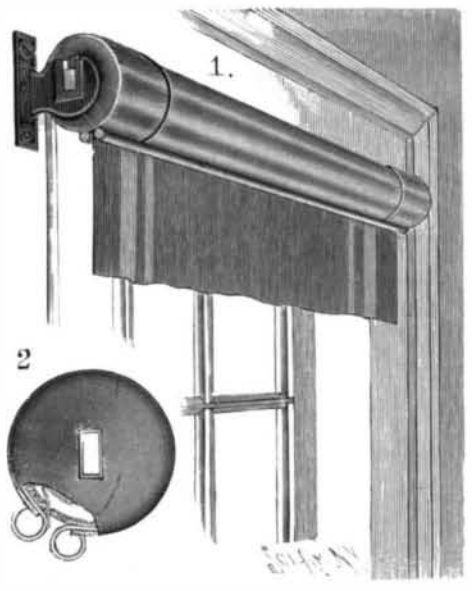
A WINDOW SHADE CASING.

The illustration represents a simple, durable, and inexpensive casing, which may be readily applied to and supported by the ordinary window shade, to protect it from dust, and also to clean the fabric of the shade when the latter is rolled up into the casing.

The improvement has been patented by Charles F. Kraemer (P. O. box 128), College Point, L. I., N. Y. On the ends of the casing are fitted to slide heads to lengthen or shorten the device according to the width of the shade, one head having a rectangular opening for a fixed trunnion of the shade roller, and the other head having a central aperture for a revolving trunnion. The heads are so adjusted lengthwise on the casing that the ends of the trunnions project the desired distance to properly engage the bearings in the usual manner, the shade roller being of the ordinary spring-roller type. Into the longitudinal slot on the under side of the casing, through which the shade extends, are projected strips of felt or similar material, adapted to engage the webbing of the shade and wipe it as it is unwound from or rewound upon its roller, thus keeping the shade clean and preventing any dust from passing through the slot to the inside of the casing. The casing is wholly supported by and carried on the shade itself, and the shade with its casing may be readily removed and replaced as desired.



KRAEMER'S SHADE PROTECTING CASING.

A NEW ELECTRIC LAMP.

If the bicyclist is not supplied with every conceivable accessory that can minister to his convenience when on the road, it will not be for want of diligence and ingenuity on the part of the inventor. In the accompanying illustrations are shown two views of "The Chloride Electric Light," in which it is sought to avoid such defects as the various oil and gas bicycle lamps may be liable to, by making use of electricity. The external appearance of the lamp is certainly in its favor. It is moulded on simple lines and is free from any excess of moulding or embossing which would catch the dust and render the lamp difficult to clean. The body of the lamp, which is formed of a light, tough insulating material, is divided internally by a vertical diaphragm which forms two separate cells.

Projecting from the floor of each cell are two terminals. At the top of the diaphragm and resting on an offset turned in the walls of the lamp is a rubber disk, above which is a false cover, which is pressed down tightly upon the disk when the outer cover seen in the engraving is screwed down in place. The silvered reflector, into the base of which is screwed a small incandescent bulb, is readily accessible for cleaning, the glass with its cap being pressed on and then locked by giving it a slight turn to the right. Accompanying each lamp are several sets of plates that have been charged with electricity; two plates and two zinc elements being placed in the lamp, in conjunction with a small amount of "electric salt," give a current sufficiently strong to light the lamp so as to throw a light forty to sixty feet.

The electricity in the plates will be exhausted only as the light is used. When the lamp is not in use, the light can be extinguished by changing the location of the small switch shown in the front of the lamp. The capacity of the plates for about two hours' use in the evening is, for a good light, twelve to fourteen hours. Where the light is burned continuously the plates have a capacity of about ten hours. When entirely exhausted the plates can be removed and new ones substituted, the old ones being reserved and sent back to the agent or manufacturer of the lamp, and recharged. The plates can be recharged indefinitely, and are not affected by climatic conditions.

