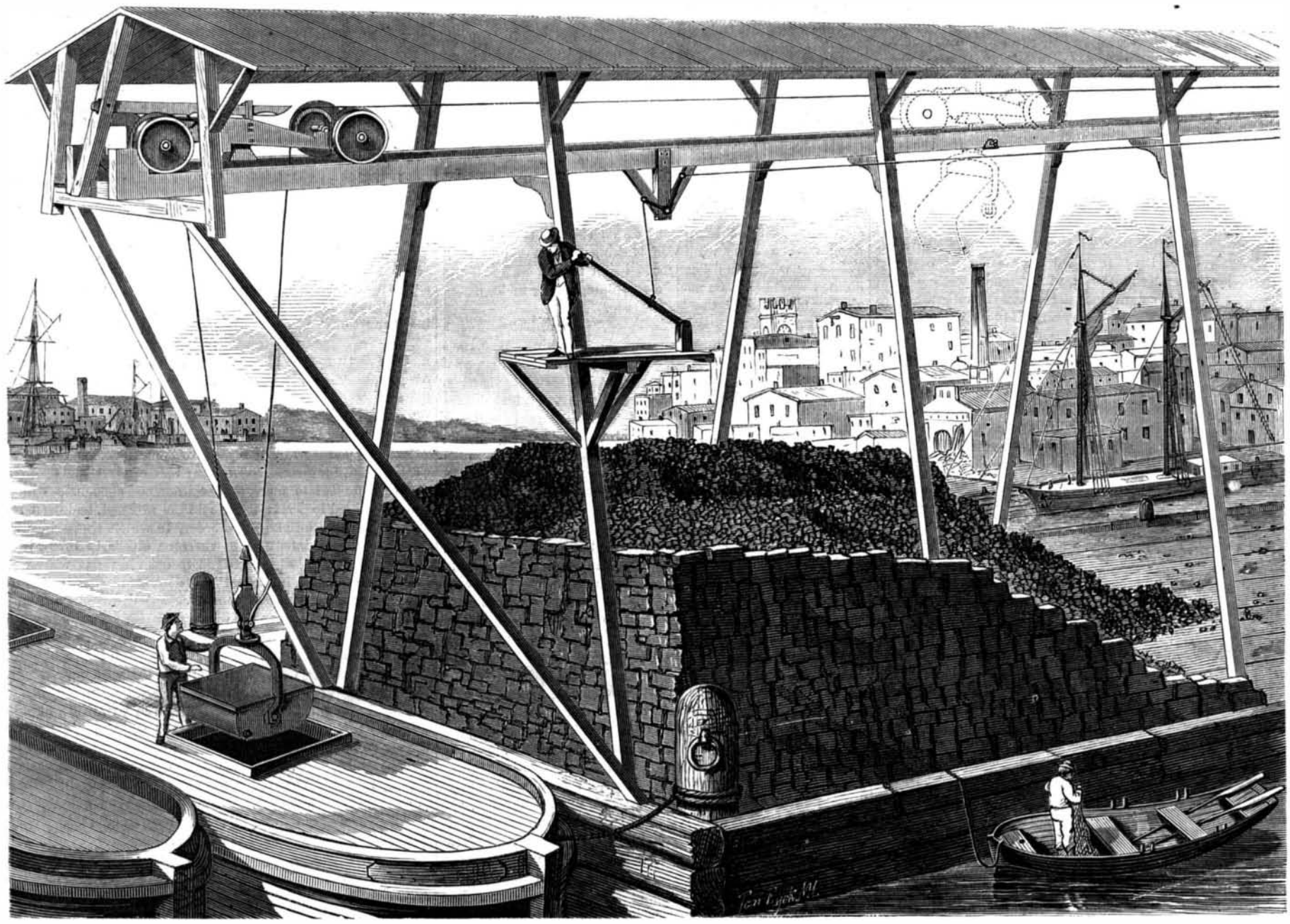
SCIENTIFIC AMERICAN

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

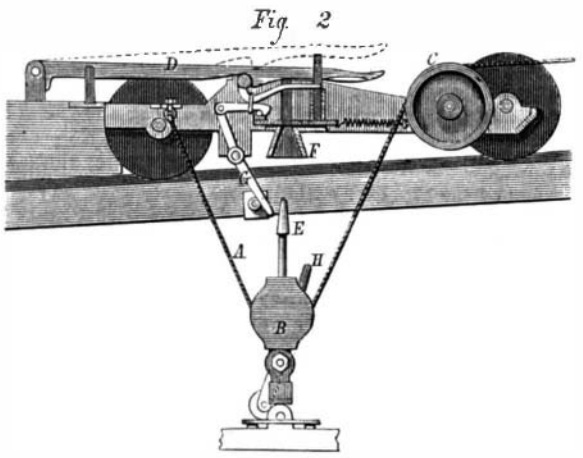
Vol. XXV.--No. 25. [NEW SERIES.] NEW YORK, DECEMBER 16, 1871. $3 per Annum. [IN ADVANCE.]



