

K. M. DALLAS

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# HORSE POWER



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Publishers, Fullers, Bookshop, Cat & Fiddle Arcade,  
Hobart, Tasmania

C. L. RICHMOND & SONS PTY. LTD.  
DEVONPORT, TASMANIA

1/12/68



# THE FARM HORSES

**H**ORSES and man worked as a team — the man spoke of driving the cart, wagon, drill or binder, not of driving the team unless it was in haulage work on roads. He was as much Guide or Conductor as Driver, for the horses knew their job while he guided the plough and corrected their slight deviations from the desired course. So there was a language with a few simple words, all of Anglo-Saxon origin. The pattern of use probably became more fixed when horse teams were no longer led while at work but were guided by voice and reins. Some ploughmen had teams so well trained that reins were not used at all; there was only the voice to guide.

The language was simple and oral — it doesn't go easily into print. There were many variations of tone, emphasis and pronunciation. "Whoa", "Whoa-back" (wooback); "Gee", "Gee-back"; then "Wooback geeback" had definite meanings though "Gee Nugget" might mean just "go" — if he were standing awaiting the order or "veer right a little" if he were on the move. "Gee" and "Geeback" meant to veer right or turn short right. For left deviation it was "Come here" (koom 'ere; koomyer; koomther; koomether) but to turn short left "Wooback! Whoa Komeher" was used. With two horses abreast it was: "Wooback Wallace, koomyer Nelson" if Wallace was the nearside horse and Nelson the off, for left wheel; for right wheel it would be "Wooback Nelson, Gee Wallace". So "Gee" meant "Go" or "Veer" according to circumstances while "Whoa" "Way" or "Wee" mean "Stop" while "Wooback" meant "Step back" but was qualified by the "Koomyer" or "Geeback". To go forward "Gitup", "Giddup there", "Stand up" or "Standup there" might serve in some conditions but stop was always "Whoa" or some close variant — save with the retired Colonel who addressed his carriage horse always with: "Halt, Marcus, Halt!"

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To urge on a flagging horse or team "Gee" was used with embellishments — "Gee Dimon you loafin' cow" — but when the team was fresh and over eager or the ground stony and rough the soothing calls of "Steedee" or "Gentleee" were common.

The given names were an integral part of this language and it is difficult to enlarge the list. For mares, Bell, Bella, Blossom or Bloss, Bonnie, Beaut(y), Brisk, Bess; then Daisy, Dolly, Duchess, Darlin', Darby, Dimond or Jewel, Jess, Gipsy were most serviceable for emphatic damns or soothing calls — "and you had to be saying them all the time so they had to be easy to say" as Bert put it. For geldings, Boxer, Banjo. Drummer, Clyde, Nugget, Punch, Pride, Robin, Roy; an army bracket, Captain, Major, Trooper (General simply wouldn't do); Duke (look or Dook) Noble and Prince (but never King) and folk heroes like Nelson and Wallace and possibly Banjo (the bushman's poet). Others less common were, for mares, Flower, Trixie, Mettle; for horses, Sharper, Farmer, Trimmer, Boss, Jack.

There was always something dignified or ennobling about the names, but they had to fit that pattern of language. Notice for contrast the common names for working bullocks: always neuter for sex, paired like the bullocks themselves and simply descriptive as a rule — for the driver's main business was with his leaders. The best pair I knew were appropriately Nimble and Lively; fine, tractable animals they were. Bluey and Bounce, Bright and Baldy, Brindle and Roan, Redman and Curly, Snowey and Darky (or Nigger), Spot and Star, Poley, Drummer, Tiger, Bowler. There was no dignity about them; always under command, under the yoke; the whip was indispensable, the badge of authority, the sign that backed up the words, the conductor's baton. Dumb, servile creatures — the names mattered only with the leaders and poles.

The horses' names identified them as persons and went with them through life but they had to fit the rhythm of the language. They had a status; Ted Harmon's Nugget was as well known as Ted. They were part of the family; an intimate part of our daily life; our companions in work and sometimes in play. They shared our prosperity and adversity, our good and bad times, our winters and summers, fair weather and foul. We depended on them as they did on us. From infancy we learned from them and through them many important moral lessons, such as kindness and care for the feelings of others. They were persons, especially to children. They had the temperament and faculties proper to their kind but they grew in the same climate and soil as ourselves and were schooled by us and by their work mates to be tractable,



civilised beings. Each had some distinctive qualities which became more fixed with the passing years. There was always something new to learn about them or from them. What they did was news and was told and retold and woven into the legends of those times, an integral part of the folk lore of the people who tended and used them.

Most of our horses were bred and reared and trained on the farm. They were nurtured as foals, guarded as yearlings and schooled at two years or so, with light work at three. By four years they were fit to take their full part in the work on the land or on the road and were trained for special tasks as their aptitudes became clear. The leaders and shafters of road teams were specialists; the near and off-side horses of plough or binder developed the special skills required of them. In the art of ploughing the team was an extension of the skill and faculties of the ploughman. They knew his ways; they marched straight forward on the line of the markers (strike out sticks) set up for each land, their ears attentively turned back for his guiding calls, their mouths sensible of the pressure of the bit. At the end of each furrow they held straight on until their chests touched the fence and waited the accustomed call to turn short right or left to lead into the returning furrow on the other side of the land.

The art of ploughing was at its highest while the single-furrow plough prevailed — the long-handled swing plough. The makers' names and reputations were as well known to the masters of this art as were those of wheelwrights, shipwrights and violin makers to those who used their masterpieces. It was a rare privilege to hear masters like the late Arthur Lamprey of Sassatras extolling the merits of the ploughwrights whose works they had so often used. He won his first championship in 1902 and his last in 1946 when he was approaching seventy years of age.

The first all-iron ploughs were made in Scotland about 1800 and contemporary accounts mention "winged" ploughs — "swing" may be a corruption of this. No matter — the iron plough and the Clydesdale breed came from the same regions as the first reapers and the first horse threshing mills. Ploughs of old had wooden beams so the main part of the iron plough was always the beam just as the mouldboard, first made of wood, then shod with iron, then made of cast iron, then of chilled steel, was still a "board". The lighter, stronger iron plough had a powerful influence on improved farming wherever Scots ploughmen, horses and implements were used. Often ploughs were made by country blacksmiths but the mouldboards, shares (pronounced "Shears"), coulter and wheels were factory made. The coulter was a heavy, vertical iron knife which cut the turf ahead of the point of the share which peeled off the strip of turf from the subsoil; the

mouldboard turned the strip out of the furrow and laid it over against the last strip turned. The straight coulter was most common but we also used a "rolling coulter" or skeath, a thin, sharp vertical disc which cut the turf more cleanly.

The swing plough was long; there was a shorter, lighter plough with wooden handles called a Duck or Scotch Duck, probably because its original trade mark was "Dux". It was handy in short work and in light soils. There was an endless variation in conditions of soil: stiff, loose, wet or dry. For grass or stubble field, hillside or flat, stony or gravelly, clear or obstructed by stumps or fallen trees, straight work or crooked, the swing plough did the most efficient job.

The strike out line was marked with stakes lined up at half-chain distance from the fence or base line. Some used a measuring stick — is this the Rod or Pole of land tables? — and some relied on even paces, lining the sticks by eye. "Stepping the Chain" was a common competition at country sports and any one who was a foot in error was no class. The first furrow was a mere scratch on the turf. The horses marched on the line of stakes, stopping at each for its removal. The plough returned on this line, skimming a slight furrow in the reverse direction. Then the first real furrow was turned back on the second strike furrow and the return furrow was ridged up against that one. This completed the crown of the first land and furrow after furrow was laid on left and right of the crown until a chain-wide strip was thus laid over, in even lines, the last furrow as close to the fence as the team could work, with the end of the swingle tree scraping the posts. (The trace chain was always hooked point inwards to the iron clamp at the end of the swingle tree.)

The second land was struck out at a one-chain interval from the last furrow of the first. When a half-chain had been ploughed on each side, the intervening strip was done, leaving a wide finishing furrow in the middle. If the last furrow turned was an even six inches wide then the ploughman was satisfied.

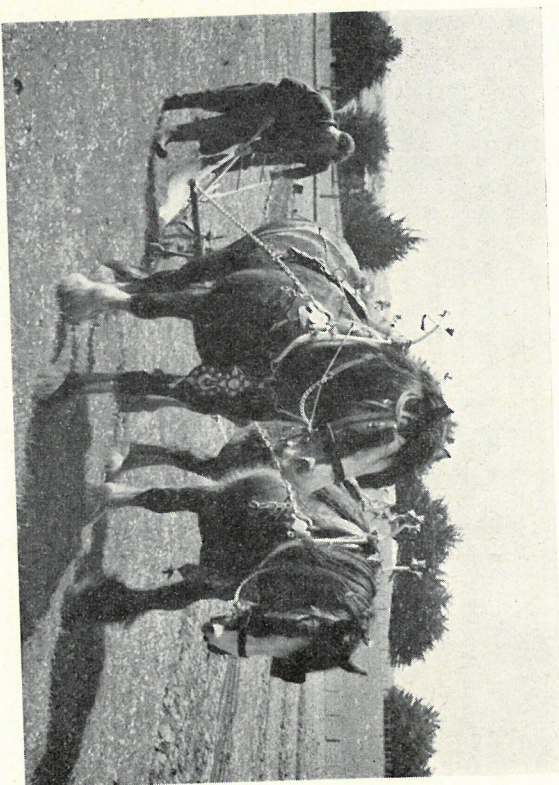
So all day and every day the horses marched "at attention" — one in the furrow, one on the land — necks arched, eyes forward, ears pricked back to every call; at even pace, neck and neck, as lagging or faltering might cause the plough to run askew. Sharp calls to the lagging one, a "steadee" to the over-eager, a stream of soothing or encouraging sounds, whistles shrill and long drawn; scolding, nagging, cursing — "Gee Dimon you loafin' cow!" — kept them fully alert on their course and let the ploughman concentrate on holding the share to proper width and depth. He needed both hands for that; in real need he might loose one grip to pull on the taut plough line. So with names that lent themselves to horse language, names repeated a



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thousand times a day, that could sting like a whip lash or be drawled in a soothing refrain, he could keep both hands on the handles. There was poetic rhythm in it. So no farmer called a mare "Victoria" nor did Joe Augusteen dub his colt "Bismarck", but could be heard intoning: "Vo! Vay! Vo! Vay! Koom idder da Bonnie da Clyde!"

