

SCIENTIFIC AMERICAN

A WEEKLY JOURNAL OF PRACTICAL INFORMATION, ART, SCIENCE, MECHANICS, CHEMISTRY, AND MANUFACTURES.

Vol. XXXVIII. No. 16.
[NEW SERIES.]

NEW YORK, APRIL 20, 1878.

[\$3.20 per Annum.
[POSTAGE PREPAID.]

Report of the Director of the Central Park Museum, 1878.

This report, recently issued, shows that during the past year there were added to the collection, through donations, purchases, deposits, exchanges, and births in the menagerie, 147 mammals, 169 birds, and 8 reptiles. The total number of animals exhibited during the year was 942. Most noteworthy of the animals that came into possession of the menagerie may be mentioned a fine pair of guanacos, received in exchange for a lion bred in the park. Among the animals placed on deposit that deserve particular remark are three polar bears (no specimens of which have been exhibited since 1875) and one pair of brown hyenas, the first ever brought to this country. During the latter part of the year, 8 Indian and 5 African elephants (the latter quite young and ranging from 40 to 60 inches in height) were exhibited, and attracted great attention.

Of the 107 animals born in the menagerie during the year, the most notable was that of a monkey, since it is very rarely the case that these animals breed in confinement. Losses by death have been few, and at the close of the year there were 706 animals on hand, valued at \$71,966; of this amount, \$13,371 was the property of the department, and \$58,591 that of exhibitors.

The greatest economy has been practised in the management, and, as compared with the expenses of the preceding year, a reduction of \$4,081.79 has been effected. In an ap-

pendix to the report, the Director gives a classified list of the animals in the menagerie, with both their scientific and common names, and also a catalogue of the books and periodicals which he has thus far collected as a nucleus for a library.

A SAILING RAILWAY CAR.

"The Force of Wind in the Motion of Sails may be applied also to the driving of a Chariot, by which a Man may sail on the Land, as well as by a Ship on the Water," remarks Bishop Wilkins, in the second book of his "Mathematical Magick," printed at London in 1648. Such chariots, he goes on to explain, have been used from time immemorial on the plains of China and also in Spain, but their most remarkable success has, says the learned author, been achieved in Holland, where "it did far exceed the Speed of any Ship, though we should suppose it to be carried in the open Sea with never so prosperous Wind: And that in some few Hours space it would convey Six or Ten Persons, 20 or 30 German miles, and all this with very little labour of him that sitteth at the Stern, who may easily guide the Course of it as he pleaseth."

The astonishment of the good Bishop and his cotemporaries at the speed attained may well be realized when it appears that Dutch sailing carriages, constructed as shown in Fig. 2, next page, accomplished a distance of 42 miles in two hours. This was an unheard of speed in those days for any means of locomotion. "Men ran before it seeming to

go backwards. Things which seem at a great distance being presently overtaken and left behind." Until railroads were invented, without doubt the wind carriage outstripped all other means of traveling; and it is perhaps a little anomalous that more efforts were not made toward its improvement. Bishop Wilkins himself made an effort in that direction by rigging a wind mill in the vehicle, whereby "the Sails are so contrived, that the Wind from any Coast will have a Force upon them to turn them about," and he proposed to gear this contrivance with his wheels, and "consequently carry on the chariot itself to any Place (though fully against the Wind) whither it shall be directed." This same thing was reinvented a couple of years ago, in this country, as we noted at the time, and perhaps it might be uncharitably inferred that if, after the labor of two and a quarter centuries, our inventors could do no better than reproduce the venerable Bishop's notion, the *ultima Thule* of originality in wind carriages must be close at hand. Yet in reality the ice boat is probably the offspring of the wind-impelled land vehicle; and the little carriages to be drawn along by huge kites, such as many an ingenious school boy has constructed, are allied to it.

