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The COUNTRY GENTLEMAN

The OLDEST AGRICULTURAL L in the WORLD



The CURTIS PUBLISHING COMPANY *Philadelphia*

THE Stewart brothers were wild-horse hunters for the horse trades that the pursuit made possible and for the occasional chance of a sale. But Lin Slone never traded or sold a horse he had captured. The excitement of the game and the lure of the desert and the love of a horse were what kept him at the profitless work. His type was rare in the uplands.

These were the early days of the settlement of Utah, and only a few of the hardest and most adventurous pioneers had penetrated the desert in the southern part of that vast upland. And with them ventured some of that wild breed of riders to which Slone and the Stewarts belonged.

Lin Slone awoke next morning and rolled out of his blanket at his usual early hour. But he was not early enough to say good-by to the Stewarts. They were gone.

They had left him more than his share of the outfit, and perhaps that was why they had slipped off before dawn. They knew him well enough to know that he would not have accepted it. Besides, perhaps they felt a little humiliation at the abandonment of a chase which he chose to keep up. Anyway, they were gone, without breakfast so far as he could ascertain.

Slone looked away to the west.

"Good-by," he said, and he spoke as if he were saying good-by to more than comrades.

"I reckon I won't see Sevier village soon again—maybe never," he soliloquized.

There was no one to regret him, unless it was old Mother Hall, who had been kind to him on those rare occasions when he got out of the wilderness. Still it was with regret that he gazed away across the red valley to the west. Slone had no home. His father and mother had been lost in the massacre of a wagon train by Indians and he had been one of the few saved and brought to Salt Lake. That had happened when he was ten years old. His life thenceforth had been hard, and but for his sturdy Texas training he might not have survived. The last five years he had been a horse hunter across the wild uplands of Nevada and Utah.

Slone turned his attention to the pack of supplies. The Stewarts had divided the flour and the parched corn equally, and unless he was greatly mistaken they had left him most of the coffee and all the salt.

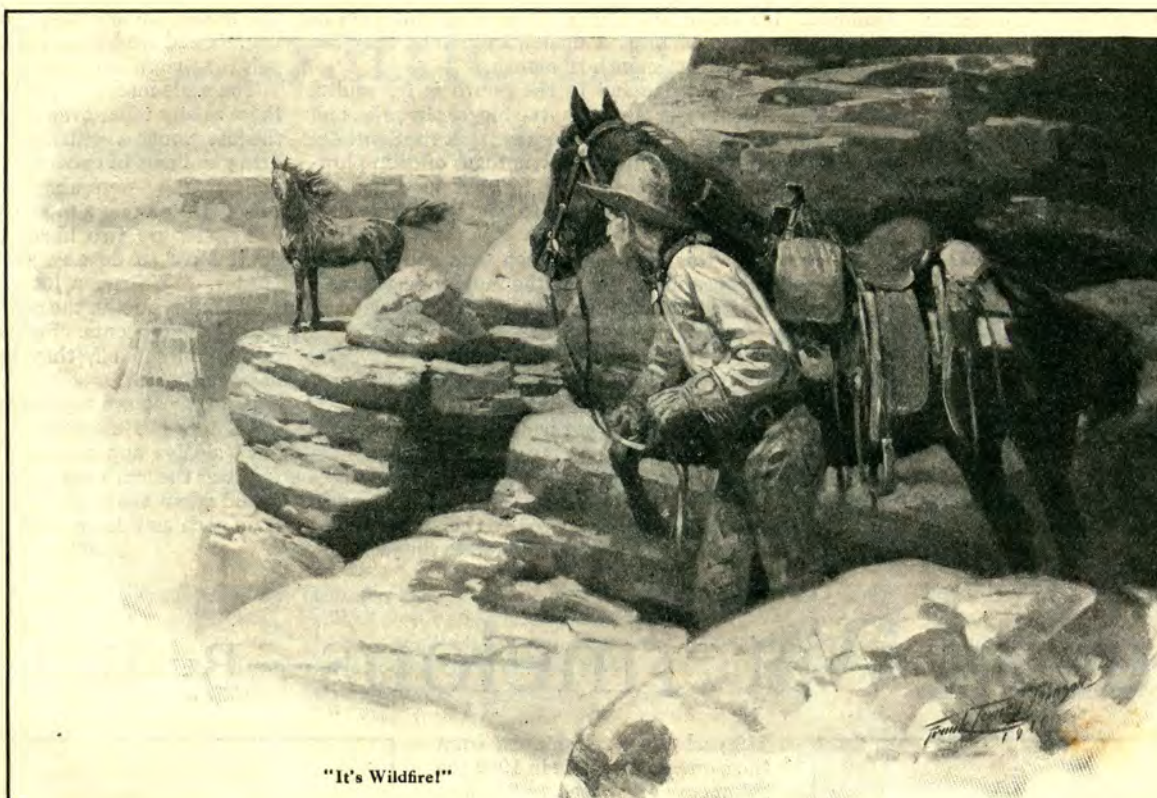
Then he swiftly set about kindling a fire and getting a meal. In the midst of his task he heard the whistle of his horse.

