

Organize and Educate.

THE GRANGE IN RETROSPECT.

As the secretary of the national grange has recently issued a leaflet stating the name of the first grange in each state, town in which organized and date of organization, and also the date of the organization of the various state granges, a glance at the table below is of interest. The statement of the national secretary shows 41 state granges as having been duly organized. Subordinate granges have also been organized in I T, Nev and Ariz. The only states and territories that have never had a grange are: Alaska, N Mex, Okla, Utah and Wyo. The states entitled to voting membership are shown in the table below by dots; the dormant state granges (less than 15 subordinate granges) by cyphers.

While the voting membership of the national grange (a state is entitled to representation that has 15 live granges) was largest at the early organization of order, the falling off was not noticeable for 15 yrs, but in '92 Wis was unrepresented and Tenn and Ala dropped out. Since then Ky, Miss, Va and Neb have become dormant as state organizations. While there has been a decline in the organized work and co-operative efforts of farmers in the south and west, yet numerically the grange has a larger paid-up membership to-day than it has had for many years. The strongest grange states at present are as follows: N Y 42,000 members, Me 24,500, N H 22,500, Mich 20,000, O 19,000, Pa 18,500, Mass 15,000. The national grange has for years been liberal in the spending of its funds for organization work in the dormant states, but of recent years very poor returns have resulted from such expenditures. Farmers of the south and west do not appear to be ready to organize and co-operate. In the more strongly organized states much good work is being done and the increase in membership keeps steadily on. If farmers of every state and territory in the Union would enroll their names as members of the grange, the farmers of the country, with well chosen farmer leaders, as are the present officers of the grange, could do much to improve their condition.

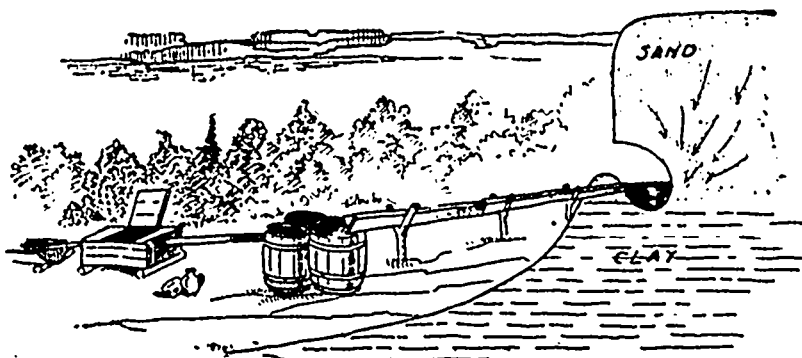
A FARMERS' FAIR SHOULD PAY.

Would a farmers' fair be patronized sufficiently by farmers to award liberal premiums and pay other bills? Why not? Is the farmer so indifferent as not to have interest to patronize that which is for his own enlightenment and good? No, he is the most faithful to enterprises where he is benefited of any business man. I believe farmers could raise the necessary means to support a fair on the principles Mr Rice suggests in F & H Aug 1, without aid from the outside if necessary.

A purely farmers' fair for many sections would be the starting point for the uniting and enlightenment of farmers, which are fast coming to the front as our smartest, most faithful and unflinching citizens and statesmen. The farmer should have his fair and show the world the products of his industry. A well-prepared fair should be most interesting, for the mechanic may from it draw new patterns and get new ideas, the manufacturer learn more of the raw material, its growth and quality, the artist find new sights and colors for his brush, the sculptor new models for his hands. Such a fair should have the largest interests and patronage, and be able to award the largest and most numerous prizes.—[F. N. Cummings, Ill.]

The Farmers' National Congress holds its 20th annual session at Colorado Springs, Col. Aug 21-31. Addresses on live topics by representative citizens from all parts of the country are on the program. Greatly reduced railway rates have been secured. John Stahl of 4323 Langley Ave, Chicago, Ill, is secretary.

T. J. Duncan of Bloomfield, Kan, an invalid, rented 190 a wheat ground last fall, and his children, a girl 16 yrs and a boy 14 yrs, plowed it with riding plows, the girl harrowed it, and the boy followed with the drill. A man was hired to run the harvester, the children doing most of the balance of the work. The 190 a yielded 4000 bu of 61 lbs wheat.



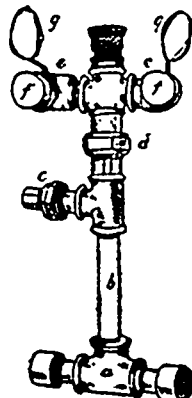
Securing Seepage Water from Base of Sandy Layer.—See Opposite Page.

The Handy Mechanic.

A NEW WATERING DEVICE.

