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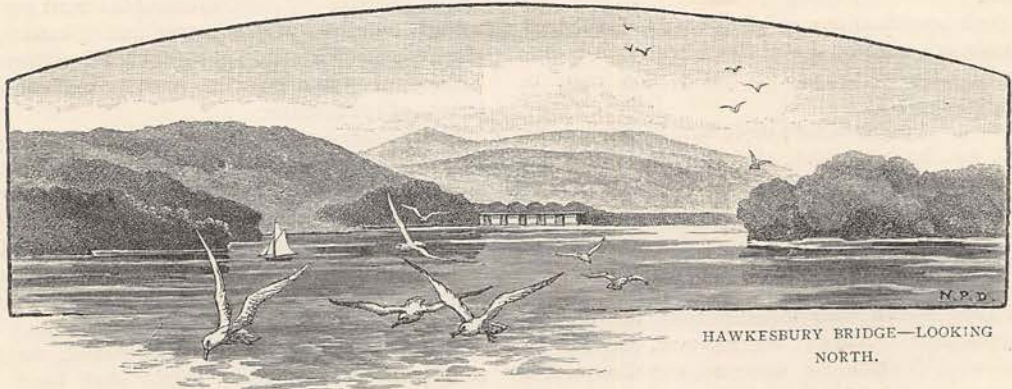
Provisional, or *complete*, specifications are not open to the inspection of the public until after the complete specification has been accepted.

With the assistance of the above information, it is hoped that intending patentees will have some idea of what is necessary to obtain legal protection for their inventions; but, of course, in so short a paper it is impossible to include every detail.

Finally, let me advise all who can afford it, to obtain the counsel and assistance of a professional expert in patent procedure, as this course will, in the end, be found to save much time, trouble, and possible disappointment.

H. E. B.

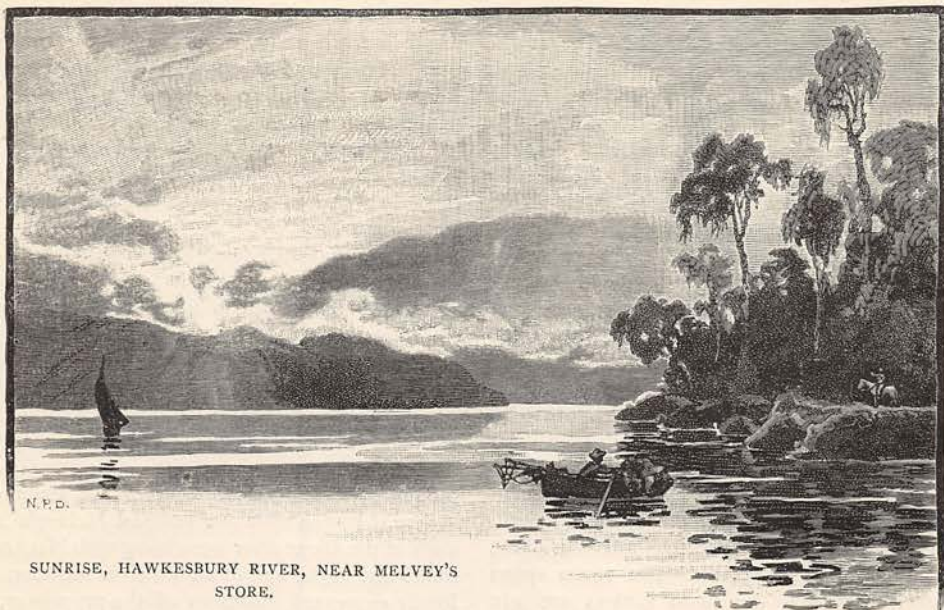
AN AUSTRALIAN JAUNT.



HAWKESBURY BRIDGE—LOOKING NORTH.

TWENTY miles north of Sydney, the beautiful capital of New South Wales, there is a small river which widens into an estuary, fifteen miles in length, spreading north and south into long land-locked reaches. I had often heard of the Hawkesbury—as the river is named—and how Trollope had said that it beat the Rhine for

beauty, and I was anxious to see it and experience some of those yachting joys for which both Port Jackson and this river are equally famous. Consequently, I gladly accepted an invitation to join in a camping expedition, intended especially to visit the reaches of the Lower Hawkesbury, where the coast-line, although for the most part precipitous and well wooded,



SUNRISE, HAWKESBURY RIVER, NEAR MELVEY'S STORE.

affords many a sandy bay where safe anchorage and fresh water may be had.

