

### GREAT VALUE OF THE BORDEAUX MIXTURE



Cheap and convenient mixing platform for making Bordeaux mixture.

Farmers, gardeners and fruit growers can not fence out the many forms of insects and fungi which live upon their crops and which are as anxious for a harvest as is the grower. It is a fight between the grower and the pest and the latter has generally had the best of the battle. The farmer has not been properly equipped. He has often had invisible foes—foes which he did not understand, hence could not assail them and the general result has been that the insect or the fungus obtained an ample supply of nourishment and the grower has taken what was left, but, thanks to science, he need suffer in ignorance no longer.

#### Power in Knowledge.

A study of the investigations and experiments which have placed in the hands of the intelligent grower effective methods of warfare is as interesting as it is important; it reveals an educational movement which stands unparalleled in the effect it has had in broadening the horizon of the agriculturist. It has forced him to see that there is more in his business than following the rule-of-thumb process so long in vogue. It has emphasized the power of knowledge and it has demonstrated and is daily impressing the fact upon all who take the trouble to see, that it requires more brains than brawn to succeed in an occupation at which formerly even the most ignorant could be at least fairly successful. The ignorant are going to the wall, and the student—the "book farmer" if you please, is pushing them along and filling their places when they are gone.

#### Bordeaux Mixture Perfected.

For the purpose of answering briefly our many inquiries about Bordeaux mixture and its use, it will be sufficient to say that in 1886 a great



Equipment for mixing Bordeaux mixture in a small way. No. 1, lime slacking box. No. 2, stock solution barrel for lime. No. 3, stock solution barrel for sulphate of copper. No. 4, barrel spray pump. No. 5, bucket for dipping and measuring stock solutions. Two such buckets would be highly desirable.

many men conducted experiments to test the value of the compounds of copper, very few other substances being used, and among them was A. Millardet, professor in the Academy of Science, Bordeaux, France, and to him may justly be given credit for discovering the value and use of the preparation which was destined to prove superior to all fungicides that have been used to this day, and which is now so well known under the name of Bordeaux mixture, and readily made on any farm.

The composition of the "Standard" or 3.6 per cent Bordeaux mixture is as follows:

Copper sulphate .....	6 pounds
Quicklime .....	4 pounds
Water .....	22 gallons

This formula was at first extensively used, but it was found that a more dilute mixture would answer the purpose equally as well, as it was practically abandoned for the mix-

ture which may now be termed the "Normal" or 1.6 per cent Bordeaux mixture and the following is the composition:

Copper sulphate .....	6 pounds
Quicklime .....	4 pounds
Water .....	45 gallons

#### To Make Bordeaux Mixture.

The "Normal" or 1.6 per cent Bordeaux mixture is made by dissolving 6 pounds of sulphate of copper in 32 gallons of water, while in another vessel 4 pounds of lime is slacked in 12 gallons of water; the two liquids are then slowly mixed and the preparation is ready for use.

It is interesting as well as important to know that while Bordeaux mixture is our most valuable fungicide it also possesses a marked insecticidal value, as flea-beetles appear to be most easily overcome or driven away by this preparation.

No farm or garden, no matter how small, can be considered fully equipped without a supply of Bordeaux mixture and suitable apparatus for applying it.—Illinois Farmers' Institute.

### EXCELLENT FEED FOR DAIRY COWS

Dried Sugar Beet Pulp is Almost as Valuable as Original Beets—How it is Prepared.

The dried sugar beet pulp is a most excellent feed, and, like silage and roots, more valuable than a chemical analysis seems to indicate. The pulp is almost as valuable, pound for pound, as the original beets from which it comes. The pulp is soaked in water a few hours before feeding. One peck of pulp when soaked will make a good bucket of thick slop. The usual ration for a cow is one peck of the soaked pulp mixed with two quarts of corn chop and two quarts of wheat bran, fed morning and evening. After this is eaten the cows are given a forkful of mixed hay, with straw at noon. The cows fed this ration give a large quantity of good, rich, well-flavored milk and fatten up fit for the market with four months' feeding. Cows that will come fresh in the early spring should be allowed to go dry at least four weeks before calving. Dry cows can be kept in good, thrifty condition on chaffed cornstalks and oat straw, with one quart of corn chop to a bushel of chaff. Those giving milk should get a bucket of warm slop twice a day to each, made by mixing one pint of corn chop, one pint of linseed meal and one quart of wheat bran, in addition to mixed feed.

