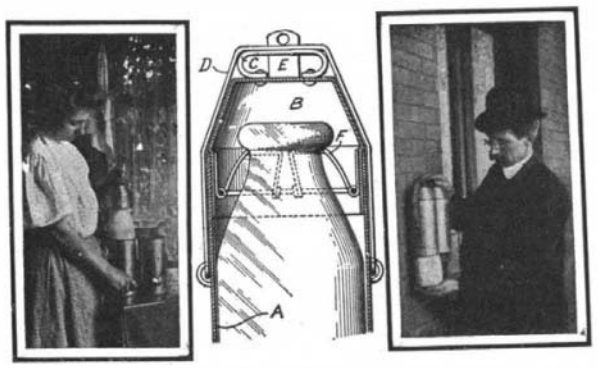
# Patent Department

### MILK-BOTTLE HOLDER.

It is sometimes rather difficult to fix the blame when the morning's milk is not to be found at its usual place on the doorstep. Either the milk has been stolen, or the milkman is dishonest and has failed to deliver the order. The honest milkman, as well as the housewife, will welcome some sort of a milk-bottle receptacle which will securely lock the bottle until such time as the authorized person is ready to take it in. Such a device is shown in the accompanying engraving. The line drawing shows a section through one of the bottle receptacles. It will be observed that



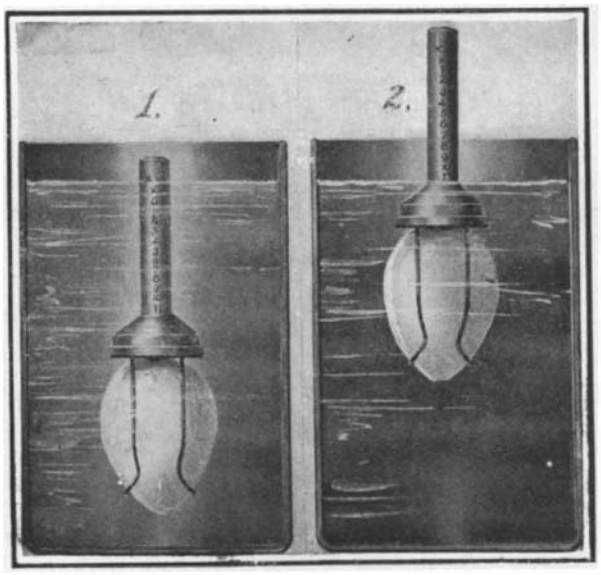

MILK-BOTTLE HOLDER.

it consists of a cylinder *A*, open at each end and a metal cap *B*, which fits into the top of the cylinder. The cap is secured thereto by means of a padlock fastened on a bracket member *E*, which passes through the handle *C* of the cap, and a bail *D* hinged to the cylinder. Within the cap is a wire retainer *F*, of such form that when the bottle is inserted in the cylinder from the bottom, the neck of the bottle is seized by the retainer, and held so that the bottle cannot be withdrawn. The only way in which the bottle can now be removed is to unlock the padlock, so that the cap may be removed from the cylindrical part of the receptacle. The bottle will be lifted out with the cap, and can be disengaged from the wire retainer. A separate receptacle is required for each bottle, but these can all be secured to a single bracket and fastened by a single padlock. It is impossible to steal the bottle from a receptacle of this sort without tampering with the lock, or otherwise damaging the receptacle in such a way that the work will be recognized as that of a thief. The inventor of this milk-bottle holder is Mr. Frank Weisenberg, of 148 Prospect Avenue, Brooklyn, N. Y.

### DEVICE FOR TESTING EGGS.

A well-known test for eggs consists in placing the eggs in water, when the bad ones will float, but of the eggs that sink there is no way of determining which are the fresher ones and how much less stale one may be than another. A very ingenious device has recently been invented which enables one to note the slightest variations in the eggs. The device consists of an aluminium air chamber comprising a main body portion and a stem. The latter is graduated, while at the bottom of the body portion are two spring-wire loops shaped to engage and hold an egg. The device with the egg attached thereto is placed in water and will sink to a depth depending upon the specific gravity of the egg. The freshest and best eggs sink the stem down until the water is on a level with the *XX* mark. Even if the egg registers 0 it shows that the egg is quite fresh and still has sufficient food strength to hatch a live chick. Mark 4 registers the limit of fair eating. At 8 the egg is fit for cooking only, while 12 shows that decomposition has set in. Not only is the tester valuable in the kitchen but to the chicken raisers as well, as it tells how much nutriment there is in the egg for the support of life in the chick, and during incubation it shows the progress of evaporation in the incubator as compared to normal hygrometric conditions as found in the eggs under the hen.

