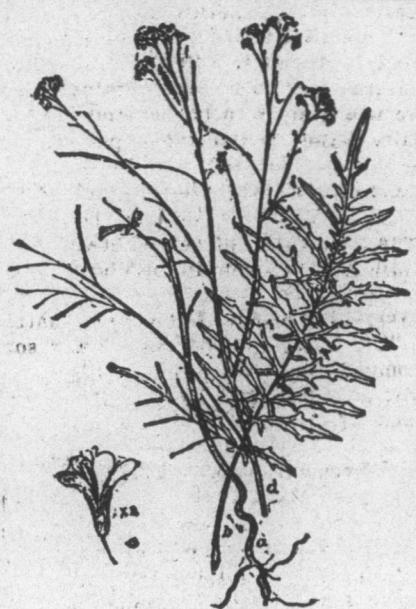


A New Weed Pest.

Tumbling mustard is a troublesome weed in the Canadian Northwest provinces, and has recently been reported from nine different localities in the United States, mostly on waste lands and city lots. Its record in Canada, and the rapidity with which it has already spread in some places in the United States, necessitate prompt action if its further progress is to be checked. The weed is found throughout the greater part of Europe, northern Africa and western Asia. Temper-



TUMBLING MUSTARD.

nature and moisture have not yet limited its range, and there is every reason to suppose that if left unchecked it will dispute the possession of land with daisies, thistles and other foul growth. This pest is a biennial, after germination resembling dandelion or shepherd's purse. A small part of a flowering branch is shown at d. The lower part of the stem bears numerous leaves 3 to 10 inches long and 1 to 3 inches wide, shown at b. The nearly white blossoms, shown at c, appear in small clusters at the ends of branches. Seed is usually introduced in baled hay, poorly cleaned seed, stock cars or sweepings from grain cars. The timothy seed growers of our Western States should be especially active to eradicate this pest in case it appears in their fields. To exterminate, mow the weeds below all flowers, grub out plant and root during August, harrow the land thoroughly at frequent intervals during summer, and seed with sod-forming grasses.—American Agriculturalist.

Threshing Damp Grain.

It is quite likely that much grain will be threshed while damp this year, as wet weather in harvest time caused it to be got in before fully dry. In most cases the grain will take less harm in the bundle than out of it, says "American Cultivator." So long as grain was threshed by hand, there was no danger of the work being done while either straw or grain were damp. It made the work too hard, and the threshing was always reserved for cold weather, after frost had thoroughly dried out both straw and grain. When horse power threshing machines came into use, there was nearly as much care in having the grain in good condition for threshing. We have seen the thresher stalled when the grain came too fast or too damp. In the large steam threshers the bundles go through all right, but if damp, more or less of the grain goes into the stack. The evil of threshing damp grain is not confined to the loss by waste. What is put in the granary is much more likely to heat and become musty than it is if the grain has been thoroughly dried in the straw.

To Prevent Evaporation.

A plank drag behind the cultivator to smooth down ridges and thus keep the soil from rapidly drying is advised by many investigators, says Farm and Home. This is particularly important during a drought when all the moisture in the soil must be retained if possible. Ordinary cultivating between the rows leaves deep depressions and high ridges, thus exposing double surface to the action of the sun and air. The plank drag smooths down these ridges, while leaving the land light and porous. An Ohio farmer advises rounding the edges of the plank slight-



PLANK DRAG ATTACHMENT.

ly, from end to end, so as not to disturb the earth deeply near the plant rows. Our illustration shows an easy way of attaching the plank.

Seed Corn.

The practice is common among farmers, even among those the most advanced, to select seed from the body of the ear, and to discard the small grains that grow on the tips and butts of the ears. They do so from the conviction that like produces like, and the stronger plants should be obtained from the larger grains. If, however, such a practice were persevered in from year to year, it would result in

FASHIONS FOR FALL.

POINTERS ON AUTUMN MODES PRESENT THEMSELVES.

Balloon Sleeves Have Collapsed and the Skin Tight Affairs Will Soon Be Introduced—Enormous Pipe Folds in Skirts Also Show Decadence.

Styles of the Season.