It was quiet work; round on round, hour by hour, with short halts for a breather, a swig of cold tea or a yarn with some ploughing neighbour. At dinner time, turn at the end, start the ploughing into the new furrow, stop, drop the chain traces from the hooks

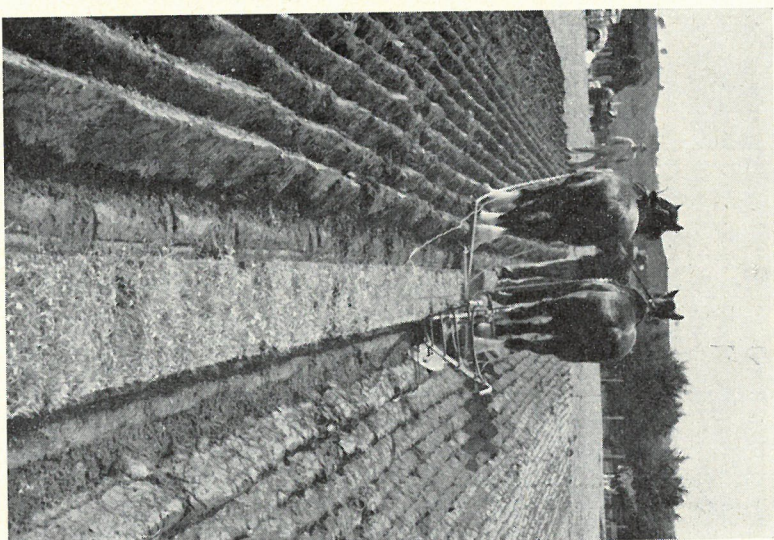


Ross Elphinstone's team striking out — Ridgley, 1967.

on the haimes, unclip reins and couplings and walk them back to the stable for water and feed. They had to have their time. Then back for the long afternoon. It was almost silent work; the soft thump of hooves on damp soil, occasional clink of chains, the soft murmur of the yielding sod as it flowed off the mouldboard — none of this was loud enough to drown the sound of heavy breathing through the distended nostrils, especially in uphill work. The sounds of soil and plough are lost now, drowned by the blattering exhaust of tractors — the pleasant reek of sweating horses or warm soil has been replaced by the stench of deisoline. In the silences as they stopped on the headland there were the distant sounds of cattle or the cries of seagulls scrambling for

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grubs in the furrow. Then: "Wooback Nelson, Gee Clyde", and they turned short with a rattle of swingle trees and clink of chain, moved along the headland, stopped and swung short round into the furrow — Clyde in the furrow, Nelson on the land. A slight lift on the handles to point the share down, then



Ploughing Match, Ridgley, 1967. Team of R. Smith East Yolla (Bonnie and Blossom).

"Gee Clyde, Gee Nelson" and they were away, peeling off another furrow. Towards the end of the day the pace was steadier but still it went on; the bar-taut chains, steady pressure in the collar, the proudly arched necks, the pricked ears, the firm true step. Come cow time, the plough was set in ready for the morning, the chains dropped, reins unclipped and hanked up and the team turned for the gate and home; water and feed, then at bedtime, more chaff and straw bedding spread in their stalls.



In the morning, before daylight, feed, and clean up stalls; after breakfast, collars and hames strapped on, winkers slipped over warm muzzles, bits in mouths, throat lash buckled, and out to the daily round of finishing old lands and opening new.

Let's go back to the beginning. Farm people from infancy to age saw generations of horses come and go. They knew them as foals and youngsters, hot-headed and flighty in youth, steady and reliable in maturity, slower and enfeebled with age, lingering on at grass in some quiet corner or put out of their misery when loss of teeth or a hard winter made life a burden. They nursed them in sickness, tended their injuries. There were favourites, of course, but not pets. We knew, though we had the lesson already — Captain Smollett's warning: "Spoil to-seele hands, make devils". We knew pets became pests. So, though old Brisk had been reared on a bottle when her mother died from snakebite, and would follow Uncle Joe into the kitchen, she learned no bad habits thereby. She was the staunchest of leaders in a road team; she never chuckled it. We discovered one gap in her training: in the shafts of a dray she would not back it. You can't teach old dogs new tricks.

There were rogues that could open gates and doors, break through fences into standing crops, rifle chaff bins or gardens, take advantage of green, new-chum drivers and refuse to budge if they disapproved their intentions. Sometimes mere tricks became vices but this was rare. Vices were usually traceable to neglect or ill-treatment when the horse was young. We had one young rogue who had us baffled for days — each morning she was in the green oat crop but we could not find how she got there. A seditious green bounded this paddock but we could find no tracks through it. Then she was seen at her trick — walking a fallen tree which lay athwart the creek, quite high up from the ground. The clever monkey! So to stop that a barrier of crossed timbers was placed across her bridge. Then she was seen to walk to the barrier and stop. To slip meant a fall into the gully. She turned right round, all four feet in that small space, and walked back. Yet no one had trained her in that balancing feat.

The prevailing belief was that vices came from bad training. Defects of form were ascribed to breeding but never, or very seldom, vicious qualities. This was because mating was carefully considered and a mare that was known as a jib was not likely to be accorded the privileges of motherhood. So the fault was not due to inheritance. "He got like that when old Harry worked him with sore shoulders" or "He was all right till old Kroofter had him and half-starved him" might serve as typical explanations. It was poverty or vice of men that made poor or vicious horses.

The Clydesdale was the predominant breed though some strains of Shire and Suffolk could be found. Also many half-draught horses were bred as general utility horses; the light tractors. Bay was the predominant colour, with black points — black hoofs and hair (the pure Clydesdale usually had white points and the hind legs of our farm horses sometimes showed this). There were often white patches on head and muzzle or at least a white "blaze" on the forehead. Blacks, chestnuts and iron greys were rare and an all white horse rarer still.

The brood mare was usually in middle age and the decision to breed was never lightly taken as a mare heavy with foal could be given only light work. Gestation takes eleven months and while the foal was young only occasional light work could be done.

Clydesdale stallions travelled the farming districts at the off season, led by their groom or owner, who usually rode a mare. Over a round of many miles and days the stallion served a large number of mares, sometimes two in succession at one farm. Then he was led home to renew his strength for the next round, usually three weeks later, and another three weeks after that. When the mare refused him this was usually taken as a sign of pregnancy.

Service was done in an open yard screened from public view — behind the barn. Children were chased away — so the play was to hide in the barn and watch proceedings through the cracks. Boys only of course; girls were supposed to be indoors and were not even told of such things. Horses were for men only. Girls might learn the facts of life from observing bulls and cows but rarely and by accident from horses.

The mare was led into the yard where the stallion was parading, stepping jauntily, led by his groom. There were overtures, often with a wooden fence between to protect an impatient sire from being kicked by a reluctant mare. He nuzzled her neck and nipped her on the withers, evoking squeals of protest or excitement. When the groom was satisfied that she was enraptured, and therefore unlikely to kick, the stallion was led round, the mare's head held firmly and nature was allowed to take its course. Sometimes, after he had regained his pride, the serving was repeated, "to make sure". This might have depended on how many more mares he had to cover that day. So it is no wonder that after a round of four or five days the lord and master was ready for a quiet weekend. One summer day I had to meet such a one when half way home and take over from the groom. There were six miles of hot, dusty road. He shambled listlessly, stumbling frequently, and giving great silent yawns at intervals. All passion spent, he showed no interest in the mare I rode, nor she in him.



As pregnancy advanced the mare was given light and occasional work. Muscular twitchings in her flank were held to come from the life within. The space between the dray shafts was too small for her comfort. She was kept at grass in a home paddock and watched closely. The waxing of her teats showed birth was imminent. Then one morning there was a foal — great excitement for children. The quaint form, long, bony legs, short neck — a caricature of a horse. The elders studied sex, colour, hoots — all points where his breeding showed. After a few days his tail was docked — the lower joints removed; his would never sweep the ground. (In Northern Europe horses wear long tails which may persist from a demand for horseshair or from the nuisance of flies and midges in the hot summer. The Norse still plait ropes of horseshair for their fishing boats; they do not stiffen in freezing weather as hemp lines do.)

At first the youngster was just "It" — "he" or "she" came after. It was weaned. This was long after birth, after the teeth had begun to appear and he could graze with forelegs wide-spread. Long legs and short necks make grazing difficult; he learned it by imitation as his stomach could tolerate green food. Dry chaff was for working horses after their grinders had grown. As the mother resumed work the foal sometimes went along with her and was suckled at intervals but with field work this was not safe; the foal was left in the yard and had regular meals like the rest of us.

After weaning, the yearling grazed with the other horses and began to look like a horse. The barrel grew longer, the hind quarters larger (a horse grows one end at a time). Early in his second year the colt was gelded — a job requiring skill and worth the vet's fee. He was thrown, tied firmly and some anti-septic was applied. Afterwards he was kept in a shady spot and watched for signs of clean healing. After this his schooling began.

