

Sanitary Regulations of Barber Shops.

The last Legislature of New York State passed a sanitary code for the regulation of barber shops. The law has only recently taken effect. The Board of Health of New York has adopted the following rules in order to properly enforce the provisions of the State code. They are so reasonable and wise that we call attention to them with the hope that municipalities of other States where no such law prevails will demand the passage of similar legislation. The rules of the New York Board of Health are as follows:

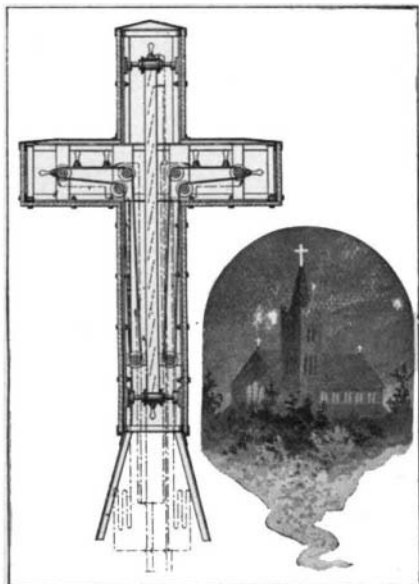
1. Barbers must wash hands thoroughly with soap and hot water before attending any person.
2. No alum or other astringent shall be used in stick form. If used at all to stop the flow of blood it must be applied in powder form.
3. The use of powder puffs is prohibited.
4. No towel shall be used for more than one person without being washed.
5. The use of sponges is prohibited.
6. Mugs and shaving brushes shall be thoroughly washed after use on each person.
7. Combs, razors, clippers, and scissors shall be thoroughly cleansed by dipping in boiling water or other germicide after every separate use thereof.
8. No barber, unless he is a licensed physician, shall prescribe for any skin disease.
9. Floors must be swept or mopped every day and all furniture and woodwork kept free from dust.
10. Hot and cold water must be provided.
11. A copy of the regulations is to be hung in a conspicuous place in each shop.

The most of these rules are now observed by every well-regulated barber shop, but the cheaper barber shops rarely pay attention to all the necessary sanitary precautions in serving their patrons. The evils arising from unsanitary barber shops have long been known, and we are glad to note the growing tendency to correct them.

ILLUMINATED CROSS FOR CHURCH TOWERS.

An illuminated cross at the top of a church steeple can be seen from a great distance and presents a very pleasing spectacle; but such illumination is seldom provided owing to the difficulty of reaching the lamps when they need repairs. The expense of hiring a "Steeple Jack" to replace a lamp whenever it burns out would obviously far outweigh the artistic benefits derived from such illumination. However, an invention recently patented by Joseph A. Blenke, of Covington, Ky., provides a very simple means of gaining access to the lamps. The means used will be comprehended by a glance at the accompanying illustrations. It will be observed that the incandescent electric lamps are mounted on belts which are stretched over pulleys. The vertical and two horizontal arms of the cross are each provided with a separate belt. The arrangement is such that the lowest pulley of each belt may be easily reached from the base of the cross. The lamps are inclosed in a glass case having the shape of a cross. The glass is preferably ground or frosted, so as to diffuse the light and distribute it more evenly in the form of a cross.

When for any reason it is desired to gain access to any one of the lamps the tower is ascended, and the