New York correspondence:

the production of ears with few grains of corn on the tips or none at all, for the distance of a full inch from the end of the ear. It has been ascertained from experiment that corn produced from the butt of the ears comes first in tassel; that from the body grains tassel next, and corn from the tip grains last of all. The difference between the periods of tasseling will average a week or ten days. This is nature's method of providing an abundance of pollen, to complete the fertilization of all the grain on the ear. It may not be wise to plant all the small grains from the tips of the ears, as there would then be a danger that the corn would be too thick. This difficulty may be obviated by running the seed through a sieve, with meshes of suitable size, after the corn has been shelled.

Agricultural Education.

Agricultural education is as essential to the farmer and stock raiser as a classical training is to a man who follows literary pursuits. If a young farmer has a chance to avail himself of the instruction given in agricultural colleges, though of a theoretical and experimental nature, it will save him much time and perhaps many hard knocks. Successful farming has become a science, and the sooner one learns the nature of the soil he works and the adaptability to it of seeds and grains, the better he will be equipped to apply his own practical knowledge and experience. Shiftless, haphazard farmers will never stand a show with men who are thoughtful, progressive and energetic. The best posted man is generally the most successful, and for that reason every farmer should endeavor to have a library as large as he can afford, and in these days of cheap books, most every one can afford plenty of instructive books for a winter's reading.

Land Measure.

792-100 inches, 1 link; 100' links, 1 chain; 1 chain is 66 feet or 4 rods; 1 rod is 16½ feet; 160 square rods is 1 acre, or 208 feet 8½ inches square is one acre; 43,560 square feet is 1 acre; 4,480 square yards is 1 acre; 80 chains make 1 mile; 320 rods make 1 mile; 1,760 yards make 1 mile; 5,280 feet make 1 mile; one-half mile square contains 160 acres; 4 miles square contains 2,350 acres; 5 acres of land measures 406 feet 8½ inches square; 10 acres of land measures 660 feet square; 15 acres of land measures 808 feet 4 inches square; 30 acres of land measures 933 feet 4½ inches square; 25 acres of land measures 1,056 feet square.

Cultivating a Fenced Garden.

Some kitchen gardens must be fenced, or destruction from straying cattle will follow. It is a misfortune, however, to have a garden so fenced that cultivation cannot take place. The accompanying sketch shows a way to fence a small garden, that admits of easy and thorough cultivation. The garden must be entirely in rows running lengthwise. The side fences are permanent. The ends are panels of

movable garden fence.

fence that hook on to posts set permanently, each post being in line with a plane row in the garden, so that they will not be in the way of the horse and cultivator. It is but a moment's work to take down, or put up, these end panels, as they can be made of light strips.

The Apiary.
Strong colonies protect themselves against robbers.

Do not let the sun shine directly upon the hives.

Bees hatched in the fall will live through winter until spring.

All excess of drone comb should be removed from the hive.

One advantage in wire foundations is that it will bear a heavier weight of bees.

When a considerable number of hives are kept, seven feet each way is close enough to place them.

Pure Italian bees, as a rule, are the easiest handled. Not only do they sting less, but they keep their places on the combs better.

Poultry Points.

Give fowls shade.

Give fowls air and exercise.

Give fowls lime, grit and light.

Give fowls fresh earth to scratch.

Give fowls green stuff every day.

Give fowls fresh water twice a day.

Gats should be crushed if fed to little chicks.

See that coops are well oiled or white-washed before the little chicks are put into them.

Do not be deceived with the idea that incubators need no care. The best can be made require attention.

A sitting of eggs was sent from Nebraska to Hammonston, N. J., by mail, registered, at a cost of 39 cents, without an egg broken.

Give the old hen a good dusting with sand before she is taken from the nest with the little chicks. Better do it a day or two before the chicks come.

Farm Notes.

Econimize space.

If you starve your land it will starve you.

Have cabbage leaves in the hat on a hot day.

Buy in bulk, in order to get large discounts.

Don't try to raise crops to which your soil and climate is not adapted.

The man who must go to market must pay the cost of going to it, let it take what form it may.

FARM NOTES.

blue silk was the material, the skirt having a silk panel of accordion-pleated plain blue silk. In the bodice the sleeves, vest, collar and wide girdle were of the plain material, but the body was from the figured goods.

PUFFS THAT HAVE COLLAPSED.

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"Men who have seen a good deal of life don't always end by choosing their wives well."—George Eliot.

Copyright, 1890.

WIDE FRILLING.

narrow frilling finished the stock collar, and wider frills ornamented the wrists.

