

## The Scientific World.

Sweeping, or, more properly, cleaning rooms by the vacuum process is now a success in large buildings. It has been suggested that the apparatus might be adapted to use in private houses which are supplied with electricity for driving the vacuum pump.

A zirconium incandescent lamp for electric lighting has been invented in Germany which gives much more brilliant effects than carbon lamps in common use. Its cost is greater, but the saving in the consumption of electricity to get the same amount of light is said to be very important.

Sir Howard Grubb has invented a new sight for firearms which does away with the front sight altogether. It consists of an arrangement of mirrors by which a cross mark in the sight appears to be directly upon the target when the gun is aimed squarely at it. It is adapted to use on rifles and large guns.

The Brown wire-wound gun has given the greatest velocity yet attained in America for a gun of large caliber. An army test at Sandy Hook not long ago, showed this new form of gun to give an initial velocity of 3,300 feet per second. Though some fault has been found with the wire-wound gun, it appears to be winning its way.

It has been supposed that balls of fire, in connection with lightning, were illusions due to the effect of the flash upon the retina of the observers' eye. However, the scientist Plante has stated that in his own researches he has produced these fire balls on a small scale. The phenomenon has not as yet been explained, but its reality is not now in doubt.

Experiments in France for the purpose of whitening, or bleaching flour, by means of electricity, proved that this could be accomplished. The flour was brought into contact with electrified air, the ozone of which was found to render the flour much whiter. The bread made from this flour was found to be of an inferior taste, as the bleaching process had the effect of injuring the quality of the flour.

An aerial torpedo has been devised which is discharged like a sky rocket, exploding when it strikes the ground or water. The torpedo is fired from a triol, which can be adjusted at different angles, varying the distance to be covered. Or the lifting charge in the rocket itself may be changed to suit the distance of the object fired at. Tests proved the new weapon to be effective, at a comparatively limited range.

A German chemist has made a soap for the use of painters and others handling materials in which there is much lead, which is said to do away entirely with the constant danger of lead poisoning incident to such occupations. The soap produces sulphuretted hydrogen, which transforms the lead into harmless sulphide of lead and render it possible to cleanse the skin absolutely. The same production of innocuous sulphides takes place when substances containing copper, mercury, and arsenic, or any of them, are washed from the hands with this soap.

The largest floating drydock in the world has been completed at the Maryland Steel Works yards for the United States government, and it will be towed 14,000 miles to the Philippines. Four hundred men have been employed two months cleaning and painting the 1,500,000 square feet of steel plates. When the dock is launched, it will be towed to Patuxent River, where tests will be made with a big battleship. The contract it is stipulated the dock shall lift a 16,000 ton battleship. The dock weighs 11,000 tons and cost \$1,124,000.

## CHRISTMAS PRESENTS

The following are a few of the many things we sell that would make suitable Christmas presents. Our catalogue, a copy of which we will mail you on request, will suggest many more.

## "Starr" Hockey Skates

Shamrock Boys, plain, 50c per pair.  
No. 20 Plain Steel, all sizes, \$1.15 pair.  
No. 25 Nickel Steel, all sizes, 1.50 pair.  
No. 20 Bracketed, plain, all sizes, \$1.35 per pair.  
No. 25 Bracketed nickel, all sizes, \$1.75 per pair.  
No. 7 Best quality, plain, \$2.00 per pair.  
No. 10 Best quality, nickel, \$2.50 pair.

## "Hyde Park" Skates

The best machine-made double end skate on the market. They are made in all sizes, and with flat or rounded blades, and nickled. Every pair of these skates is guaranteed against defects. Price \$3.00

## Dunne's Tube Skates

For hockey or racing, round or diamond-shaped tubing, nickel or aluminum finish. Every pair of these skates is guaranteed. Price \$5.00 per pair.

Dunne's Tube Skates for Ladies, extra light, \$5.00 per pair.  
In ordering skates state size of shoe worn.

## Hockey Sticks

Boys' Rock Elm, oiled, 20c each  
Men's XX Practice, 25c each.  
Men's XXX Rock Elm, 30c each  
Men's XXX Long Blades 35c each.  
Men's Injun, 40c each.  
Smith's Special, selected rock elm, long blades, 50c each.  
Men's Mic-Mac, 50c each.  
Men's Spalding's Match 50c each  
Men's Special Match, hand finished, extra long blades, 65c each.  
Built up defence, hand finished, long blades, 85c each.

## Pucks

No. 3 Boys', 15c each.  
No. 2 Men's Practice, 25c each.  
No. 1 Regulation Match, 40c each.  
No. 0 Special Match, extra soft, 50c each.

Hockey Gauntlets, \$1.50 each.  
Hockey Knickers, plain, 60c pair  
Hockey Knickers, padded, \$1.25

## Boxing Gloves

In endless variety and of exceptional value. We particularly recommend any of the following. The prices quoted are per set of 4 gloves.

No. 300 Boys', \$1.75 No. 25 Youths', \$2.00  
No. 24 Men's, \$2.00 No. 339 Youths', \$2.50  
No. 23 Men's, \$2.50 No. 21 Men's, \$3.00  
No. 19 Men's, \$4.00 No. 15 Men's, \$4.50  
No. 11 Men's, \$6.50

## Hockey Shin Pads

No. 640 Boys', 30c pair  
No. 60 Men's, 50c pair  
No. 610 Men's, 75c pair  
No. 660 Men's, \$1.00 pair  
No. 650 Men's, \$1.25 pair

## Toboggans

Indian, 2 ft. long, \$1.50  
3 feet \$2.00; 4 feet \$2.25  
5 feet \$2.50; 5½ feet \$3.00  
6 feet \$3.25; 6½ feet \$3.50  
7 feet \$4.00 each.

Club, the best toboggans made, very durable  
4 feet long \$3.00; 5 feet \$3.50; 6 feet \$4.25; 7 feet \$5.00 each.

## Game Boards

No. 1 Archarena, on which 60 different games can be played, \$2.00 each.  
No. 2 Archarena, for 66 games, \$3.00 each.  
No. 1 Crown Board, for 65 games, \$3.50 each.  
No. 4 Surface Crown, for 100 games, \$4.50 each.

## Safety Razors

Gillette Safety Razors, complete with 12 double-edged blades in neat morocco case, \$5.00 each.  
Star Safety Razors, in tin case, \$2.00 each.  
Star Safety Razors, with extra blade, \$3.25 each.

N.B.—We despatch goods the same day that order is received

The Hingston Smith Arms Co., Limited,

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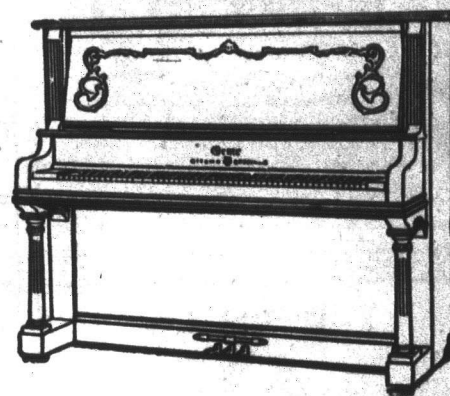
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Buy a piano for its tone, lasting quality and neat case designs—these are the principal points to be considered—and the "Orme" covers them all. Thirty years of ripe experience was needed to produce the "Orme" which now contains every modern device for tone production, including the 'Violoform' Sounding Board and the Cupola Steel Frame. Write for descriptive drawings to-day—sent free to any address.

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