HOW MOVING PICTURES ARE USED.

In the April *Woman's Home Companion* there is an extraordinarily interesting account of the development of moving pictures as definite educational agencies. The article includes a number of specific reports of the uses to which moving pictures are being devoted. Following are some of them:

"A Louisiana teacher changed the entire character of picture-shows in her town by asking the manager to cooperate with her in class work. When her pupils in literature were reading 'The Vicar of Wakefield' the manager exhibited a picture film of that classic. When the geography class began to study about Switzerland, the manager secured films showing Alpine climbing. That manager is doing a bigger business, the school children are receiving clearer ideas of their class work, and the parents are following what their children are doing in school.

"The Iowa Federation of Women's Clubs has started a movement to induce moving picture managers to show Red Cross films and other hygienic subjects throughout the state. The senior class of the high school at Florence, Colorado, has made the introduction of high-grade films into the local picture houses their year's work in civics.

"The Woman's Municipal League of Tecumseh, Nebraska, made an arrangement with the manager of the Lyric Theater of that city to give them a percentage of one day's receipts each week, and exhibit certain films illustrating the civic needs and work of the city. This has brought manager, patrons, and social workers closely together for the city's good.

"The president of the Great Northern road is encouraging immigration to the Northwest by sending out twenty thousand feet of special films showing industrial and agricultural life along its route. These are displayed in cities where congestion should suggest the slogan, 'Back to the Farm.'

"The Tarrant County Medical Society, Ft. Worth, Texas, has started an educational campaign by showing in moving pictures how to keep food clean and pure, the care of milk, sanitary dairies, etc.

"The New York State Board of Charities wished to interest the public in the work and methods pursued in various state institutions. It had a film company take moving pictures, in orphanages, reformatories, hospitals, schools for the blind and the crippled, 'homes,' etc. These are now exhibited in commercial clubs and at conventions and county fairs."

SIMPLE METHODS OF DETERMINING THE HORIZONTAL COMPONENT OF THE EARTH'S MAGNET FIELD.

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A simple direct-reading method for measuring H , the horizontal component of the earth's magnetic field, has been found to be very satisfactory by the writer.

A portable ammeter, which can be read to thousandths of an ampere accurately, an adjustable resistance, a battery cell, and a tangent galvanometer are all connected in series. The galvanometer being adjusted in the position where the value of H is to be found, adjust the resistance until the galvanometer reads the angle whose tangent is equal to one-

tenth the galvanometer constant $\frac{2\pi n}{r}$, where n is the number of turns and r the mean radius of the coils.

If $I = \frac{10 H}{2\pi n} \tan \theta$, then our equation becomes,

$$I = \frac{10 H}{2\pi n} \times \frac{1}{10} \times \frac{2\pi n}{r}, \text{ or } I = H, \text{ numerically.}$$

The ammeter now reads H as well as I .

The best kind of galvanometer to use for this purpose is one so made that

$$\tan^{-1} 2\pi n/10 r = 45^\circ,$$

where the sensitiveness of the galvanometer is the greatest. A good arrangement is to let $n = 20$, then $r = 12.566$ cm. Then

$$2\pi n/10 r = \frac{2 \times \pi \times 20}{10 \times 12.566} = 1, \text{ and}$$

$$I = H \tan \theta.$$

For, $\theta = 45^\circ$,

$$I = H, \text{ numerically.}$$

HEALTH RESORTS AND INFECTION.

Among the public the idea is occasionally found that cities or communities frequented by tuberculous persons present conditions favorable for the infection of the well. While it was difficult to secure conclusive evidence to prove the error of the assumption referred to, yet a study of the question would indicate that casual contact and house infection were of relatively slight importance, and that if the presence of a large number of "open cases" were a factor of great importance in spreading tuberculosis, there should be some correlation between the death-rate of imported and acquired cases in the various communities. None of the states except Arizona classifies separately the deaths from imported cases and those from locally-acquired tuberculosis. It is found that in Denver, which also makes this distinction in classifying these deaths, the death-rate from locally acquired tuberculosis, while it fluctuates somewhat, is low and is certainly not increasing. California also classifies these deaths according to length of residence and while the line cannot be distinctly drawn between imported and locally acquired cases, yet the conclusion is that the death-rate from tuberculosis is no higher in southern California, which receives most of the imported cases, than it is in the central and northern portions of the state. The abundance of sunshine, which quickly destroys the germ, and the possibility of outdoor life in most of these communities, together with the supervision exercised by physicians over this class of patients and the instruction given them as to the spread of infection and adoption of correct hygienic measures, make these communities as safe for the general public as the communities less favored by climate. *The Journal of the American Medical Association* says that tuberculosis is notoriously a disease dependent on poverty, malnutrition, dust, bad air, and bad housing, these conditions in the closely populated industrial centers with less supervision over the cases really afford much greater opportunity for the spread of this infection than the presence of many open, but supervised cases, as in the health resort communities.