Keep the stables clean, well lighted and ventilated. All stock, cows especially, should be carded and brushed down every morning. Stock cattle and young stock are less liable to have skin diseases if the hide is thoroughly cleansed and kept free from scurf or dandruff. A little crude petroleum rubbed over bare spots will soften the skin and promote the growth of hair. This oil is excellent for cuts and sores.

First wash the sore with warm water and castile soap, wipe dry with clean cloth and then rub in the oil. Crude petroleum is better for this purpose than the refined oil as it has more body and greater healing properties. The oil may be had from any of the large paint stores for 12 cents per gallon.

### WASTEFUL IN USE OF WATER

Seeped or Oversaturated Lands Caused by Waste From Irrigation or Leakage From Canals.

The cause of seeped or oversaturated land is the waste from irrigation and leakage from canals and laterals. The skillful irrigator may insist that if no more water is applied than is needed for growing and maturing crops, and that if the canals are so constructed that no substantial amount of water escapes into the earth, no land will become too wet for farming purposes, says the Denver Field and Farm. It is true that in many instances irrigators have been unduly prodigal in the use of water, particularly when the land is first subdued and watered. The art of economical irrigation is usually learned only when scarcity of water compels its less lavish use.

In any event, under present methods some waste of water will occur under the best of management, making draining in many places essential to profitable farming. Water which produces permanent saturation rises from the bottom of the saturated soil toward the surface. Waste from irrigation first passes downward until a hard stratum of earth is reached. This may be only a few feet, in which case the additions which accrue from the irrigation of a few years will bring the permanent ground water level to within two or three feet of the surface, at which time injury to farm crops will ensue. It is not the downward movement of water alone which occasions boggy or wet areas, but the lateral movement of ground water down a slope until a flat tract or surface depression checks the flow and causes an accumulation of water, which is made known by its appearance, but not until the lower parts of the soil have been filled.

Such depressions or level areas receive the accumulated waste water proceeding from adjoining lands, which occupy a higher level. It will be seen that the saturated condition of the land which shows injury is not due to the water which is applied directly to irrigate it, but to the surplus which percolates from the higher lands, sometimes through considerable distances, until it reaches the lower flat or depression and Colorado now has a law providing for the organization of drainage districts in which the expense of putting in the drains is borne by the entire acreage. Drainage has been carried on in the west to such an extent that certain methods are now practiced with reasonable assurance of success. The development along the last five years is most encouraging to holders of seeped land.

### PLANS FOR SUB-IRRIGATION

Most Practical Method Found is Where Ditches Are Dug Just as for Laying Tile.

(By W. H. LAUCK, Irrigation Investigation, United States Department of Agriculture.)

Sub-irrigation by means of tile will bear investigation under the different conditions encountered in the dry land districts. The ideal conditions for sub-irrigation is where a hard-pan or impervious stratum is found underneath 18 to 36 inches of soil, in which capillary attraction is good, and just to the extent that the conditions approach this ideal is it a success for growing annuals. The roots of perennial crops will eventually clog the tile in their search for moisture. A small plot of one-half acre, with tile laid at different distances apart, viz.: 10, 15, 20, 25 and 30 feet apart, will, after a series of years determine the proper spacing of sub-irrigation tile systems for the soil. The most practical method of sub-irrigation that the writer has found is where ditches were dug just as for laying tile, and filled in with from three to six inches of cinders with a piece of tile set on end in the ditch on the cinders for applying the water, after which the soil was filled in over the cinders. This is inexpensive, compared with other methods, if a supply of cinders is available.

### GENERAL FARM NOTES

Keep the best ewe lambs to increase the flock.

Clover makes a first-class pasture and so does orchard grass.

Don't neglect to castrate the male pigs when three or four weeks old.

Gas and green feed are what enable the farmer to produce cheap pork.

Give the sows a fair trial and do not make the sad mistake of disposing of them too soon.

If the cows or calves get lousy try an application of strong brine thickened with soft soap.

To double the amount of milk per acre and cut the cost of milk production in two—build a silo.

The man with five cows and a separator is better off than his neighbor with eight cows and no machine.

Pigs are scarce enough this year, so that the man who has a few can afford to take mighty good care of them.