"Good old Nagger!" he said. "I shore won't have to track you this mornin'."

Presently he went off into the cedars to find Nagger and the mustang that he used to carry a pack. Nagger was grazing in a little open patch among the trees, but the packhorse was missing. Slone seemed to know in what direction to go to find the trail, for he came upon it very soon. The packhorse wore hobbles, and Slone found him standing quietly in a clump of cedars. Nagger caught sight of his master and came at a call.

This horse Nagger appeared as unique in his class as Slone was among riders. Nagger seemed of several colors, though black predominated. His coat was shaggy, almost woolly like that of a sheep. He was huge, rawboned, knotty, long of body and long of leg, with the head of a war charger. His build did not suggest speed. There appeared to be something slow and ponderous about him, similar to those qualities in an elephant, with the same look of power and endurance.

Slone discarded the pack saddle and bags. These latter were almost empty. He roped the tarpaulin on the back of the mustang, and making a small bundle of his few supplies he tied that to the tarpaulin. His blanket he used for a saddle blanket on Nagger. Of the utensils left by the Stewarts he chose a couple of small iron pans with long handles. The rest he discarded. In his saddlebags he had



"It's Wildfire!"

WILDFIRE

By Zane Grey

Author of "Riders of the Purple Sage," "The Lone Star Ranger," etc., etc.

ILLUSTRATED BY FRANK TENNEY JOHNSON

a few extra horseshoes, some nails, bullets for rifle, and a knife with heavy blade.

"Not rich to go into a far country," he mused.

Then he mounted and rode down the gradual slope, facing the valley and the black, bold, flat mountain to the southeast. Some few hundred yards from camp he halted Nagger and bent over in the saddle to scrutinize the ground.

A clean-cut track of a horse showed in the bare, hard sand. The hoof marks were large, almost oval, perfect in shape. Manifestly they were beautiful to Lin Slone. Long he gazed at them, and then he looked across the dotted red valley, up the vast ridgy steps, toward the black plateau, and beyond.

Then Slone slipped off the saddle and knelt to scrutinize the horse tracks. A little sand had blown into the depressions, and some of it was wet and some of it dry. He took his time about examining it, and he even tried gently blowing other sand into the tracks, to compare that with what was already there. Finally he stood up and addressed Nagger.

"Reckon we won't have to argue with Abe an' Bill this mornin'," he said with satisfaction. "Wildfire made that track yesterday before sun-up."

Thereupon Slone remounted and put Nagger to a trot. The packhorse followed with an alacrity that showed he had no desire for loneliness.

As straight as a beeline Wildfire had left a trail down into the floor of the valley. He had not stopped to graze and he had not looked for water. Slone had hoped to find a water hole in one of the deep washes in the red earth, but if there had been any water there Wildfire would have scented it. He had not had a drink for three days that Slone knew of. Nagger had not drunk for forty hours. Slone had a canvas water bag hanging over the pommel, but it was his habit to deny himself, as far as possible, till his horse could drink also. Like an Indian, Slone ate and drank but little.

It took four hours of steady trotting to reach the middle and bottom of that wide, flat valley. A network of washes cut up the whole center of it, and they were all as dry as bleached bone. To cross these Slone had only to keep to Wildfire's trail. And it was proof of Nagger's quality that he did not have to veer from the stallion's course.

It was hot down in the lowland. The heat struck up, reflected from the sand. But it was a March sun and no more than pleasant to Slone. The wind rose, however, and blew dust and sand in the faces of horse and rider. Except lizards, Slone did not see any living things down there.

we're still after him. He's worried. . . . But we'll keep out of sight—a day behind."

When Slone reached the cedars the sun was low in the west. He looked back across the fifty miles of valley to the colored cliffs and walls. He seemed to be above them now, and the cool air, with tang of cedar and juniper, strengthened the impression that he had climbed high.

A mile or more ahead of him rose a gray cliff of the plateau with breaks in it and a line of dark cedars or piñons on the level rims. He believed these breaks to be the mouths of cañons, and so it turned out. Wildfire's trail led into the mouth of a narrow cañon with very steep and high walls. Nagger snorted his perception of water and the mustang whistled. Wildfire's tracks led to a point under the wall where a spring gushed forth. There were mountain lion and deer tracks, also, as well as those of smaller game.

Slone made camp here. The mustang was tired. But Nagger, upon taking a long drink, rolled in the grass as if he had just begun the trip. After eating Slone took his rifle and went out to look for deer. But there did not appear to be any deer at hand. He came across many lion tracks, and saw with apprehension where one had taken Wildfire's trail.

Wildfire had grazed up the cañon, keeping on and on, and he was likely to go miles in a night. Slone reflected that small as were his own chances of getting Wildfire they were still better than those of a mountain lion. Wildfire was the most cunning of all animals—a wild stallion; his speed and endurance were incomparable, his scent as keen as that of animals that relied wholly upon scent to warn them of danger; and as for sight, it was Slone's belief that no hoofed creature, except the mountain sheep used to high altitudes, could see so far as a wild horse.

