who asked, with lingering wistfulness, at length: "But-his wife-you know-" "Oh," responded that wretch, Thomas

Watson, "didn't I tell you I had told Jun she was no fool? She was in bed, and asleep, I suppose. I never happened to ask."

## CARINE MCLEAN. WHAT MUSTACHES TELL.

An Odd System of Character Reading Fr the Hiraute Adornment. There is a great deal of character in the

mustache, says the Northwest Magozine. As the form of the upper lip and in the regions about it has largely to do with the feelings, pride, self-reliance, manliness, vanity and other qualities that give selfcontrol, the mustache is more particularly connected with the expression of those qualities or the reverse.

When the mustache is ragged and, as it were, flying hither and thither, there is a were, flying hither and thither, there is a lack of proper self-control. When it is before, so that no two plates can touch each straight and orderly the reverse is the other. Then connect all the alternate plates together with a strip of lead, making If there is a tendency to curl at the outer

ends of the moustache, there is a tendency to ambition, vanity or display. When the curl turns upward there is geniality, combined with a love of approbation; when the inclination is downward there is a more sedate turn of mind not unaccompanied with

It is worthy of remark that good-natured the dyna men will, in playing with the mustache, intive. variably give it an upward inclination, whereas cross-grained or morose men will pull it obliquely downward.

# A WICKED PRAYER BOOK.

#### Printed in 1686, and Notable for Having the Word Not Omitted. New York Sun. 1

process of making storage batteries varies i little from that just described, and yet it i The authorized Bible printed in London so simple that any boy could make this by Robert Barber and Martin Lucas in 1631 better kind. The most common form of the commercial has been named the Wicked Bible, on acstorage battery is called the "grid type," and is made as follows: To make th count of an extraordinary mistake of the printer in leaving out the negative in the positive plate, take a smooth, flat sheet of lead of the size of the plate desired and

Seventh Commandment. The mistake occurs in Epistle 1, Gal. 5, 16 verses as will be seen:

oak trees about 15 feet from the ground. How to get the mule down was the ne stick till the solution is very acid to the But, like all great packers, question. tasic, (never pour the water into the acid as that would generate heat. Then stand in the tumbler or cell two flat pieces of sheet "Shorty" was equal to the emergency. He soon took in the situation, rushed up to one of the mules that had some powder, caps and lead, as wide as the cell will permit of, and fuse in its pack, which he soon fixed so as to explode the powder and placed it in the tall enough to reach one or two inches above the acid solution. Place two rubber bands hollow end of one of the trees. He touched a match to the fuse and yelled: "Get out of around one of the plates—one band near the bottom. Then bind the two plates together so the two lead plates do not touch each the road!" and when the shot went off and the smoke had cleared away "Shorty" looked around and saw Old Tom (the mule) with APPLYING THE ENERGY. his load all on walking up the hill to the rest of the train, and not a scratch on him. Connect one plate by means of a copper wire to one pole of a battery or dynamo and

SLIGHT ERROR IN THE TYPE.

Why a Young Newspaper Man Was Auxlous to Go Off to South America.

IWRITTEN FOR THE DISPATCH.: "Why was young Fobbs so anxious to be assigned to do the charity concert last

Allow the current to flow for about four or night?" asked the managing editor of the five hours and at the end of that time it will be noticed that one lead plate has become city editor. brown and the other gray. Now disconnect the wires from the source, and on touching "I think it was because his best girlsang a

solo in it, and he wanted a chance to write the two ends of the wires together a small a lot of gush about her and make himself snark will be noticed. If the ends are kept ogether for a short time the storage battery solid." will discharge itself, and must then be r

"And why is he so anxious this morning charged. After the first charge the brown plate, which is called the positive plate, must always be connected to the positive to be sent to do the revolution in the Argentine Republic?" inquired the managing "I've an idea," answered his subordinate.

"that it is because Fobbs tried to grow crit-ically enthusiastic over his girl's chest notes and they came out in the paper this morn-ing as 'chestnuts.'"

"Tell him he may go to the Argentine Republic," said the managing editor. And there was a far-away look in the usually stern eyes of the boss, who himself

had never married, and about whom there was a vague legend in the office of a tender romance which came to an untimely end in the early days of his professional career. POLK SWAIPS.

#### SUBSTITUTE FOR BUTTER.

The Latest Scems to be a Slight Improve ment on Butterine.

plates must be used; for the current that a storage battery will give is in proportion to the number and size of the plates. To make a storage battery of more than two plates According to the Boston Medical and Surgical Journal, M. Heckel and Schlag-The denhauffer have discovered and reported strength of acid is the same, no matter how many plates are used. Stand auy odd number of plates in the acid, providing every other one with rubber bands, as upon a certain Spanish broom-like bush native of the west coast of Africa, which belongs to the Polygala family, and to Malonkang or Ankalaki. Its seeds yield soldered joints, so that if there are 19 plates in all, nine plates will be connected 17.5 per cent of a yellowish butter-like fat together to form one big positive plate, and ten will be connected to form one big of a very agreeable nutty flavor, and which could well serve as a substitute for butter.

