

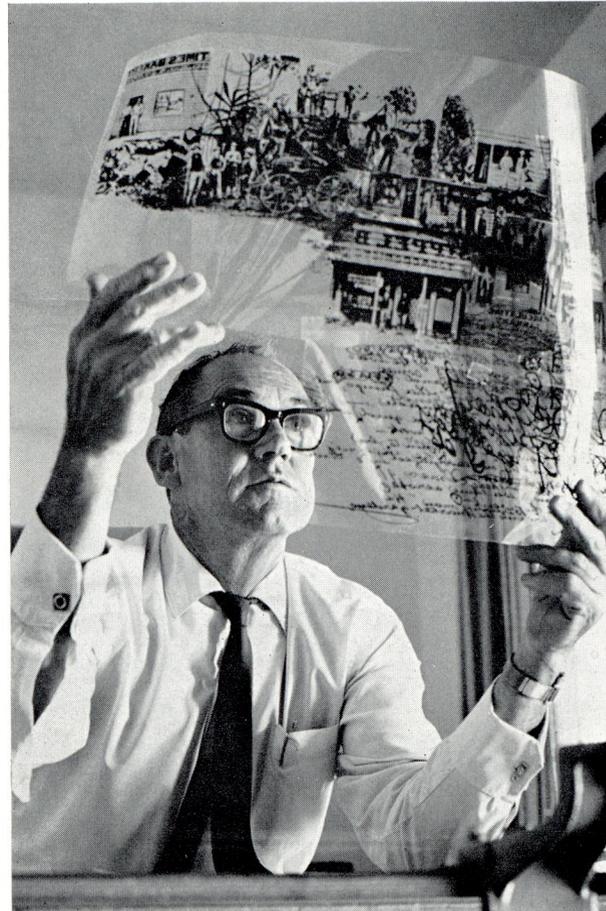
# "... the contract was mine"

By GORDON ANDREWS

One of the most moving moments in my recent life occurred on one of the periodic visits to Melbourne, after about eighteen months of work, when Mr. Monty Brown, Works Manager, Note Issue Department, took me straight up to the examining room where a "sea" of One Dollar notes, still in the sheet form, were being checked by scores of girls—millions of dollars. This was the second real climax to the work, which finally occupied approximately two years, the first being when I was informed that the contract was mine.

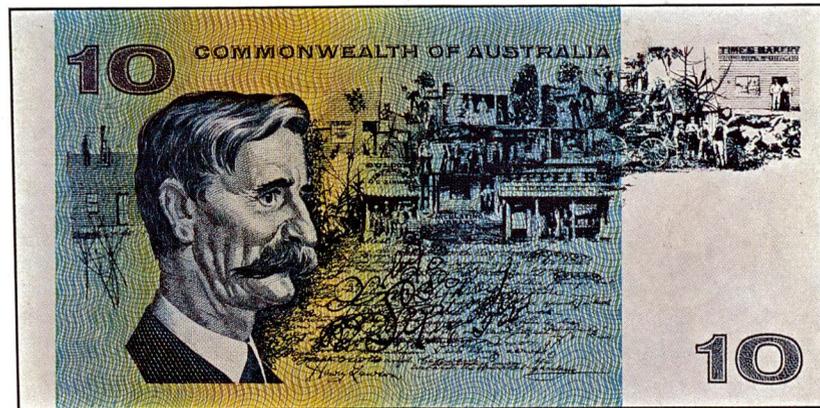
Seven designers were asked to enter a limited competition to design the Dollar notes, but only four were in a position to take on the long task. Alistair Morrison, Hal Missingham and Douglas Annand, too committed to other work at the time, were retained in the group of seven as consultants. After six months of work the competition was concluded with each designer having completed eight sides of four notes.

My designs were selected and although they had resolved all the basic design problems of the specifications and brief, it was now necessary to dig deeply into all security possibilities and to refine every detail to its utmost. From the beginning of this exercise it was intended that the successful designer should carry his work through to the finally printed notes and that the responsibility for the design remained in the designer's hands. The limitations imposed by



Above right: The designer, Gordon Andrews, checks a large transparency of the layout for the \$10 note.

Right: The design on the back of the \$10 note shows Henry Lawson's profile along with some of his writings.



Top: The front of the \$20 features the portrait of Sir Charles Kingsford Smith with pendulum tracings symbolic of wings.

Centre: The Queen's portrait and the Australian Coat-of-Arms appears on the front of the \$1 note.

Bottom: The "pastoral design" on the \$2 note features John Macarthur, the promoter of the wool industry in the early days of the colony.

reproduction processes and security requirements seemed endless.

A completely detailed written brief describing the various production processes, dimensions, the Bank's requirements and aspects of security was given to each designer and a thorough inspection of the printing plant in Melbourne was arranged. This provided the opportunity of first hand understanding of the possibilities and limitations.

There was now a long haul ahead when most of my working time was occupied in this task. Happily there was an atmosphere of co-operation and keen anticipation amongst the craftsmen and management of the Bank, making my work considerably easier than it might have been, as the success finally rested on the skills of engravers, precision photographers and first class printers.

During the preliminary stages of designing it was emphasised by the professionals that what is known as "white line"—that is, white line on a solid background—is the most difficult kind of intaglio to counterfeit, particularly when juxtaposed to fine open lines printed on the same white background. The traditional fine open line patterns are inevitably pale in the final result because of the excessive amount of visible paper.