And so it came about that on Christmas Eve, 188—, I found myself on the pier at Double Bay—one of the numerous inlets of Sydney Harbour—in company with Robinson and Jones and a heap of miscellaneous articles required for “camping out.” These (together with ourselves) were soon transferred to the *Lurlie*, a 22-foot half-decked centre-board, which we had hired for the occasion, now lying in the bay. Of these Robinson—henceforward to be known as the “skipper”—was a thorough seaman, while Jones was well able to second his efforts. I was merely a passenger; able, however, to bear a hand with the hal-yards or swab down the deck. It was quite dark



WATERFALL AT THE BASIN.

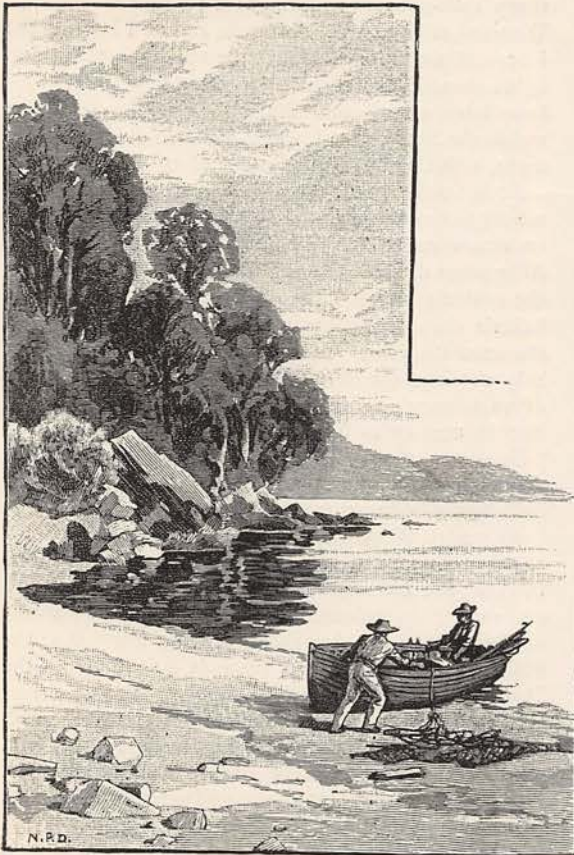
before we got under weigh and stood down the harbour in company with a friend's boat, the *Olivia*, bound on a similar excursion to Botany Bay; and a sharp look-out was necessary for passing steamships. We were sailing on the port tack, and as I lay forward I several times reported first the red light, then both lights showing, and finally the green light alone. An hour later we reached Watson's Bay, an inlet just within the South Head, where we cast anchor for the night, with the *Olivia* just astern of us.

At five o'clock next morning, the skipper and I went ashore to buy bread in the *Olivia's* “cockboat,” as our ancestors called it. We first tried the big hotel. After some difficulty I roused a sleepy maid. “No; she couldn't let us have any bread; but there was a baker's shop round the corner.” This she said and slammed the door. In spite of the early hour, the old lady who kept the shop (being accustomed to the ways of yachtsmen) made no trouble about serving us. But in answer to a polite remark, she replied that “Christmas was not for the likes of her!” and in this dismal frame of mind we left her to grope her way back to the bedroom from the dimly lighted shop.

As we left the shore, the dip in the coast-line, known as “The Gap,” and the Macquarie Lighthouse came in view; the latter, standing 354 feet above sea-level and raising its column another 70 feet, shows its revolving light for thirty miles at sea; but just at the end of the Southern Head there is a fixed light—the Hornby—erected to enable ships to take a correct bearing for the harbour. This was built after the ill-fated *Dunbar* in the darkness and turmoil of the gale of the 26th of August, 1857, steered straight for “The Gap,” meeting the stern repulse of perpendicular cliffs instead of the safe anchorage of Port Jackson. From the summit of the cliffs on the following morning a single human survivor—James Johnson—was seen

clinging to a ledge of rock 100 feet below. This morning, however, the wind was so light that it was two hours before we reached the Heads. The rocks on either side rise over 300 feet, forming a natural entrance; and around either towering wall the waves swirl and break with an ominous roar.

