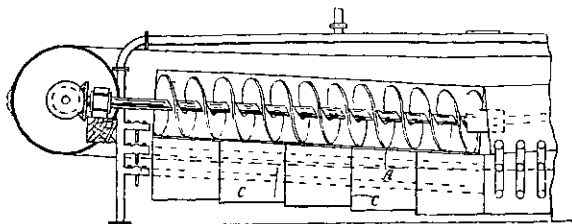
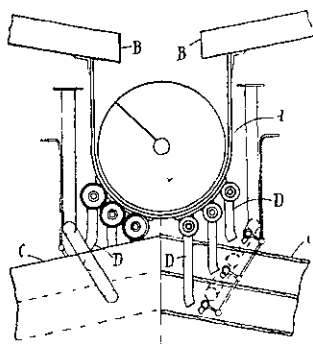


# Inventions.

## A New Gold-Saving Apparatus.

It is a fact well known amongst dredging men that in spite of the utmost care upon the part of dredgemasters a very large percentage of alluvial gold escapes in the treatment of the wash. A great many contrivances have been invented with the object of preventing this very serious loss, but none of them so far appear to have come up to the full expectations of their inventors. A new apparatus, which is certainly worthy of a trial, is the joint production of Messrs. Brittin, Magnus and Le Cren. As shown in our illustration the apparatus com-

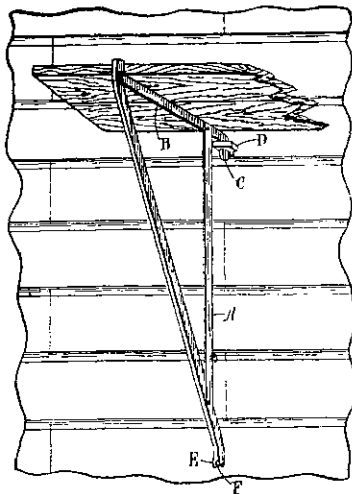


prises a trough, A, into which is delivered the fine material brought up by the dredge buckets, the separation of the fine from the coarse material being effected by a shaking riddle, B, which is inclined towards the trough. Within the trough is a constantly revolving archimedean screw which constantly agitates and moves the fine material from one end of the trough towards the other. Upon each side of the trough are the inclined saving tables, C, fitted with the usual gold-saving plush or the like. Nozzles, D, from the trough deliver the fine material upon the upper ends of the tables. The nozzles are adjustable to regulate the quantity of material delivered, and a very large spread of saving surface is obtained by superposing the tables.

Dr. F. G. M. Brittin, Papanui, Christchurch, is the inventor of this apparatus.

## The Safety Scaffold Bracket.

A scaffold bracket which is coming very largely into use throughout New Zealand is the invention of Mr. G. E. Humphries, builder, of Wellington. It is particularly useful for fixing weatherboarding, for cleaning and painting the walls of wooden buildings, and for use in fixing gutters etc., as it can



be attached to and removed from a wall with great ease and dispatch, and leaves the whole surface of the wall available for painting. The device comprises a rectangular frame, A, of angle and bar iron.

The upper horizontal member, B, which supports the platform, has a square hook, C, which fits into a similarly shaped hole in the end of a coach screw, D, which is screwed into the stud of the building. The bottom of the bracket has a claw, E, which fits over a spike, F, which is driven into the building to give additional support. All that is needed in fixing this bracket is an auger and a claw hammer. That it fills a long-felt want is evidenced by the fact that, although it was only placed on the market four months ago, there are already over one thousand in daily use by up-to-date builders in the Wellington province.

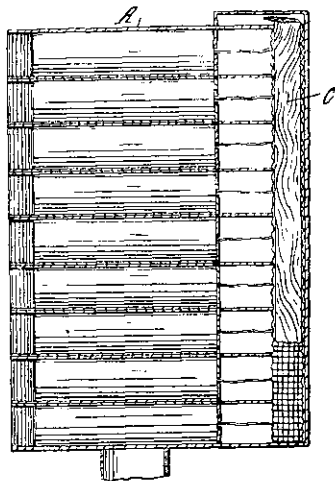
## Combination Boot.



THE lace boot is considered to present the neatest appearance to the eye of fashion; but upon the other hand the button form of fastening appears to offer a considerable advantage in saving of time. The combined lace and button boot shown in our illustration is the invention of Mr. J. H. Jackson, who hopes to induce some firm of wholesale manufacturers to place it upon the market.