The fat softens between 28° and 30° C. beginning to melt at 35°, but does not be-The even number of plates must always come fluid below 52°. Upon cooling, it remains fluid for a long time, only beginbe treated as the negative pole, and in charging, connected to the negative pole of ning to solidify at 33°, when it regains its original consistency. It saponifies very easily with alkalies, and contains 31.5 per amo,-the odd number to the posi-The lead strips connecting the negative plates must not touch the positive cent. olein, 4.8 per cent. free palmitic acid, plates and vice versa. To make a still 57.54 per cent. palmitin, and 6.16 per cent, myristin. It contains small quanties of formic and acetic acids, but no butyric or valerianic acid, and therefore it does not larger battery, take two or more cells as above and then connect all the positive poles or plates to make one large positive plate and all the negative to make one easily become rancid. large negative. However, for commercial purposes, the

# A SCALE FOR DRINKERS.

The Amounts of Alcohol Contained in the Typical Beverages.

The following figures show the percentage of absolute alcohol by volume in certain typical drinks. They show if a man wants uick action he should take Russian about three-eighths of an inch thick and punch in it as many smooth round or whisky, as it contains the most alcohol. The figures were obtained at Berlin by a

square holes as possible without weakening the plate too much. Then make a thick series of analyses: Weiss beer, American, 2.18; draught beer. paste of red lead and dilute sulphuric acid, and with a thun piece of hard wood-like a Weiss beer, American, 2.18; draught beer, and with a thun piece of hard wood-like a putty knife-force the paste into the holes from both sides, leaving a clean, smooth finish to the paste, flush with the lead plate or "grid." THE NEGATIVE PLATE. Make the negative plate in the same way, only using litharge for the paste instead of



Plowing With Her Steer.

Susy evidently had on her war paint, fo which they have given the specific name of butyracea. The native name of the bush is ously at work as we approached; the men lingered under the trees instead of coming into the house, and the dogs fied from be-fore her foce, fairly yelping.

THE DINNER HELPED HER.

But after a good dinner, sitting on the porch, smoking a pipe of home-made to-bacco, her mood was much relaxed, and I could see she had a sort of grim enjoyment in the consternation she scattered. Turning to me a twinkling smile she said with Turning chuckle, "Lor' a mighty! I'm jest ableeged t' give 'em a tarin' up 'casion'ly. When I'm gone ever' thing'll go to pieces-plumb to pieces!" Seeing her mollified humor I ventured to

refer to a story I had recently been told. It was to the effect that not long after the war, and while political feeling ran high, there was to be a public speaking at town. The county was strongly Repub-lican, and it came to Aunt Susy's ears that

there was a plot hatching to "ran off" the Democratic speaker. The evening came; the Court House was crowded, every door and window filled with curious faces. There was a feeling of strained expectancy; the atmosphere was fairly explosive; the small minority of Democratic feit pretty blue; the small Democratic speaker, with-out a single backer behind him, was in a bad fix, and began to look pale, when Aunt

Susy Parker pushed her way through the erowd, stalked to the stand, and going be-hind him, clapped her hand down on his shoulder: BOUND TO HAVE FAIR PLAY.

"Now, you just talk my little man," said abe; "you go right ahead an' say your say, I'll back ye!" The story, as I had heard it, went no. Chairl

dived back into the house, and returned with an empty quart flask in her hand. "Thar, take that an' ride up"-and she

10s a Woman, He Said.

me to death," said No. 1.

AFTER THE RESCUE.

"Well, that's pretty good," said I, in an injured tone, "I thought I was the scared "But I thought you's a revenue raider!

Laws, Sis, what on airth makes ye wear sich a riggin' round in these hyer mountains?

Hits plumb dangerous!" I took stock of my get-up, and couldn't gainsay the man much. Seeing only the upper part of my form as ne had he couldn't be blamed for his mistake. The "riggin" be blamed for his mistake. The "riggin" consisted of the soft felt cavalryman hat, be fore referred to, pulled down over my face pretty well, and a dark neglige flannel shirt (the gift of an affectionate father, when it had become too small for his manly form) with which, for greater freedom and ease, I had replaced my close babit basque, and a four-in-hand tie which I considered unbe-

coming to my brother's style. "Well, I guess one of you is Bob, isn" he?" said I.

he?" said L. "Yes," replied No. 2. "Well," I remarked, pulling out the flask, "Aunt Susy Parker says\_\_\_" Both men began to laugh. "'Light! 'light!" said Bob; "come in an'

"Light light, said Bob; "come in an' have some dinner." He helped me off very gracefully. No. 1 took Phebe away, and Bob and I went back through the thick woods into a little cabin. "Here's a gal come from Annt Susy Par-ker, Hey," said Bob, "an' Eph like to shot 'er fer a raider. But she do look mightily like a boy 'ith that hat on-does, don't she?"