When the lamp is to be used, as much "salt" as will fill a small measure which is furnished with the lamp is placed in each cell, and sufficient water is added to cover the battery plates. The rubber disk and the false cover before mentioned are put in place; the outer cover is screwed down until a watertight joint is secured, and the lamp is then ready for use. The current is controlled by the small switch seen below the reflector, the switch being placed on the upper point, as shown in Fig. 2, when the lamp is first charged, and moved to the lower point in about three hours' time, or when the plates become somewhat exhausted. At the end of the ride the contents are poured out of the lamp, and the zinc elements are carefully washed in water.

For use on the bicycle, the lamp is provided with a thumb screw clamp shown in Fig. 1.

The Electric Portable Lamp Company, of Elmira, N. Y., also makes a lamp of this kind for the use of miners. This lamp is provided with a screw button by which it can be fastened snugly against a plate attached to a stout leather belt and carried around the waist. A steel bracket is also provided which enables the lamp to be carried in one's hand or hung up in the mine. (See Fig. 2.)

In addition to the uses above mentioned, the lamp is adapted for carriages, and may be carried by policemen, night watchmen, etc.

Fig. 1.—NEW ELECTRIC BICYCLE LAMP.

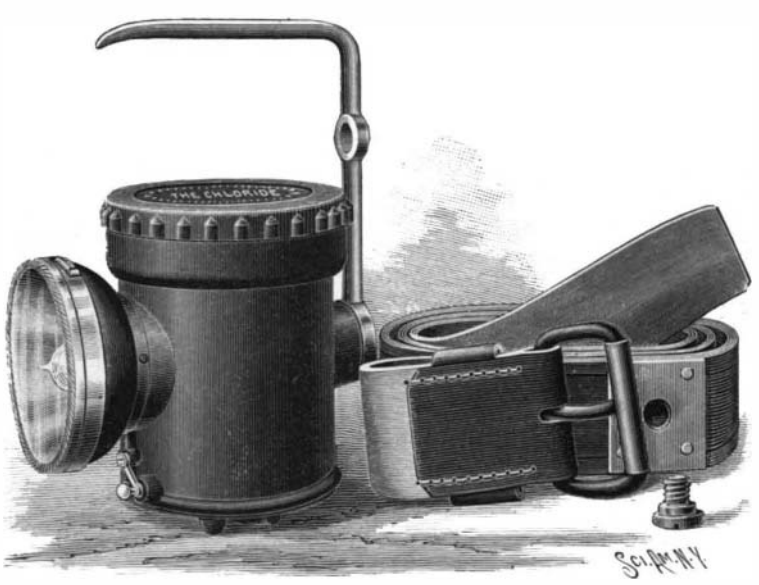


Fig. 2.—ELECTRIC LAMP FOR THE USE OF MINERS.

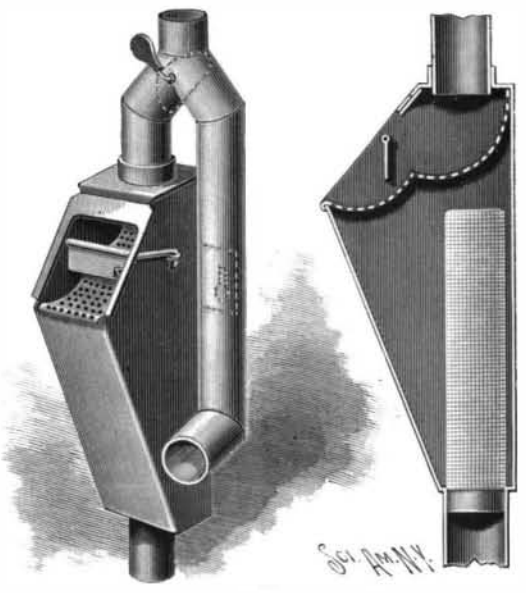
The Log of the Mayflower.