It was midday before we left the ocean, and, passing Barrenjoeh Head, entered Broken Bay. Midway in the channel stands Elliot Island, a rough mass of rock, looking, from a south-eastern aspect, like a lion *couchant*. This we passed, and henceforward sailed in a series of landlocked reaches, surrounded by tree-clad heights, from which it was difficult to guess how an exit could be effected. Another turn and the great railway bridge rose before us, forming in this wild region a striking symbol of the dominion of man. Its length—2,900 feet—is a small part of its claims to be considered. The nature of the river-bed—mud and soft sand—required an artificial foundation. This was secured by sinking caissons filled with concrete (in one case to a depth of 162 feet, the deepest known foundation for a bridge) on which the six piers, which bear the bridge itself, rest. The seven spans of mild steel, of which the main girders are 410 feet in length and 58 feet above the water, were built upon pontoons and then floated down to the piers at high water, and so placed in position.



FLINT AND STEEL BAY—HAWKESBURY RIVER.

Just beyond the bridge on the southern shore, marking the old crossing-place, is Peate's Ferry, where there are an hotel and a cottage or two round the bay. Here we went ashore, and having bought some fresh milk, proceeded to boil our "billy"—the indispensable tin with cover and handle which every bushman carries for making tea—and ate our Christmas dinner. There was a party of men playing cricket on the strip of sandy beach, in spite of the blazing sun, while some women and children looked on. Leaving these Philistines and their terrible corrugated iron dwellings, we cast off from the little pier, and brought up at the mouth of the bay just in front of Long Island, where we raised our canvas tent and fished till evening. Then we got under weigh again and ran up the river. Gradually the air cooled and the bright sunlight fled away, but not before it had coloured the hills with crimson and purple. The heavens grew dark and the stars shone out, not separately, but in tangled masses, as is their wont in the southern hemisphere. By the time we reached Melvey's Store the cliffs of the silent river were hung with blackness. We made fast to the hull of an old river steamer, amid the loudly expressed murmurs of the proprietor, who informed us that he had just had it painted. From another boat just moored to the landing-stage a merry party went on shore. After securing a sufficient length of rope to avoid being stranded on the soft mud, we fell-to and had supper, and then turned in for the night. Next morning I climbed on to the forward deck and sketched the sunrise. The hills were veiled by grey mists, which formed into a bank of clouds upon their crests. From beneath the centre of these clouds the golden light of the newly risen sun poured, while, from behind, rays of orange light spread into the sky. The water was still, and reflected the dominant tone of grey. When the others awoke we went ashore for a bath in the creek and breakfast; then sailed up the river till the cliffs closed in on either side, before they expanded once again into fertile meadows.

"For lo! from where, at rocky Portland's head,
Reluctant Hawkesbury quits his sluggish bed,
Merging in ocean to young Windsor's towers,
And Richmond's high green hills and native bowers;
Thence far along Nepean's pebble way
To those rich pastures where the wild herds stray,
The crowded farmhouse lines the winding stream
On either side, and many a plodding team
With shining ploughshare turns the neighbouring soil,
Which crown with double crop the labourer's toil."*

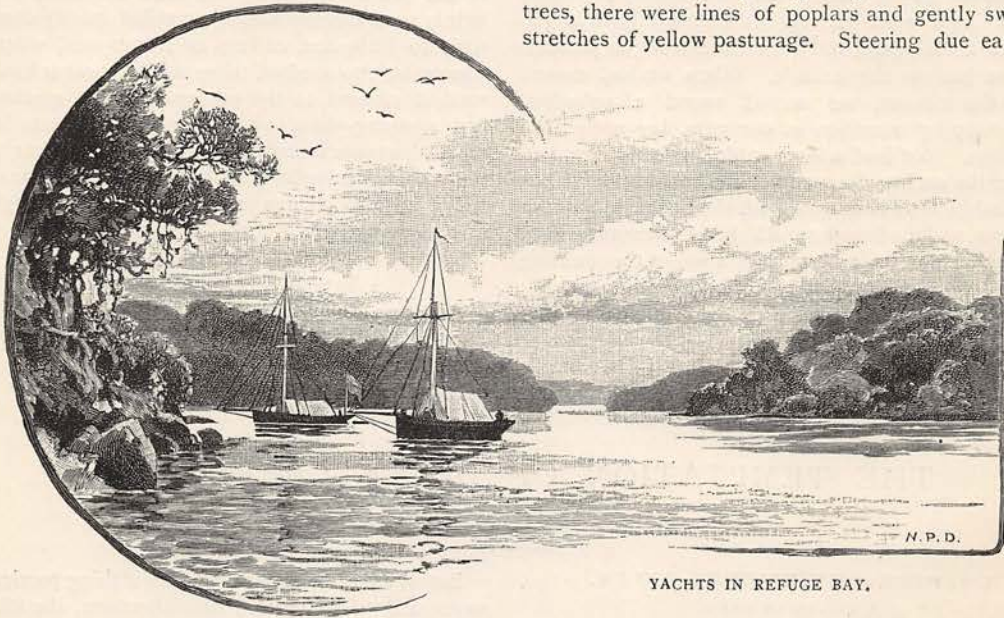
In working down we overhauled a fishing boat in which a man—an Italian—was sturdily pulling down against wind and tide, with his wife and family, to say nothing of a load of fish. As the wind was blowing fresh, we took him in tow as far as the eastern side of Peate's Ferry. As we dipped the boat's bow in answer to our straining canvas, the children crowed and laughed at the fun. But in the middle of this run, just above the Hawkesbury Bridge, we carried off our port stay-plate and the shroud whistled and danced

