

### The Bogoslov Volcano.

The most interesting result of the recent trip of the Rush was a visit paid by the officers to Bogoslov Island, where is the famous volcano of that name. In conversation with one of the officers, an interesting *resume* was obtained of the discoveries and data gleaned by the visit. Bogoslov is sixty miles west-southwest of Oonalaska. It originally consisted of one island with two craters, one of which first sprang into activity in 1792.

Last winter the island was the scene of a strange convulsion of nature. The second crater, now known as New Bogoslov, became active. In some powerful convulsion the sandspit which had connected the two parts of the island was submerged, and one crater was separated from the other by several fathoms of water. It is thought that during this convulsion changes occurred in New Bogoslov below the water line; that fissures were opened, through which volumes of water made their way into the caldron within. This accounts for the immense quantities of steam which the officers of the Rush saw escaping from the crater at a distance of fully sixty miles.

Of the two craters, New Bogoslov offered the most interesting field of study to the officers of the Rush. They ascertained the crater to be only 200 feet above the sea level. The peak had disappeared in the gaping hole. Along the sides of the volcano large deposits of lava, pumice, ashes, and volcano rock were seen. From fissures on the level earth springs of boiling sulphur arose to heights of from seven to ten feet. The officers planned an ascent to the crater—a hazardous feat which could only be attempted when a favorable wind carried the sifting volumes of sulphurous steam in a single direction. When near the mouth of the crater the footfalls of the officers were echoed within the volcano. On peeping over the edge of the mouth an impressive sight was witnessed. Steam in endless quantities rushed up from unknown depths, and rumbling, bubbling noises, like that of thunder, were heard. The air was impregnated with sulphur, and near the crater one could breathe only with difficulty.

One of the most novel discoveries in connection with the ascent was that the ocean birds used the volcano island as a natural incubator for their young. Thousands of gulls flew away at the approach of the Rush. They left behind them, along the sides of the volcano, eggs in all stages of development.—*San Francisco Chronicle.*

### AN IMPROVED WATER CYCLE.

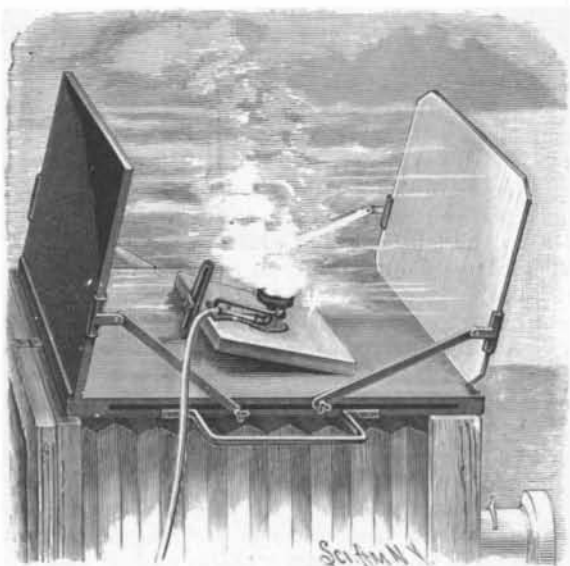
Since one general form has been adopted for the main frame and the principal parts of the cycle as it is commonly seen on the street and road, the improvements in these machines are limited to the details, and consequently inventive genius has turned with renewed zeal to the construction of the water velocipede. To the several forms already known is now added the water cycle built according to the ideas of Joseph Korner—who has a foundry in Olmutz—the arrangement of which can easily be seen from the accompanying drawings. The seat for the rider is placed above the single high wheel, and from here the rudder, which is located in front, can be operated in a simple manner. Iron, steel, brass, and wood are used in the construction of the machine, and it weighs about 156 pounds. It can move in any direction at a very good rate of speed, carrying, if desired, another person besides the driver, his weight being about 136 pounds. The machine can be taken apart for transportation, and by loosening or tightening four screws the parts can be shifted so as to be horizontal. Its movement is smooth and regular, there being no uneven oscillations. To the flag staff, which holds the rudder in a horizontal position, a sail can be attached, thus increasing the speed four or five times. The rider can use the two oars, shown resting on the forks, in pushing the machine off the sand banks without dismounting. Trials of the water cycle have been made in the neighborhood of Olmutz which have been remarkably successful. In one of these trials a distance of more than a quarter of a mile was covered in four minutes up stream, and in two and a half minutes down stream. The numerous turns were made with perfect safety.—*Illustrirte Zeitung.*

### Electric Elevated Roads.

Elevated railroad schemes are very numerous in Chicago at present. Articles of incorporation have been issued for another rapid transit company which proposes to construct an elevated road upon the north side of the city to be operated by electricity. This is a section of the city which needs increased rapid transit facilities, and an elevated road may be all right, but the question is, Will it be operated by electricity?

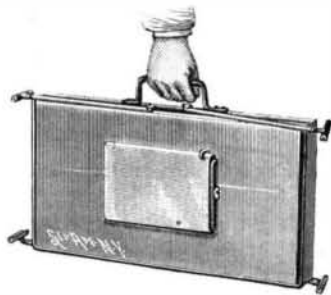
### A DEVICE TO FACILITATE TAKING PHOTOGRAPHS BY FLASH LIGHT.

