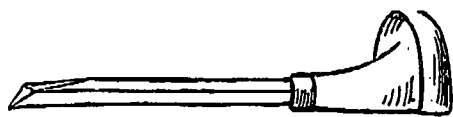


sufficient to show how radically different are the little implements.



This tool is held in the palm of the hand, with the blade resting against the thumb for guidance. It is shoved from right to left, *ploughing* out the wood. It is about half the size of the original.

Pine and pear woods are now useless. We must have a firm, close-grained, hard wood, free from cracks and knots. The wood used by Bewick is the wood we use to-day—it is boxwood—and is only found of proper density and texture in Asia Minor and Turkey.

It comes to us in logs which are sawed crosswise into rounds, a little over an inch in thickness, which the boxwood preparer planes down and scrapes to the height of ordinary printing types. If any knots or curly places are then developed, the wood is sawed up into small squares which are afterwards glued together, forming blocks of any size required by the engraver.

The block on which the picture is engraved which appears on the front cover of this paper, may be composed of a dozen or twenty little squares, glued together as stated above.

Sometimes the block is covered with a very thin wash of Chinese-white, and the drawing made directly on the wood.

More often, nowadays, the drawing is made on paper, or painted on canvas, and then by photography, transferred on to the wood.

Now, if the drawing be in lines, so produced by pen and ink, or pencil, the white spaces between the lines are carefully cut, or dug away, as in the knife work, but with a graver as pictured above. Of course the engraver has a number of these tools, varying in size and shape.

If the drawing be made with a brush, in "wash" or "tint," then there are no lines for the engraver to follow mechanically; so with his tools of various sizes he cuts his parallel lines—the lines which appear white on the printed sheet—and gets his gradation of color from white to black by the difference in the relation between the white, or cut line, and the black, or surface line—this black line is that portion of the wood left standing on the original surface of the wood.

For example, in the lighter portion of the picture you will observe that the cut line is comparatively broad, while the surface line is very thin and sharp. Sometimes a transverse series of lines is cut across the original lines, producing a series of dots, which raises the tone of the color to something nearer white.

In the darker parts of the picture the white line becomes thinner and thinner, and the surface line becomes broader and broader until it merges into solid black.

This is the whole principle of engraving on wood, so far as the mere cutting goes. But now comes in an all-important factor.

Has the engraver any art instinct or feeling for tender relations between the various tones? If yes, he will engrave a stormy sky with such wavy lines as will suggest the tumbling movement of the rolling clouds. A quiet sky he will cut in very smooth, parallel lines that will simply give the weight of color necessary for the harmonious whole of his picture. And so on with the several objects he has to engrave.

He will be mindful, if engraving silk or satin,

that he cuts a line that will suggest the sheen of the fabric; and grass, trees, water, rocks and flesh should be treated with a line that conveys the quality and texture of the objects represented.

This is all there is to it. You see how simple it is. You may remember the story of the old Scotch sailor who returned after a long voyage, with his pay in his pocket, and wandered, sailor-like, around Glasgow, inventing pretexts for spending his money.

He got into the clutches of a dealer in second-hand articles, who advised him to buy a fife, which he called a flute, in these words: "Buy a flute, mon, buy a flute. Ye hae only to stap yer fingers aff an' on these sax wee holes, an' ye'll hae ony toon ye like in a wee while's practice."

Just so simple is engraving. Given a few gravers and a boxwood block, and you will have any picture you desire, after a while that is not *vue*.—*Youth's Companion*.

The Congo Railroad.

WE rejoice to announce that the first section of the Congo railroad has been opened. It extends only from Matadi to the Leopold Ravine (about two miles), and is therefore a very short section. But the task is "well begun," which is proverbially "half-done." The first Belgian locomotives are actually running within sound of the Falls of Yellala. What a wild dream this would have seemed thirteen years ago! There is, of course, no passenger traffic, nor even goods traffic as yet; but the locomotive and the ten-ton trucks which follow it will wonderfully expedite the prosecution of the works by facilitating the moving of earth and stone, and the transport of material in general. Henceforth there is reason to hope that the work will progress much more quickly, especially as arrangements have been made for 500 navvies to be added to the number at work on the road month by month, until there are 4,000 engaged at different points along the line.

