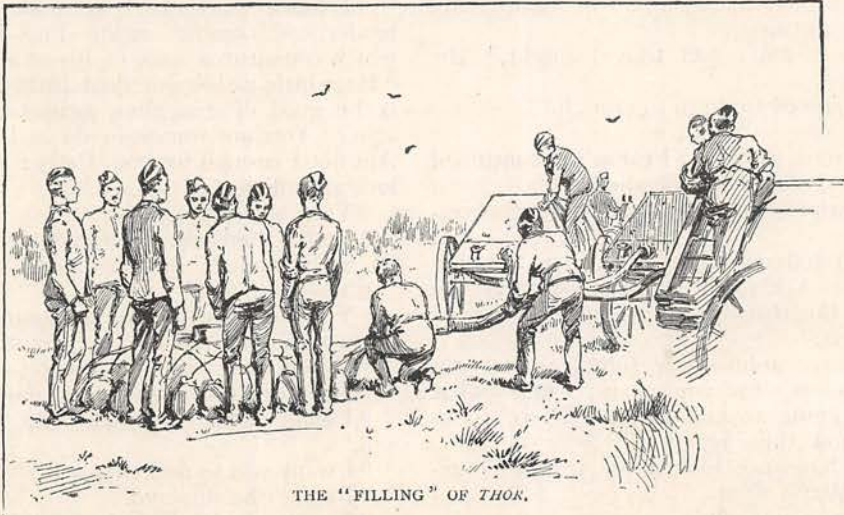
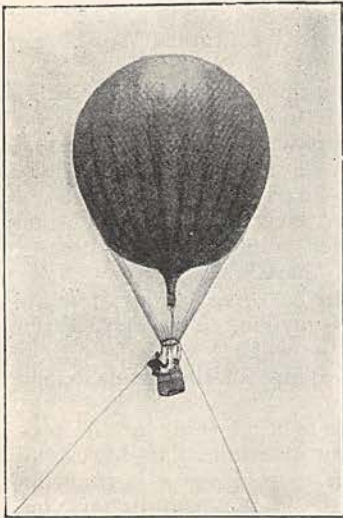


IN A WAR BALLOON AT ALDERSHOT.



THE "FILLING" OF THOR.



THOR "PLATFORMED IN MID AIR."
 (From a photograph by Major Harward.)

THE "mere" editor, scornful of minute detail, and rightly regardful of his "space," does not see much difference between the military and the civil balloon. This, to the enthusiast, is very trying. "Why," said such an one to a young "art editor," whom she was defying in his own lair, "I have seen

the *valve* of a civil balloon, and it was just like the top of an old tub." "Well," said that hard young man, nothing daunted, "for all I know" ("or care" he meant), "it *may* be an old tub!" He conquered; but that enthusiast resents it yet.

For in every respect the war balloon is vastly superior to those of a kind usually associated with pleasure-trips—sometimes of fatal termination. With an "envelope," not composed of silk or cambric, but wrought, by secret process of manufacture, to marvellous

impermeability and strength, from so frail a thing as gold-beaters' skin; filled with hydrogen-gas, which, while far more portable than the coal-gas of civil balloons, is also of greater lifting power; the net and cords all thoroughly trustworthy and of special manufacture, the war balloon inspires both trust and admiration in all who know her.

And she is loyally served. She was not brought to such perfection without good work and true, without patience, great skill—I had almost said, without devotion. And this, no doubt, is the spirit which animates the quiet, rather solemn workers employed in the momentous work of fashioning the "envelope."

"We know that life depends on it," says pretty little Mrs. Wilkins.

And, looking at the faces of these women, of widely varying age, of widely varying physiognomy, yet all, that came under my notice, with the same subdued and self-respecting demeanour, one is forced to the conclusion, offered in no spirit of levity—that there is something peculiarly "elevating" in balloons—in the sense of responsibility involved in their manufacture, and most loyally obeyed.

To know the military balloon is to love and to trust her. And have I not known her? I have "interviewed" her, gazed at her, fingered her. Had I not duly learnt that that elegant spherical form, on which she justly prides herself, has its sufficient termination in what is called a "neck," I might add that I have daily sat at her feet. And, indeed, why not?

