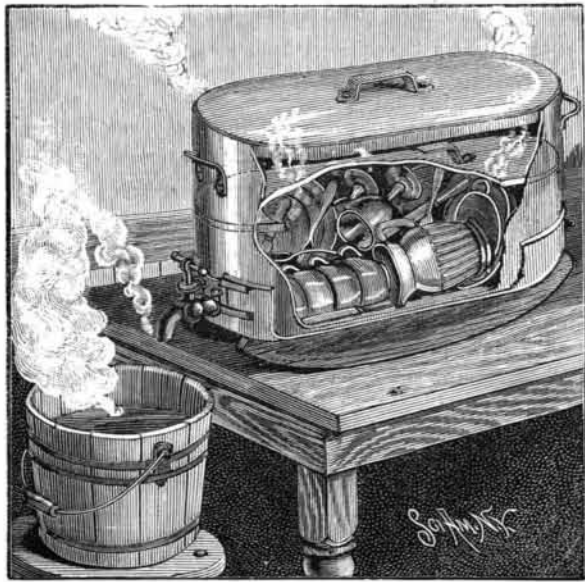


## AN IMPROVED DISH WASHER.

A simple and inexpensive device for speedily cleansing dishes or other soiled table ware, in a very convenient manner and with small chance of breakage, is shown in the accompanying illustration, the improvement being the invention of Eliza A. H. Wood (deceased) and Mrs. Minni Wood Gordon. The dish holder has a closely-fitting removable cover, and a faucet near the bottom at one end, for freely draining off the water, while within the holder freely slides a comparatively heavy loose lid, designed to rest on the dishes and hold them in place after the hot soapy water has been poured upon them. The holder rests in a cradle, on the lower side of which are rockers, the cradle having a low border wall and flat bottom, and a slot in each end of the border wall of the cradle accommodating the faucet. When the unwashed dishes have been packed in the holder, the hot soapy water



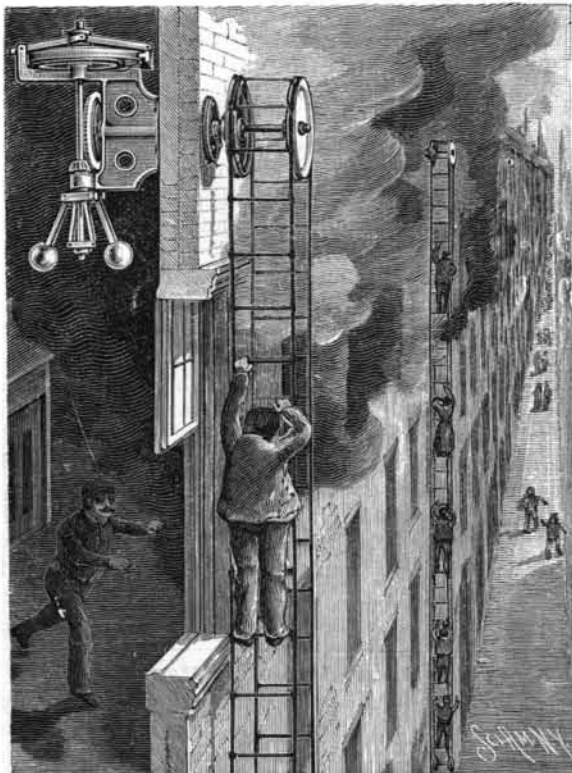
THE WOOD-GORDON DISH WASHER.

poured over them, and the heavy inner lid placed on them, the outside cover is put on and the entire device rocked, to cause a thorough and rapid circulation of the soapy water through the dishes, after which the first water is drawn off and rinsing water used, as desired, in the same way.

Further particulars with reference to this invention may be obtained of Mrs. Minnie Wood Gordon, Bloomfield, Fla.