GREEN AND STANCLIFF'S APPARATUS FOR HOISTING AND CONVEYING COAL.

The accompanying engravings illustrate an improved apparatus for hoisting and conveying coal, patented August 1, 1871, through the Scientific American Patent Agency, by Joseph Green, of New York city, assignor to himself and George Stancliff, also of this city, and which is undoubtedly

Fig. 2



one of the most complete devices, for the work intended, yet produced.

The principal engraving shows the apparatus as discharging a cargo of coal at a dock, and is an excellent representation of the general appearance and application of the invention.

Figs. 2 and 3 are details showing the main features of the invention, which are simple and not liable to get out of order.

The elevator bucket is raised by a rope, A, Fig. 2, which passes under the sheave, B, Fig. 2, and over the pulley, C, Fig. 2, attached to the frame of a car which runs on an elevated inclined railway, as shown in Fig. 1. The car is held from moving, while the bucket ascends, by the hook lever, D, Fig. 2, which engages a round cross-bar of the car frame.

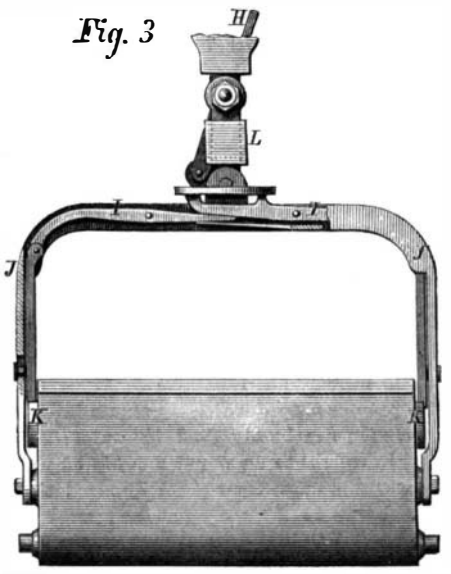
As the bucket reaches the car, the spear head, E, Fig. 2, enters the funnel shaped guideway, F, which directs the point of the spear head up against the hook lever, D, thus releasing the latter from its engagement with the bar which holds the car. The continued traction of the rope then draws both car and bucket to the point at which it is to be dumped. During this part of the movement, the bucket is sustained by the spear head, held by a spring catch plate which is caused, by suitable tripping mechanism, to pass under the lower shoulders of the spear head, and which is released from its engagement from the spear head, and reset on the return of the car, by the action of the tripping lever and hook, G, Fig. 2, attached to the frame of the car.

The bucket is dumped, when it arrives at the proper point, through the agency of the tripping lever, H, Figs. 2 and 3, which operates bent levers or latches, I, that pass down through the interior of the bale, J, and enter catches, K, attached to the pivots of the bucket.

The tripping is effected by an adjustable stud clamped to the lower side of one of the rails. A sleeve on the shank of the spear head allows the bucket to be turned and locked so as to be dumped forward or backward, or to either side, as required.

The facility with which coal can be handled by this apparatus is very great, and we expect to see its universal adoption. The inventor states that one tun per minute may be raised to the ordinary hight, and delivered one hundred feet back, as an average rate of working. The apparatus requires the attention of only two men, and is adapted not only for hoisting coal in yards and gasworks, and for discharging cargoes of coal, but also for use in the elevation of ores and broken crude materials of every sort. The Manhattan Gas Company has already adopted this machine for their coal sheds, (ten of these machines being now in operation and building for this company), at their works on North river, at the foot of Eighteenth street, where they may be seen in operation. For further particulars, address Joseph Cramp

Fig. 3



ton, machinist, Twentieth street, between 10th and 11th avenues, New York city.

ASBESTOS is a silicate of magnesia, containing also about 15 per cent of lime. It has long been known, as its name indicates. The ancients used it for the wicking of their lamps and also for napkins. The Greek word *asbestos*, meaning unextinguished, was appliedto the wicking, as the wick never burnt out and the votive lamps were kept constantly burning. When made into napkins, it was called *amianthos*, meaning undefiled, as the napkins were cleaned by throwing them into the fire. The French have adopted the name of *amianthe*, instead of asbestos, from this latter word.