We had a first rate dinner of beans and bacon, corn bread, buttermilk, sweet pota-toes, honey and coffee, and then they showed me the still down in a sort of cellar under the house, so the smoke could go out the one chimney. The quart flask was filled, and I from the man, and the advice to either re-form my cosume or find some safer amuse-ment than hunting up blockaded stills. ALICE MACGOWAN.

# It Might be Useful

New York Evening Sup." Paralysis of the hind legs is epidemic

sufficient visions of the future without hav-ing recourse to any palimpaest discoveries; while as for his hand-well, perhaps the hand that Maisrie had held over her heart for one wild, breathless moment, was a little too unsteady to use a pencil. If only the hours would go by!. He tried to read-and could not. He got hold of a map of Scot-land, and traced out the line of travel he should like to follow if Maisrie and her grandfather and himself should ever start. among Connecticut cats. If only Congressmen could be inoculated with it now and sitated from rearing to address

took out a foolscap sheet of paper which had she might be coming out certain pencilings on it. These formed, in fact, an outline sketch of a lecture which he had undertaken to deliver before the Mendover Free Library Association; and it was high time he was getting on with it, for the meeting was to be held in the following week. But strange things happened with this sheet of paper. Apparently the pen-eiled heading was "The Unscrupulousness of Wealth;" but the longer he looked at the title, the more clearly did it spell out "Maisrie Bethune." The sub-headings, too, began to reveal hidden mysteries. Here was one which on the face of it read "Cir-

Well, he knew he could get no confirma-

tion of either his audacious hopes or his de-

pressing fears until the next day; and as the

alternation between the moods was altogether

so that he could quickly follow her? Or perhaps her grandfather might be going to the library, leaving her at home by herself? The door of the house opposite grew to be as fascinating as the windows; unknown possibilities might be sprung upon him at any moment. It was quite a cheerful morning-for London in November. If pale mists hung

about the thorough/ares, at least some trace of blue was discernible overhead; and on the panes of the higher windows the sunlight shope here and there a dull gleaming gold. The butcher's boy whistled loudly cumstances in which the capitalist may beas he marched by; the cabman flicked at ome a tyrant in spite of himself." But be- his horse out of mere good humor; the



WHAT HAVE I DONE, VINCENT?

hold! that scrawl slowly disappeared, and in its place a picture grew into existence. He seemed to recognize the big gray building — was it not the knew the figure of the tall young girl with the long flowing hair, who, in riding habit, its place a picture grew into existence. He seemed to recognize the big gray building — was it not the mansion-house of Balloray?—and well he did not look up. The two were talking to-gether as they went along the little thorough-fare and turned into Park street. The next moment Vin Harris had snatched up his has came out on to the terrace, above the wide stone steps. Is this her grandfather, proudfeatured, light-hearted, with the same un-daunted demeanor as of old, come to wave her goodby? The splendor of the morning is all around her; there is a white road out-

and gloves and was off in pursuit. But he did not seek to overtake them. On the contrary, he kept as wide a space between them and him as he had done be-fore he had ever dared to address them; and side the grounds, and an avenue of beech trees dappled with sun and shade; when trees dappled with sun and shade; when she vanishes into that wonderland of folinge, she seems to take the light of the day away yet the distance was not so great but that yet the distance was not so great but that he could observe Mainrie's every gesture and the graceful motion of every step. She wore those hanging sleeves, too, that had hidden his arm on the preceding night— those hanging sleeves that had allowed her to say something in secret to him, even amid the noise and movement of a great crowd. And now that he saw her actual self instead of the vague phantom of his reveries, he plucked up courage. Yes, ahe must have known what she was doing. Those were flesh and blood fingers that had taken hold of his; when she raised his hand to her heart, it could not have been altowith her. And again, what further mira-cle is this? "Another vision interposes, and at length becomes dominant; and this one is very different; this one is of a street in Toronto. And here also is a young girl; but now she is all in black; and she is all alone-she knows not one of those passers-by. Pale and pensive she walks on; her yes are downcast; perhaps she is thinking eyes are downcast; pernaps and is thinking of wide intervening seas, and of her loneli-ness, and of one who used to be her friend. Tears?—but of what avail are these, here in this strange city?—they are only a confession is strange city?-they are only a confession f helplessness-perhaps of despair. \* \* to her heart, it could not have been alto-to her heart, it could not have been alto-to her heart, it could not have been alto-gether through inadvertence. Once or twice a wild fancy got into his head that here and now he would hasten forward, and seize her Vincent Harris got up and walked about the room; at this rate the members of the Mendover Free Library Association were not likely to receive much instruction. And indeed he did not return to that sheet or foolscap; his brain could conjure up quite sufficient visions of the future without hav-ing recourse to any palimpsest discoveries; while as for his hand-well, perhaps the hand that Maisrie had held over her heart for one wild, breathless moment, was a little too unsteady to use a pencil. If only the hours would go byl. He tried to read-and could not. He got hold of a map of Scot

went by, and brought him no nearer to the discovery he longed for. When Maisre and her grandfather returned from their stroll through the park the young man went back