The yearling or two-off youngster was commonly handled but not petted. He learned the ways of the stable by association, becoming familiar with stalls and doors and the sounds and smells of men. After two years the forming of his mouth began — and he was given his name, chosen from that limited range of conventional names. Whatever baby name the children might have given was soon dropped. He was isolated in a small yard and two strong men cornered him, holding him by the muzzle while a halter was put on. No noise, no fuss, just firm overpowering. No hurting, no dogs, no kids, no distractions. Then a bridle was put on and a bit inserted in the tender mouth — often it was of yielding stuff like a hard rubber, not callous steel. A surcingle or body-belt was firmly buckled round his ribs and short reins made fast to this. Then he was set free to get used to it. Grazing

was impossible; the more he tried the more the pull of the bit registered in his brain. Biting was intermittent but each rigging and unrigging taught him to relax in the presence of men. He was learning control and deportment. His partnership had begun.

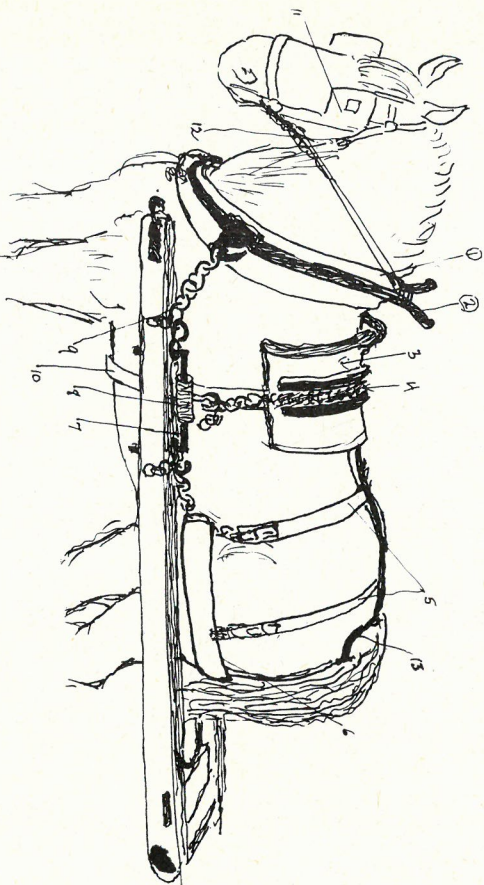
The first control by men was with long reins in a small yard. As he learned response he was enlarged to a grassy paddock and guided in changing directions. The next stage was work. A collar and haines were fitted. By this time his neck and shoulders were maturing and the saddler made his collar to measure. Outside of heavy leather; the inside of light leather or coarse woollen saddlecloth. The stuffing was of straight-laid clean straw — we sometimes supplied stuffing of hair from the colt's own tail. The haines were strapped over it and traces of rope or leather were led to a small sledge or a log. (Chain traces might startle him and injure him if he struggled.) Again he was driven round in the open with long reins. As he developed steadiness his lessons ended and real work began — usually in the middle of a road team. As farmers often paid others to do their carting he was apprenticed to one of these and yoked in the middle of the team. The spider harness with its heavy chains was quietly put on (never scare him) and the trace hooks quietly slipped into links on the traces of the horse behind him, while those of the horse ahead were hooked into free links on the front of his traces. He thus had to go along; to control any resistance a halter on his head was tied short to the chain trace ahead of him. There was usually no fuss; as a foal he had often walked beside the team. The spider (four heavy leather straps radiating from a leather disc on top of the rump) kept his traces suspended if slack but as the team moved the tight chains made no noise. He soon steadied down — a well-schooled youngster took it all calmly and pulled steadily from the start. A few tantrums were regarded as a sign of spirit.

His apprenticeship had begun — not of much use and incapable of doing much harm. After three or four trips he might be pulling like a veteran but knew nothing more — so now he's half of nothing and all a private yet. Road haulage was a simple school, sustained pulling at a three-mile gait. In our parts three ton loads with three horses were normal. With more horses and heavier loads the strain on the shafter was too much on the hills. It took more braking and on winding uphill going the shafter and his next ahead (the one "on the points" of the shafts — we always said "sharves") had more than their share. Council by-laws limited weight of loads by the width of tires. In the flat country road teams were often in pairs, with twin sets of shafts and four or six horses ahead. This gave more effective power but had one defect — they had to pull in the same tracks as the



wheels and the smooth surface made their shoes slip somewhat so they tried to bore each other over to walk on the crown.

The chains were heavier than plough chains as they had to sustain the in-line effort; a heavy wooden spreader kept them from galling the body and hind legs.



The Shafter

- |                    |                   |                 |
|--------------------|-------------------|-----------------|
| 1. COLLAR          | 6. BREECING       | 11. WINKERS     |
| 2. HAIRIES         | 7. TRAVELLER IRON | 12. THROAT LASH |
| 3. CART SADDLE     | 8. TRAVELLER      | 13. CRUPPER     |
| 4. BACK CHAIN      | 9. TUGS           |                 |
| 5. BREECING STRAPS | 10. BELLY BAND    |                 |

The leader of a road team had responsibilities and was chosen because he was the most sagacious, tractable and free-stepping. He (or she) set the pace and also the line of pull by hanging out on curves in response to the driver's orders. On down grades he moved fast to keep trace chains from sagging and the team in line. On rough tracks, through bogs and fords, or at night, he was the lookout, the driver's eyes and ears. Reins were used but were seldom necessary with a good leader. Law required a single rein on the near side to pull off for other traffic but this was seldom needed. The driver's place was near the wagon itself — the brake was his sheet anchor. So the leader was usually out on his own, controlled only by word of command. The combination of qualities wanted was found more often with mares. Geldings were stolid, reliable, but seldom brilliant. Stallions were rarely schooled for regular work and so were ungovernable; certainly

unbiddable. Mares had the quicker response of a mercurial temperament.

The shafter had to be powerful and steady. His work called for a reserve of power to take the whole weight in tight places or hold it back on steep grades. He did his share of steady pulling but was usually allowed to plod along and was called on for full power in emergencies. He was the low gear and the reverse gear of the prime mover — the starter and stopper, under the driver's immediate control. His harness was quite different. A heavy, square cart saddle, of wooden frame and padded underside, had a deep-grooved iron channel piece over the top in which the heavy back chain lay. It also had a stout belly band of two-fold leather. The chain held the weight of the shafts (with a dray, of the loaded cart as well). It was made of flattened links for free movement in its greased channel. On top of each shaft there was a steel bar a foot long and raised above the shaft on two short bars which were bolted through the timber. On the bar was a hollow steel traveller with a hook for the back-chain. This fitting allowed the shafter to move forward or back as he alternated between pulling and backing. The short chain "tugs" by which he pulled joined his hairies to the hook on the front of the traveller iron; the after hook was for the chain links of the breecing. The tugs often had a spiral spring link against the sudden shock of a heavy strain; "th' britchin" was a broad band of triple leather supported by heavy straps radiating from a leather padded steel ring on top of his rump. There was also a crupper from which a strap ran to the back of the saddle.

The shafter then was the steering power, reverse power and, in tight places, the sole forward power too. He was boxed in and in any accident to the wagon he had no hope of breaking clear. So when things went smoothly he was just allowed to plod along, carrying always the weight of shafts at least. No place for a spirited animal.

I have seen a powerful shafter, under pressure, snap the stout belly band like a strip of paper. It was a stallion this time, a powerful, ungovernable brute. There was a steep, short lead up on to a main road where the team in line could not help. The driver called on him and brought the doubled whip down on his ribs; his quarters sank as his hind legs gave full power and his ribbed thorax expanded as his front feet dug into the soft ground. The belly band just burst. That was horse power.

On steep grades the brake, applied to back wheels only, was screwed on even to the point where the wheels skidded. The brake shoes were heavy wooden blocks on a transverse rod under the wagon in front of the wheels. The wear was taken by leather facings, usually the sole of a heavy boot. On rough and slippery



hills even this was often not enough. Then a strong spar was thrust through the spokes of the wheels, letting them skid all the way down. Sometimes a heavy log was hitched on behind the wagon with a chain. If brakes failed the only hope lay in the shafter who might — just might — keep control long enough to reach the bottom or stop the load by running it into a roadside bank, if any. On long hills brake failure meant disaster.

Our longest and steepest grade began in a deep, redsoil cutting at the hill top. On the near side there was a sheer earth bank all the way but on the off side the bank ceased just at the steepest part and from there on for a hundred yards there was nothing but a steep hill sloping right down to a creek bed. A four-horse team was coming down, pulling a six-ton portable steam engine. The driver stopped at the top and screwed the brakes hard on. As the grade increased the brake gave way and in a moment the shafter, a small but staunch mare in this case, was skidding her feet before it, almost sitting on her arse, and accelerating. In three seconds the load would have taken charge; in ten it would have overrun the team and rolled over the bank, dragging the mangled heap to the gulch below. If traces snapped some might have fought clear; the shafter had no chance. The only hope lay in turning the team back short up the road. The leader, a free stepping dark bay mare, was already moving fast to keep them in line. To even reach her in time was one thing, to grab her to fetch her back up on the near side, the safer side, was quite another. Spirited mares resent being led — she would have swung away to the off side. Desperate cases need desperate methods. The driver ran at top speed down the near side and hit the mare across the face with his doubled whip, an indignity not in her experience. She doubled back uphill in a wild rush, turning the others in succession. Their sudden jerk on the shafts threw the shafter on her side and the undershaft buried in the last of the low bank. The load was stopped; the team was in a tangle of chains with the big stallion struggling on top of the shafter. When the tangle was cleared the score was slight abrasions and a broken shaft. There's no time to weigh chances in such situations and confusion is the only chance. The lively leader supplied it. Five seconds lost and all would have been for the crows.

Climbing long steep grades it was necessary to stop for a spell. The wheels were chocked to allow the team to relax. On English wagons there was a trailing roller, called as it was in Germany, a wheel shoe. We just used any handy stone or piece of wood. The driver's encouraging crooning, playing on the names, had a poetic quality but I recall only this fragment: "Gipsy! Darlin!

