

AGAINST
ANTHRAX • BLACKLEG
MALIGNANT EDEMA
AND SHIPPING FEVER
VACCINATE
 with
Lederle
Bacterins and Vaccines

Your best protection against many costly diseases is timely vaccination. Lederle's low-cost, reliable and safe veterinary biologicals are recognized widely as setting the standard of quality for the Americas. By their early use, diseases in which medicine, if available, is costly and frequently useless, may be avoided.

Among outstanding Lederle bacterins and vaccines are:

BLACKLEG-HEMORRHAGIC SEPTICEMIA BACTERIN (Alum-Precipitated) B. H.* **BACTERIN Lederle** for protection against both blackleg and shipping fever.

BLACKLEG BACTERIN (Alum-Precipitated) **Lederle** for protection against uncomplicated blackleg.

ANTHRAX SPORE VACCINE No. 3 (CARBOZOO*) **Lederle** for protection against anthrax in cattle.

HEMORRHAGIC SEPTICEMIA BACTERIN (Alum-Precipitated) **Lederle** for protection against shipping fever.

BRUCELLA ABORTUS VACCINE (Vacuum-Dried) **Lederle** to increase resistance against brucellosis.

Lederle biological products for livestock are produced with the same exacting care that is used in producing biological products for human use. Safety, sterility and uniformity are emphasized. Each vaccine, bacterin or antiserum is a *quality* product.

For best management practices and disease-control procedures, consult your veterinarian.

*Reg. U. S. Pat. Off.

Animal Industry Section

LEDERLE LABORATORIES DIVISION

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Otto C. Hansen, Mineral county stands at the gate wheel in the key drop box in his irrigation system. Water released here plunges down steel pipe line for a 180-foot drop to his fields below developing 70 pounds pressure for operation of sprinkler system. The mountainside creek formerly sank into an underground channel passing under the farm lands and into the river eventually.

Look, No Pumps . . .

It's A Dream System

By **JERRY LESTER**

MOST FARMERS CAN consider themselves lucky to have irrigation water delivered to their farm in a ditch, but Otto C. Hansen, Mineral county, has water delivered to his fields in pipes at 70 pounds pressure for immediate use in his sprinkler system. And all this has been done without pumps and no maintenance costs will plague him in the future.

This irrigators' dream system was achieved on the Hansen farm by putting a dam across a hillside creek and piping water down the mountain to his fields—water that otherwise sank into an underground channel, skipping the farm land and emptying itself into the river.

Hansen has always known about the creek on the hillside above his farm. He knew that it always has had a plentiful supply of water. But it mysteriously disappeared.

With the help of technicians of the Mineral county soil conservation district, he figured that if the water could be caught before it sinks into

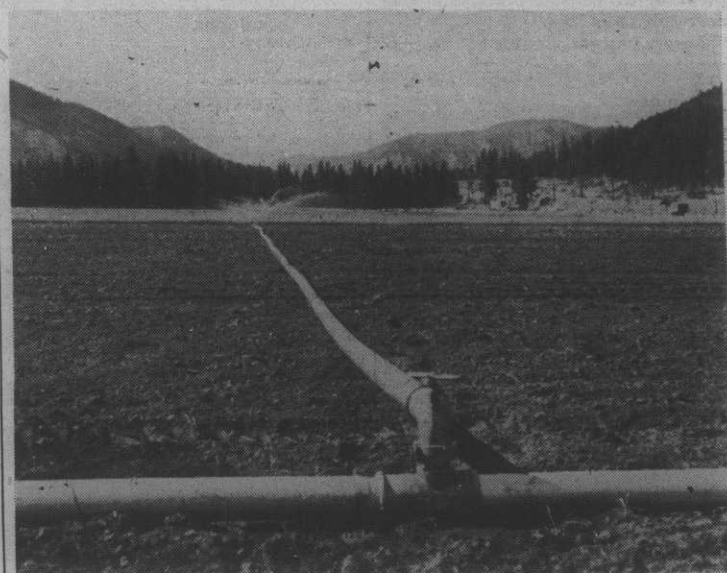
the hillside, it could be piped down to the farm. This possibility was interesting enough in itself but even more so, when the idea of using the pressure developed by gravity for a sprinkler system came to mind.

5,200 Feet of Pipe

From a dam across the hillside creek, water is taken through 5,200 feet of concrete pipe into a concrete box at the crest of the steepest hill as it drops to the farm land. This box is 4 by 12 by 8 feet deep and is made of 6-inch thick reinforced concrete. From this box the water drops 180 feet through 10-inch steel pipe to another concrete drop box and from there to the field where the sprinkler system main line pipe is connected.

Soil conservation district engineers also surveyed and designed the dam, piping layout and drop boxes.

Hansen has 1,540 feet of 5-inch sprinkler pipe, 1,350 feet of 6-inch



Here is a view of the Hansen revolving head sprinkler system at work in his fields. Water is piped from a dam across a mountainside creek down to the field. Drop of 180 feet produces 70 pounds pressure for immediate use in system without pumping, ditches or maintenance costs of any kind.