—seeing that the “neck” both encloses, and is afterwards enclosed by the “petticoat” (or “tail”). I have done—what have I not done in pursuit of her acquaintance? Have I not, in order to see the Section go through the drill of laying out the balloon “Tourist,” “crowning” (with the valve), “filling,” etc., left the gates of sleep behind me at 4.40 a.m., and sought the roseate hues in vain? For the

ascent, the “tail” rope is attached), the car with the balloon packed inside, and all things needful for an ascent—*e.g.*, the valve, the grapnel, a handful of pilot balloons (for testing the current)—all but the gas tubes,* which, to the number of thirty-five on each, 105 in all, are packed on three other waggons; a guard of mounted sappers bringing up the rear. Had the Duke wished to



ON THE MARCH.

air was chill, and the dawn was dull; I saw no lark brush the dew from his wing; but my footfalls helped to scatter the dust of Aldershot; and the weary sentry, yet in his watch-coat, presented arms to my commanding officer as we drew near the Balloon Depôt.

And at one inspection by H.R.H. the Commander-in-Chief, did I not mark the Balloon-Section, with its waggons, pass the saluting point to the strain of

“Wings to bear me over
Mountain and vale away”?—

having first witnessed the departure, in order, from the parade-ground thus:

A detachment of mounted sappers, the officer in charge of a portion of the Section, a corporal and six men seated on the balloon wagon (which also bears the “drum” with the telephone wire, and to which, during an

witness an ascent, the Section could easily have been made up to sixteen strong from trained engineers in the field; the balloon would have been “laid out,” “crowned,” and “filled,” by means of pieces of skin-hose, each six feet long, laid on to the gas chambers at the end of the tube waggons; the three pieces of skin hose being joined to the balloon and to each other by means of zinc connections. Twenty minutes after the order had been given to “fill,” an ascent of 1,000 feet could have been made; and in five minutes more a message could have been obtained.

All this I have seen. But one day my long-cherished hopes were “crowned”; and a safety “valve” was furnished to my enthusiasm. I, too, have been in Arcadia, have sailed on ether, and bombarded the heavens.

The morning of my ascent was a pleasant

* These are portable gas reservoirs.

and favourable one—fine, rather still; while the atmosphere was fairly clear. "Thor" was being filled; as I drew near, two waggons with the gas tubes were discharging their contents, in the manner I have already described, into the 10,000 cubic feet of space awaiting fulfilment, but, as a matter of fact, she did not receive quite 10,000 cubic feet of gas, and looked rather wrinkly in consequence. That does not signify; the gas expands, and if you fill to the entire capacity you have the less room for its inevitable expansion—sooner or later you have to open the "neck" and let off a little. The first day, when the balloon is at her fullest, is not the best, from an economical point of view, for attaining a good height. It is wiser to wait for the diminished volume of succeeding days, and the corresponding space for expansion.

Made in 1890, "Thor" is just four years old, and feels her years. A hole had been discovered and mended that morning. Before and during my ascent another was revealed in the leakage which was slowly going on.

She has now nearly had enough. Round the net, at intervals, hang bags of sand-shot. These keep the balloon down, in process of filling. As the lifting power increases, the

bags are lowered. Underneath the balloon is a man who smooths the "kinks" out of the skin hose, that the free passage of the gas to the envelope may meet with no obstruction. When "Thor," having received all the hydrogen she craved, had assumed a sufficiently shapely and debonair appearance, she had her photograph taken. You see her surrounded by her attendants. You also see her gaily poised aloft, the aeronaut and this scribe being, like the angels in Mrs. Browning's "Drama of Exile," thus—

"Platformed in mid-air."

There were telegraph wires to be crossed before we fairly started. The men got her safely over this *bête noire* of the balloonist. Holding fast to the ropes below, they led her to, and over, the obstruction, while the balloonist quickly threw the pilot rope across. From the open space beyond the Balloon Depot we finally made our ascent, "Thor" having first been connected by the captive rope to the balloon waggon, at the end of which is the drum with the telephone wire which feeds it.