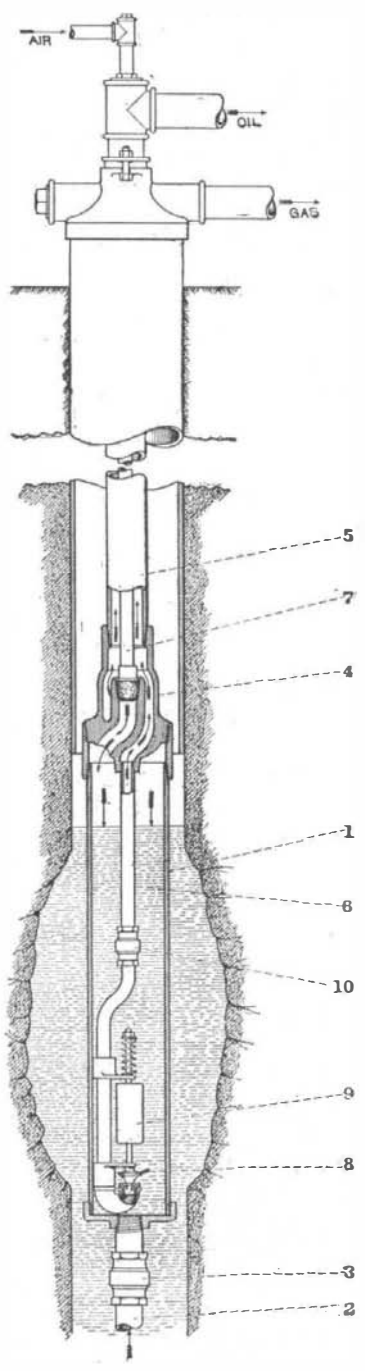
The inventor of this egg tester is Dr. E. C. Waldorf, of 496 Porter Avenue, Buffalo, N. Y.




DEVICE FOR TESTING EGGS.

### FLOWING OIL WELLS BY COMPRESSED AIR.

Compressed air is being used very successfully in the flowing of oil wells on the farm of Mr. John W. Waitz near Oil City, Pa. One hundred wells are thus equipped and they yield a daily average of 200 barrels. The average depth of the wells is 800 feet, and the air pressure required is somewhat more than 400 pounds per square inch. The equipment of the wells will be readily understood by a reference to the accompanying engraving.




FLOWING OIL WELLS BY COMPRESSED AIR.

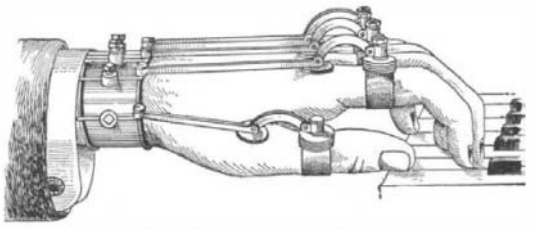
An oil receiver 1 is located in close proximity to the bottom of the well, presumably in the "shot hole," in the oil-producing stratum; into this receiver oil flows by gravity through the inlet pipe 2, which is provided with a check valve 3. The receiver is attached at its upper end to the by-pass 4, which in turn is attached to the tubing 5. An oil-delivery pipe 6 extends from the by-pass down into close proximity to the bottom of the oil receiver. An air-inlet 7, which is provided upon its lower end with a suitable packer, seats firmly in the upper end of the by-pass. The receiver 1 is composed preferably of 4¼-inch casing, and varies in length from 60 to 200 feet, depending upon the capacity or production of the well.

When the well is to be flowed, air is admitted to the upper portion of the receiver and, acting upon the surface of the oil, forces it downward into and through the delivery pipe 6, into the tubing 5, thence to the surface into a receiving tank or any suitable receptacle. Pipe 6 is provided at its lower end with an automatic valve. To the stem of disk 8 of this valve is attached a float 9, the weight of which is nearly balanced by a spring; when the float is submerged in fluid it is buoyed up and the valve-disk is held up from its seat. When the oil is forced from the receiver, the float lowers and causes the disk to seat, thus preventing the entry of air into pipe 6. A check valve 10 prevents the return of oil from the pipe 6, or tubing 5, into the receiver, so that said pipe and tubing always stand full of oil. The number of times that wells are flowed daily, depends upon the amount of oil they produce.