* Wentworth.

in the air. Casting off the boat, we quickly put about, and making Mullet Creek, a bay on the northern abutment of the bridge, came to for repairs. Having secured a preventive stay fastened to the bulwark, and taken two reefs in the mainsail, we ran over to Cowan Creek and made Refuge Bay—a favourite anchorage of the Sydney Yacht Squadron. Here we found the *Era*, flying the commodore's flag, and the *Vacuna*. The *Lurlie* was now in one of those curved sandy bays in landlocked waters, in which, in the blue Ægean, the Homeric seamen loved to rest. And, like them, we dropped our anchor from the bow and

ling in the bay. Late in the evening a fresh light showed. We hailed her. It was the *Isaa*, another S.Y.S. boat.

We were loth to leave this pleasant spot, and it was almost midday before we weighed anchor, with the wind blowing stiff from the north-west. We ran down the river to Elliot Island. Here, finding that our canvas strained the preventive stay, the skipper luffed up and took two reefs in the mainsail and set the storm-jib. Thus eased, the *Lurlie* sped swiftly across the bay to Brisbane Water, where we gave a stranger—a ship's boat with two officers in her—a lead over the dangerous bar. Here we found a totally changed scenery. Instead of jutting crags and overhanging trees, there were lines of poplars and gently swelling stretches of yellow pasturage. Steering due east, the



YACHTS IN REFUGE BAY.

let the stern swing round, then carried out a line, which we fastened to a "hollow stone" ashore. In the very words of Odysseus, "we stationed the well-made ship in the round harbour, near the sweet water, and my companions went out of the ship and skilfully prepared supper."* In Refuge Bay the "sweet water" comes from a waterfall breaking over the side of the cliff and shaded by spreading trees. In the interests of yachtsmen, a large square tank has been placed hard by, and is always kept full of water. Here as elsewhere, we found a delightful *al fresco* bathing-place, where, curtained by ferns and leaves, the spray fell with welcome coolness upon our heated bodies. Then we made our fire, and, having "skilfully prepared our supper," went on board to eat it.

The *Lurlie* at anchor formed a comfortable shelter. The boom was raised three feet, and a V-shaped canvas tent, closed forward, hung from it. As the boat had plenty of beam there was abundance of room for three or four men to eat and sleep in her. After eating with such zest as only a long day in the open gives, we lit our pipes and watched the lights twink-

* "Odyssey," xii.

channel led us past half-submerged mangrove-trees, and the quaint village of Kincumber, where the houses lay close enough for us to hail the men as we swept past them. Thus we came to the Broadwater—a name which recalls the Norfolk broads. When we returned to Brisbane Water, we crossed the stream and brought up at Rock Davis's shipbuilding yard. Being holiday time, there was no one working, but, taking a kindly interest in us, some men came down and put on a new stay-plate. For this service they would accept no payment. As we put off, Davis himself gave us a word of counsel. All day the heat had been intense, the great ball of fire sending down merciless shafts upon man and beast, and a storm was plainly imminent. Seeing this, "You might do worse than stay where you are," he said; and he was right. The skipper was of opinion that a periodic squall, known as a "southerly buster," was due, but he thought that an hour's run would take us safely across the bay to our anchorage at the Basin.