Many farmers make a practice of turning lambs into the cornfield in the early fall to gather up all the weeds.

The Poland-China breed is noted for its fine quality of flesh and the breed also belongs to the fat or lard type of swine.

A humane as well as effective way of dealing with a kicking cow is to fasten a strap about her body just in front of the udder.

# WASHINGTON GOSSIP

### Colored Brethren Stirred Up Over Question of Hell



WASHINGTON.—The colored brethren and sisters in the District of Columbia and the city of Washington are stirred up to a boiling point over the question of hell. The pastors of the various and sundry colored churches held a meeting the other day and in solemn convulse decided that there must be something "diddling" immediately to offset the effect of the recent action of the International Bible Students' association in going on record as believing there was no burning hell.

If you take the fireworks out of hell according to some of the colored dispensers of "de gospel" in this city, you rob them of a great lever and a club over their uncertain congregations.

A regular honest-to-goodness-burning lake of brimstone and molten lead is the old fashioned kind of hell that has done yeoman service in making young negroes see the error of their ways in the past and has helped mightily the limited donations to foreign missions and the colored pastors here beg to enter a protest against its abolishment.

Others may discard the old time hon-

ored hell, but as for the aforesaid pastors they propose to hold right on to it. They reaffirm their undivided belief in the hell of the fathers; the same old hell that they have taught their flocks of, and that is so hot, that if a colored brother gets in ten thousand miles of it he will smell like a wet dog on a hot stove.

Some of the younger members of the various congregations were inclined to harken unto the superior judgment of the Bible Students' association, and were a little inclined to turn a willing ear to the cooling news. So gratifying was the intelligence to them that they were getting real cheerful, and there was some talk of holding a regular jollification over the event, in which everybody would be invited to "cut loose and have a good time" and when doubtless many respectable persons would have got all "lit up" in honor of the occasion.

The pastors held their meeting, however, and decided to put a crimp in all this wild joy. On the following Sunday, therefore, at the sundry churches all over the city, the colored brother who has been congratulating himself that he could, when he got ready, lay deprecating hands upon any unprotected chicken roost without fear of having at some vague time in the future to wrap his system around a few gallons of molten lava while spashing around in a lake of burning brimstone, got a rude jar that upset his calculations.

### Perspiring Statesmen Labor At the Capitol.

Did you ever attend a Decoration day celebration and see the local politicians rise on the platform and deliver themselves of long and fervid oratory? Did you ever notice that they are always dressed in the dignified and sober Prince Albert coat? No matter how hot the day none of them would ever think of rising to speak unless they were attired in this emblem of American statesmanship.

After the local dignitaries had their say and the chairman rose to introduce the most important of them all, the representative in congress from the district or one of the United States senators, were you not impressed by his distinguished appearance? Could you imagine him going about in shirt sleeves, with vest unbuttoned and a handkerchief tied about his neck? No! A thousand times No! You could not. But they do.

It's warm in Washington in the summertime. Some people say it's hot and some more people say some other things about it.

One day the papers print an interview with some one of the leaders that congress will adjourn early in



August. The story arouses hope in many hearts. A few days after they print another interview with some other man just as prominent who says that there will be no adjournment until the middle of September.

So it goes. Meanwhile it is hard to get together a quorum of the faithful to transact business. The other day when an important bill was up before the house there were not enough members present and the sergeant at arms was instructed to go out and arrest any members that he could find and bring them in. They were rounded up from their offices and from the long cool corridors and cloak-rooms of the capitol where they were basking in the breezes from electric fans or in the solitude of their offices where they had discarded their coats and were endeavoring to keep cool.

### Proved That His Baby Was Finest in the World.

A BABY boy arrived at the residence of Thomas Fronesack a few days ago. He is a very remarkable youngster. Any one who has anything to say to the contrary does so at his own peril. Fronesack has promised to "lick" the man who dares to tell him to his face that that boy isn't the finest baby in the world. And Fronesack makes good, too.

The other afternoon Fronesack and his brother-in-law, Felix Wosnack, were sitting together on the Fronesack porch. Fronesack was discussing the baby. He has done nothing else but discuss that infant since he put in his appearance.

"Did you see the smart way he loubled up his little fists this morning?" said Fronesack to Wosnack. "My, that boy is going to have strong hands."