It bothered Slone a little that he was getting into a lion country. Nagger showed nervousness, something unusual for him. Slone tied both horses with long halters and stationed them on patches of thick grass. Then he put a cedar stump on the fire and went to sleep. Upon awakening and going to the spring he was somewhat chagrined to see that deer had come down to drink early. Evidently they were numerous. A lion country is always a deer country, for the lions follow the deer.

Slone was packed and saddled and on his way before the sun reddened the cañon wall. He walked the horses. From time to time he saw signs of Wildfire's consistent progress. The cañon narrowed and the walls grew lower and the grass increased. There was a decided ascent all the time. Slone could find no evidence that the cañon had ever been traveled by hunters or Indians.

Miles of low greasewood and sparse yellow sage led to the first almost imperceptible rise of the valley floor on that side. The distant cedars beckoned to Slone. He was not patient, because he was on the trail of Wildfire, but, nevertheless, the hours seemed short.

Slone had no past to think about and the future held nothing except a horse, so his thoughts revolved the possibilities connected with this chase of Wildfire. The chase was hopeless in such country as he was traversing, and if Wildfire chose to roam round valleys like this one Slone would surely fail utterly.

But the stallion had long ago left his band of horses and then, one by one, his favorite consorts. Now he was alone, headed with unerring instinct for wild, untrammelled ranges. He had been used to the pure, cold water and the succulent grass of the desert uplands. Assuredly he would not tarry in such barren lands as these.

For Slone an ever-present and growing fascination lay in Wildfire's clear, sharply defined tracks. It was as if every hoof mark told something to Slone. Once, far up the interminable ascent, he found on a ridge top tracks showing where Wildfire had halted and turned.

"Ha, Nagger!" cried Slone exultingly. "Look there! He's begun facin' about. He's wonderin' if

The day was pleasant and warm and still. Toward the middle of the afternoon, coming to where Wildfire had taken to a trot, he put Nagger to that gait, and by sundown had worked up to where the cañon was only a shallow ravine. And finally it turned once more, to peter out on a level where straggling pines stood high above the cedars and great dark-green silver spruces stood above the pines. Here there were patches of sage, fresh and pungent, and long reaches of bleached grass. It was the edge of a forest.

Wildfire's trail went on. Slone came at length to a group of pines, and here he found the remains of a camp fire and some flint arrowheads. Indians had been in there, probably having come from the opposite direction to Slone's.

This greatly encouraged him, for where Indians could hunt so could he. Soon he was entering a forest where cedars and piñons and pines began to grow thickly. Presently he came upon a faintly defined trail—just a dim, dark line even to an experienced eye. But it was a trail and Wildfire had taken it.

Slone halted for the night. The air was cold. And the dampness of it gave him an idea there were snow banks somewhere, not far distant. The dew was already heavy on the grass. He hobbled the horses and put a bell on Nagger. A bell might frighten lions that had never heard one. Then he built a fire and cooked his meal.

It had been long since he had camped high up among the pines. The sigh of the wind pleased him, like music. There had begun to be prospects of pleasant experience along with the toil of chasing Wildfire. He was entering new and strange and beautiful country. How far might the chase take him? He did not care.

He was not sleepy, but even if he had been it developed that he must wait till the coyotes ceased their barking round his camp fire. They came so close that he saw their gray shadows in the gloom. But presently they wearied of yelping at him and went away.

VI

THE cold of early morning awakened Slone when all was gray and the big black pines looked spectral. His hands were so numb that he had difficulty starting a fire. He stood over the blaze, warming them. The air was nipping, clear and thin, and sweet with frost fragrance.

Daylight came while he was in the midst of his morning meal. A white frost covered the ground, and cracked under his feet as he went out to bring in the horses. He saw fresh deer tracks. Then he went back to camp for his rifle. Keeping a sharp lookout for game he continued his search for the horses.

The forest was open and parklike. There were no fallen trees or evidence of fire. Presently he came to a wide glade, in the midst of which Nagger and the pack mustang were grazing with a herd of deer. The size of the latter amazed Slone. The deer he had hunted back on the Sevier Range were much smaller than these. Evidently these were mule deer, closely allied to the elk. They were so tame they stood facing him curiously, with long ears erect.

It was sheer murder to kill a deer standing and watching like that, but Slone was out of meat and hungry, and facing a long, hard trip. He shot a buck, which leaped spasmodically away, trying to follow the herd, and fell at the edge of the glade. Slone cut out a haunch, and then catching the horses he returned to camp, where he packed and saddled and at once rode out on the dim trail.

The wildness of the country he was entering was evident in the fact that as he passed the glade where he had shot the deer a few minutes before there were coyotes quarreling over the carcass.

Slone could see ahead and on each side several hundred yards, and presently he ascertained that the forest was not so level as he had supposed. He had entered a valley or was traveling a wide, gently sloping pass. He went through thickets of juniper, and had to go round clumps of quaking asp. The pines grew larger and farther apart. Cedars and piñons had been left behind, and he had met with no silver spruces after leaving camp. Probably that

point was the height of a divide. There were banks of snow in some of the hollows on the north side.

