

# GEM Theatre.

Adults 20c.

Children 10c.

**ELSIE FERGUSON**  
IN  
**"THE DANGER MARK."**  
TUESDAY, April 8.

Her father, her father's father, all those she had held dear, had been conquered by a lust for drink. Her dramatic regeneration is what makes this one of the photoplay sensations of the year.

**"ON THE JUMP,"**  
William Fox Production,  
featuring George Walsh.  
THURSDAY, April 10.

George Walsh plays are known for the life and pep which are always found in them. "On the Jump" is no exception to the rule. Everybody come "on the jump."

**"LADIES FIRST."**  
Mack Sennett Comedy.

**ABORTION DISEASE OF CATTLE.**

By E. L. Glaisyer.

Infectious abortion of cattle is a specific, infectious disease manifested by abortion, retained placental membranes, metritis, mastitis and sterility. Calves suffer from white scour and pneumonia because of this disease. The bull is considered a carrier, but to just what extent he may be responsible for transmission of the disease is yet a question.

This disease constitutes a very serious problem viewed economically because of the extensive losses occasioned by it. Recent investigations tend to show that abortion disease exists in most dairy herds in this country and is observed in the beef herds even on the range in many parts of the United States. In addition to the loss of calves, a loss that may run as high as 90 per cent in some instances—occasionally cows succumb to metritis, mastitis or other complications resulting from this infection, but perhaps the greater loss comes from sterility—a common sequel to infectious abortion and a genuine menace to the breeding industry.

**Cause.**

The bacillus abortus, isolated by Bang in 1906, is the recognized cause of bovine abortion disease. It is a non-motile, non-sporulating, Gram-negative, rod shaped organism from one or two microns in length and about one-half micron in diameter. This organism may be obtained in pure culture from various tissues of an aborted fetus.

**Sources of Infection.**

According to authentic reports made by investigators of this disease, cows that had suffered abortion disease often remain carriers and disseminators of abortion bacilli long after they had ceased to abort. Cows that have been exposed to the infection, but still have never aborted, may also be carriers and disseminators of the bacilli abortus. As the result of years of tests with milk from cows so effected, it has been found that the udder is diseased and consequently milk is a source of infection. Therefore, a cow that has been exposed to the bacilli abortus should be looked upon as a probable carrier and disseminator of abortion bacilli and raw milk from such an animal, or milk from unknown sources may contain abortion bacilli and consequently be a source of infection. The fetus, whether living or dead, placental membranes and vaginal discharges from a cow affected with abortion disease contain virulent bacilli and may consequently be a means of transmitting abortion disease. Calves may become infected with the B. Abortus from milk and from the discharges of cows that have aborted, and such an infected calf, in turn may become a source of infection. Feed and water,

litter, buildings, lost and pastures become infected from diseased animals and become a source of infection. The bull as a source of infection merits serious consideration; however, whether the bull is more than a mere mechanical carrier of infection is an undecided question.

Infection of the fetus in uero is of common occurrence. Calves may also become effected from milk, from the discharge of infected cows and from contaminated water. The avenues of infection may be by the way of the intestinal tract and test ducts, in addition to the genitalia. Artificial or accidental inoculation by way of the blood or lymph stream is of course possible.

**Lesions.**

The existence of a catarrhal inflammation of the uterine mucosa, with an accumulation of a brown, cheesy exudate between the mucous membrane and the fetal membranes, particularly around the cotyledons, is typical of abortion disease. The fetal membranes are usually edematous and an exudate separates them from the uterine mucosa. By this means circulation is interfered with between mother and fetus and abortion eventually results. Should infection fail to produce a separation of fetus and placenta, abortion ordinarily does not follow, but such animals would be effected with metritis, retain placenta and probably also mammitis. Endometritis of varying intensity frequently succeeds abortion and is the primary causative factor of sterility. The uterine lesions disappear spontaneously in from one to two months after normal parturition of abortion. The mammae are usually the seat of a mild catarrhal inflammation, and in such cases there occurs tumefaction of the supra-mammary lymph glands and occasionally slight inflammation of the pelvic lymph glands exist. The lesions observed in calves are those of a typical croupous pneumonia and marked interitis. The two conditions may or may not co-exist.