At this moment a casual acquaintance of Fronesack's passed at the gate.

"Hear you got a new baby, Mr. Fronesack," said he.

"You bet," responded Fronesack; "the finest little baby boy in the world."

The visitor was conducted into the



house and the Fronesack baby was proudly exhibited. He did not seem impressed.

"He's a nice enough baby," said the visitor, "but he's just like all kids."

"What's that?" demanded Fronesack, "you come into my house and tell me to my face that this is just an ordinary baby. I can lick the man who says that."

"Well, I said what I said," retorted the visitor, "and I ain't taking it back. That baby of ours has got your baby skinned to—"

Bang! Also bang, biff, and bang!

Fronesack waded into the stranger. The police came finally. They locked Fronesack and Wosnack up at the police station. The visitor went to the hospital. He was unable to give his name and address there. He wasn't able to talk.

### Practical Joke Causes Break Between Senators



THE late Senator Coke of Texas and Private John Allen of Mississippi were warm personal friends and for years dined at the same table at the old Metropolitan hotel," said Col. Charles A. Edwards, the noted correspondent, the other day.

The propensity of Private John to work off a joke even on as dignified a statesman as was Richard Coke came very near creating a permanent break in their amicable relations. I may say here that the Texan was an intense southerner, naturally of an irascible temperament.

"Well, to get back to my story as to the trick played him by the gentleman from Tupelo. It all came about through

the action of John Allen in allowing his beard to grow out during a vacation of congress. Throughout the session he had gone clean-shaved, so that on his reappearance the following winter with a full beard not even the negro bellboys at his hotel knew him, and he had to introduce himself to the proprietor.

The only other person to whom the jocose legislator disclosed himself was Senator Berry of Arkansas, and the latter, at Allen's request, took him in to the presence of Coke and introduced the humorist as Mr. Beeman, a newly elected member from Mississippi.

"Very glad, Mr. Beeman, to meet you," said Senator Coke, rising and extending his hand with great sauvity. Shaking the proffered hand, the impostor drawled out: "Very glad also to meet you, senator. Senator Coke of Massachusetts, I believe?"

"No, sir; not from Massachusetts by a d— sight," answered the hot-tempered T snorting."

### LITTLE NATION OF ANDORRA

Republic Is a Veritable Rip Van Winkle Land Hidden High Among the Pyrenees.

Paris, France.—There is nothing else in the world quite like the little "protected republic" of Andorra, a veritable Rip Van Winkle land, hardly yet stirring from its thousand years' slumber, and in its dreams it still hears echoing the march of the valiant paladins of Charlemagne, by whose help it came into being. But it is likely to waken soon and be made to realize that it, too, belongs to the 20th century. For a railroad is being built across the Pyrenees just east of Andorra, and then will be sure to come a wagon road—the valley can be entered now only by a bridle path—from the railroad into its midst.

Perched up among the Pyrenees, on the border between France and Spain and on the ridge of the watershed be-



Old Stronghold in Andorra.

tween the Atlantic and the Mediterranean, the flag of this proud little nation flutters over a region that is almost as much the land of the free and quite as much the home of the brave as is that of the Stars and Stripes, although it includes but 175 square miles and contains a population of only 6,000 souls.

For over 700 years Andorra has thrived under a modified double protectorate, the rule of France on the north and of the Bishop of Urgel on the south. A representative of each lives in the valley, administers justice and receives a small biennial tribute. Otherwise Andorra is an independent and self-governing state. Its relations to these two "over-lords" are a quaint survival of medieval feudalism.

### FINDS HIS LONG-LOST RING

Man Gets Wedding Band Buried in Sand Three Years at King's Beach in Massachusetts.

Boston, Mass.—Three years ago this summer J. Franklin Brown, now head bookkeeper in a shoe factory at Chelsea, lost a wedding ring while in bathing on King's Beach, Swampscott. Today he has the ring, and behind its restoration is a story of a bit of detective work.

Two weeks ago Arthur Gatchell, mail clerk in the Lynn postoffice, was rolling around on the beach in a bathing suit when the sandy recess in which the ring had lain hidden for three years was exposed. The only clue to the identity of the owner was an inscription on the inside which read, "From Flossie to Frank, Oct. 11, 1905."