Slone came presently upon a lion track in the trail, made probably a day before. Slone grew curious about it, seeing how it held, as he was holding, to Wildfire's tracks. After a mile or so he made sure the lion had been trailing the stallion, and for a second he felt a cold contraction of his heart. Already he loved Wildfire and by virtue of all this toil of travel considered the wild horse his property.

"No lion could ever get close to Wildfire," he soliloquized with a short laugh. Of that he was absolutely certain.

The sun got up, melting the frost, and a breath of warm air, laden with the scent of pine, moved heavily under the huge yellow trees. Slone passed a point where the remains of an old camp fire and a pile of deer antlers were further proof that Indians visited this plateau to hunt.

From this camp broader, more deeply defined trails led to the south and east. Slone kept to the east trail, in which Wildfire's tracks and those of the lion showed clear. It was about the middle of the forenoon when the tracks of the stallion and lion left the trail to lead up a little draw where grass grew thick. Slone followed, reading the signs of Wildfire's progress and the bent of his pursuer as well as if he had seen their actions.

Here the stallion had plowed into a snow bank, eating a hole two feet deep; then he had grazed round a little; then on and on; there his splendid tracks were deep in the soft earth.

Slone knew what to expect when the tracks of the lion veered from those of the horse, and he followed the lion tracks. The ground was soft from the late melting of snow, and Nagger sank deep. The lion left a plain track. Here he stole along; there he left many tracks at a point where he might have halted to make sure of his scent. He was circling on the stallion, with cunning intent of ambush.

The end of this slow, careful stalk of the lion, as told in his tracks, came on the edge of a knoll where he had crouched to watch and wait. From this perch he had made a magnificent spring—Slone estimated it to be forty feet—but he had missed the stallion. There were Wildfire's tracks again, slow and short, and then deep and sharp, where in the impetus of fright he had sprung out of reach. A second leap of the lion, and then lessening bounds, and finally an abrupt turn from Wildfire's trail told the futility of that stalk. Slone made certain that Wildfire was so keen that as he grazed along he had kept to open ground.

Wildfire had run for a mile, then slowed down to a trot, and he had circled to get back to the trail he had left. Slone believed the horse was just that intelligent. At any rate Wildfire struck the trail again, and turned at right angles to follow it.

Here the forest floor appeared perfectly level. Patches of snow became frequent and larger as Slone went on. At length the patches closed up and soon extended as far as he could see. It was soft, affording difficult travel. Slone crossed hundreds of deer tracks, and the trail he was on eventually became a deer runway.

Presently, far down one of the aisles between the great pines, Slone saw what appeared to be a yellow cliff, far away. Sight of it puzzled him. And as he went on he received impressions that the forest dropped out of sight to the front. Trees grew thicker then, obstructing his view. The trail was soggy and he had to help his horse. The mustang floundered in the soft snow. Cedars and piñons appeared again, making travel still more laborious.

All at once Slone had a sensation that seemed a strange blend of light and wind and space and void. On the instant his horse halted with a snort. Slone quickly looked up. Had he come to the end of the world?

An abyss—a cañon—yawned beneath him, beyond all comparison in its greatness. His keen eye, educated to desert distance and dimension, swept down and across, taking in the tremendous truth before it staggered his comprehension.

But a second sweeping glance, slower, becoming intoxicated with what it beheld, saw gigantic cliffsteps and yellow slopes, dotted with cedars, leading down to clefts filled with purple smoke, and these led on and on to a ragged, red world of rock, bare, shining, bold, uplifted in mesa, dome, peak and crag, clear and strange in the morning light, still and sleeping like death.

This then was the great cañon that had seemed like a hunter's fable rather than truth. Slone's sight dimmed, blurring the spectacle, and he found that his eyes had filled with tears. He wiped them away, and looked again and again until he was confounded by the vastness and the grandeur, and what seemed a vague sadness of the scene. Nothing he had ever looked at had affected him as this cañon the Stewarts had tried to prepare him for.

It was thought of the horse hunters that reminded him of his pursuit. The deer trail led down through a break in the wall. Only a few rods of it could be seen. This trail was passable, even choked with snow. But the depth which hung off this wall seemed to fascinate Slone and hold him back, used as he was to desert trails. Then the clean mark of Wildfire's hoof brought back the old thrill.

"This place fits you, Wildfire," muttered Slone, dismounting.

He started down, leading Nagger. The mustang followed. Slone kept to the wall side of the trail, fearing the horses might slip. The snow held firmly at first and Slone had no trouble. The gap in the rimrock widened to a slope thickly grown over with cedars and piñons and manzanita. This growth made the descent more laborious, yet afforded means at least for Slone to go down with less danger.