**Symptoms.**

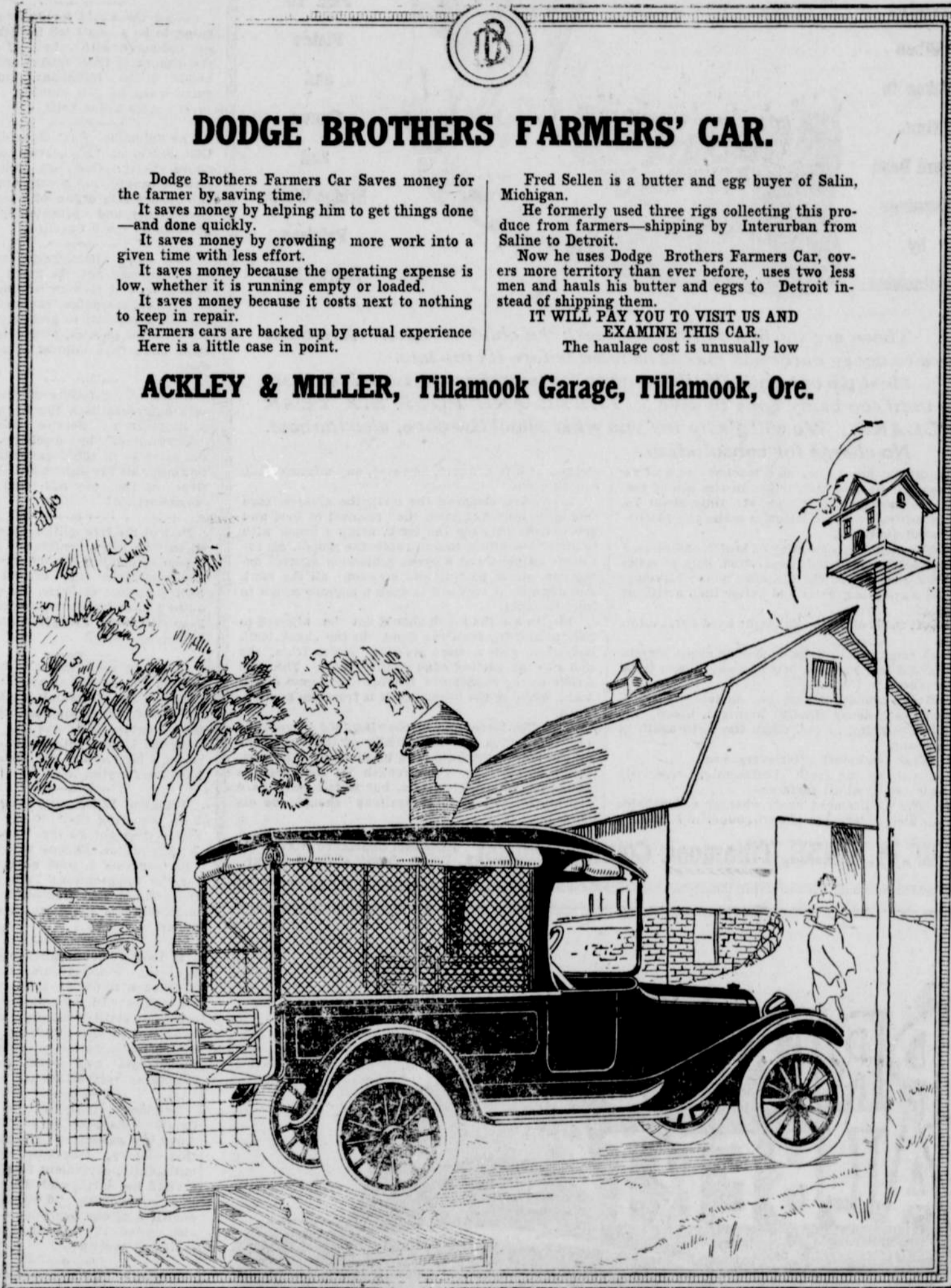
These depend on the extent, duration and severity of the diseased processes. Abortion may occur and take place at sometime from the fifth to the seventh month during the course of gestation. Placental membranes are usually retained and more or less inflammation of the uterus results and this is followed by sterility. Mastitis is also present in the majority of instances. The disease is characterized by white scour and pneumonia in calves. Abortion occurs more frequently in heifers or young cows, and while it usually takes place during the latter stages of gestation, it may occur earlier. In such instances the only evidence of abortion is the fact that animals are not pregnant and yet are known to have conceived. With

