COMMISSIONERS' PROCEEDINGS

(Continued from page 9.)

The board then proceeded to audit their own accounts as follows:

Peter A. West, mileage and per diem ..... $ 74.00

C. W. Baylor, mileage and per diem 56.40

C. J. Anderson, mileage and per diem 59.00

At 5 o'clock p. m., on motion the board adjourned to the call of the chair.

Attest: chairman.

PETER A. WEST,

W. B. SHOEMAKER, Clerk.

Grand Duke Nick's record in the Asia Minors certainly ought to be good for a recall to the big league.

We see by the papers that the Italians have won a great victory, beating the enemy back to camp by four good lengths.

Practical Farming

Helpful Facts Gathered from Reliable Sources Of Interest to Montana Farmers

(NOTE) If you have any idea to offer to the other readers or wish anything to appear in these columns kindly send it in.

NAKED OR HULL-LESS OATS

The department has occasional inquiries regarding the yields which can be obtained from naked, or hull-less oats and the uses which can be made of this grain. The hull-less oats differs from the ordinary oats in that the grain threshes free from the hull instead of remaining closed in it. In appearance the kernels are practically identical with those of ordinary oats from which the hull has been removed. The growing plant looks like common hulled oats, except that there are three to five more flowers in each spikelet instead of two or three. Usually all except one or two kernels in each spikelet are very small. The several varieties of hullless oats differ in the size of the kernel, the presence or absence of awns, etc.

Naked oats have been grown for several centuries in Europe and for perhaps a hundred years or more in the United States, but they have never become commercially important either in Europe or America. In fact this grain is grown extensively only in the dry, mountainous region in western China and Tibet, where it is quite largely used as human food. Numerous importations of stocks of seed from this region have been made by the department in recent years, but none of them has proved to be of commercial value.

There are several reasons why naked oats have never been able to compete successfully with the ordinary hulled varieties. All the stocks which have been imported are very susceptible to smut and rust, so that those diseases materially reduce the yield. There is considerable loss from shattering if the crop is allowed to stand until fully matured. Even under the most favorable conditions, the yield from the hull-less oats is seldom more than half that which can be obtained from the good varieties of hulled oats. The kernel absorbs moisture readily and is very likely to heat if stored in quantity. The seed quickly loses its germinating power, being quite similar to rye in this respect.

While the naked oat has never been of commercial importance, it has furnished material for promoters and in times past has frequently been sold at unreasonably high prices. From 1780 to 1880 hull-less oats were sold in considerable quantities under the name of Bohemian oats, the price sometimes being as high as 50 cents a pound. Though this grain was widely exploited for a number of years and wonderful claims were made regarding it, it proved to be of so little value that soon it disappeared almost entirely from cultivation in the United States.

While there is some demand for oat kernels without hulls for the feeding of squabs and young chickens, it is cheaper to buy ordinary oats from which the hulls have been removed than to grow any of the hull-less varieties now known. For feeding to larger animals, except hogs, the hull is an advantage rather than a detriment, as it lightens the ration and increases the bulk. For several reasons the miller prefers hulled oats to hull-less ones. The hull-less oat is of some interest to plant breeders, for it may be possible to produce high-yielding hull-less strains by hybridization with good hulled varieties but until such strains are produced there seems to be no reason why the farmer should grow this crop.

ANOTHER WHEAT PEST.

The season of 1915 marked the first recorded occurrence of what in Europe has long been regarded as one of the most destructive of known cereal diseases. Reference is here made to the stripe rust (Puccinia glumarum), a fungus closely related to the well-known stem rust which has so often taken big tolls from American wheat bins. Stripe rust, in the United States, so far as careful observation has thus far shown, is confined to the Pacific coast and tributary inter-mountain states. It has been reported as being very abundant in certain of the wheat-producing valleys of Montana, and was particularly marked as an epidemic in certain parts of Oregon, Washington and Idaho.

We have at our disposal no effective method of preventing or controlling outbreaks of grain rust in the sense that we may prevent or control the occurrence of oat smut or the stinking smut of wheat, but in the case of the stripe rust we may possibly delay its appearance in the Mississippi valley if the farmers avoid planting wheat known to have been grown west of the 106th meridian, a line passing through eastern Montana.

It is a well known fact that thousands of carloads of wheat from Montana were shipped during the fall and early winter to Minneapolis, Duluth and other mid-western points. Some of this wheat may have been purchased as seed in those parts of the Mississippi valley where winter wheat is grown, and there is a slight possibility of the stripe rust having been introduced through the planting of such wheat. On the other hand, it seems not improbable that the stripe rust may have been present in the United States to an inappreciable extent for several years, and that prior to 1915 it had had opportunity to establish itself in sections east of its present eastern limits, but because of possible unfavorable conditions may have failed to do so.

The stripe rust does not confine its ravages to wheat alone, but is known to occur on barley, rye, emmer, and certain wild grasses. Unlike the stem rust, it has no known secondary host, and is, therefore, probably propagated solely by means of its summer or unredo spores. This fact in itself diminishes somewhat the probability of the rapid progress of this rust over great distances, for it is true that its unredo spores can not endure prolonged drying.

In parts of this country where stripe rust was most severe, the actual damage resulting to the crop did not seem serious. However, in regions of high humidity it might prove far more destructive than stem rust, and for this reason it is a matter of great importance to keep it out of the great wheat-growing states of the Mississippi valley.

The symptoms of the stripe rust are peculiarly characteristic, and the observer is not likely to experience much difficulty in distinguishing it from other cereal rusts. The unredo or summer spores develop in more or less well defined lemon-yellow stripes on the leaves, leaf sheaths and glumes. In case of severe infection the many stripes on a leaf may be so close together as to appear to unite laterally to the extent of involving the entire leaf. The teleutospore or black spore stage appears later in the season in the form of long, black culms, and sometimes the glumes. Specimens seeming to answer the above description should be forwarded to the pathologist, Office of Cereal Investigations, Washington, D. C.

STRAW STACKS PROTECTED BY LIGHTNING RODS

For several years an Iowa farmer has protected his straw stacks with lightning rods in the same manner that he protects his farm buildings. The uprights on a stack are supported on a footboard which runs the full length of the stack, along the ridge. The rods are grounded through gas pipes, the lower ends of which are buried deep in the earth. This apparatus is used from year to year. When a stack is to be removed the cable and rods are rolled up and put aside until a new stack has been built. The device can be quickly and easily installed. Though 12 trees on this farm and three barns on neighboring farms have been struck by lightning in recent years, the barns and stacks on this farm have so far enjoyed complete immunity from damage by lightning.—From the April Popular Mechanics magazine.

Watchful Waiting.

Paddy Dolan bought a watch from the local jeweler with a guaranty to keep it in order for 12 months. About six months later Paddy took it back because it had stopped.

"You seem to have had an accident with it," said the jeweler.

"A small one, sure enough, sir. About two months ago I was feeding the pig, and it fell into the trough."

"But you should have brought it before," said the jeweler.

"Sure," replied Paddy. "I brought it as soon as I could. We only killed the pig yesterday."

When a congressman's ideas of preparedness consists of sending out garden seeds to the voters of his district he is the wrong kind of congressman.

The theory is now being advanced that the Panama canal has made two fleets necessary because it is easier for them to get from coast to coast.