There was no stopping. Once started the horses had to keep on. Slone saw the impossibility of ever climbing out while that snow was there. The trail zigzagged down and down. Very soon the yellow wall hung tremendously over him, straight up. The snow became thinner and softer. Soon the horses began to slip. They slid on their haunches. Fortunately the slope grew less steep, and Slone could see below where it reached out to comparatively

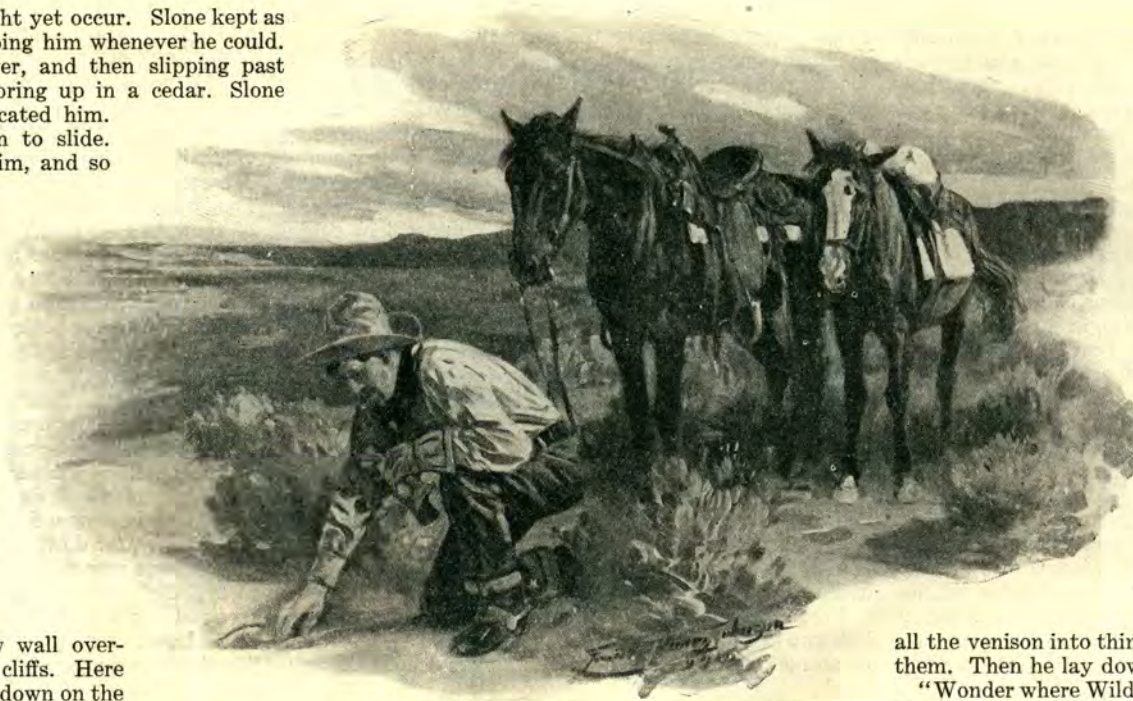


The Mustang Slipped, Rolled Over, and Then Slipping Past Slone Went Down the Slope

level ground. Still a mishap might yet occur. Slone kept as close to Nagger as possible, helping him whenever he could. The mustang slipped, rolled over, and then slipping past Slone went down the slope to bring up in a cedar. Slone worked down to him and extricated him.

Then the huge Nagger began to slide. Snow and loose rock slid with him, and so did Slone. The little avalanche stopped of its own accord, and Slone dragged Nagger on down and down, presently to come to the end of the steep descent. Slone looked up to see he had made short work of a thousand-foot slope.

Here cedars and piñons grew thickly enough to make a forest. The snow thinned out to patches, then failed. But the going remained bad for awhile as the horses sank deep in a soft red earth. This eventually grew more solid, and finally dry. Slone worked out of the cedars to what appeared a grassy plateau inclosed by the great green and white slope with its yellow wall overhanging, and distant mesas and cliffs. Here his view was restricted. He was down on the first bench of the great cañon. There was the deer trail, a well-worn path, keeping to the edge of the slope. Slone came to a deep cut in the earth, and the trail headed it where it began the last descent of the slope. The trail swung to the left, then presently climbed to a higher bench. Here were brush and grass and huge patches of sage, so pungent that it stung Slone's nostrils. Then he went down again, this time to come to a clear brook lined by willows.



"Wildfire Made That Track Yesterday Before Sun-Up"

The horses drank long, and Slone refreshed himself. The sun had grown hot. Most of the time his view was shut off, but occasionally he reached a point where through some break he saw towers low down, gleaming red in the sun. A strange place, of silence and smoky veils in the distance! Time passed swiftly. Toward the waning of the afternoon he began to climb what might be a saddle of land connecting

the cañon wall on the left with a great plateau, rising more and more in his way as he advanced.

At sunset Slone was mores shut in than for several hours. The slope was gradual up this pass to the saddle, and upon coming to a spring and the first pine trees he decided to halt for camp. The mustang was almost played out.

Thereupon he hobbled the horses in the luxuriant grass round the spring and then unrolled his pack. Once as dusk came stealing down, while he was eating his meal, Nagger whistled in fright. Slone saw a gray, pantherish form gliding away into the shadows. He took a quick shot at it, but missed.