The shadows caused by the brilliancy of the light, and reflections from polished surfaces, when pictures are taken by flash light frequently make it impossi-



BRIDGES' PHOTOGRAPHIC FLASH LIGHT DIFFUSER.

ble to obtain the best results. To obviate this difficulty the device shown in the accompanying illustration has been provided, consisting of a base adapted to be supported upon a camera, and holding in position a translucent plate at one end and a reflector at the other



DIFFUSER FOLDED.

end, while between them is an adjustable shelf adapted to support a magnesium lamp, or upon which magnesium may be burnt. The base is composed of two boards, with strips between their ends and one upon oneside, so as to form a shallow pocket to receive the translucent plate and the reflector, whereby the device when taken down may be packed in small space for transportation. The plate and reflector are held in upright position, resting in transverse grooves in the ends of the base, by means of arms pivoted to the base and provided at their other ends with clamps or holders adapted to receive and hold the plate and reflector at the desired inclination. Hinged centrally upon the base is a shelf, provided at one end with a slotted bar and set screw, to raise or lower that end, to give any desired inclination to the



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lamp base to get the best effect of the light. When this device has been properly adjusted upon the camera to cause the light to be diffused in the direction of the object to be photographed, the quantity of light flashed by the burning magnesium is preserved, while it is made uniform by diffusion, lighting up all points, reducing and mellowing the shadows, and

avoiding reflections and interference from the presence of polished objects. For further information relative to this invention address the patentee, Mr. John S. Bridges, 15 South Charles St., Baltimore, Md. The apparatus can be folded into compact form for transportation, as may be seen from the small engraving.

### Antimony Hypodermically for Apoplexy.

In the *Medical Bulletin* (July, p. 243) Dr. J. F. Bird reports some interesting clinical notes respecting the hypodermic use of tartarized antimony in the treatment of apoplexy. Its sedative action is highly indicated, whether the condition be arterial or nervous excitement, or both combined.

He first used it in the case of the late Dr. James McClintock. On reaching the house, he found the doctor lying on the floor, having fallen from the sofa on which he had been sitting. The respiration was hurried, but there was no stertor. Pulse 120, but not full or strong. Three or four doctors who had preceded him pronounced the case hopeless. No medicine could be administered by the mouth, and blood-letting was inadmissible. He immediately injected half a grain of antimony—tartar emetic—hypodermically, and very soon the pulse began to fall, and the hurried respiration abated. In half an hour he repeated the operation, and soon found all the bad symptoms subsiding, and the patient passed a quiet night. Next morning he was perfectly conscious, and made a rapid recovery so far as the apoplexy was concerned. His next case was a Mr. Klein, who had fallen to the floor very suddenly, but with symptoms very different from those of the previous case. This man had violent convulsions, a rapid and full pulse, with stertorous breathing. Two physicians were with him, and regarded the case as *in extremis*. At Dr. Bird's suggestion one of them injected a fourth of a grain of antimony hypodermically, and in a few minutes the stertorous breathing became less marked, the pulse began to fall, and the convulsions became less violent. The doctor injected another fourth of a grain of antimony, when all the violent symptoms abated. Two hours afterward the man sat up and was taken to his home.

In another instance he was called in the night to see a Mr. Hance, who was seized in a manner similar to the foregoing cases. He was convulsed; skin hot and red; pulse greatly accelerated, but not very full or strong. Respiration was greatly quickened, and breathing stertorous. He was perfectly unconscious. Dr. Bird resorted at once to the antimony, using a fourth of a grain, which had a marked effect upon the symptoms. In about twenty minutes he repeated the dose, and had the satisfaction of seeing all the symptoms subside, and a state of semi-consciousness return. In this case, because of the general turgidness of the face and neighboring integuments, he had a few cups applied, but allowed but little blood to be taken. There was no further trouble, and in a few days he was able to resume business.

Summing up his article, Dr. Bird is of opinion that for the treatment of apoplexy tartarized antimony is an invaluable therapeutic agent hypodermically administered. The same mode of treatment may be resorted to in canine practice when valuable dogs are attacked with fits.

### New Style of Fly Wheels.

A novel fly wheel, of large dimensions, which differs materially in construction from those ordinarily in use, has been designed by Messrs. Mannesmann, to guard against the terrible danger of bursting, to which accident cast iron fly wheels are only too subject when worked at a high speed. This wheel, which is in operation at the Mannesmann Tube Company's works, in connection with their process for making seamless tubes, consists of a cast iron hub, to which are securely bolted two disks of steel plates, about twenty feet in diameter. Round the periphery of the wheel thus formed, about seventy tons of No. 5 gauge wire are wound, under a tension of about fifty pounds, thus binding the whole securely together. There can be no comparison between the resistance of a wheel so constructed to the centrifugal force and that offered to this force by a cast iron one. This fly wheel, of twenty feet diameter and weighing seventy tons, revolves 240 times per minute, therefore the periphery of the wheel has a speed of 285 miles per minute, or nearly three times the speed of the Flying Dutchman. It works on the main shaft, from which the tube mill is driven by means of helical toothed steel wheels.—*Specialties.*

EVERY year a layer of the entire sea, fourteen feet thick, is taken up into the clouds. The winds bear their burden into the land and the water comes down in rain upon the fields, to flow back through rivers.