A novel watering device which would be appreciated in especially rural districts, is that invented by L. B. Lewis of Hampden Co, Mass. It is not patented and so simple in construction any plumber can make one. The device, as illustrated, is made to set in any water tank along the highway from which horses or animals drink. It can be made of any length so as to fit any size or shaped tank. Having a neat and smooth cup at its upper end, which extends 2 in or more out of the

water and close to the rim of the tank, it is easy to drink from. Galvanized iron is used of 1 in size. The piece, a, has closed nuts screwed on each end; it serves as a rest and foundation for the whole structure, being firmly bedded on the bottom of and inside the tank close to the tank's side to hold it in place. Piece b may be of any length desired, being regulated by the height of the tank. Piece c is a union by which the water enters the device. It can be made at such height as will suit the inflow of water. If desired, piece c is not necessary, as water can be received through piece a, provided connections are made for it. Piece d is a union for connections. Pieces e are arms screwed to a T connection, extending out 1 in in opposite directions from the main pipe and then turned 1 in at right angles to the front. A nut, f, is screwed to each end. The face of each nut, f, rests against the side of the water tank and the whole device is held tightly by malleable copper wire, g, fastened at the thread between joint of pipe, c, and nut, f. Small holes are drilled in the edge of the tank, 1 in from the top, and the wire, g, drawn through two or three times and securely fastened. The de-



vice thus rests securely on a and is held firmly in place at f by the wire. Into the T piece is fitted a 1 1/2 in nickel-plated drinking cup 1 1/2 in long. The cup stands about 2 in above the surface of the water in the tank, is 2 1/2 in from the rim, so can be easily drank from. Mr Lewis has placed 50 of these devices in water tanks in 18 cities and towns of Mass and Ct, gratis. He hopes that towns and cities will have sufficient enterprise to have local plumbers make them and place in every water tank. The weary traveler, the bicyclist, and in fact everybody, when thirsty, would appreciate them.

A EUROPEAN HAIL GUN.

Hail storms have done extended injury to crops nearly every season in sections of southern Europe. After 3 yrs of experimenting, Moritz Stiger of Styria invented a hail gun which affords complete exemption from hail injury. Stations are located at intervals of about half a mile apart in regions subject to hail storms, and are provided with a small cannon placed vertically and surmounted by a 6 ft narrow, conical trumpet, which transmits the vortex and concussion of a 2 1/2 oz charge of powder to the threatening

cloud, preventing the formation of hail and apparently also diminishing the electrical discharges. Since Mr Stiger's invention a new style of breech-loading, rapid fire gun, or repeater, as illustrated herewith, has been substituted, and 500 of these anti-hail stations have been and are being established at Brescia for the protection of vineyards. Small bombs with time fuses have been added to the equipment and it is stated that the vortex, outlined by means of the dust, reaches the height of over a mile and that its low, whistling noise is heard 14 to 17 seconds after its discharge.

At one station in Italy these guns were fired more than 1000 times from 56



NATIONAL GRANGE VOTING MEMBERSHIP.

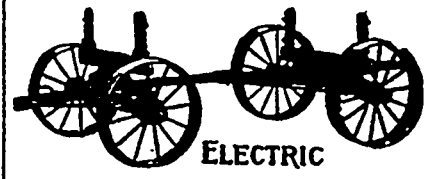
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1 Ala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Ark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Cal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Col	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Ct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 Dak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Del	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 Fla	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 Ga	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 Ill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Ind	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 Ia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Kan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 Ky	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 La	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Me	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 Mass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Mich	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 Minn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Miss	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Mont	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22 N. H.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23 N. J.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 N. Y.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 Pa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26 R. I.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 S. C.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28 Tenn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 Tex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 Va	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31 W. Va	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32 Wyo	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

stations, and during the summer, clouds were bombarded 40 times. The firing must be going on just at the moment of calm which precedes the bursting of the storm, or else it is altogether unavailing, as this seems to be the period during which the hail is formed. Stiger's guns have absolutely prevented hailstorms for 4 yrs, and now the vineyards of Italy are being generally protected. Italy has 4000 stations and France in this summer establishing a large number. Hail insurance has been generally abandoned where these guns are in use. In our own country, the use of hail guns, if as successful as in Europe, would remove the greatest uncertainty in the raising of the tobacco crop.—[Director E. W. Hilgard, Cal Exper Sta.]

Comforts on the Farm—The vast number of farm houses possess not one redeeming feature. Instead of finding a steady, even temperature throughout the house, well equipped bathroom and a kitchen provided with convenient appliances for lessening the burdens of overworked wives and daughters, we find that during winter parts of the house are overheated and in other parts the thermometer ranges about zero, and a house plan apparently designed to combine the greatest possible amount of discomfort and inconvenience. Our farmers are highly industrious and their daily labor extends over many weary hours, but our lives should not be wholly given up to this. In our homes, our life habits are formed and characters built up, and no condition is more favorable for developing a sturdy energy and manly self-reliance than the environment of the well-regulated country home. Beautifying our homes enhances at the same time the value of our farms.—[Past Lecturer W. F. W. Fisher, Dominion Grange.]

Milkweed cut two or three times a year and not allowed to seed will soon disappear. A good instrument to clip the second crop with is made by taking a common grass hook and substitute an old rake-stalk for a handle, thus with long handle many steps are saved and it makes a handy tool to have about a place.—[J. C. Fern, Ct.]

Farm Wagon Economy. The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co., who make this Electric Handy Wagon and the new famous Electric Wheels, have solved the problem of a successful and durable low down wagon at a reasonable price.



This wagon is composed of the best material throughout—white hickory axles, steel wheels, steel bounds, etc. Guaranteed to carry 4000 lbs. These Electric Steel Wheels are made to fit any wagon, and make practically a new wagon out of the old one. They can be had in any height desired and any width of tire up to 8 inches. With an extra set of these wheels a farmer can interchange them with his regular wheels and have a high or low down wagon at will. Write for catalogue of the full "Electric Line" to Electric Wheel Co., Box 24, Quincy, Ill.

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