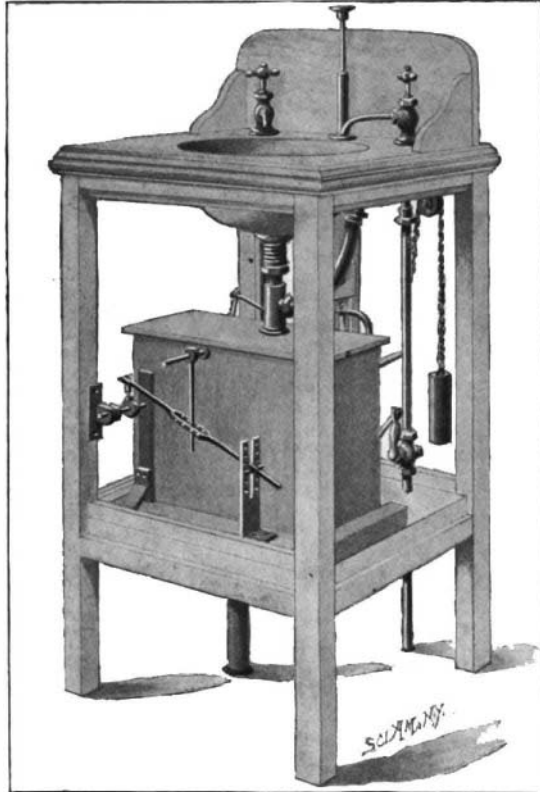
ILLUMINATED CROSS FOR CHURCH TOWERS.

belt on which the lamp is mounted may be reached through a door in the casing near the base. On pulling this belt the lamp will be drawn down to within reach of the hand. The wires through which the current is fed to the lamps have sufficient slack to permit the belt to be moved to a limited extent. After the lamp has received the necessary attention or been replaced by a new one, the series of lamps may be again returned to the normal position by drawing

on the belt. All parts of the illuminated cross are thus rendered readily accessible to the electrician.

DEVICE FOR PREVENTING WASTE OF WATER.

Most sinks and basins are provided with outlets to prevent overflowing of the basin in case the water is left running by some careless individual. This precaution is good as far as it goes, but it does not prevent waste of the water, which, in some localities, is quite expensive. A recent invention, which is to be accredited to Mr. Warwick Ford, of 157 West 14th Street,



DEVICE FOR PREVENTING WASTE OF WATER.

New York city, is adapted to meet the requirements by providing means for shutting off the supply of water after the basin has been filled up to the overflow outlet. We show herewith a general view of the invention. The overflow pipe leads down from the basin into a small tank pivoted within a larger tank shown beneath the basin. The small tank is prevented from tipping forward by connection with a weight shown at the right in the illustration. Overflow water from the basin runs into the small tank until its weight causes the tank to tip and empty its contents into the larger tank, whence the water flows off through the waste pipe. Now, when the small tank swings downward the shaft to which it is secured is rocked, and this motion is utilized, by means of connecting levers, to turn the stop-cocks on the water-supply pipes, thus shutting off the flow of water. At the same time the stopper of the basin is lifted off its seat, permitting the water in the basin to flow out. When it is desired to use the basin again it is only necessary to push down the slide rod, which is shown between the faucets, and then lift it up again. This rotates the shaft, restoring the parts to their original positions. In order to empty the basin when no overflows occur, the slide rod is pushed down, which causes the main shaft to turn and lift the stopper off its seat. The main shaft may be seen projecting from the tank at the extreme left of our illustration. The crank arm on this shaft is connected to a rod resting at its forward end in a forked bracket. Midway of the rod is the slot into which an arm from the second shaft projects. By means of this connection rotation of the main shaft causes the second shaft to turn on its axis, and the relative amount of moisture can be regulated by raising or lowering the outer end of the connecting rod and by shifting the depending arm to different points in the slotted rod. The secondary shaft operates the stopper of the basin by means of a connecting rod passing up through the discharge pipe, and the adjustment just described is necessary to insure accurate seating of this stopper and perfect closure of the discharge pipe.

A System of Transporting Fruit Without Ice.

A car of Valencia late oranges of the Pet brand from Pomona, Cal., was recently shipped from San Dimas and packed by the Citrus union there, coming through under what is known as the Baker system of transportation.

The oranges were of poor quality and the packing the same. The fruit, however, opened in good condition, proving that fruit can be shipped from California without ice, under a proper system of treatment under some known process.

The Baker process consists in confining the food products in a dry atmosphere of medium temperature

charged with a harmless, antiseptic, germicidal gas. The effect is claimed to destroy or make dormant the germs or bacteria, both in the atmosphere and on the food products, and by uniting with the exuded juices of such food products to form a germ-proof coating which not only excludes other germs or bacteria, but also prevents the further evaporation of the juices.