Mr. Young, writing from Matadi on March 6th, says:

This has been an important day in the history of the Congo railway. For the first time the shriek of the locomotive, such a well-known sound at home, has been heard on the Congo. A trial trip was made for some distance up the line, which is now laid for about two miles. The strange sight caused great excitement among the natives, who looked on from a respectful distance. Exclamations of astonishment were heard from all sides, and mouths and eyes were wide open with wonder.

I heard one of the workmen say to his companions that "that," pointing to the engine, "would be able to go to Lukunga in one day." Not a bad guess by one who knew nothing about such things except what he had just seen.

There has been a sad mortality among the colored workmen, arising apparently from some native disease, and affecting both the Kroom-boys and other laborers brought from a distance, and the natives of the country. The sickness has frightened many of the men away to their homes, and is not well understood by the European doctors. African natives are not inured to continuous hard labor, and many may have been knocked up by continuous toil. But they are improving in this direction. The works so far are perfectly satisfactory, and the engineers anticipate no great impediments. It will be a glad day for the millions of the Congo basin when the cataract region, that has so long proved an insurmountable barrier between it and the rest of mankind, shall be pierced by a road, over which the unwearied, unsuffering iron horse may carry, safely and quickly, any number of missionaries and any amount of material. God hasten that day for the gospel's sake!—*Regions Beyond*.

The Songs My Mother Sung.

"*Angelus Domini nuntiavit Maria!*"
St. Mark sets the peal for an hundred chimes clear;
"*Angelus Domini nuntiavit Maria!*"—
Thus the low prayer of my swarth gondolier.

The purple curtains of the west
Have almost hid the sunset's fire,
Which, flaming Venice-ward, a crest,
Lights softly dome and cross and spire.
Deep lie the shadows in lagoons
Far as Chioggia's sails and reeds;
The air with landward perfume swoons;
My oarsman bows and counts his beads.
Our craft rides silent on the stream;
And, floating thus, I idly dream.

And dream? Ah, fair queen of the sea,
Not all thy witchings can enthrall
And fold the wings of memory.
A thousand leagues one tone can call,
A thousand leagues one picture bring
In fadeless form and scene to me;
And though thy angelus thrilling ring
Out o'er the Adriatic Sea,
I hear through all its rhythmic rung
Those dear old songs my mother sung!

O angelus-hour to heart and soul,
O angelus-hour of peace and calm,
When o'er the farm the evening stole,
Enfolding all in summer balm!
Without, the scents of fields—the musk
Of hedge, of corn, of winrowed hay—
The subtle attars of the dusk:
And glow-worms like some milky way;
Within, as from an angel's tongue,
Those dear old songs my mother sung:

"From every stormy wind that blows";
"Softly now the light of day";
"Thou hidden source of calm repose":
"I love to steal awhile away";
"My days are gliding swiftly by";
"Depths of mercy, can there be";
"Jesus, look with pitying eye";
"Rock of Ages cleft for me";
"Saviour, on me thy grace bestow";
"Praise God from whom all blessings flow."

"*Angelus Domini nuntiavit Maria!*"
Sweet were the echoes that fell on the ear;
"*Angelus Domini nuntiavit Maria!*"
I worshipped betimes with my swarth gondolier.
—*Chautauquan*.

Faces.

What on earth could be diviner,
Than the wondrous skill and plan
Of our God—the great designer—
When he made the face of man?

For among His whole creation,
Never yet alike were two;
'Tis His sign of consecration,
That each face has something new.

Children's faces! where joy bubbles
Like a gushing laughing spring,
Never dreaming of the troubles
That the coming year may bring.

Age! faces! sweet and tender,
Tranquil as a summer sea,
Looking toward the gates of splendour
Where the "many mansions" be.

Sad it is that many faces
Bear the tainted marks of sin,
That should mirror only graces
Of a clean white soul within.

There are features never wearing
Faith's triumphant, joyous gleam,
Faces stony and despairing,
For some shattered, vanished dream.

Others smile in sweet submission,
Meekly kiss the chastening rod,
Ne'er bewailing their condition,
Doubting not the love of God.

There are cheeks all stained with traces
Of the tears that fell like rain,
Fell upon the dear dead faces,
That will never smile again.

Many are the faces waiting,
Faces loved, but gone before,
Watching till we join them—waiting
Over on the Jordan shore.

Sweet will be the glad embraces,
When we meet our dear ones then;
We shall know their loving faces
And we'll never part again.

—RENA ROSS, in *The Household*.