This led me to break away from tradition and design the patterns in reverse—that is, fine white lines of the paper reading between solid lines of ink. This made it possible to get some strength and character into the color. Almost everyone, apart from the design consultants, was either dead scared of this idea or sceptical about the outcome.

The idea, for some reason, had not been developed previously. During the production of the plates for these backgrounds it was found that they were much more difficult to produce even with the accurate and precise machinery and cameras available which proved the point.

This form of line also gave us the possibility of superimposing a hairline in one color down the centre of a line of another color in perfect register from one corner of a sheet to another. This, of course, is taking advantage of the SIMULTAN printing its five colors simultaneously. This precision machine is built like a magnificent large watch.

Portraits were being drawn for the engravers from old photographs, chalk drawing and paintings. The requirement by the engraver was that the portrait should have a full tonal range to give the maximum possibility of variety in "cutting". It was my intention that the notes should look strong and virile. To achieve this the portraits should be rich in tone, vigorous in line treatment with lots of strong blacks and sparkling whites.

The engravers welcomed this approach and worked with patience and enthusiasm, showing unprecedented co-operation. It takes two to three months to engrave a portrait. There were five engravers engaged in the work. One of them, being borrowed from the U.K., produced the two portraits on the Twenty Dollar and it is interesting to observe the difference in style between his work and that of those permanently employed by the Bank.

The portrait of Her Majesty was commissioned to Mr. Douglas Glass during the competition period with a careful brief from the designers concerned—indicating the position of the head—no tiara or coronet—the kind of lighting and regalia. Her Majesty graciously consented to all this. We did not want a "pretty" portrait, but one which had the dignified appearance of a monarch.

It was my intention not to make the notes an Australiana catalogue but to use interesting Australian subjects. However, it would have been suicide to have left the sheep out—so wool and wheat paired nicely. The Ten represents Greenway and Lawson—roughly suggesting the Arts and the Twenty, Kingsford Smith and Lawrence Hargrave—flight, inventions and adventure—so important in Australia's history.

The programming for the geometric lathe operator, a long intricate process of building up the background tints on to glass negatives, was carried out at "Organisation Giori" in Milan by Mr. Monty Brown and myself. Geometric lathes are intricate and extraordinarily precise machines which can, by complicated arrangement of gears by a skilled operator, draw wave and complex lines using a diamond point to cut into a fine resist on plate glass. The lines thus produced iron out the crude quality of the originals which are hand drawn. The master lines produced are then stepped and repeated to the overall pattern. The patterns are eventually separated into their particular color and separate plates are produced for each color.

The second process is the intaglio printing. A steel plate is hand engraved during months of extreme patience and skilful work, and its image transferred to the large plate with say twenty-five impressions, all accurately placed to register with the offset print. This plate is fitted around the cylinder of the intaglio press and the "graves" filled with a heavy solid ink. The surplus ink is wiped off by continuous calico wiping sheets and the image is transferred to the paper under great pressure and heat. This deposit of ink can be felt by passing the finger tips lightly over the surface of a note. This is recognised as one of the security features of most currency notes.

While the background patterns were being built up by machine the originals for the intaglio plates were being drawn. Certain elements, such as the title and other typography, the numerals with their inserts of "white line", were established and engraving began. Tradition in bank notes can not be entirely swept aside. The engraver's art is still one of the most important security assets.

The original drawings for the engravers were six times the printed size and included all the detail required for the engraver. Forced line photography was used on both sides of the Ten Dollar, and it is interesting to note how accurately the engraver has interpreted this treatment. I had feared that this would not be possible.

The SIMULTAN machines were tested for a week or so to check out all operations and to run them in. Then finally a set of \$1 plates arrived from Milan—they were late and time was getting drastically short. The plates were fitted and checked out perfectly for register.

The ink chemist was brought in—he was extraordinarily sensitive to the job and really knew his work of blending colors.

However, as with most new ventures, there are many unknowns and here I thought, for the first time, that I had failed through ignorance of the inking ability of these machines. In fact, nobody here knew precisely how much ink the machine should deliver to the paper for the perfect print. The first run produced a bitterly disappointing, washed out color.

The strong colors I had fought so hard to preserve during the designing of the backgrounds were insipid. The ink maker said "run more ink" and the printer said "the ink film is now maximum;" we struggled to strengthen it with denser pigment. The color simply became "dirty". Finally after exhausting and persistent experimentation the right film of ink was established and the color brought up to the strength desired.

The ink maker and the machinists were endlessly patient with me when I tried one combination of color after another with each note, having to wash up the rollers, clear out the ink ducts and start again. A painter may handle colors boldly in his big scale and each color can be optically separated and enjoyed but in the fine scale, where lines of color alternate, some otherwise beautiful combinations simply look grey because the eye is not able to distinguish them as separate colors.

A complex problem such as this calls for a great deal of moral support by those close to it.

I am indebted to the Bank for its unswerving understanding and lack of interference with the designs in progress, to the consulting panel for their frequent constructive criticism, to the engravers who strove with extraordinary patience and skill to translate the black and white drawings into engraved steel plates without distortion of my intention, and the many craftsmen who converted my designs into bank notes.