Beaut! Chock th' bloody wheels George!" If you can scan that you can reconstruct the scene.

The road team was a steady discipline for the youngster. He settled down and his muscles grew from steady exercise and good food. Steadiness came from the example of the others as well as from the routine of being groomed and harnessed. Before road work began he got his first set of shoes. To a skilled farrier this was all in a day's work. The colt was used to being handled; his feet had often been lifted whenever he was in the stable. And it didn't hurt.

A road team developed a rhythm of work, varying with the grade and the load and whether homeward bound or not. They travelled well at night — cooler going and no distractions. They did not march in step like the "performing seals" of the Horse Guards; there was no call for that, no matching teams for even length of stride. At times this was almost achieved—under steady load on long upgrades the strain compelled some uniformity of stride and the firm, slow hoof beats drummed a stronger, slower rhythm, slightly syncopated. Rhythm is infectious with other animals beside ourselves. On slight down grades with the load running free each horse might swing it with slack chains clinking. The shafter's massive rump developed a rolling gait and the shafts and front wheels shimmied to it while with steady pulling the shafts and wheels were kept in line. The youngster felt these variations with his feet and nerves; his ears registered the insistent sounds. He worked to music — the drumming of iron shod hoofs on solid roads. He felt the varying strain on his shoulders as he buckled to the pull with the rest. He swung into the loose-footed gait of the down grade and on the steeps heard the shafter's propping and slipping "down the sideling with the guttering brakes asqueal". Thus hour by hour and in the sweat of his loins he was handled and made.

Farm work was a different matter. A youngster might be schooled to pulling by dragging a log or a sledge. It was no great matter if he stuck in a gateway or capsized something. Land work was more exacting. Ploughing was a precise art with a two horse team. Yoked with a seasoned mate he might learn slowly — the old hand was the furrow horse and kept the line, treading circumspectly. The youngster worked on the land, the higher level, offsetting somewhat his lack of inches and treading firmer ground. Still the seasoned horse had the better of him over a long day. Youth chafes under restraint and sustained effort — "it takes an old dog for a hard road". One concession might be made — he might be yoked "to advantage" by shifting the long iron link on the plough to another notch in the iron rack of the swingle tree.



The ploughman controlled the pair (or threesome if it was a double furrow) by reins as well as voices. Each rein branched to pull on both (or two of three) bits at once. A short coupling sometimes joined the inner ends of bits. To veer left the old horse pushed the new chum ; to veer right he pulled him. So long as the youngster moved forward all was well. His winkers masked all side and rear vision. So the rounds and hours and days passed ; he conformed to the ways of the team and became familiar with the simple, reiterated calls. Each movement had its formula, its sequence of appropriate sounds. The variations in tone were as important as the words. So the sequence of "Stop. Step back. Turn short right" was dimmed into his senses, his vocabulary of horse language prompted by the pull of reins and the pull of his offside's couplings. Thus he learned horse language and horse sense — just as negro slaves learned simple elements of a new tongue but, being also men, they did not stop at that stage.

So in a week the colt was reliable ; in a season he was efficient but only with many seasons would he develop sagacity and become a sentient, responsive creature.

Guiding the plough was the ploughman's main concern, to control line, width and depth and turn of sod. He had to apply a subtly varying pressure to the plough stils and to take an extra pull on reins was a distraction from this. Schooling a new horse meant frequent stops if the quality of work was not to suffer. If the young one got his backleg over the trace chain it meant stopping to put this right. With the all-iron double-furrow three made a team, with the colt in the middle. He was just pushed around but as there was less to be learned this was no great matter. The old masters scorned to use the double furrow just as an earlier generation still had objected to steel mouldboards because "they poisoned the land".

All increase in size of teams meant there was less to learn and less urgency about learning. On drill or harrow or disc or binder the youngster worked on the wing (outside) and was sometimes given a notch advantage on his swingletree. His movements had to conform to those of the others who were guided more by reins than by voice. Machines are noisy and make much dust — the driver cannot be heard for the din. Shouting amid thick dust is very dry work.

Binding was of all farm work the heaviest on horses because it demanded sustained speed as well as strength, and for long days. To-day the binder itself is almost extinct and the horse-drawn binder almost forgotten. Yet a small group of farmers near Yolla still use it, with horse teams, because tractors, beside needing an extra man, are quite unsafe on the sidelining slopes.

The machines are older than the men but the quality of work, both by men and horses, is as high as ever it was. Teams must have both stamina and experience.

The binder had much more machinery than the reaper but its weight, and the drag of the machinery, was much increased by the continuous flow of the stuff, whether green or ripe, through the elevators and sheaf-packing gear. All the power for its gears came from the broad main wheel which supported the machine. So the forward speed of the binder determined the speed of all the moving parts. The cutter bar whizzed to and fro in its steel guides, whose long spikes also combed the standing crop and held it firm to the blades. The cut swathe fell inward on the broad canvas belt of the tray. The belt, stretched tightly on wooden rollers, carried the swathe in a continuous band to another set of double canvas belts which carried it upwards between them to the top of the binder, where the packing gear compressed the sheaves. As each sheaf by its weight tripped the tying needle, the knitter and the knife, the finished sheaf was kicked out on the ground.

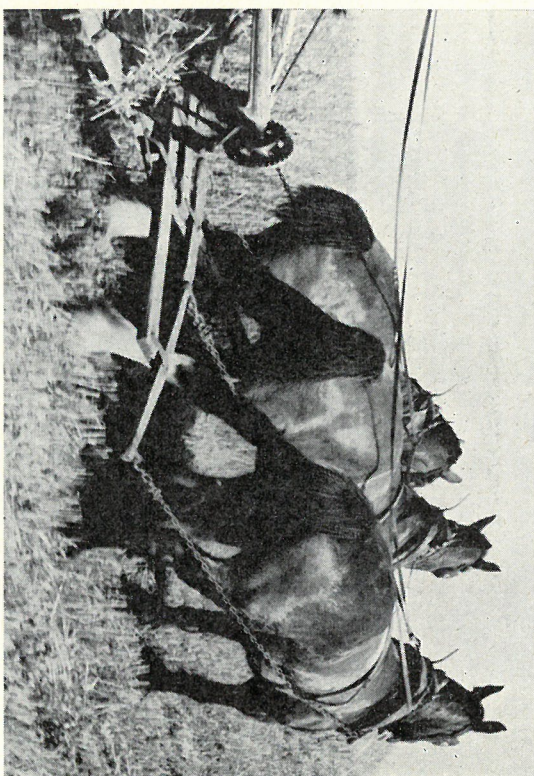
All this meant a score of cog wheels, many yards of square-link chain and several transmission rods. The efficiency of this process demanded speed, a constant speed, so the team had to pull all day against a constant drag — even on steep downhill work the drag was almost enough to offset the force of gravity. Without this speed the canvas conveyors or the cutter bar choked on a thick crop and this meant delays in clearing them if not also breakages. (The wooden conrod which linked the cutter to its eccentric was called the pitman — a usage which derives from the wooden pump rods of the earliest days of steam engines in mines.)

Even with three strong horses, in heavy crops or uphill work, the drag was lessened by cutting a narrower swathe. In some hill country the cut was only five feet wide though in level country an eight-foot cut was not unknown. Six feet was most common. So in 1880 over all grain growing lands the two-fold growth in numbers of binders and of the breeds most efficient for their use, the Clydesdales, went on together. This was one of the most extensive substitutions of mechanical power for man power that the world has ever seen.

Before it all tying was by hand. After it even hay was machine tied, which also saved much effort in hay making. Some early reapers had a platform on which two men stood to tie the loose cut corn. In heavy crops men could not keep up the pace. Back delivery reapers were followed by gangs of five or more, all day long tying straw bands and stooking the sheaves. There was a knack to it that would have delighted a time-and-motion expert



(just as there was in all manual jobs in some degree) but this fast and unremitting work was hard on hands and fingers, as well as backs, especially when there were thistles in the crop. Gather the sheaf, seize a wisp, halve it, locktie the corn end, lay the band, lay the sheaf on it, twist the free ends while kneeling on sheaf to compress it, thrust the end of the twist under the band and, as you rose, toss the finished sheaf over your left shoulder. All this, and the man-hours involved, went out when mechanical packing and tying turned the standing crop into lines of neat and standard sheaves.



**Binding team showing pole and swingle trees. Polers owned by Bob Steer (Robin and Bonnie); Wing horse (Boxer) owned by Murray Haines.**

Moreover, much reaping then was also still done by hand. The reaper gathered the standing straw with the sickle, then held it with his left hand as he drew the serrated edge across the wisp. The wisps were laid to make a sheaf and the tiers followed as already described. Hand reaping was done by contract gangs well into the binding age, especially where the crop had been chipped in among stumps too close-set for reaper or binder to manoeuvre.

Uncle Joe ran a reaping gang and about 1890, when the practice of sending tea out to the paddock was beginning, told old Skipper Boys his gang would expect tea. A bucketful was sent

out but it was undrinkable — he found later that it was made from the dregs of other days. He took it to the house, poured it out in front of old Skipper and told him it was tea he wanted. He got it, but his gang, who had never heard of sabotage, tied king-size sheaves, a three-in-one effort, and placed one in the middle of every stook. When Skipper and his son came to cart the stooks they had no option but to accept the protest.

Not only did this horse power revolution reduce labour costs. It gave economies through cutting the crop at the time of highest yield and quality as well as taking full advantage of fine weather. It was here that the superior speed and stamina of the Clydesdale were decisive, though it was also superior for other mechanised farming and for longer road haulage. In the wheat-fields of Montana, where winter was imminent at harvest, there were scores of machines in echelon, powered if the drawings are true, by teams of four mules driven by Bohunk migrants. No Tasmanian farmer would allow such drivers to spoil in a few days the efficiency built up in horse teams by years of patient training.