And so, at last, we entered the car, a brand-new one, made by convicts at Dartmoor. This contains two tiny seats. The

lifting power of 10,000 cubic feet of hydrogen is 700 lbs. Allow for the weight of the envelope, 80 lbs.; of the valve, 4 lbs.; the net, 45 lbs.; the car, 23 lbs.; the hoop, 13 lbs.; the grapnel and rope, 25 lbs.; the balloonist's instruments (compasses, maps, aneroid, etc.), 14 lbs.; and the weight of two men of 150 lbs. each, with some sand for ballast, completes the freight.

The grapnel is the balloonist's anchor. It is made of best Lowmoor iron, and has four collapsable "flukes," which are held open or shut at will, by means of a small brass clamp. It is an ingenious and rather deadly-looking contrivance. I should not care to be its resting-place. But it is harmless enough. When not in use, it is hooked on to the side of the car. The head is furnished with an eye, to receive the one-and-a-half inch grapnel rope, by means of which it slides down to the ground, and where the knot and a cross-bar of wood check it; the other end of the grapnel rope being attached to the net hoop. This rope, like the cord of which the net is composed, is made of Italian hemp, and is always supplied by the same makers, the cord measuring 170 feet to the pound; the rope the same number of feet to the half-pound.



THOR AND HER ATTENDANTS.

(From a photograph by Major Harward.)

An Engineer officer, lecturing on ballooning, remarked that everybody says, on a first ascent, that the country looks "like a map." I may be "contrary," but certainly it would be at once a very ideal, and also an extremely realistic, map that was capable of giving a like presentiment. If one should ask me, "What, then, is it like?" I answer that this vast military settlement, with its far-reaching War Department Reservation of drill and manoeuvre ground, represented on one side by the dusty Long Valley, on the other by the heather-clad Fox Hills—the theatre of military operations on the occasion of many a mimic fight—this, then, becomes to the balloonist's eye a fine model in miniature (such as that of the battle of Waterloo in the United Service Institute) of a phase of army life at once characteristic and unique.

Such a bird's-eye view I will not call lovely, though the neighbourhood is singularly beautiful. Those who look for such a description forget how much a landscape depends for this virtue of picturesqueness on the illusive charms of distance, comparative heights, natural perspective, with its blending of mystery and imagination, its restful vistas. Distance of a kind one has, but distance that equalises and levels rather than such as offers alluring contrasts. Thither, away to the south-west, stretches Cæsar's Camp, with Hungry Hill. How dwarfed, how flat! The Long Valley is but a patch—yellow and barren. The gardens of the Officers' Club House have shrunk curiously. The little tin soldiers and the toy cavalcade seem to crawl. The canal winds on with diminished breadth in the direction of Fleet, whose pond would make a fair-sized ball-room mirror; yet the former, at least, I may not despise. Its waters supply steam; steam constitutes the motive power that compresses hydrogen, hydrogen inflated and lifted this huge bubble that bears me aloft 1,000 feet. Below me lie the Liliputian boats about the landing-stage. Eight miles to the north-east is Bisley Volunteer Camp. Yet a little nearer is Sandhurst.

Then may I look down? Yes, but with caution. Do I feel ill? Wretched? Nay, but a little queer. Does the car sway intolerably, and does an unutterable sinking come upon me as the earth, and things earthly, seem to fall suddenly from beneath me? No, again; for they are winding out slowly and easily my thousand feet.

I have said that the balloon was leaking during the ascent. How dangerous! Not at all. In a high wind, and in the course of a protracted ascent, the hole might have



"EXCELSIOR!"

become serious. If it were very bad, the officer would throw out ballast, and so lighten the balloon. He might mount into the neck, and repair the damage temporarily with skin carried for patching, and an adhesive solution. This might be his course on a "free" run. And he might open the neck for a minute or two, and so relieve pressure. This latter course was followed by the officer in charge of the balloon. It was all that was required, except that we should not go very high. Nothing heroic happened. I have no dangerous ascent to record. The captive rope was wound up on the "drum" which is at the end of the balloon waggon. Slowly and steadily we came to earth. The descent is sometimes said to be the worst part of an ascent! This has rather an Irish sound, but in my case it is the literal truth. As we went up we paused for a second, and my inarticulate thought was: "Oh, what will it be to go down—to *sink!*" In the event I found it very bearable. The anticipation had been the worst part of this, as of many other troubles. I walked home through the Camp with slightly diminished colour—and that was all!

B. W.