Progress in German Cable Laying.

A new era in German cable construction began with the laying of a cable to Vigo, Spain, a distance of about 1,300 miles.

During the last seven years, Germany has laid 7,375 miles of cable, at a cost of over \$7,000,000. In 1898 a cable, 73 miles in length, was laid between Sassnitz and Trelleborg, and in 1899 German Southwest Africa was connected with the international telegraph system by a cable 154 miles long.

In 1900 the first German-American cable between Emden and New York, via the Azores—a distance of 4,813 miles—was laid. At about the same time Germany put down the first German cables along the Chinese coast, the cable Tsintau-Chefoo being 285 miles and that connecting Tsintau and Shanghai 438 miles long. The year 1901 witnessed the laying of the fifth cable between Germany and England, connecting Borkum and Baktou, a distance of 280 miles. The telephone cable between Fehmarn and Laaland was laid in 1902.

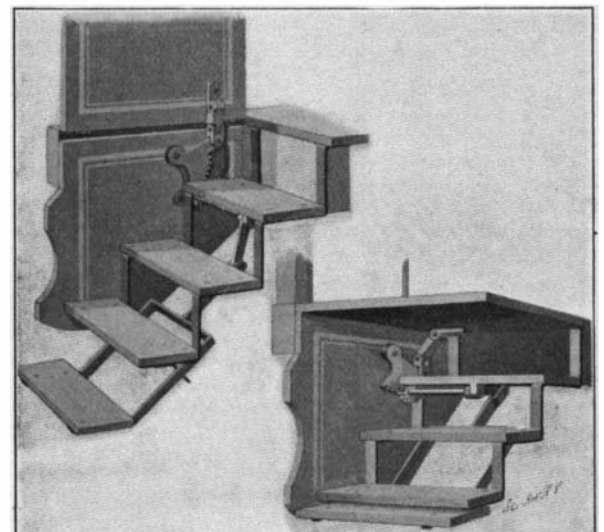
The construction of a second trans-Atlantic cable between Emden and New York, via the Azores, has been commenced and it will, it is expected, be ready for service before the expiration of the next year. Germany is also contemplating an increase of her cable net in eastern Asia and the South Sea, by constructing cables between Alenado and Guam and the Palau Islands and Shanghai.

It is said that the growth of German interests, both military and commercial, will in the future require the building of more cables by Germany, independent of foreign nations. Germany now has cable works and two cable steamers.

FOLDING STEP FOR VESTIBULE CARS.

Our columns recently contained a description of a folding step for railway cars, which could be lowered at stations to permit passengers to mount from or dismount to the low station platforms now almost universally used. The folding step was lowered or raised by means of a lever at the side of the car and was obviously much more convenient than the cricket or portable step which trainmen have heretofore been obliged to carry. The inventors of this step, Mr. James H. Fassett, of Nashua, and Mr. John E. Warren, of Greenfield, New Hampshire, have recently adapted their invention to vestibuled cars, and in doing so have hit upon an important improvement. In the present invention no lever is required for operating the step, but the same is automatically lowered and raised by connection with the hinged platform usually found on vestibuled cars.

The accompanying illustrations show the step in its two positions. The step, it will be observed, is carried on a forked arm which slides in a guide back of the fixed steps. At its upper end the arm is connected to a crank-arm on one end of a shaft. A gear-wheel is keyed to this shaft at the opposite end and meshes with a toothed sector connected by a link to the hinged platform of the car. Obviously, when the platform is



FOLDING STEP FOR VESTIBULE CARS.

raised, the sector will be drawn upward, rotating the gear-wheel and swinging the crank-arm downward, which throws the step out to proper position for use. When the platform is lowered the reverse takes place, and the step is drawn up to folded position beneath the lowest fixed step. In this way the supplementary step is operated without requiring attention of the trainman or causing him any more labor than the usual task of operating the platform.