We had scarcely crossed the bar when suddenly the wind dropped to a dead calm, and out at sea there appeared a dark line, growing nearer and deeper every minute. It was the south wind tearing up the water.

In five minutes the squall struck the boat. It was no honest wind, but it came in angry puffs that seemed to drive the ship down instead of sending her onwards. For some minutes we continued to beat on, all three hanging out by our toes over the weather side, for we sorely needed ballast. Fortunately we had got our shrouds repaired, and we still carried two reefs in the mainsail and the storm-jib. Once the ship took the water over her lee bulwarks, and I saw the iron centre-board. Finding that the tide ran out so fast that with constant "luffing up" we were in danger of losing all steerage way, and having crept up a bit under the lee of Elliot Island, the skipper gave the order to let go the anchor and lower away the sails. It was tough work getting the mainsail down in the face of a fresh gale, and once the boom got jammed and we had to use a knife. When we had stowed away the canvas, we served round a refresher, and, wrapping ourselves in our rugs, lay under the combings. We had a long cable, perfectly new, and neither the anchor dragged nor the cable broke. But the wind blew as if it would lift the boat clean out of the water, and the thunder and lightning were incessant. The *Lurlie* was an insignificant atom in the swirling waters; we were completely cut off from human aid; now and then a great blaze of light would show the

grim interior of the boat, where we lay drenched, then leave a leaden darkness all around. It is at such times that a man clears away all doubts as to the meaning of right and wrong.

The storm died away as suddenly as it had come. The wind chopped round from south-west to west, blowing very light, although now and again an angry puff came, like the dying struggles of the storm fiend. After beating about for some hours, we stood up the river, and reached a safe anchorage on the opposite shore.

Next morning "Flint and Steel Bay"—as it is quaintly called—looked very peaceful after the turmoil of the preceding night, and with the wind blowing lightly from the south-east, we sailed quietly down the river to Pittwater, calling at Barrenjoeh, where we went ashore to send off telegrams. Another hour and we had crossed to the western side and reached our last stopping-place, where the bay contracts into a narrow passage under high cliffs, then widens into a perfect natural harbour, called, from its circular shape, "The Basin." It was just such a place as Virgil describes:—

"Here no cable holds the weary ships:
No anchor binds with curvéd grip."

And here we rested.

W. BASIL WORSFOLD.

THE TEMPTATION OF DULCE CARRUTHERS.

By C. E. C. WEIGALL.

CHAPTER THE TWENTY-FIFTH. A FRIEND IN NEED.



HER uncle had not long left the house before Dulce received a summons to repair at once to her grandmother's room.

She was lying down on her bed, trying to still the throbbing of her brain and head, which, from want of rest and the excitement of the last twenty-four hours, was almost more than she could endure. The noise in the street, each separate barrel-organ tune and rumble of carriage-wheels, seemed to be repeated and intensified a thousand times in her ears.

She rose at once in answer to Parker's knock, and smoothed her tumbled hair and bathed her throbbing brow and face with eau-de-Cologne, trying to bring back a little colour to her pallid cheeks, and endeavouring to control her quivering nerves to pass through the ordeal of the interview with her grandmother as bravely as it was possible for her to do.

That it would be a fiery ordeal she well knew; for her grandmother's capabilities of wrathful vituperation she had found to be boundless by previous experience.

But as life did not seem to be a thing particularly sweet and to be desired that afternoon, she felt that death itself might be bearable; and how much more a mere tongue-lashing, that could hurt nothing save the sensitive skin of self-consciousness?

Having borne so much, she could bear a little more; but still she longed for her uncle's presence, for in his absence she was so utterly friendless and alone.

Lady Spenshouse was seated alone in her darkened room, with a bundle of materials on a table at her right hand, from which she had evidently been choosing her mourning dresses and mantles.

She laid aside some deeply black-edged paper that she was using as Dulce came in, and carefully wiped her pen and blotted her letter before she looked up.

"How very ill you look, Dulce!" were her first words. "This sort of excitement does not suit you at all, I can see; and if you are not very careful, I begin to be quite afraid that you will lose your good looks earlier than other girls. It will be a great pity if you do."

Dulce seated herself in a straight-backed, unpromising chair, and glanced at her grandmother with a feeling of curiosity as to how her husband's death and the conflicting emotions of that terrible time had affected her.