"It's a lion country all right," he said. And then he set about building a big fire on the other side of the grassy plot, to have the horses between fires. He cut

all the venison into thin strips, and spent an hour roasting them. Then he lay down to rest and he said:

"Wonder where Wildfire is tonight. Am I closer to him? Where's he headin' for?"

The night was warm and still, dark under the huge cliff, and velvety blue with stars of white fire. It seemed to him that he had become more thoughtful and observing of the aspects of his wild environment. The only difference he could realize in himself was a welcome consciousness of loneliness. He fell asleep and the night seemed short. In the gray dawn he arose refreshed.

(Continued on Page 910)

THE TRACTOR—By Barton W. Currie

Design, Parts, Service—the Big Little Things

IF YOU happen to buy a simple little tractor, with only 11,000 pieces in it, you are in a fair way to acquire some fundamental experience in mechanics. The 11,000 pieces are not all parts, to be sure, or what are commonly called parts. Nuts, bolts, washers, lugs or spuds, pinions, cotter pins, radiator pieces, carburetor pieces, engine pieces, magneto pieces, pipes, tubings and joinings in the lubricating system, grease cups, oil cups, frame braces and rivets, wheel spokes, steering-gear pieces and innumerable odds and ends in the metal fabric make up the dismaying total.

A very small fraction of this total is working parts. Every piece will bear some specific burden of wear and tear, but a good many thousand pieces are indestructible so far as the life of a tractor is concerned.

Sometime look over a tractor, an automobile or any other mechanical contrivance of necessarily complex fabric that has played out and been scrapped, and you cannot help being amazed at the number of pieces that survived intact. It is a good deal the same with the human anatomy. Even in the case of the centenarian whose vital spark has suddenly gone out there are innumerable tissues and bones and tubes that could, seemingly, have borne their burden for many years were it not for the fact that the heart engine and its carburetor valves, the lubricating and the respiratory systems, are played out.

A good many tractor prospects are asking: Where will we find the greatest simplicity in tractor design, the fewest pieces, the fewest parts? Unfortunately there is no brief or comprehensive answer to this question. At this writing there are approximately 170 tractors, no two of them alike. In another year probably 200 or more, each a separate design, will be offered for sale.

There is such wide variance of design that classification is almost impossible. We have one-wheel, two-wheel, three-wheel, four-wheel tractors, caterpillars of several types, steel mules, iron horses, auto-plows and plow-autos, oil-gas and gas-oil, crude-oil burners, kerosene burners and gasoline burners. There are distinctive plow-pull types and distinctive all-purpose types, likewise special types for hauling; there are one-cylinder, two-cylinder, four-cylinder and six-cylinder tractors.

This great diversity of design is due primarily to the fact that there has not been sufficient experimentation to permit of careful analysis of the fundamentals of tractor design by tractor engineers. The early development of the tractor was confined to the plowing engine. Now, with the intrusion and immense popularity of the small tractor, there is a scramble in the direction of the all-purpose tractor. And in many of its aspects it is a mad, mad scramble.

To produce a satisfactory plowing tractor required a combination of certain elements. An approach was being made to simplification and standardization.

To provide a tractor combining in itself high excellence for plowing, cultivating, harvesting, road hauling and belt work required the addition of a great many elements not at all necessary in a plow-purpose tractor.

To get anywhere the all-plow tractor had to work up to deliver large units of power. The all-purpose tractor worked down to diversify and in that way to multiply small units of power. The all-plow tractor soon oversold its market; the all-purpose tractor, in the infancy of development, cannot seem to meet demand.

You must follow a precipitate decline from the 50,000-pound tractor to the 3000-pound tractor. Placed side by side they are about as alike as the zebra and the hairy mammoth. They are creatures of utterly different species. The big one and two cylinder tractors that have come down to date are fairly true to species. The "feather-weight" is a hybrid cross with a predominating strain of automobile in him.

The big type was based upon stationary-engine practice. Its sponsors declare that any machine, to be a success at farm work, must be made heavy, to stand rough usage and continuous service. It must be heavy, to carry the single or double cylindered motors with large cylinder dimensions. The bearing surfaces must be large.

The transmission system is usually of rough-cast gears, of coarse pitch and large diameter. These gears, too large to inclose, must be run in the open. Frames and wheels must be proportionately heavy. Carburation, cooling and ignition systems are of the utmost simplicity, designed for practically constant load and speed. Fine adjustment or flexible control is not considered.

It is argued for these big, crude fellows that they are more nearly fool-proof than any other type; that a one-cylinder engine gives half as much trouble as a two-cylinder, one-fourth as much trouble as a four, and one-sixth as much trouble as a six. In bygone days you heard this same argument from automobile manufacturers.

The fool-proof argument—as a selling argument—has very little force in this mechanized epoch. It is human nature to like to monkey with the buzz saw.