The binder worked round and round, counter clockwise, peeling a continuous swathe. The machine was steered by the pole whose swivelled cross bar was strapped by each end to the collars of the two most powerful of the team. There was no need for brake or breaching harness — the machine in gear needed pulling even on down grades — but the polers had to take its weight on neck and withers, especially when going down hill. They had to turn it at the corners and at times back it, even against the grade. This last task was distressing even to seasoned horses and was no job for a youngster.

So it was long work at first, shortening in towards the centre; hares and rabbits were driven inward and usually broke cover, pursued by dogs and kids, from the last strip or triangle of grain. Six, seven or eight acres in the day, long heavy days, with reek of dust and oil and sap of the green straw — working on into the long summer evenings if it seemed that rain was near. All day the pressure was on. Then at last it was knock-off time; horses unhitched, pole unstrapped, traces dropped and reins coiled up and off they went to drink and feed. The binder canvases were slacked against the evening damp and the cover put on if rain threatened.

After the reaping came the harvest. The grain stood in stooks for two weeks or more and was carted only in dry weather. Green or wet stuff was liable to spontaneous combustion. The hay wagons were fitted with special frames and "ladders" to permit higher, stable loads. Built for hard roads, the wheels sank deeply in the stubble land. On sideling slopes the risk of slipping the



load was higher so the lower tiers were put on there. If part slipped it was often necessary to re-stow the lot. Sometimes on steep slopes the wagon itself capsized with the patient shafter on his side, feebly waving his legs like a beetle. To unhook the team, roll the wagon upright and re-load lost much time. Short hauls were usual, with very heavy pulling in awkward places.

The hay was stowed in barns or in stacks in open yards. The art of stacking was a complex one, varying with the shape or size; the stack had to take the amount to be carted, hold it without slipping, and also turn the rain; for this rugs or straw thatch were often added.

Very few people to-day, even among farmers themselves, realise what a revolution there has been in this matter of hay and chaff production. All in the last thirty years there has been a change so complete that hay as we knew it hardly exists at all. Today it is almost all of dried and baled mixed grasses and clovers and, in many ways a superior article, it is produced at a fraction of its former cost in man hours and horse days. To-day the power mower and the pickup baler, operated by two men, can harvest three tons of baled hay per acre with one-tenth of the hours and with less effort. Moreover, this method is very little affected by wet weather. The carting, stacking and using of the hay crop, too, is largely machine-powered and done on a far larger scale at a fraction of the cost.

Formerly each separate sheaf was pitched and turned about ten times before it reached the threshing drum or the chaff cutter. The pitch fork was one of the commonest tools, another product of the age of cheap steel. Before that was the hay fork, a simpler thing of two tines, used to turn the windrows of loose grasses or oats as they were left by the horse mower or the scythe. In Alpine Europe this may still be seen for the scythe is there the most used of tools and hay forks are made of wood by training branches to grow diverging twigs to form the tines. The two-pronged iron fork improved on that but for the firm, standard sheaf of the binder a stronger fork was demanded. So we got the pitch fork which could stand the strain of throwing sheaf after sheaf high on to hay wagon or stack and "Tossing the Sheaf" was a common contest at country sports meetings — tossing a sheaf over a bar twenty or thirty feet from the ground. Pitching high on to the stack, often against the wind, or into the remotest parts of a high barn, under the broiling heat of an iron roof, were common features of that hay farming. All this has gone with the mechanical harvesting of grass hay and the use of the header harvester for oats or wheat. With this, even the hand sewing of the sacks has gone; the grain is gathered and winnowed and poured into silos so that on sheep farms it pays to grow

oats solely as sheep food, raising the volume and quality of wool thereby.

The numerous tillage operations in the horse power days were basically what they have been since man learned to till the soil, though the devices were more sophisticated. The horsepower revolution increased the scale on which this was done. The harrow remains a basic tool, but with better horses larger harrows and more frequent harrowing became profitable. Several harrowings went into preparing the seed bed to control weeds and conserve moisture. Speed was valuable. Our harrows were of bar iron frames with steel spikes but in peasant farms of Europe these were then simple affairs of wood, even with wooden tines. It was light work; good training for young horses. The disc harrows were very efficient in breaking up rough ploughed land; sharp discs that turned as they cut, shearing roots and turf. This was heavier but not too heavy for youngsters. These, and the spring-tooth cultivator, were in use in Tasmania long before the binder appeared.

The seed drill, too, was widely used for grain, turnips, peas and grasses. The flow was controlled by small cog wheels but these did not add much to the weight of the machine. Sowing fertiliser with the seed was also done though the use of artificial stuff like guano and bone dust was not general. The superphosphate revolution was mechanised and horse powered. The drill was a three-horse job because it always worked on loose soil.

After the sowing the seed bed was smoothed or rolled to give more even cover for seed and to break clods and depress stones. Some used a wooden roller, some a flat sledge of timber. We called this a drag; others called it a smudger or smooget; in some districts the operation was called laplanding.

Potato cultivation was ploughing but with a difference. As grass ground was preferred, to provide green manure, the swing plough turned the sod more efficiently and kept the rows straighter; the planter followed every third round, dropping the sets at intervals fixed by short paces. The bonedust sower followed, throwing it by hand along the furrow. As the light iron double-furrow was improved the practice of using two teams began, thus covering six acres in a day but needing five horses, two ploughmen, two setters and one, or two, bonedust sowers. (Mechanical planters came in during World War II, with tractor power, and so do not concern us.)

After planting, the ridged land was broken down with disc and harrows. When the plants appeared in rows (called drills by analogy) the scarifier, or horse hoe, was used to keep the soil loose between them. This was a job for one horse with reins; a horse that would tread carefully between the rows and stir the soil



without disturbing the young tops. We called it a scarifier; the term horse-hoe was not common; some called it a scuttler, others a scuffer. The origins of these variations would be hard to find. After this the crop was hoed by hand and as the plants grew the moulding plough, with double mould boards, heaped up the earth around them. This too was a one horse job.

There was always some kind of carting to be done, with dray or sledge, carting seed for the drill or for potato planting, fertiliser, firewood or fencing materials. In summer when the iron tanks ran dry a barrel on a sledge or an iron tank on a dray brought water from creeks almost daily. Fencing posts were split in the bush land and carted by sledge or dray according to the state of the tracks. Heavy anchor posts for gateways or the ends of sections of wire fences were dragged separately all the way from stump to the post-hole. Sometimes there was a contract to sneak telegraph poles to the roadside. It was in this bush carting that the sagacity of horses was most clearly brought out. Often they were hooked singly to a post or a spar and allowed to go free, taking the turns at their own gait and dodging obstructions. If they stuck fast they waited calmly until the driver caught up and freed them. Through bogs or fords and down steep, slippery banks they had the sense to keep clear of the hazards of a swinging beam. Where drays had to be used, for split palings for example, the shaft horse needed all his skill and agility to keep his feet; thrown sideways as one wheel hit a stump or dropped into a deep hole, scratching for a foothold on steep inclines of wet clay, taking most of the pull on steep rises, propping down steep banks and rushing through boggy creeks at speed. Such work really called for stolid, slow-paced bullocks and only where it was occasional were farm horses put to it.

Horses were also used on farms for stationary power — in driving chaff cutters, threshing grain and pumping water. The pump house and its horse gear may still be seen by the Lake River at Woolmers. In Scotland, where the horse thresher was invented, such cover for horses warranted the cost but was not common here. Also in Scotland many such mills were driven by small water wheels.

While cheap convict labour existed most grain was threshed by flails and winnowed by hand. Horse power came as labour costs rose. The numbers of horse threshers and chaff cutters increased long after steam threshing drums were in use but it is probable that they were mainly on small remote farms where there was not enough work to attract a contractor with a mobile steam plant. We know the numbers of horse threshers increased; we don't know exactly where they were located; we do know that steam plants were most profitable where production was

most concentrated. We know, too, that driving mill gear was donkey work which spoiled good horses and Scots farmers said this from the first appearance of the horse mills. They used them just the same, because this made them less dependent on the migrant threshing gangs. They used horse power thus profitably when rain and snow precluded outdoor work. These arguments were not so strong in Tasmania.

The gear was for two or four horses, yoked to a single beam or two crossed beams. These drove a main gear wheel which transmitted power by jointed rods to the drum or chaff cutter in the adjoining barn. Large farms had their own; there were also portable sets which were carted from farm to farm. The horses trod a circular path, a monotonous round at even pace, to keep an even speed on drums or blowers or knives. This was deadening to sensitive animals; yoked head to tail, no leaders, no alternation of hill or dale, no varying orders — just a roundabout with steady pressure on the collar, like setting skilled sawyers in a treadmill. It is hard to believe that high grade Clydesdales were wasted on this work.

The first innocent steam threshers were moved by animal power. We know there were many of these portable engines but the steam traction engine which moved itself, and the thresher, on their own wheels, was far more economical and abolished the drudgery of horses in threshing mills. It could move only on firm roads, and slowly, but the moves from farm to farm were short. It worked on contract and brought its gang of workers with it.

Its coming brought great activity and excitement. We knew the machine was at Carroll's and would reach us by 10 a.m. A sheep had to be killed and food for the gang prepared. We heard the distant chuffing as it climbed the hill, belching smoke and steam. We watched it turn into the barnyard and draw into position. The drum was set in, with chocks at its wheels; the engine moved into line and the big belt fixed; then it, too, was chocked firmly. Meanwhile the drum was rigged, the gang in their places, the whistle blew and the rumble from inside rose to a steady roar as a stream of sheaves from the top of the stack began to flow into the beaters. The muted roar and clack of belts almost drowned the panting engine as a stream of straw flowed up the elevator to the straw stack; the grain trickled into sacks hooked to iron spikes below the winnowers. Men pitching sheaves, tending sacks, forking straw and raking waste chaff; the engine driver splitting wood, stoking, tending the water pump for the boiler. The engine rocked and the drum throbbed to the strain.