While the puffs of sleeves are collapsing the stiffness will gradually go out of skirts, and women may reasonably hope that we will eventually arrive at something like the soft bell skirt, the most graceful skirt into which women ever put themselves. Certain it is that house gowns will have a little train, and will be long all around, with the hips fitting close, and though the skirt will spread toward the hem it will not flute or crackle. The enormous pipe-folds of the last two seasons will hardly be carried through this season, though at present they are acceptable enough. Two suitable types for the period between summer and early winter are displayed in the last two pictures. This period is one in which the new styles will develop fully, or at least point the way along which the change is to come, and until one stage or the other is reached those women whose outfit for dress is moderate will

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be making a total of six. When used as a single loader, the act of placing a cartridge in the breech opening holds the cartridges in the magazine in reserve automatically. A glance will show the number of cartridges contained in the magazine.

Thus the rifle can be used alternately, as desired, either as a single loader or as a magazine rifle, at the will of the

operator, and it can be used as a single loader while the full magazine is held in reserve in the event of a rush being made at close quarters by the enemy.

The "temperature" clock is a novel scientific contrivance that promises to solve the problem of how to construct a timepiece so that it will continually run, and never need attention. It is clearly shown in accompanying diagram, and is described as follows:

It is composed of two reservoirs—A, which are located a short distance apart, each of which has a central tubular standard B, open at their upper ends, and connected by a cross bar C. Within these tubular standards are placed pistons D, having packed piston heads E, and a suitable quantity of mercury is placed within the reservoirs so that the tubes B will be partially filled.

The piston rods D pass through keepers F at the upper ends of the standards, and the upper ends of the rods are held in proper location to each other by means of a cross bar G. A coiled spring H is placed on each rod D, between the bar G and keeper F, in order to keep the plunger E firmly seated on the mercury, and to lower the cross bar G when the mercury contracts.

Below the connecting cross bar C is a bracket I which is mounted a ratchet wheel J and a toothed wheel K on a horizontal shaft. Centrally on the cross bar G two vertically depending rack bars L are hung; the bar L having downwardly projecting teeth, so that when the pistons move the bar G upwardly both the toothed bar M engages with the ratchet wheel, and when the pistons

move downwardly the toothed bar L engages with the same wheel and continues to rotate it in the direction of the arrow.

As the ratchet wheel J is on the same shaft with the large gear wheel K, and the latter being geared with a smaller gear N which turns the winding mechanism of the clock, it is obvious that whether the pistons move up or down, the clock spring, or the weights, if the latter should be moved, are constantly being wound up, and the clock thereby kept constantly in motion. The mechanism is so arranged that a change in temperature of one degree will wind up the clock for a six hours' run, and it indeed would be a stable temperature if it remained absolutely stationary for a period of six or twelve hours.

THE SAVAGE GUN.

It Will Be Used by the National Guard of New York State.

Herewith is presented an illustration of the mechanism of the Savage gun, which has been selected by the Board of Examiners for the use of the New York State National Guard. The rifle has a lever bolt action, with a fixed central magazine, holding five cartridges, with one in the barrel chan-

nel.

THE SAVAGE GUN.

Pilgrim Bottle Sells Well.

A pilgrim bottle of Venetian glass

was the other day sold at Christie's in London, for £370.

Jugg—I have come to ask you, sir, to refuse to permit my daughter to marry me. Al—To refuse? Why, you—

Yes, sir. If you will only be so kind, I know I can get her consent at once.