The contention of designers of tractors built along automobile lines, that the use of single or double cylinders of large dimensions is incorrect for tractor duty because it is necessary to make the tractor "hopelessly" heavy to obtain proper wearing surface or bearing area, has met pretty general popular approval. It makes its strongest appeal

to the automobile-owning farmer. More than ninety per cent of the automobiles owned by farmers are four-cylinder light cars.

Unquestionably, however, the light-tractor advocates have been carried away by their own enthusiasm. They have too much of the automobile and too little of the tractor in their machines. That has already been pretty thoroughly demonstrated. The evidence is apparent this year, when you find most of the experienced tractor designers either bringing out or preparing to bring out tractors combining both the heavy type and the light type of construction.

The arguments for this welding of design are compromise arguments—an acknowledgment of the good points of both designs. But even these compromise types have not followed any standard. Some producers of the heavy type merely cut down size and weight by using better materials where greater strength was necessary and applying anti-friction bearings where the loads were heaviest. Builders of "too-light" designs followed the opposite course, building up and strengthening, adding more power units to the motor.

The logical future development of the tractor will undoubtedly be along the line of combining the knowledge and experience of the agricultural engineer, the automobile engineer and the tractor engineer. Each class has much to learn.

Some of the leading automobile engineers of the country are now employed in making a minute study of tractor mechanics and agricultural economics. Mere mechanical skill will not serve to produce any special ideal type of tractor. The agricultural engineer can furnish invaluable information concerning farm management, cropping conditions, soil textures, soil contours, the possibilities for replacing horses, the possibilities for the diversification of belt-power, and so on. One of the very best light tractors on the market was designed by a farm-trained mechanic.

The automobile engineers, seeking mechanical refinements, have already made a big impression by compelling the use of better building materials. Their influence is largely responsible for the growing use of cut and hardened gears, inclosed gearing run in oil, and moderately light, high-speed motors. There is both a positive need and an increasing demand for the intensive use of high-grade materials, as well as for the development of design to take the utmost advantage of quantity production.

The great automobile manufacturers who are undoubtedly coming into the game will seek the broadest market.



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WILDFIRE

(Continued from Page 882)

The horses were restive. Nagger snorted a welcome. Evidently they had passed an uneasy night. Slone found lion tracks at the spring and in sandy places. Presently he was on his way up to the notch between the great wall and the plateau. A growth of thick scrub oak made difficult travel. It had not appeared far up to that saddle, but it was far. There were straggling pine trees and huge rocks that obstructed his gaze. But once up he saw that the saddle was only a narrow ridge, curved to slope up on both sides.

Straight before Slone and under him opened the cañon, blazing and glorious along the peaks and ramparts where the rising sun struck, misty and smoky and shadowy down in those mysterious depths.

It took an effort not to keep on gazing. But Slone turned to the grim business of his pursuit. The trail he saw leading down had been made by Indians, used probably once a year by them, and by wild animals, and it was an exceedingly steep and rough one. Wildfire had paced to and fro along the narrow ridge of that saddle, making many tracks there before he had headed down again.

Slone imagined the great stallion had been daunted by the tremendous chasm, but had finally faced it, meaning to put this obstacle between him and his pursuers. It never occurred to Slone to attribute less intelligence to Wildfire than that. So, dismounting, Slone took Nagger's bridle and started down. The mustang was reluctant. He snorted and whistled and pawed the earth. But he would not be left alone, so he followed.

The trail led down under cedars that fringed a precipice. Slone was aware of this without looking. He attended only to the trail and to his horse. Only an Indian could have picked out that course, and it was cruel to put a horse to it. But Nagger was powerful, sure-footed, and he would go anywhere that Slone led him.

Gradually Slone worked down and away from the bulging rim-wall. It was hard, rough work, and risky, because it could not be accomplished slowly. Brush and rocks, loose shale and weathered slope, long, dusty inclines of yellow earth, and jumbles of stone—these made bad going for miles of slow zigzag trail down out of the cedars. Then the trail entered what appeared to be a ravine.

That ravine became a cañon. At its head it was a dry wash, full of gravel and rocks. It began to cut deep into the bowels of the earth. It shut out sight of the surrounding walls and peaks. Water appeared from under a cliff and augmented by other springs became a brook. From hot and glaring and dry and barren this cleft passed to cool and shady and luxuriant with grass and flowers and amber moss with silver blossoms. The rocks had changed color from yellow to deep red.

Four hours of turning and twisting, endlessly down and down, over boulders and banks and every conceivable roughness of earth and rock finished the pack mustang; and Slone mercifully left him in a long reach of cañon where grass and water never failed.

In this place Slone halted for the noon hour, letting Nagger have his fill of the rich grazing. Nagger's three days in this grassy upland, despite the continuous travel by day, had improved him. He looked fat and Slone had not yet caught the horse resting. Nagger was iron to endure. Here Slone left all the outfit, except what was on his saddle and the sack containing the few pounds of meat and supplies and the two utensils. This sack he tied on the back of his saddle, and resumed his journey.