With short stops for smoke-oh the work went on through the daylight hours, starting up even before breakfast, until the last sheaf went through — "that's the one we were looking for!". The drum ran empty, the whistle blew, steam was shut off and silence fell. Then it was belts off, sideboards packed, elevator unriggered, chocks knocked out, road gear engaged and the engine moved round to its position in front of the drum. The whistle blew and the road train trundled out the gate and away to the next set-down.

We were left to clean up, cart away the sacks, cover the straw stack and burn tares and rubbish.

The straw was used for cattle feed or horse bedding. Sometimes it was cut for chaff but this was saleable only as stock food. The oaten hay was cut by the travelling steam cutter to feed the working horses and any surplus sold. This was profitable, especially in years of mainland drought when it sold for £10 a ton.

In all these operations the horses had no part except to cart wood and water for the engine and move grain into barns. The drudgery of the treadmill had been abolished for them by steam power as it had been also, in an earlier time, for convicts.

Working horses were always fed with oaten chaff. Fresh hay was used before the chaff cutter came round, but old hay, stored long in stacks, was not relished and much was wasted. They would not eat devitalised stuff from rat-infested stacks. They were fussy. In the mangers the coarse stuff, short straws and rubbish, were nuzzled to one side along with fibres of the twine that careless feeding sometimes sent through the cutter.

The daily round of stable work took much time. Only large farms could afford grooms and stable boys. The farmer was groom, vet. and often shoeing smith, too. Horses had to be clipped with hand clippers. This was done in spring before the heavy winter coat had been shed. The thick, woolly coat was clipped from belly, legs and throat, leaving only the back and rump covered. Unless this was done they sweated profusely in warm weather if at heavy work; the sweat dripped steadily, making small pools when they paused for a breather, and damp coats chilled them in draughty stables.

When at steady work they were stable fed, though in summer they often grazed out at night and were brought in early for chaff before being harnessed for work. Horse rugs were commonly used in winter if they were out at grass. These were of heavy waterproof canvas with a lining of stout woollen stuff; they covered the back from withers to tail and were buckled under the neck and by leather straps round each hind leg. In the first

light on wet mornings the rugged horses were waiting patiently at the gate to be let into the stable.

Whether stabled at night or not, they were fed before going to work. At the sound of footsteps and the yellow light of the kerosene lantern, they nickered in anticipation. By this dim light dishes of chaff were dumped into mangers. Eager crunching of their powerful grinders echoed from the mangers, punctuated by snorts to blow dust from nostrils. Dung and fouled straw were scraped back and shovelled outside; floors were swept with stiff brooms. Then their coats were groomed with steel currycombs and brushed with a heavy brush made of goose quills. Then the farmer went to breakfast.

In daylight he returned and put on collars and haines. Collars were slipped up under the neck and buckled across the top. Each horse had his own, made to measure. Chafing of ill-fitting collars was one cause of sore shoulders and a reproach to any farmer, a mark of carelessness, ignorance or poverty — or all three. Sores were most common where horses were overworked and underfed. Excessive sweating or working in heavy rain contributed; the only remedies were rest, food — and blue ointment.

The haines were in two symmetrical sections, each a tapering tube of hollow steel, curved to the set of the collar. The sections were joined by short light chains at the bottom and drawn together by heavy straps at the top. At the point of the shoulder they had hooks of flat steel to fasten traces or tugs — Sheffield steel.

A teamster was responsible for his team — whether they were his legal property or not. They were his charge — his mates. He learned their ways as they learned his — he knew what sort of work they should be called on for and how much should be asked of them. That is why mules only were used where slaves were the drivers. The drivers were treated as sub-human, and being human resented it, so their charges were treated as less than animal and showed their resentment accordingly. Horses would not submit to the usages appropriate to mules, whether in rough food, neglect or punishment. Horses were not expendable; they had also pride of ancestry and (some of them) hope of posterity; they had many of the virtues (and were capable of acquiring some of the vices) of their maker, Man. They were, as Conrad said of ships, the creatures of man's hands, the objects of his care.

The horses might go on eating while collars and haines were fixed; when it was time to go the winkers were slipped over face and ears and the steel bit, straight bar or jointed, into the mouth. (There is a gap behind his front teeth which permits this — butlocks cannot be so bitten.) The throat lash was buckled under the angle of the jaw. The winkers were of stout, greased leather



with stiff, square leather plates masking side and rear vision. Some horses worked better in an open bridle. The fitting of polished brasses on blinkers and other harness might have been common in Britain. Here they were not unknown on show-ring teams, but on farms they were just "dirty flash"; dressing leather with neatfoot oil was functional.

There was nothing like leather for all harness but it "perished" if not frequently oiled. The harness work was done by skilled saddlers but whips and some gear were made of rawhide. Heavy whips for bullocks were a round plait of thin strips of rawhide which were tapered by lighter or fewer strips and tailed to the long lash of thin kangaroo hide. The "fall" of the whip depended on the taper and flexibility. A thong of whipcord completed it; it was this which gave the loud cracks with which the bullocky punctuated his exhortations to his straining team. Claims that they could flick a fly off the offside leader's ear might be put with Brian Fitzgerald's story of gypsies who thus pull down a perched pheasant and repeat the silent deed with his undisturbed mate.

How many who to-day speak of a "fair crack of the whip" have ever heard one? What was once vivid imagery has become loose verbiage. The same could be said of the use of "unbridled", "going in double harness", "putting a spoke in his wheel", "riding rough shod over", "keeping on a tight rein", "putting someone through his paces", or "bowling neck and crop". When Shakespeare wrote: "Let the galled jade wince, Our withers are unwrung", he had the actual thing in mind. Man's partnership with horses has left its mark on the language, but the bright coinage is defaced: because grain was sown "broadcast" we now have "telecast". Even "broadcast" has no visual image except the grimaces of a personality before a microphone. To have once seen the graceful, skilled, efficient spread of seed is enough to evoke shame at the debasement of the word, so apt for its true meaning. And who knows now, or cares, how "going hell for leather" appeared? It's easy to see why coaching reins were always "ribbons".

Farm horses had reins of light, strong hemp, always called "plough lines", fitted with strong steel clips for quick fastening to the bitrings. Sometimes they were made of rawhide. You started with a squared hide, discarding thin stuff, and pared it round and round with a sharp knife to get a thin ribbon thirty or forty yards long. This was soaked in water and carefully stretched and twisted until it became a smooth round spiral about a quarter of an inch in diameter. When finished and fitted with clips it was greased with mutton fat or neatfoot oil and was supple and

strong. It made the best of ploughlines but it had to be stowed out of reach of rats.

At noon the team came back to the stable for dinner but only the blinkers were removed — a horse cannot eat properly with a bit in his mouth. They were tethered by a neck rope so knotted that it could not choke and counterweighted so that it could not loop around the front legs.

At evening, after watering and feeding, all harness was removed and hung on handy pegs and they were groomed and bedded down. The straw bedding kept their feet warm. Many horses never lay down in a stable and many never in a stable or paddock. Night and day when in a stable they remained standing. Did they sleep? If so, it was taken standing. Foals may often be seen lying down, either fully extended or resting on the breast bone with feet tucked in. Mature horses rarely do this. Cattle do commonly, once they have eaten, but they ruminate. So the straw was not a couch but a carpet which also served to prevent them splashing when they staled. The splashes are unpleasant — notice how instinctively they spread their legs when staling. Many colts will not stale in their stalls until straw has been spread beneath them. So when all had eaten their fill and were at ease they stood in the dark stable, dozing through the noises of the night — rats in roof or straw, a mopoke's call, the sigh of winds in wall cracks or nearby trees — until the groom's step and lantern roused them to another day.

Horses shed their coat twice a year. In summer it is short and glossy; in winter long and fluffy and likely to be matted with clay and muck, especially on legs and belly. This makes grooming hard and dusty — which explains why grooms take long breaths of clean air (head averted) and expel this in long-drawn hissing as they brush or currycomb. The shedding of the coat is sometimes accompanied by change of colour, suggesting a throw-back to the wild millennia when all its ancestors had this protective colour pattern. There was a gelding who was a grey-white in winter and a light chestnut in summer; the mane and tail were creamy. He was a handsome fellow and well-mannered, the pride of Alec Oliver of Penguin-Riana. Mrs. Oliver usually drove him because her husband had a cork leg. In Scandinavia there is a pony type of mousy-grey, with black mane and tail, the descendant of the wild breeds first tamed by the Tartars and ridden with a noose on the muzzle before the Chinese invented the bridle and bit (not to mention the stirrup and the collar). These ponies still show along the spine the black stripe which marked the tartar ponies.



Horses still have, like other animals, many instinctive fears. Even well-trained horses will panic at the smell of blood, especially pig's blood. First slaughter your pig and, with the reek of hot blood barely washed from your hands, try to catch or bridle any well-mannered and well-schooled horse. If you mount it is likely that he will take the bit between his teeth (he doesn't literally—that is mere folk poetry) and bolt at top speed until exhaustion, or you (if you are still with him), brings him once more to reason. There are other smells—Melville cites the smell of buffalo robes striking panic in colts who have never seen a buffalo. Yet sheep's blood does not so frighten them. Live camels seem as upsetting as dead pigs though I have not seen the disconcerting, not to say unseating, of cavalry officers when a camel strays on to the parade ground.

There is still time for a whole catalogue of such smells to be made by those who live much among horses but those of the farm horses could hardly be compiled now.