One of the valuable features is the "compounding" of the air. This operation consists in utilizing the air more than once. The air is turned into well No. 1, and when this well ceases to flow, a pressure gage upon the air pipe leading to it will show a pressure of say 400 pounds. Communication is now closed between the air pipe of well No. 1 and the air compressor or air receiver, and the air pipe leading to well No. 2 is placed in communication with the air pipe leading to well No. 1; the air now flows from well No. 1 to well No. 2 until the air pressure in the two wells equalizes, and when the pressure gages show such equalization of pressure, communication between the air-pipes of the two wells is closed, and the remaining air in well No. 1—which is at 200 pounds pressure—is taken back into the air compressor. Receiver or full pressure is then turned into well No. 2 and it is flowed in the same manner as No. 1.

### FINGER-DEVELOPING DEVICE.

A recent invention provides a device which may be applied to the hands of a piano player to develop the muscles of the fingers individually, so that the fingers may be able to strike the notes with a uniform blow. The device consists of a wrist band which supports a series of rods, provided at their opposite ends with pads adapted to rest on the knuckles.

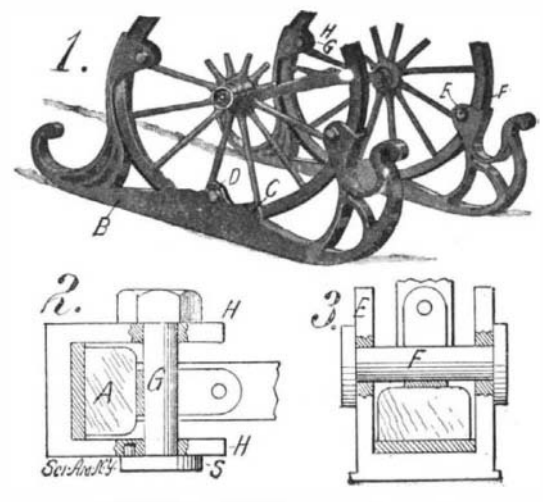


FINGER-DEVELOPING DEVICE.

Hinged to each one of these rods is a short arm connected at its outer end to a stem projecting from a ring slipped over the finger. A series of weights in the form of washers are adapted to be slipped over the stem, thereby permitting the operator to adjust the weight on each particular finger. Thus if one of his fingers is weaker than the rest, it is fitted with a heavier weight, so that in time the muscles will be developed to such an extent as to make it as strong as the rest of the fingers. The inventor of this finger developer is Mr. Fernando Loyola, 5 de Mayo No. 4, Queretaro, Mexico.

### VEHICLE WHEEL SLED RUNNER.

The usual method of mounting a wagon on runners is to remove the wheels and support the axles on the runners. This involves considerable labor; and in order to lessen the inconvenience of the operation, the type of runner illustrated in the accompanying engraving has been invented. The runner is secured to the wheel instead of the axle of the vehicle, and may readily be attached or removed. The illustration shows a portion of a wheel *A*, while the sled runner is indicated at *B*. The sled runner is provided with a channeled part *C*, to receive the rim of the wheel, and is formed with a cam-shaped groove, into which the pin *B* is adapted to be fitted. This pin is secured to one of the spokes of the wheel by means of a strap. The forward end of the runner is provided with an upwardly-extending portion *E*, to receive the wheel rim, which is channeled. A cam groove is also formed in this channeled part to receive a pin *F*, secured by means of a strap to the wheel. The rear end of the runner is also provided with a grooved part *H*, adapted to fit over the rim of the wheel, and provided with a pair of eyes through which a bolt *G* may be passed. The bolt head is formed with a pin, which engages a recess in one side of portion *H*. In this way the bolt is kept from turning while the nut is applied. When making the runner fast to the wheel, the rim of the wheel is supported in the channel part *C*, and the bolt *G* is made fast. The wheel is then turned to bring the pins *G* and *F* into their respective cam grooves. It will be observed that the wheel is gripped laterally by the channeled portions of the runner, while the bolt and pins provide three widely separated points of attachment, which securely hold the runner to the wheel. Mr. John Karssen, of Holland, Mich., has recently secured a patent on this sled-runner.




VEHICLE WHEEL SLED RUNNER.