

AN AUTOMATIC CENTRIFUGAL AMUSEMENT-WAY.
 The public never seems to tire of daring circus feats, and that they even enjoy direct participation in them, where this is feasible, is shown by the success which has been attained by roller coasters and "loop-the-loop" centrifugal railways. The bicycle loop is, perhaps, the most dangerous form of amusement ever

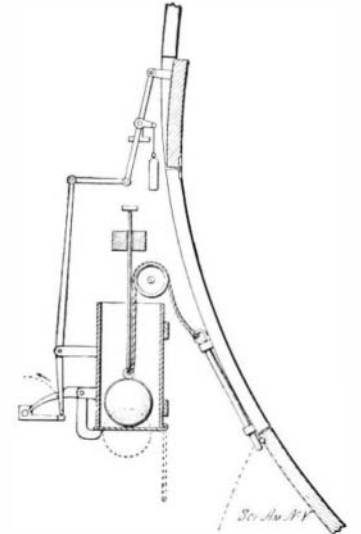
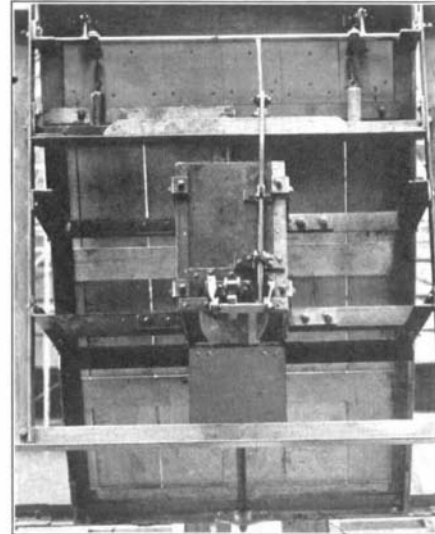
accurate steering. Mr. C. L. Hagen, the well-known stage machinist of New York city, has devised an ingenious apparatus which obviates the difficulty referred to. He provides an interrupted circle which lies in a single plane, so that the amount of steering is minimized, or almost done away with. Means must be provided to allow for the exit of

bottom cut represents the normal position of the trap when it is ready to receive the rider, and the top left-hand cut shows the position of the trap when the rider makes his exit. When it is considered that only a second and a half elapse from the time the trap is sprung until the rider passes over it and out of the circle, it will be seen that it is necessary