Another cause of panic was lightning. The physics of this is surely knowable: horses, like cats and dogs, are very sensitive to the static that precedes lightning. They also turn away from heavy rain and hail and seek shelter of trees. Many times have groups of horses been found, all dead, fallen on their sides together, where they were sheltering from electrical storms. When Tom Smith was harrowing spuds he was about to unyoke and go to shelter from a threatening hailstorm but at the crack of lightning his quiet Clydesdales reared and plunged and he could hardly prevent them from bolting for shelter with the harrows behind them. He did.

Choking is another cause of panic that is not confined to quadrupeds. There was once a steady old grey horse pulling a chaise cart full of women up a slippery clay track. In the dark they could not tell that the collar was choking him. His sudden collapse in the shafts spilled them out and, as they were bewailing the sad end of poor old Jack, he as suddenly revived. He bounded to his feet and swung right round, fled down the lane and on down the road at full gallop. He left the cart, a wheel at a time, against tree stumps on the road side and came to a trembling stop about three miles down the road, the leather traces still trailing beside him. Old, staid, almost decrepit, yet he did three miles, going away from home, almost in steepchase time.

The horse's hoof is merely the toenail of his central toe. The rudimentary bones of the others are still there in the fetlock. The nail grows but is kept to proper size by wear, in hard country. In soft land, horses (and sheep) go lame from overgrown toenails. On farms horses often worked unshod; the feet were trimmed with knives. Shoes helped in pulling on slippery tracks but on road

work or stony land shoes were essential. Hoofs will crack, as finger nails will, and are very sensitive. When a shoe was cast it was risking trouble to travel far without replacing it. Spare shoes were sometimes carried, but a few nails and a hammer to replace the cast one would get him home without distress. No horseman worth the name could miss the tell-tale clink of a loose shoe.

Front hooves and hind are as different as our hands and feet. So shoes must be fitted and are not interchangeable, any more than ours are. The back feet differ most; this goes with the fact that in turning a horse pivots on his hind feet. The farrier made each shoe to measure, cutting a length of flat rod from a wrought iron bar and bending it roughly to shape. Tough iron, soft wrought from charcoal pig. With a special chisel he cut a long deep groove on each underside and punched square holes in it for the nails. On the toe of the shoe he drew out a short, flanged clip to keep the shoe from slipping under the hoof. Then the roughly shaped shoe was fitted to the hoof and drawn on the anvil to a precise fit. The upturned sole of the foot was rasped flat; the laid shoe was reheated and, with a long punch in a nail hole to hold by, it was pressed against the hoof to burn it to a close fit, raising clouds of acrid, yellow smoke. The shoe was then left to cool slowly—quenching would make it harder but brittle.

When all four were made and cooled they were nailed on. With front foot lifted and held between his knees, his buttocks braced into the horse's armpit, he applied the shoe, took a nail from his lips, held it (as well as the hoof) with his left finger and thumb and tapped it gently; then more firmly, feeling under the upturned hoof for the point to emerge; then in four swift blows drove it hard home. (The square-headed nails of soft, flat iron, were bevelled to make them run out, not in—the horse winced if the nail touched the "quick" and that nail had to be withdrawn.) As each nail was driven, the smith twisted off the long protruding point with the claw of his light hammer. All this takes a minute or two and is heavy work with draught horses, especially if they doze and lean on the smith.

The foot was dropped to the ground and the toeclip hammered flush with the outer shell of the hoof. Then it was lifted in a forward direction, across both knees, or on to an iron tripod. The rasp was used to smooth the surface below each nail; then the rasp was dropped, and with pincers pressed hard against each nailhead, the end of the nail was clenched and hammered flat into the hoof. A final smoothing with the rasp and that foot was done.

The front feet were usually shod first. They are easier to do and the horse settles down. The hind feet are more dangerous; a convulsive kick of a hard-held foot may send the smith sprawling. It taxes strength and patience to shoe the hind feet of a



resive horse — the heat of the forge, the acrid smoke in his lungs, and all his strength needed to keep control of the raised foot make it trying work, especially with heavy stallions. It takes three men; one to hold the horse, one to fetch and carry and one to shoe.

Few farmers shod their own though most could tack on a shoe at need. Usually it meant a trip to the town blacksmith who was also a wheelwright and implement maker (the laying of ploughshares was a recurring need — worn and blunted points were drawn out and re-tempered until they were too short for further use). The total consumption of horseshoes must have run into hundreds of tons a year. Thicker rods were used for heavy horses. There were also a dozen common sizes of horse nails. In every blacksmith's yard was a pyramid of discarded shoes — excellent scrap metal for electric furnaces. We might recall that Captain Ahab had his special harpoon forged from the stubs of racehorse shoes. Such a harpoon would twist into spirals but never break. It was tough, soft iron. The legacy of the horse to the motor car was the sprinkling of nail stubs which spiralled into the rubber tyres as harpoons spiralled into the muscles and tendons of whales.

In Dalecarlia, Sweden, the toy, red-painted horses carved from pine are as well known as the thistle is for Scotland. In Falun mine museum you may still see the sample cards of horse shoe nails, twelve sizes, and guaranteed in four languages. These were in 1900 still made by hand, of charcoal iron. Iron rods for shoes, too, were rolled there of the same stuff and shipped to the ends of the earth. Iron has been made there since men first learned to use it. From the crude beginnings of bit and stirrup, through shoes and nails, hooks and hames and chains, the age of the horse was also the age of wrought iron. The making of hard, cheap steel brought in steel rails and locomotive boilers; steel wheels; tube steel and wire for bicycles, then harder steel for pistons and valves of the sink engines, but through all this change the horse users increased their demand for tough iron as numbers of horses increased. When horses died off, this demand died off with them.

Apart from the regular needs like clipping, trimming tails, trimming hooves and shoeing, most horse troubles meant a call for the vet. or some local expert. Farmers had to practise rough surgery when horses were staked, gored by cattle or lacerated by wire fences. Stakes in feet were common and meant lameness and inflammation. Home remedies like lancing, fomentation and poulticing were frequently needed. Strong antiseptics like kerosene or turps were cheap and often overdone.

The castrating of colts was a job that called for skill. The colt was thrown and held by tying his legs while someone sat on his head. Kerosene was splashed into the incisions "to keep the flies away". Colts were more liable to inflammation (and death) than steers. This may have been due to a more nervous temperament or to greater risk of infection, or because it was left until the colt was older. Farmers certainly had less experience with horses than with calves and a horse was more valuable.

The use of physic or "drenches" was also quite a business. Again there were home remedies like linseed oil, epsom salts or sulphur. Sometimes there were balls or pills, sent by the vet., to be given in a bran mash. The symptoms had been described by letter or verbal message — shivering, sweating, off his feed, stomach pains. Urinary troubles were common; rupture of stomach membranes was also common and usually fatal. A broken leg meant finish — no splint surgery could be successful and the quickest remedy was a gunshot.

You may lead a horse to water — but it is a different matter to make him drink a bucketful of medicine. A Clydesdale carries his head high but it must be hauled higher still and firmly held there to get the drench into his mouth and make sure it goes down. A drenching bit was a hollow tube with a central hole and a small funnel at one end. With the head well up the liquid flows into the gullet and must be swallowed. Sometimes a twitch was put on his muzzle. That soft, flexible upper lip which nuzzles chaff and gathers grass for the front teeth to tear off is very sensitive. Take a short stick with a looped cord attached; put the cord round the lip and twist the stick. Then push upward. It is like having someone pull your head back from behind and pour physic into the back of your throat. Without a drenching bit a bottle was used and if he was reluctant to swallow the nostrils were gripped to cut off his air supply. To do this you need strength, deftness and a high standing place. Cows and ponies were easier but to force medicine upon a reluctant Clydesdale was no job for weaklings — unless he was very sick and probably then recumbent anyway. Other tricks were used — like having powdered sulphur in a stiff paper tube which you put into the side of the mouth and then put your mouth to the outer end and blew. Be sure to blow first!

Recumbent horses — well, it was always a serious matter if a horse was down. It meant extreme exhaustion, from illness, injury or loss of blood, or from convulsive struggling when bogged. Boggng usually happened to animals already weak from age or starvation. They got into soft places probably from trying to reach fresh grass or water and were too weak to struggle out.



Often they were found only after some hours of struggling, exhausted by loss of body heat as well as by convulsions. The common expectation was that he would die even if he were dragged out, because he "had lost the will to live". He had dropped his bundle, so they said, and "if only we could get him on his feet". This makes sense too — an organism which has lifelong the stimulus from the nerves of the feet went limp when this ceased and the numbed limbs were no longer passing impulses to the brain. Note how an animal goes limp when it is suddenly lifted in a sling as when cattle are being loaded into a ship. Also one may dimly guess what super-equine effort had been made in those first minutes from the instinctive struggle to find firm standing until all reserves of energy were spent — his battery flat. People tend to impute human qualities and assume that a horse knew what was happening to him. You cannot expect an animal to wait patiently, as a man might, and hope that he will be found and helped.

Animals make no signals of distress but struggle in silence. They may scream when in pain, as when the stables are consumed by the bush fire — and that is something no one who has heard it ever forgets — but extreme muscular effort is not painful. So, his vitality sapped by exposure, the energy to lift his own weight on numbed limbs simply is not there. He cannot tell you that his muscles are constricted by cramp or that the circulation in his chilled limbs has stopped.

So some energy had to be supplied — to roll him over to a sloping ground, to drag him on his side or on a sledge to a barn — hoist him by broad straps under his belly so that his feet touch the ground but bear no weight. Like this he might linger a day — barely animate — and still succumb. The first aid of rough massage, washing with hot water, rubbing with dry sacks, stimulants, hot gruel (if he could swallow) — in spite of all these he still might "chuck it in" — but only because all vitality had been spent in that first hopeless struggle.