## AN IMPROVED FIRE ESCAPE.

The fire escape shown in the illustration is operated automatically by the weight of the persons escaping from a building to which it is attached, the improvement being designed to supersede the employment of cumbersome and dangerous iron ladders, ropes, cables, etc. The invention forms the subject of a patent recently issued to Mr. William J. McCollum, of No. 182 Van Houten Street, Paterson, N. J. At a suitable point near the windows in the outside wall of the building, near the ceiling of the upper story, is secured a tube, whose inner end is integral with a cast iron bracket



MCCOLLUM'S FIRE ESCAPE.

carrying the regulating mechanism of the device. The tube forms a bearing for a freely revolving horizontal shaft on whose outer end are two sprocket wheels, at a suitable distance apart to represent the width of a ladder, the notches in the wheels being spaced to cor-

respond with the distance between two of the rungs of the ladder, the rungs being attached to endless wire ropes. On the inner end of the upper shaft is a miter wheel in gear with a pinion, by means of which a governor is operated to control the speed of revolution of the shaft, as it is rotated by the weight of one or more persons stepping on the ladder. By the operation of the governor a steel brake band is made to bear upon a brake wheel with a pressure corresponding to the weight which may be placed upon the ladder, enabling persons to descend at a safe and uniform speed, and insuring perfect control, whatever the load. The governor may be regulated to run at any speed desired. When the occupants of the ladder alight the mechanism ceases revolution, a pawl preventing the descent of the other side of the ladder at any time, and enabling it to be used when desired to gain access to the building. To prevent the ladder from becoming slack by wear or changes in temperature, the shaft carrying the lower notched sprocket wheels forming the bottom of the ladder has its bearing in a hollow tube, to which are secured eccentrics with enlarged collars adapted to be clamped by lock nuts, whereby the distance between the top and bottom wheels may be regulated. The rungs of the ladder are tubular, and the entire apparatus is incombustible. The wire rope ladder and the sprocket wheels are galvanized, and therefore will not rust. The regulating device being inside of the building and the main shaft bearings in the wall, these parts are entirely protected from the weather. The wire rope forming the sides of the ladder is passed through bored apertures in the ends of each rung, and firmly fastened by means of a wedge, whereby a very strong ladder is made at a minimum expense, and, being very light, is not in any way a detriment to the appearance of the building. A basket may be hooked on to the ladder for children, or in other cases when desired, and the apparatus may also be used with great advantage as a lowering device for use in warehouses, mills, etc.

## Nose and Throat.

In a recent lecture before the Chemists' Assistants' Association, London, by William Hill, M.D., London, the throat was described in detail, and the pharynx and the larynx pointed out as the two most important parts. The nose has a very important connection with the throat and its disorders. It contains a series of bones called the turbinated bones, which expose a large surface of warm blood, and cause the air inhaled to be warmed ready for the lungs; moreover, the cilia of the nose cause the secretions to move and reject the solid particles it has collected. The nose is the proper organ for breathing, not the mouth. The larynx, which is the air passage, is bounded at its upper extremity by the vocal cords, and has, therefore, the double function of breathing and of phonation. The epiglottis, by altering its form, causes the food to pass down the pharynx, and keeps it from the larynx. In speaking of proper breathing, the author pointed out that diaphragmatic breathing was the proper method, and not clavicular. It was reported that Rubini had broken his clavicle during singing, by persisting in this method of breathing. Throat diseases are often caused by germs, by inhalation of sewer gas, etc. Fortunately, there are other organisms in the throat always ready to attack these germs. The throat was well provided with tonsils, both faucial and lingual. The tonsils produce phagocytes, or leucocytes, amoeboid corpuscles which actually swallow up the germs. Why, then, should tonsils be cut out? Because, when they become enlarged and horny, they lose this function, and by removing the horny surface, the newly exposed portion can go on producing the corpuscles. The decay of teeth is largely due to germs. This shows the importance of keeping the teeth in order. Obstruction in the nose is the cause of many throat disorders. Care must be exercised in the use of both alcohol and tobacco; many people can use these luxuries with impunity in moderation, others cannot. People liable to throat disorders should be very chary of eating piquant or hot dishes. Irritating remedies, too, such as cayenne and (except in special cases) tannin lozenges or nitrate of silver, should be avoided. Hot tea, too, is bad.