The manuscript log of the Mayflower has been awarded to the United States at a sitting of the Court of London.

The court was held in St. Paul's Cathedral and was presided over by the chancellor of the Diocese of London. A petition was presented by Mr. Bayard, Ambassador to the Court of St. James, for an order directing that the log of the Mayflower, which was then in the library of Fulham Palace, be transferred to the custody of the United States as one of the earliest records of their national history. Mr. Statham, who appeared in support of the petition, said that the manuscript in question contained an inscription which showed that it belonged to the New England library. It contained, he said, valuable information in regard to the original settlers of the New England States to the end of the first twenty-eight years of the colony. It is believed the book was taken to England before the revolutionary war by Hutchinson, Governor of Massachusetts, who collected historical material. The original manuscript book was produced in court and handed to the chancellor of London. The secretary to the Bishop of London said that his lordship concorded in the petition. The chancellor of London then cited a precedent and adjudged the book to the custody of the United States, on condition that a notarial copy be left on the register of the court. Photographic reproductions of the book will be made and deposited at Fulham Palace.

THE "NEW IDEA" RAIN WATER FILTER.

The accompanying illustration represents a filter adapted to be attached to a building in connection with the rain spout or gutter, the figures showing the filter in perspective and sectional views. The improvement has been patented by Nathan H. Long, and is being introduced by the "New Idea" Filter Company, Muncie, Ind. The back of the main portion of the filter, adapted to rest against the side of the house, has side flanges, in each of which is a slot to receive a screw in attaching the filter to a building, and in the front upper portion of the filter is removably held a water filtering and dirt discharging shoe, retained in position by a flange extending forward from the hood and another flange at its front edge. The upper, rear portion of the shoe serves as a dam in connection with a hinged flap or shutter, the hinged shutter raising sufficiently, however, to permit the water to force the accumulated dirt across the front portion of the shoe and to the ground, while serving to prevent the water from splashing out over the front of the shoe. Hooks at the side also hold the shutter in position. The water entering through the filtering shoe is also further filtered by having to pass through a reticulated cylinder or tube supported on the upper end of the pipe leading to the cistern. The pipe connecting with the gutter or eaves trough has a branch connection with the filter, while another branch represents the waste water discharge pipe, through which water is passed when the cistern is full, or when it is otherwise not desired to pass water through the filter. To direct the water in either direction a valve or shutter is pivoted at the junction of the pipes, the valve being turned as desired by a handle or rod to close either pipe section, and thus carry the water through the filter or through the waste pipe.



LONG'S RAIN WATER FILTER.

Building in New York.

The work of the building department of New York City during the first nine months of 1895 and 1896 is shown by the following table, which is taken from the quarterly report of Mr. Stevenson Constable, superintendent of the department of buildings:

	1895.	1896.	Increase in 1896.
Applications filed, new buildings and alterations	4,228	5,416	1,188
New buildings commenced	2,164	2,175	11
New buildings completed	1,703	2,480	777
Alterations commenced	1,094	1,465	371
Alterations completed	1,105	1,546	441
Iron and steel beams, girders, etc	58,106	161,162	103,056
Violations of the law reported by inspectors	3,843	4,754	911
Buildings reported by inspectors as unsafe	1,705	2 666	961
Notices issued	10,704	39,457	28,753
Number inspections made of passenger elevators	2,632	4,257	1,625
Unsafe buildings made safe or taken down	1,204	2,510	1,306
Violations removed	2,722	4,628	1,906
Cases forwarded attorney for prosecution	2,714	2,772	58
Passenger elevator cases to attorney for prosecution	16	182	166
Defective passenger elevators reported by inspectors	62	856	794
Made safe on notice from department	44	912	868
Notices of suits issued	5 075	5,284	209
Cases disposed of by attorney	2,841	4,522	1,681
Totals	101,962	247,044	145,082
Money collected by the attorney	$5,778	$14,337	$8,558