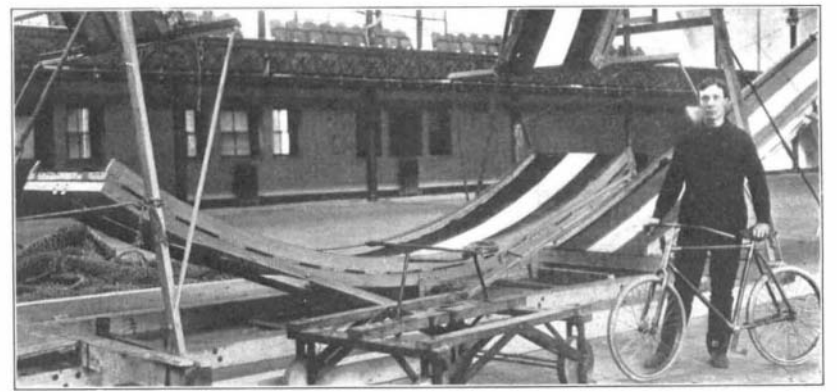


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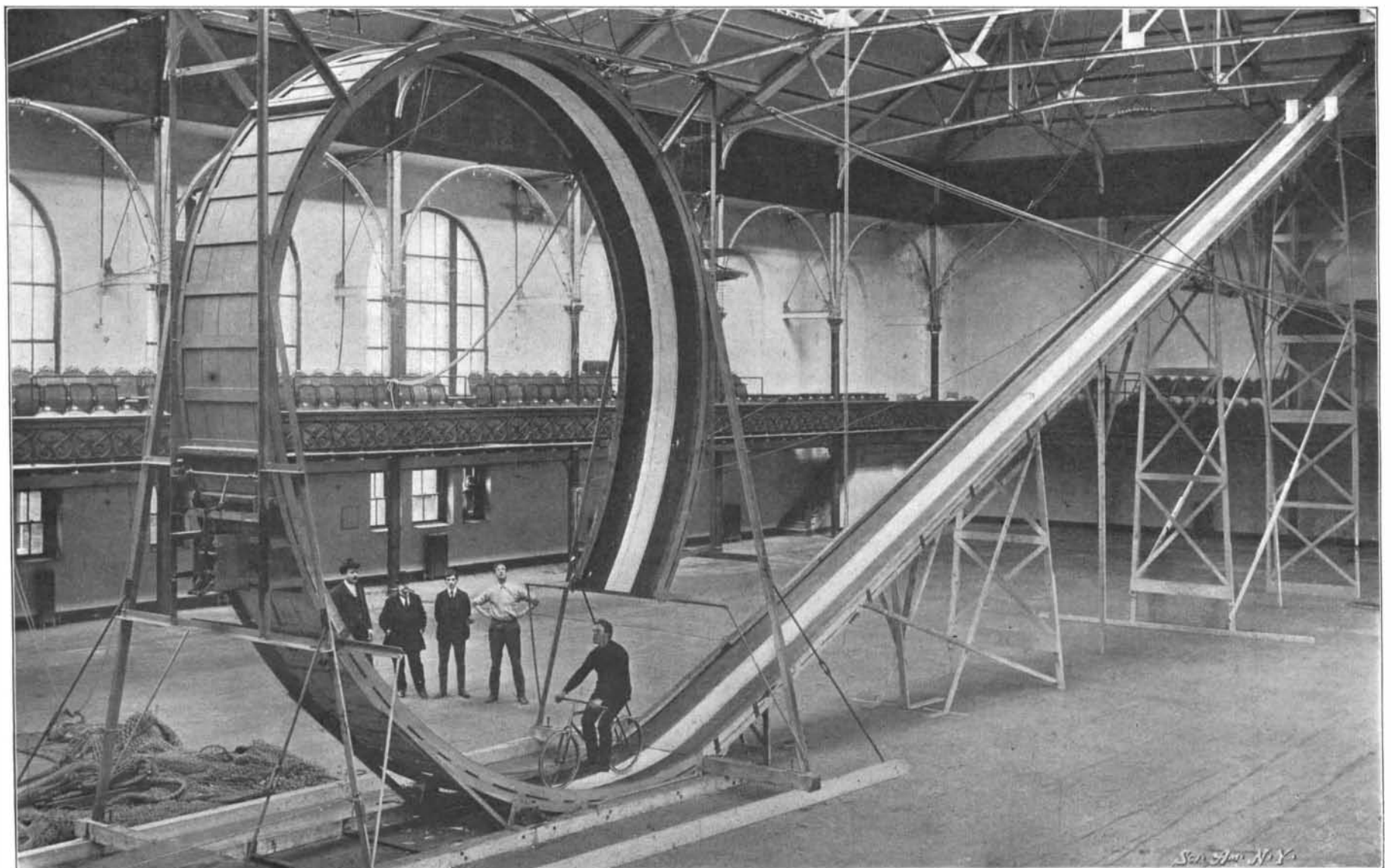
The Trap Closes.



Details of the Tripping Mechanism.



The Movable Trap.



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NEW FORM OF "LOOP THE LOOP" WITH OSCILLATING TRAP SECTION.

devised, and the device which we illustrate is intended to mitigate some of the danger for bicycle riders inherent in loops. Heretofore loops have been constructed of helical spiral form, so that the direction taken by the car or bicycle is continually changing its plane. This makes it exceedingly difficult to ride the loop on a wheel, as it necessitates constant and very

the rider. This is accomplished in the spiral loop by the lower portion of the spiral, which permits the rider to run out onto the floor or ground. With the apparatus we illustrate, the rider makes his escape by the operation of a movable trap which forms part of the interrupted circle. This trap is released automatically by the weight of the rider and wheel. Our

to provide means for very rapid adjustment of the pivoted section of the interrupted circle. The height of the incline is 45 feet. Each side of the track is painted black, and the center is left unpainted, in order to assist the rider to steer. The frame of the device is constructed of angle irons braced with adjusting rods. The interrupted circle is 26 feet in



Yukaghi Reindeer Herders.