To get him out of the bog is a feat in itself. If he hasn't been there long it may be enough to have two men pulling on a halter and others goading to one more convulsive effort. But if deeply mired he can't help himself much and you cannot get a rope under him. There was once a coach horse so far in that only his head was clear. A smooth drag chain was firmly knotted round his neck and old Nugget, a steady leader, was hitched to this. He took a gradual strain. Any other horse would have pulled his head off. Nugget took it gently until the derelict struggled clear and was dragged to firm ground. He survived it.

There was always a sharp distinction between horses' work and bullocks' work. Horses were more efficient for any work which

allowed free movement, walking away with it. Most things you can do with horses can also be done by bullocks — though more slowly. There are some kinds where only bullocks will do — like pulling out a bogged horse by a chain under the jaw. Nugget was unusually steady and his owner had good control — but that horse had a tough neck.

Bullocks were used for ploughing in rough land and for cartage in the bush or on unmade roads, but were useless for the binder. It was designed for working speeds which no bullock team could sustain. A different gearing might have been used — but the advantage of the binder lay in reaping quickly to take advantage of fine weather. Also six bullocks were the equivalent of three horses and, like the tractor, needed a separate driver.

Broadly speaking, bullocks belonged to the pioneering phase on the outer fringes of settlement. Hauling logs, opening bush land, clearing and also ploughing while the earth was still full of roots and stones. For dragging or rolling heavy logs, trunks that would have made mill timber had markets been nearer, they were the only power. Logs were sawn with seven- and eight-foot cross-cut saws, into 20 foot lengths and rolled into "kills". Often fifteen logs were thus stacked five deep and in heavy forest the trunks lay haphazardly so that it was hard to find space to begin. Three in the ground tier; then two on these, then more on the ground — rolling up and lodging them in the grooves. A wire rope was "dogged" in with two or three turns round the trunk; the team rolled them up skids with an even strain, stopping on the instant they were in place, but also then holding the strain until they were wedged. Horses would take it up at the run but relaxed when they were stopped. They might rush it right over or stop too soon and let it roll back and that often meant a day lost for the funeral.

The same division of work was found with sawmills—bullocks to sneak the logs to the road or tramway; through boggy creeks, winching round awkward corners and finally rolling them into place on the logging bogeys of the tramway. There the horses took over. Sawmill trams usually had half-draught horses, capable of walking away with a rake of timber bogeys at four miles an hour. They were lighter on their feet and planked ways jar the feet of men or horses. Thus, though horses cost more to feed, shoe and harness than did bullocks, they were used where speed paid. Big mills sometimes had steam locos which might do eight miles an hour but the track cost more.

So with farm work the general rule was horses for speed and bullocks for slow rough work and shorter distances. To-day the crawler tractor does the slow and the pneumatic-tyred one the fast work. In clearing rough land, too, a long team had to find a



straight pull. If strong leaders took it too fast or too soon the middle pairs were thrown bodily sideways. Bullocks were thus often dragged over stumps and fallen limbs in a way that almost ripped open their bellies, regaining their feet with piteous moaning. Any horse thus treated would have struggled to kick his way clear and would soon be spoiled for such work. Bullocks ate coarser food and survived cold and privations that would have killed horses. In patient endurance and dogged effort they excelled — horses were impatient of restraint, were fit only for free-moving pulls but did more work in a given time. For sliding friction, bullocks; for rolling friction on railed ways and hard roads, horses were worth the higher fuel cost and higher first cost, too.

One big horse equalled a pair of bullocks in strength. Trained bullocks showed amazing sagacity but of a different order from that of horses, and only in the routines for which they had been trained. From yearlings they were schooled and worked in the same pairs; they were not interchangeable parts. They grazed together, and "fell in" in pairs, in their allotted place and order of precedence, like tin soldiers. If a newchum driver, by any mischance, yoked them in wrong pairs there was trouble, especially if the leaders were displaced. They were disciplined conscripts, creatures of routine with a predictable performance so long as the driver kept the rules. Break them in ignorance and a platoon degenerated into a mob. Without warning they bolted down the bush track and stopped only when the chains, yokes and bullocks were tangled round a tree.

Horses were schooled to work in teams or singly; they could be changed from leading to following and still give the same response to words of command. In Tasmania oxen rarely worked singly. If one of a pair died it took some time to match another to him and this was done in the middle spans of the team. Bulls were sometimes yoked in such emergencies. Alan Marshall notes the bullocky's belief that a bull's breath will kill a stag. This, if true, may derive from sex hormones. However that may be, it is pitiful to see the abject terror of bullocks in the presence of an angry bull, especially if they are yoked. As he approaches, roaring and tearing the ground with his front hooves, they tremble and cringe as if they awaited the stroke of an executioner.

The bullock whip was an essential article, even though the lash was never used. It was badge of office and also signal; held right-handed for forward movement; left-handed for stopping or backing. Again, raised high with right-handed grip it meant "turn short and come back". Of course, the words of command varied with the signals and each bullock knew his name. With

well-trained leaders the whip was rarely needed for discipline. It was the conductor's baton.

It was memorable to see a skilled bullocky at work. Cyril Cartledge of Marawah was coming home along the beaches south of the Arthur River and, for practice, put his second pair in the lead. They were young and fresh and scared to find themselves out in front. They bored in on each other; they tried to trot but the other six behind checked them. So they settled down with Cyril trying to swing them this way or that, just for practice. At the beach end the track wound through a maze of drift logs. At one point there was a sharp left turn but the team had to lead straight on until the dray was up to this corner. Then they were stopped and he called from his place by the dray to make them double back short along the side of the team. He wanted "left wheel, left wheel"; he got "right wheel, right wheel" instead and they would not stop until they were level with the poles. He tried to back them; they tried to climb across the pole. The polsters stood firm. He let them quieten down; then silently unhooked the drag chain of the regular leaders and spoke two words: "Nimble! Lively!" They took six quick steps past the frightened youngsters, thus boxing them in; he leaned over and hooked the leaders' chain to the big ring in their yoke. Then he swung the whip, lashing them in the face to back them to their former place; though it whizzed across the backs of the leaders they gave no sign, made no move. The youngsters backed; were hooked to the yoke-ring of the third pair and all was secure. Then the old leaders swung to the quiet call: "Wooback Nimble. koom yer Lively", straightened the line and turned left to lead into the track to the ferry.

At the punt he took the first three pairs across; brought the leaders back with him and, with four bullocks and the dray, made the second crossing.

That was bullock country — the old men told how Cyril, when only nineteen, had carried an eight-ton mine boiler down the steep track on to that punt and through the sand dunes and heath roads all the way to the Ballour Mine. Horses for courses. Bullocks for the bush.

That our horses were comrades in play has already been said. They took us to Sunday picnics at the beach. Much of the track was too rough for light carts so we set off in a dray with food and water. At the beach we took them swimming, draught horses or light ponies, riding barebacked into the breakers. They swerved from them but pushed on into the smooth swells beyond until they became buoyant and struck out swimming. We could no longer control them then; to pull on reins might pull their noses under so we merely streamed along their backs, holding to



## HORSE POWER

mane or tail, as they swung and headed for land until their feet found firm hold again. They snuffed the brine, even tried to drink, but soon became accustomed to the fun. We thought of them as swimming — "all animals swim by instinct" was the way it was said. Later on, watching horses swimming behind a boat we made the discovery that they merely walk in water. The action is precisely that of walking; when they are immersed they thrust the head out to keep mouth and nostrils clear and their feet are groping for firm hold without finding it. So by merely walking they move forward in a fluid medium. The moral of this is that if you should find yourself and horse in a flooded river don't try to ride; slip off on the down stream side and hold by mane or tail. He can't get away from you. Your weight on his back will merely depress his head a little and make it more likely that he will take water into his lungs. Let him go free. Hold on; he will find his way to firm ground. He will find the shoaling water more quickly without help and quicker still without hindrance. If there is any salvation at all he will find it — merely by walking in water.

Men do not swim by instinct because their faculty for walking on all fours has atrophied. They think too much and fall into panic. They cannot raise their nostrils far above water. When a ship sinks, castaway horses will swim for hours — that is until their body heat and energy are sapped by the exposure to low temperature; they keep on walking until exhausted.

Horses have an instinctive fear of quagmire or quaking ground. They will go boldly forward through water or boggy tracks as long as they have firm ground underfoot but the margin of such places is often unstable and they will stop, refuse to go on, swing away — if forced to face it they will plunge forward frantically and flounder through. It also takes firm control to make them cross an unsafe bridge. Unless you have positive knowledge that the fear is unwarranted it is as well to respect their instinct.

Their faculty to keep a safe path in darkness which seems total to us may come from acuteness of other senses, smell, touch or sound. They cannot tell. The commonest example is that of pit ponies in coal mines when the lights fail. The miners merely hold on to harness or tail and let the pony guide them back to the stables, which are always near the shaft. They know the way through a maze of tunnels guided by smells or sounds. Yet learned men have ridiculed the irrational behaviour of miners who hold a pithead stoppage because one wheeler's pony has been allotted to another.

We speak of a homing instinct but only because we do not know what sense perceptions tell the horse plainly which way he must go. So with packhorses on hunting trips, in fog or night, we

## THE FARM HORSES

trusted to their superior knowledge. They went along with us on fishing and hunting excursions, to sports meetings and dances; they were called upon at all hours and in all weather to bring midwife, doctor or priest. They carried us on excursions of courtship, waiting patiently in the frosty night until the last farewells were said. "They also serve who only stand and wait." Sometimes too faithfully — as when the courier returned to the roadside to find his mare had somehow freed herself and disappeared. So he walked home and she was not there. He walked back next morning to find her still quietly grazing a few yards from where she had been tied — mute witness to the neighbours as to who had been carrying on with whom.