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to time who desire to take photographs of their own stock, yet feel that the work is beyond them, so we have thought it well to give you the benefit of the inside secrets of success in running a camera to produce good pictures, especially of animals

June 5, 1913.

Our editors, in spite of the fact that we have available large-sized and very costly cameras, prefer to use small collapsible cameras taking pictures of post-card size. The special camera preferred in our work is the Fremo Fiim Pack in postcard size, made by The Canadian Kodak Co. at Toronto, and obtainable in any city or town and in many villages. The particular machine our editors favor costs only \$12.50 and \$2.25 extra for carrying case.

FARM AND DAIRY

To get the most perfect pictures of an animal and to be quite sure of success, we find it advisable to always use the camera on top of a tripod. We can then place the animal in position, make sure that all is right with the camera properly focused at the right distance, and, keeping our eye over the full size of the animal, touch the bulb or press the lever at the right moment when all is ready. Without the tripod one must depend upon the very small reflection in the finder on the camera. It is difficult to make certain that the expression is right, that the ears, legs, tail, etc., are in the position desired.

Having selected a suitable place to take the picture-the ground being level and clean, the background, if possible, a woods 100 rods or more

in the distance and pleasing open country intervening, (the back of the camera towards the sun because the picture is really the result of reflected light from the sun to the animal and into the camera) we put up the camera on its tripod and have the animal led out in position about 18 feet from the lens on the camera. The distance will depend upon the size of the animal and can be judged from the comparative showing in the finder. It is well to have the animal plenty far enough away so that there will be plenty of ground all around the picture of the animal in the finished photograph; then there is no danger of cutting off legs or ears or horns as is so often done in the average photograph taken by the

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(Continued on page 14) Hydro-Electric Power in Home and Dairy

SMALL private hydro-elec-A tric plant at Greenwood. Ont., for several years has been demonstrating the value of hydro-electric power on the farm and in the country home. The owner of this plant is F. L. Green, farmer and miller. With the nergy developed by his hydro-electric equipment Mr. Green milks 40 cows, lights all his buildings, runs the machinery in his model farm creamery, runs a circular saw and emery wheel in his work shop, and Mrs. Green's work in the home is appreciably lightened by electric devices.

The installation of Mr. Green's electric plant was considerably simplified by the fact that he already had water power available. When we first heard of Mr. Green's very complete

hydro-electric equipment we feared that milling might be his principal business, with the farm as a side line, that his plant might represent an investment away beyond the reach of even well-todo farmers and hence his experience would be of little value to Farm and Dairy readers. Mr. Green, however, is more farmer than miller. On a recent visit to his home, an editor of Farm and Dairy found that dairying is the principal business at Unadilla Farm, and that it takes more men to look after Mr. Green's splendid herd of pure bred Jerseys, than to run his mill. His hydro-electric plant is so simple and cheap that any farmer with power available could duplicate it for a few hundred dollars.

Mr. Green has a 10-horse power wheel to drive a five H.P. dynamo. His water wheel is fed from the main penstock which feeds the large mill wheel. It operates under a head of 42 feet, running 800 revolutions a minute. His dynamo, which is a direct current 110-volt machine, is belted to the turbine. He uses no governor on the water wheel and any change of load is regulated

by taking off or putting on more water. As the mill is running practically all the time the mill hands can tell by noticing the lights whether or not a change in speed is needed and regulate the wheel accordingly.

"If the wheel was isolated, as it would be were it on a separate installation used for no other purpose than lighting," remarked Mr. Green, "It would of course be necessary to have a water wheel governor to regulate the speed."

Mr. Green's specialty is fancy creamery butter. His "Unadilla" brand butter is used almost exclus-



This Farm House is Lighted with Home Made Electric Energy

ively by the Ladies' College at Whitby, and the balance is sent to Toronto where it commands best creamery prices. His farm creamery, if on a smaller scale, is as complete as the best cooperative creamery in the country. His electric power is used to operate the pasteurizer, drive the separator and turn the churn. A small boiler provides the necessary steam for heating water, pasteurizing the milk and ripening the cream. Mr. Green also has a small engine installed in connection with the boiler which can be used in case of emergency. Mr. Green regards electric power as the model creamery power in that it is noiseless, odorless and dustless.

One of the greatest burdens of the housewife, the weekly washing, has been greatly simplified for Mrs. Green. A room adjoining the creamery is equipped as a laundry with set tubs and steam pipes extending from the creamery for heating water. Mr. Green is now making arrangements to run the washing machine and wringer by electricity.

Mr. Green's farm workshop is one of the most complete that we have ever seen. He has a full



A Model Farm Creamery and Laundry run by Hydro-Electric Power -Photo by an editor of Farm and Dairy.

line of tools and an electrically driven circular saw and emery wheel. "This workshop," he said, "has saved us many a dollar that without it would go to the village repair man. I believe that a wellequipped workshop is something that should be found on every farm."

MILKING BY ELECTRICITY

How to get the cows milked, once a sore problem with Mr. Green, has been solved by the installation of a mechanical milker, and it too is operated by the ever ready hydro-electric power. Most farmers who have had experience with the milking machine can testify to its usefulness only from an experience of a few months. Mr. Green, however, has had his milk-

ing machine for a few years and finds it entirely satisfactory., The vacuum pump is located in the dairy building, which is over 150 feet from the stables. Pipes extend underground to the stable where the machine is used on pure bred registered Jerseys that represent a lot of money, but are not considered by Mr. Green too good to be milked by machinery.

The most appreciated feature of this hydro-electric plant, according to the testimony of both Mr. and Mrs. Green, is the electric lighting. The dynamo is used for lighting the mill, office, barns, stables, dairy building and the home. All the buildings are well lighted and the house exceptionally so

"We have over 40, 16-candle power lights in the house and some 25-candle power Tungstens," said Mr. Green. "We generally have about half of these on and run the dynamo a little fast to give four or five volts above the marked voltage of the lamps so as to get a better and brighter light. From the steady and even speed of the wheel we get a very steady light. I have noticed that dynamos when driven by a gasoline engine

sometimes give an unsteady light, which is hard on the eyes and the light goes up and down following the necessary changes of speed in the engine " ADVANTAGES OF ELECTRIC LIGHTING

Fancy how nice it is when one goes to the stable on a cold winter morning, just to turn a button and forthwith the whole stable is flooded with light! No lanterns to get out of order or broken; no danger of fire through their careless handling. In the home there are no lamps to clean and fill. The Greens just turn a button and

(Continued on page 17)