## A Friend to the Orchardist.

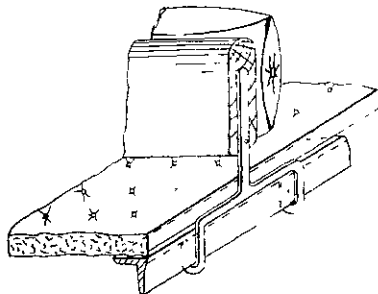
THE ubiquitous blackbird and starling evince such determination to share the fruits of the orchardist's labour, that the ancient scarecrow has long been abandoned as an effective deterrent. A bird-scaring device invented by Mr. Harold Irwin appears likely to have considerable effect



upon the nerves of the predatory enemies of the fruit grower. It consists of a frame, A, in which are placed a number of roman candles, B, which are arranged one above the other and charged so that each candle gives a succession of reports when ignited from one end. The ignition is effected by a slow burning taper wick, C, which extends down one side of the frame. Mr. Irwin has patented his invention in New Zealand and abroad.

## Bed Foot-Rest and Warmer.

Miss Flora McPhee has entered the ranks of lady inventors as the author of an adjustable foot rest, which she believes will materially add to the



comfort of the occupant of a bed. The invention consists of a "Pillow block," which extends across the bed and is made to slide so that it may be adjusted to any position to suit the comfort of the user. It is possible to make the pillow block in the form of a receptacle for hot water, which can

be poured in through a plug at the top and withdrawn through a tap at the side. The invention in its ordinary form is said to be a great addition to comfort; while if constructed as a foot warmer it should be particularly useful for sick persons.

## Household Fuel Economiser.

The lady inventor is not very much in evidence in New Zealand, but so far when she has tried her prentice hand she has usually been successful. Miss B. J. Mouat, who resides in Dunedin, has devised a contrivance which effects considerable economy in the fuel consumption of ordinary household grates. The device consists of what



may be termed an iron "Air Box," which is placed within the fire where it takes space which would otherwise be occupied by fuel. Air passes from the bottom of the grate through the apertures upon all sides of the box and materially assists in the perfect combustion of the fuel, there being a noticeable reduction in the amount of smoke from grates in which the invention is used. Beneath the grate is a damper which can be moved out or in to regulate the amount of air passing to the air box.

## Worry.

ONE definition of worry is that state of mind that enables one to see difficulties ahead and to prepare to meet them. This is quite different from the fretfulness that leads to continual complaining over trifles that cannot be helped. A person who never worries but takes things as they come never amounts to very much. Just drifting along, shirking responsibilities, having sublime faith that "things will come out all right" means freedom from worry, but it also means a double burden placed upon someone else. This unwillingness to face difficulties leads to irreparable loss in many ways. We put off doing things until it is too late; we fail to prepare to meet forthcoming obligations in money matters until our chances for doing so are past, and sacrifices must be made that otherwise would have been unnecessary. Details in every-day matters are neglected, the habit to shirk becomes fixed, the character is weakened and the result is a wasted life. Love of ease is not compatible with success and it becomes necessary to choose between the two. If we want to make life worth while we should have some object to work for and with strong determination to win we should do our best to overcome all obstacles. Sometimes we shall fail, but strength comes with every struggle, courage with every effort and success must come at last. Look at things squarely, leave nothing undone as being "not worth while." It is the small things, the mastering of details rather than the doing of great things that combine to make success. Don't be afraid of worry; it acts as a spur to force one on, it keeps one alive to possible and real difficulties and to be alert means to be prepared.—ELLA L. LAYSON, in the *Agricultural Epitomist*.

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**WOOD PRESERVATIVE.**—Coal tar is an excellent preservative for wood. For fence posts a thick coating should be applied after the bark is removed. Dipping the posts in a vessel of hot tar is much better than applying with a brush. For cleaning the hands from the tar any common oil is good; kerosene may be used afterwards.

**RUST-PREVENTING COMPOSITION.**—A good mixture which will prevent the rusting of machinery can be made by dissolving 1 oz. of camphor in 1 lb. of melted lard. When the impurities have been skimmed, black-lead may be added to give the whole an iron colour. After cleaning the machinery carefully and smearing it with the compound it can be left indefinitely, or if wiped off after twenty-four hours will obviate rust for some time. When removed, the metal should be polished with soft cloth.