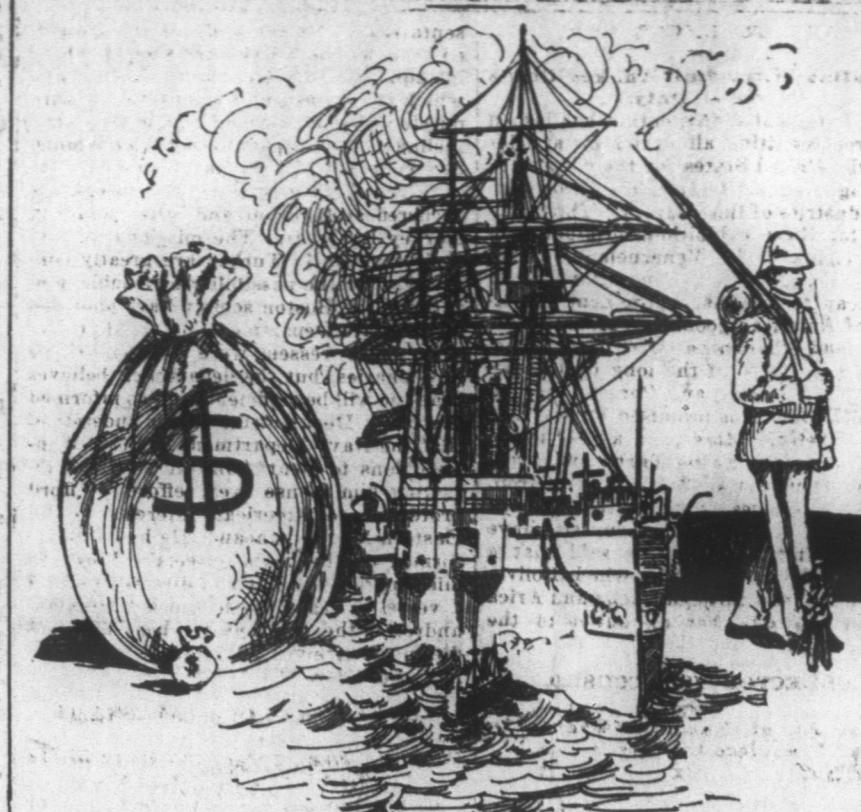
—Indianapolis Journal.

NOT OUTDONE BY THE NOBILITY.

THE COUNTESS OF SQUEEZEMES RIDES A SOLID GOLD WHEEL.

“That's nothing. I ride a diamond frame.”

WOULD BE MERE TOYS.



SPAIN'S TREASURY, NAVY, AND ARMY COMPARED WITH THOSE OF UNITED STATES.

A "TEMPERATURE" CLOCK.

Expansion and Contraction of Mercury Keeps It Perpetually Going.

The "temperature" clock is a novel scientific contrivance that promises to solve the problem of how to construct a timepiece so that it will continually run, and never need attention. It is clearly shown in accompanying diagram, and is described as follows:

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bor, making a total of six. When used as a single loader, the act of placing a cartridge in the breech opening holds the cartridges in the magazine in reserve automatically. A glance will show the number of cartridges contained in the magazine.

Thus the rifle can be used alternately, as desired, either as a single loader or as a magazine rifle, at the will of the

operator, and it can be used as a single loader while the full magazine is held in reserve in the event of a rush being made at close quarters by the enemy.

The rifle is hammerless, and the magazine arrangement, according to experts, is the best yet invented.

The rifle is constructed to use the government cartridge, 30 calibre, 35 grains of smokeless powder, 220 grains of jacketed bullet. The velocity is 2,000 feet per second, the barrel pressure being about 35,000 pounds per square inch. Should the guard ever have to co-operate in the field with federal troops both could use the same cartridge, thereby avoiding the possibility of serious mistakes in serving out ammunition.

LIN'S OPPOSITION TO WAR.

China's Greatest General Is Prolifically a Man of Peace.

Ex-Secretary John W. Foster contributes a sketch of "The Viceroy Li Hung Chang" to the Century. Mr. Foster says:

"Although the greatest general his country has produced in this century, he is pre-eminently a man of peace.

Confucius, whose disciple he is proud to call himself, taught the folly of war, and the practice of the Government and Chinese society in this respect is inspired by his teachings. While Japan has exalted the warlike spirit, and there the soldier is the idol of the people, in China the soldier is lightly esteemed, and always takes rank below the literary class. But notwithstanding this peaceful spirit, there is often a war party in China, and on two or three memorable occasions it has fallen to the lot of the Viceroy Li to be placed in opposition to it.

The Kuldja question, about 1880, brought the country to the brink of war with Russia, and it was only by his most active resistance to the war party at Peking that a peaceful settlement was reached. It is now well known that he opposed the late hostilities with Japan. The Government of the latter during the progress of the war obtained possession of and published certain memorials to the throne, dated in 1882, and forwarded by the Viceroy, which looked to the ultimate invasion of Japan; but at best it was merely an inchoate scheme and probably encouraged by the Viceroy to aid his projects for the defense of the approaches to Peking. He had a better knowledge of the military strength of Japan and of the weakness of China than any other of the Emperor's advisers, and he feared the consequences to his country of a conflict.

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