Presently he came to a place where Wildfire had doubled on his trail and had turned up a side cañon. The climb out was hard on Slone, if not on Nagger. Once up Slone found himself upon a wide, barren plateau of glaring red rock and clumps of greasewood and cactus. The plateau was miles wide, shut in by great walls and mesas of colored rock. The afternoon sun beat down hot. A blast of wind, as if from a furnace, swept across the plateau, and it was laden with red dust.

Slone walked here, where he could have ridden. And he made several miles of up-and-down progress over this rough plateau. The great walls of the opposite side of the cañon loomed appreciably closer. What, Slone wondered, was at the bottom of this

rent in the earth? The great desert river was down there, of course, but he knew nothing of it. Would that turn back Wildfire? Slone thought grimly how he had always claimed Nagger to be part fish and part bird. Wildfire was not going to escape.

By and by only isolated mescal plants, with long yellow-plumed spears, broke the bare monotony of the plateau. And Slone passed from red sand and gravel to a red soft shale, and from that to hard red rock.

Here Wildfire's tracks were lost, the first time in seven weeks. But Slone had his direction down that plateau with the cleavage lines of cañons to right and left. It developed at times that Slone found a vestige of the old Indian trail and this made him doubly sure of being right. He did not need to have Wildfire's tracks. He let Nagger pick the way, and the horse made no mistake in finding the line of least resistance. But that grew harder and harder.

This was the bare rock, like a file, that would soon wear Wildfire's hoofs thin. And Slone rejoiced. Perhaps somewhere down in this awful chasm he and Nagger would have it out with the stallion. Slone began to look far ahead, beginning to believe that he might see Wildfire. Twice he had seen Wildfire, but only at a distance. Then he had resembled a running streak of fire, whence the name Slone had given him.

This bare region of rock began to be cut up into gullies, all of which had to be headed or climbed in and out; and miles of travel really meant little progress straight ahead. But Slone kept on. He was hot and Nagger was hot, and that made hard work easier. Sometimes on the wind came a low thunder. Was it a storm, or an avalanche slipping, or falling water? He could not tell for sure. The sound was haunting.

Of one thing he was sure—that he could not have found his back trail. But he divined he was never to retrace his steps on this journey. The stretch of broken plateau before him grew wilder and bolder of outline, darker in color, weirder in aspect, and progress grew slower, more dangerous.

The plateau appeared to be ending in a series of great capes or promontories. Slone feared he would soon come out upon a promontory from which he might see the impossibility of further travel. He felt relieved down in the gullies, where he could not see far. He climbed out of one presently, from which there extended a narrow ledge with a slant too perilous for any horse. He stepped out upon that with far less confidence than Nagger had. To the right was a bulge of low wall, to the left a few feet, a dark precipice.

The trail here was faintly outlined and it was six inches wide and slanting as well. It seemed endless to Slone, that ledge. He looked only down at his feet and listened to Nagger's steps. The big horse trod carefully, but naturally, and he did not slip. That ledge extended in a long curve, turning slowly away from the precipice, and ascending a little at the farther end. Slone drew a deep breath of relief when he led Nagger up on level rock.

Suddenly a strange yet familiar sound halted Slone, as if he had been struck: The wild, shrill, high-pitched, piercing whistle of a stallion! Nagger neighed a blast in reply and pounded the rock with his iron-shod hoofs. With a queer sensation Slone looked ahead.

There, some few hundred yards distant, on a promontory, stood a red horse.

"My Lord! . . . It's Wildfire!" breathed Slone tensely.

Wildfire was as red as fire. His long mane, wild in the wind, was like a whipping, black-streaked flame. Silhouetted there against that cañon background he seemed gigantic, a demon horse, ready to plunge into fiery depths. He was looking back over his shoulder his head very high, and every line of him was instinct with wildness.

Again he sent out that shrill, air-splitting whistle. Slone understood it to be a clarion call to Nagger. If Nagger had been alone Wildfire would have killed him. The red stallion was a killer of horses. All over the Utah ranges he had left the trail of a murderer. Nagger understood this, too, for he whistled back in rage and terror. It took an iron arm to hold him.

Then Wildfire plunged, apparently down, and vanished from Slone's sight.

(TO BE CONTINUED)

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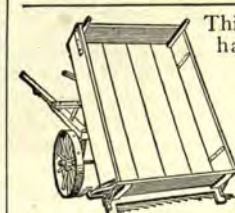
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Mint jelly may be made by using more sugar and boiling it down or by using gelatin as a basis, flavoring with mint sauce.

Dissolve half a package of gelatin in half a cupful of cold water. Then add one cupful of mint sauce, the juice of a lemon, half a teaspoonful of salt and one pint of boiling water.

The natural color is a brownish green. It may be colored a brighter and more attractive green by using a green powder, which is a harmless vegetable preparation. It may be had from almost any drug store. Use one quarter of a teaspoonful of this powder to one ounce of water. Of this green liquid use only a few drops to each glassful of mint sauce or jelly. After adding the coloring matter, strain into jelly glasses to set. Cover with paraffin wax. This delicious mint gelatin will not keep indefinitely as will jelly made from sugar, but can be made frequently from the mint sauce.

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