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John and Charles Wise Ballooning Collection - Scrapbook 3

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Porter was the founder of the "New York Scientific American" [image: a stylized line drawing diagram of air balloon]

AERIAL REPORTER.
WEDNESDAY, NOVEMBER 24, VOL [illegible] 1852. NO. 13.

REPORT OF PROGRESS
[?] OF CONSTRUCTING THE PIONEER AEROPORT, OR FLYING
SHIP, BY RUFUS PORTER.

[PATRONS?]:
[?] report, I expressed the intention to issue no more papers [?] have put the aeroport in successful operation; and had [?] been interrupted by the inclemency of the weather, [?] should have been accomplished that object in season to have [?] same at the regular [?]. But it so happened that soon [?] of No. 2, we had several days of rain, which were [?] gales from the northwest, and excessive cold. It [?] from [?] former reports, [?] at a part of the work to be done [?] le-work and the [application?] of a thin finishing coat of [?] these [?] ranches, however, were nearly accomplished; [?] be done during a [?], nor while a cold wind was covering [?] of my long [?] having become dilapidated [?], was [?] off by [?]; and being nearly ready the purpose of inflat[?] float, we thought it not [?] it was decided [?] pend operations, and wait [?]. [?] feel confident that in three days of mild calm [?] get all ready to make the inflation, and the connected [?] wheels &c., ready for operation. I s[?] fly recapitulate the progress of the work from the com[?], [?] icking the time and expenses.

M[?] was to procure lumber, and such other materials as [?] in this city, and to employ a competent foreman or s[?] to direct the business in my absence. I then proceed [?] New York, and selected the requisite fibrous materials for the floa[?] engaged an artisan to [make?] the copper cylinders (28 in number [?]) also procured the requisite iron pipes, screws, and other [?] articles [?] returned. I selected and engaged the ground on wh[?] to com[?] date, [?] having procured the requisite material erected [?] tent 170 feet long, 24 wide, and 22 feet high. This was [?] tered with 1,200 yards of [strong?] cotton sheeting well sewed [together?], the [?] secured by co[?] ge, and the whole secured to the frame [?] 1,400 [feet?] of small [rope?]. [The?] cost of the tent was about \$250. [While?] this was [being?] constructed, [I?] procured the requisite set of patterns [and?] put in progress [two?] brass [engines?], which were subsequently [?] in [excellent?] style and are [?] superior in construction and [finish?] to [?] of [?] the kind [?] here, though the cost did not exceed \$100. [I also?] put in progress [?] several machines to be [employed?] in the [?] of the work; [for?] applying the varnish to the [?] material [?] ?] compressing the same when [?] large and [?] blowing-wheel of peculiar [?] inflating the float [?]. These cost about \$150, and are still in good [working?] order; but the calender rolls [?] as has been heretofore mentioned. The process of [?] in [?], and [?] copper cylinders arrived, [?] of the [?] was committed to an artisan [?] in Georgetown, whom circumstances heretofore [?] delay and [?] nearly three months before [completed?] and it finally [?] nearly \$200, though I had [?] the same [?] for less than \$100.

[?] material was prepared [?] three coats of varnish, five [?] - as many as [?] advantageously--were [?] our [?] in sewing [?] lips together, and making [?] the covering [?] saloon, fans for the [propeller?] [?] during [?] the workmen were employed [?] crane-



work [?]aloon, landing car, wind-lasses, engine-frame, rudder, replenisher, windows, &c.; and not a little time was consumed in keeping the tent in repair, and in handling the float, changing position as the sewing process required. The longitudinal supporting rods, nearly 3,000 feet in the aggregate, were also prepared, as also the lateral projectors, though we had encountered much difficulty and delay in procuring the material for them, having been compelled to procure the timber and the sawing and dressing thereof the second time, in consequence of the first lot proving defective in dimensions. I also had procured metallic tubing for the joints of the rods; casing and furnace for the boiler; 70 feet of smoke-pipe; hollow revoloidal shafts for the propelling wheels, and other materials too numerous to mention in detail. Subsequently, the float was inflated with air, and all hands were employed in attaching the supporting rods to the float, by driving close rows of tack-nails through strips of thick oiled canvas from the inside into the rods, which were held in place by persons standing outside of the float. Before this branch was completed, it was discovered, what should have been seen earlier, that the necessity of having some of the rods curve upwards, while others must lie straight upon the ground precluded the possibility of attaching them all without rending the linen material. This was the commencement of our principal misfortune and delay. It was, of course, at once decided to detach many of the rods which were already nailed, and adopt another method of attaching them, namely, by sewing to the outside of the float strips of canvas wide enough to allow the edges thereof to be subsequently nailed to the rods, which last could be done after the float had been partly inflated with sufficient quantity of hydrogen to raise it from the ground.

This process proved very tedious; for in sewing these strips, it was requisite that the thread should be passed through a strip of canvas-tape on the inside also; and for this purpose, each person employed outside must have an assistant within the float to receive the needle and pass it outward. This labor might have been obviated by having the canvas strips attached to the float when the latter was first made up. To be brief, however, on this subject, this work has been accomplished, though at an expense of the labor of 10 persons 6 weeks, including the detaching and re-attaching of the rods by double rows of nails, &c., thus adding to expense at least \$400. During this process, however, I procured the construction of a strong and permanent set of generating boxes for the production of hydrogen, and had, with some difficulty, including a forced march to New York, and another to Baltimore, procured the requisite materials--about six hundred dollars' worth of zinc and sulphuric acid--for the purpose of inflation. I have also procured the finishing of my independent, self-regulating pump for supplying the boilers; and the curved arms and bracings of the propelling wheels; also two neatly finished endless chains, 35 feet each, to carry the motion from the engines to the wheels; also an improved parachute, the use of which is not expected to be required, except for experiment.

After the main rods had been re-attached, (for it was decided, for reasons mentioned in my last number, to re-attach them while the float was in a collapsed state, and prior to the hydrogenic inflation,) it was found advisable (in consideration of the long and rough exposure of the float by resting two months upon the ground, and being trod upon by the persons employed inside) to give it an additional coat of varnish, which, as before mentioned, has been commenced.

I have mentioned, especially, the re-attachment of the main rods by continuous rows of tack nails; but the intermediate or receding rods have been attached by short pieces of canvas attached to the float at

intervals of four feet. These pieces (or stops, so called) were also attached to the rods by nails; but this mode was found to be unsafe,

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