A Chukchee Skin Hut.

height and 20 feet in width, and the track is 4 feet wide. The movable section oscillates on a 3-inch trunnion. Springs are provided to assist its quick movement, and its upper end is heavily counter-weighted by iron bars which slide in between the girders. The releasing mechanism consists of a one-foot hinged movable section of the floor of the circle extending across the entire width of the roadway. The rider stands upon the blocks on the incline, which serve to raise the rider sufficiently, so that an attendant may place the bicycle in position to receive him. The rider then takes his seat upon the bicycle, and removes his feet from the blocks and places them in the stirrups. The bicycle is of especially heavy construction, weighing 65 pounds, and is provided with stationary hangers for the feet. The descent begins, and the momentum which is acquired from the steep incline is sufficient to cause the rider to pass around the interior of the circle, he being held to the track in traversing the circle by centrifugal force. As he passes the hinged section, it is depressed, and acting through the medium of shafts and levers, a dog releases the hinged bottom of the iron box, which serves to support a large lead ball to which is secured a wire rope which passes over a sheave and is fastened to the end of a long bolt. The instant the weight drops, a sharp pull is given to the bolt, sufficient to draw it back, releasing the trap, which falls into the second position by gravity and accelerated by the springs. It will be noticed that movable dogs are provided to run on the beams supporting the trunnion bearings. Their object is to prevent any recoil of the trap. When the rider passes out of the circle after the trap has been sprung, he directs his wheel against ropes which are stretched across the path. The ropes pass through blocks, and are secured to chains which are dragged along the floor or ground, gradually bringing the rider to a stop. The loop illustrated

was assembled at the St. Nicholas Rink, New York city, where our photographs were taken. The first test was made with a 14-pound bowling ball. The trap worked quickly, and, in fact, there was a good fraction of a second to spare. The next test was made with a car, which is shown in our engraving.



A Wooden Year, Month, and Week Calendar of the Yakut Tribe.

It was held on the track by wheels which pressed against angle irons which were secured to the girders. The car weighed 262 pounds. The next test was made by Carl Anderson, who had already ridden the spiral loop. He found that the factor of safety was ample, the trap springing into its second position just before he had reached the top of the loop. This act is very exciting, for it is almost impossible for the eye to follow the rider while he is making his circuit. Mr. Hagen is building a similar device half the size to be ridden by a monkey in a car.

SIBERIAN COLLECTION OF THE JESUP NORTH PACIFIC EXPEDITION.

BY WALTER L. BEARLEY.

The Jesup North Pacific Expedition, sent out under the auspices of the American Museum of Natural History, after several years of exhaustive investigation, has completed its field work. The main feature of the expedition was the remarkable ethnological specimens and discoveries obtained in Siberia by the Russian explorers and scientists, Messrs. Waldemar Jochelson and Bogoras. These distinguished investigators, with dog and reindeer sledge, traveled ten thousand miles or more over some of the wildest and most inhospitable regions of the earth. As bearing on the problem of American ethnology, this is considered one of the most noteworthy expeditions of recent times. The twenty thousand or more specimens of household utensils, dress, and ceremonial objects, whose like has never before been brought into civilization, strikingly illustrate the life habits and culture of some of the most primitive men and women dwelling on our globe to-day. The description of these objects themselves, which will appear in their forthcoming memoirs, will add a new and interesting chapter to the history and development of the human race. The exhibits will be further augmented by a series



Warrior in Armor.



Cowhide Churn and Birch Ceremonial Vessel for Churning Koumiss.



A Yakut Belle.

SIBERIAN COLLECTION OF THE JESUP NORTH PACIFIC EXPEDITION.