## Painting the World's Fair Buildings.

The painting and decorating of the vast interiors of the great exhibition halls at Chicago is an enormous undertaking. Frank Millet is the artist in charge. A recent estimate of the area to be covered with paint developed the fact that it would be impossible to set enough men at work with brushes to complete the task in time for the opening of the fair. Mr. Millet thereupon contrived a machine for doing the work. It consists of a piece of gas pipe flattened at one end to make a "spray." From this a rubber hose connects with an air pump driven by an electric motor, and beyond this is a barrel of paint. The pump sucks paint from the barrel and the air jet sprays the paint with force upon the surface to be coated. Four workmen with this mechanism can accomplish more in a day than a small army of painters could in a week.

## AN IMPROVED WOODEN VESSEL.

Ordinary buckets and tubs are being replaced in the South and West by the more expensive but more durable fiber ware and galvanized iron vessels; but the difficulty heretofore experienced with wooden buckets is designed to be obviated by the improvement shown in the illustration, as the staves are thereby prevented from warping in dry seasons, and are securely held in place and tightened when carrying a heavy load in the vessel. The invention has been patented by Mr. Edwin M. Reese, of Santa Paula, Cal. On opposite sides

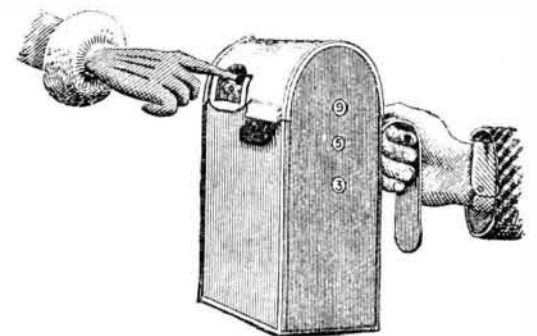


REESE'S IMPROVED BUCKET.

of the upper hoop, a bolt extends through an opening in a stave, and engages at its inner end a brace or segmental hoop, fitted in a recess on the inside of several adjoining staves, the bolt at its outer end engaging an eye on the lower end of a vertically sliding link, which has a hook at its upper end to which one side of the bail is connected. The opening in the stave through which the bolt is passed is of a form to allow room for an up and down movement of the outer end of the bolt, and when the bucket is manufactured the upper hoop is located near the lower edge of the opening, the bolts then being inclined downwardly, as shown in one of the small sectional views. The opening in which the bolt moves is filled with asphaltum, putty, or other suitable material, and when the staves dry up, or there is a heavy load in the bucket, the lifting of it by the bail tends to draw the hoop and the bolts to an upper position, as shown in the other of the small views, thereby closing and tightening the upper ends of the staves to take up possible shrinkage.

## A COIN-TAKING AND TICKET-DELIVERING BOX.

By means of the improvement shown in the accompanying illustration, when a coin is pushed into the box, a bell rings and a numbered ticket is delivered, an indicator at the same time recording the number of tickets issued. The invention has been patented by



WILLIAMS' AUTOMATIC CHECK BOX.

Mr. John Williams, of Patricroft, Manchester, England. Within the casing are spring-controlled locking devices, extending into the slideways of the coin-receiving opening, so that the coin, when placed in the mouth of the device, cannot be removed, but causes a drum to be revolved to deliver the ticket. Only one ticket at a time can be removed or automatically delivered from the box.

Further information relative to this invention may be obtained of Mr. Edward Haynes, No. 128 Pearl Street, New York City.

## Bouillie Bordelaise.

This preparation has been proved to be a specific for the potato blight caused in Europe by the *Phytophthora infestans*, and the following formula for its preparation appears in the *Kew Bulletin* for October:

Copper sulphate.....	45 lb.
Quicklime.....	22½ "
Water.....	220 gal.

The sulphate is dissolved by suspending it in a coarse cloth, in a wooden vessel containing the water. Slake the quicklime in a separate vessel, and after stirring thoroughly with added water, pass it through a sieve into the copper solution, stir well, and add the remaining water. The quantity specified is sufficient for one acre of land.