It is curious to note, however, that while to the railroad is owing the abandonment of the wind carriage, to the same agency it now seems likely that its rejuvenation will be due. Wind vehicles are already in use on the long stretches of tracks which extend over the Western prairies, and the

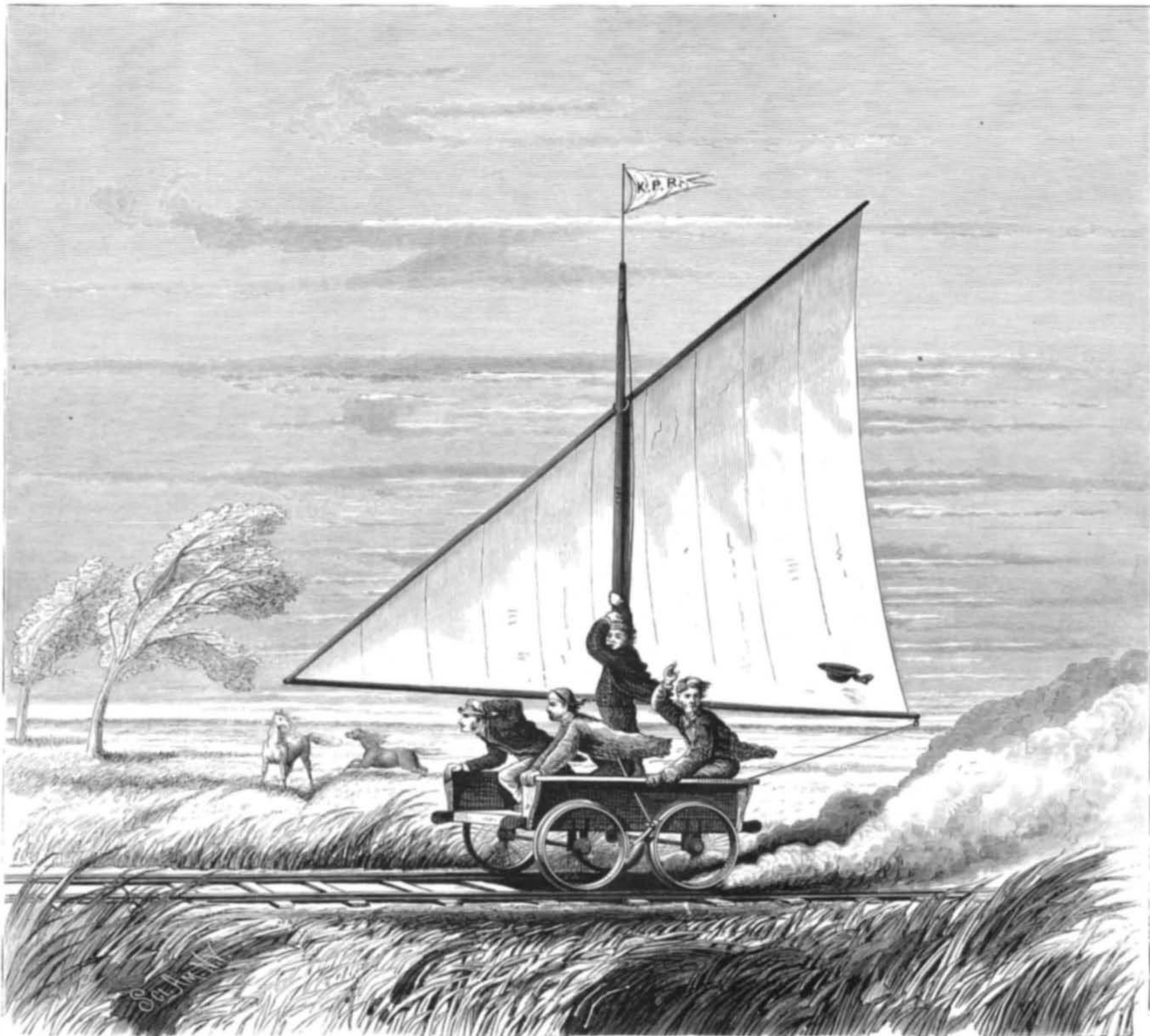


Fig 1.—SAILING CAR ON THE KANSAS PACIFIC RAILROAD.