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the retained placental membranes unlike other cases where abortion may take place during the latter cases of pregnancy, there is a vaginal discharge which varies in color from a yellowish white to a brownish red. This discharge may continue, or it may be expelled periodically, the latter as a result of accumulation in the uterus. Where metritis exists, subjects manifest evidence of distress have extremely high temperature, and may be lost in from one to three days, because of the absorption of putrid products from the uterus. In the less severe cases subjects are depressed, appetite is irregular, the coat is rough, they become emaciated and yet the majority recover in from one to three months. White scour in calves is usually evident within the first three days of life and a concomitant symptom is lassitude, depression and rapid emaciation; fecal discharges are white and increase in frequency and quantity. Death from exhaustion occurs within a few hours after the disease becomes evident. Pneumonia in calves is characterized by a dejected appearance of the subject, high temperature, lack of desire to move, cough and nasal discharge. Dull areas may be determined by percussion over one or both lungs. Death usually results from three to ten days, yet in some instances recovering results.

**Treatment.**

Animals that have aborted and that have retained secundines should be handled as in any case where

placental membranes have not become detached normally. Since such subjects have probably been disseminators of the infection for a considerable period of time, all other animals should be considered as exposed subjects upon which such infected animals have been kept may be contaminated. Consequently, in order to determine the true condition of other animals on such premises, it may be necessary to have laboratory diagnosis made by the examination of blood. The method of treatment will depend somewhat upon circumstances, but in all cases beneficial results will be obtained by the injection of the affected animal with the killed cultures of the B. abortus. The fact is well established that cows ultimately attain an immunity to abortion disease, and the purpose of the injection is killed cultures of the organism is to hasten the time at which the immunity will result. By a series of experiments, it has been found that by the use of large doses of the killed cultures of the abortion bacillus, a resistance of this disease is produced.

**Anti-Abortion Bacterine (Bovine)**

For several years anti-abortion bacterine has been employed in the treatment of abortion diseases, and results have been highly satisfactory. In fact, where bacterine is used according to directions, the number of animals aborting has been reduced to less than 5 per cent of the pregnant animals in the herd. These injections are now recommended, using five mils (cubic centimeters) per

dose, repeating on the fifth or seventh day, until the three injections results have been highly satisfactory. been thus treated are found in the season following, to be relative free of abortion, metritis, retain placenta, mammitis and white scour which is evidence of the value of the bacteria treatment in abortion disease. Animals should be treated before breeding or as soon after as possible (within one to five months). The treatment is not of great value after pathological changes have taken place in the placental membrane and uterus. However, animals treated during advanced pregnancy will be materially benefited during the remainder of the period of gestation, and the new born is less likely to be affected with white scours.

**PERSHING TO TELL HUNS ABOUT LOAN**

The Victory Liberty Loan is going to be advertised in all German territory occupied by American forces, according to announcement made by the Treasury Department. Thousands of posters, buttons and other campaign materials have been shipped to General Pershing for distribution in this territory; so that the German people will know that America is carrying on the fifth great Liberty Loan.

**FARMERS COULD PURCHASE ENTIRE U. S. VICTORY LOAN**

Earnings for 1918 Estimated at \$12,000,000,000 by Treasury Department.

The farmers of the United States alone could subscribe the entire amount of \$5,000,000,000 to be asked for in the Victory Loan which is to be opened by the government April 21. Figures given out by the treasury department show that the earnings of American farmers for 1918 totalled more than \$12,000,000,000.

Ability of the American people to meet the obligations of its government is shown through figures issued by the treasury department showing the earning power of the nation in 1918 to have been in excess of \$73,000,000,000. It would have taken less than two days' earnings of the American people to pay all the interest charges on all the Liberty Bonds outstanding during that year.

There is far more gold back of a United States government bond than that standing behind bonds of any of the others of the allied nations. America's total wealth is estimated at \$250,000,000,000. The part of the world's monetary stock held by this country is \$2,079,000,000, an increase of \$1,192,000,000 since the beginning of the war.