How to find the owner on such a meagre clue, when thousands bathe on the beach every summer, was the problem. For a week Gatchell searched every place that he could think of. Then, remembering the old adage about two heads being better than one, he consulted a friend, George F. Alley, and, out of their conferences, a bright thought popped forth: "Why not look up the marriage records on that date?"

That settled it. They found a Frank and a Flossie were married and Frank lived then at 53 Essex street, Lynn, from where he was traced. Flossie, before she became Mrs. Brown, was Miss Lauckner of 41 Porter street, Lynn.

### FINDS GREAT STORE OF LOOT

Stocks of Silks and Satins Valued at \$25,000 Is Discovered by Alert Policeman.

New York.—A policeman passing a tall loft building on Tenth avenue heard men's voices coming from an upper floor, and broke in to investigate. In a closet on the fourth floor he found a muscular young man who jumped at him so quickly that they both rolled down three flights of stairs together. The young man was underneath at the foot of the stairs, and was promptly handcuffed. A search of the lofts revealed a great stack of silks and satins, valued at \$25,000, packed up ready to be taken away. The prisoner told the police later that three other men escaped while he was struggling on the stairs. They had an automobile outside the building to use in carrying off their loot, he said.

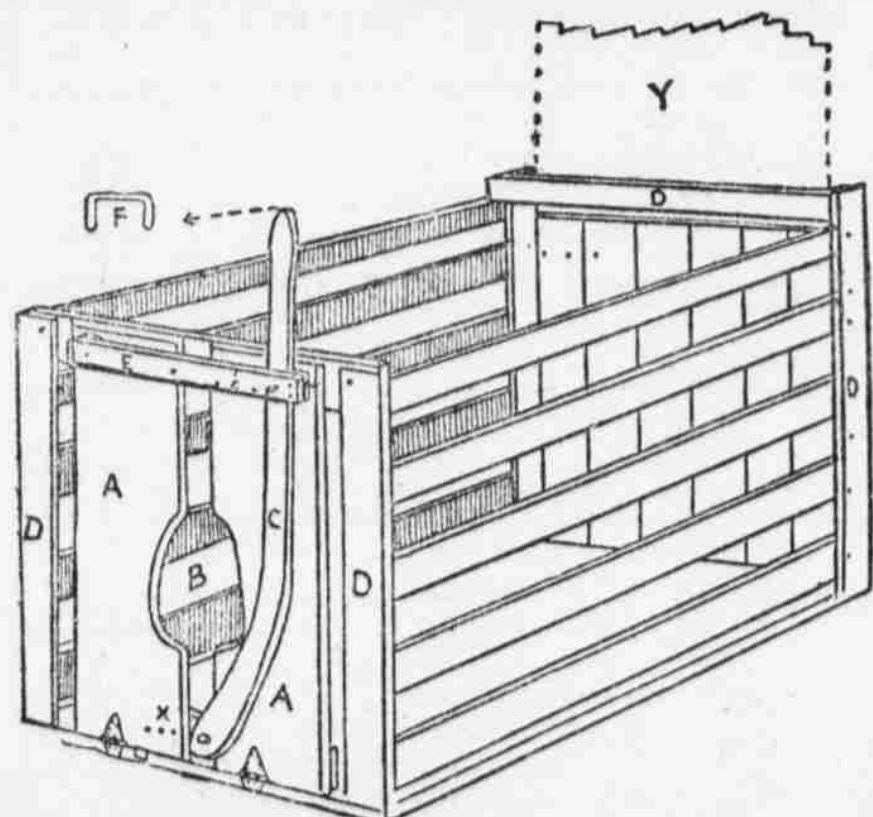
#### First Game at 100.

Plymouth, Mass.—Uncle Tilden Pierce, aged 100, recently played his first game of golf just after having taken his first automobile ride and his first drink of ginger ale.

#### Use Barrel as Collection Plate.

Waukegan, Ill.—Instead of a collection plate, a barrel was used for contributions at the Zion City tabernacle. Deacons announced that it contained \$7,500.

### GOOD TRAP FOR RINGING HOGS



An excellent and yet inexpensive trap for ringing hogs may be constructed by following the instructions herewith and observing the illustration, which is quite clear:

The frame is constructed with 2x1-inch scantlings (D.D.), at the corners lapped and bolted. The lever C when pulled forward partially closes the opening and holds the hog firmly.