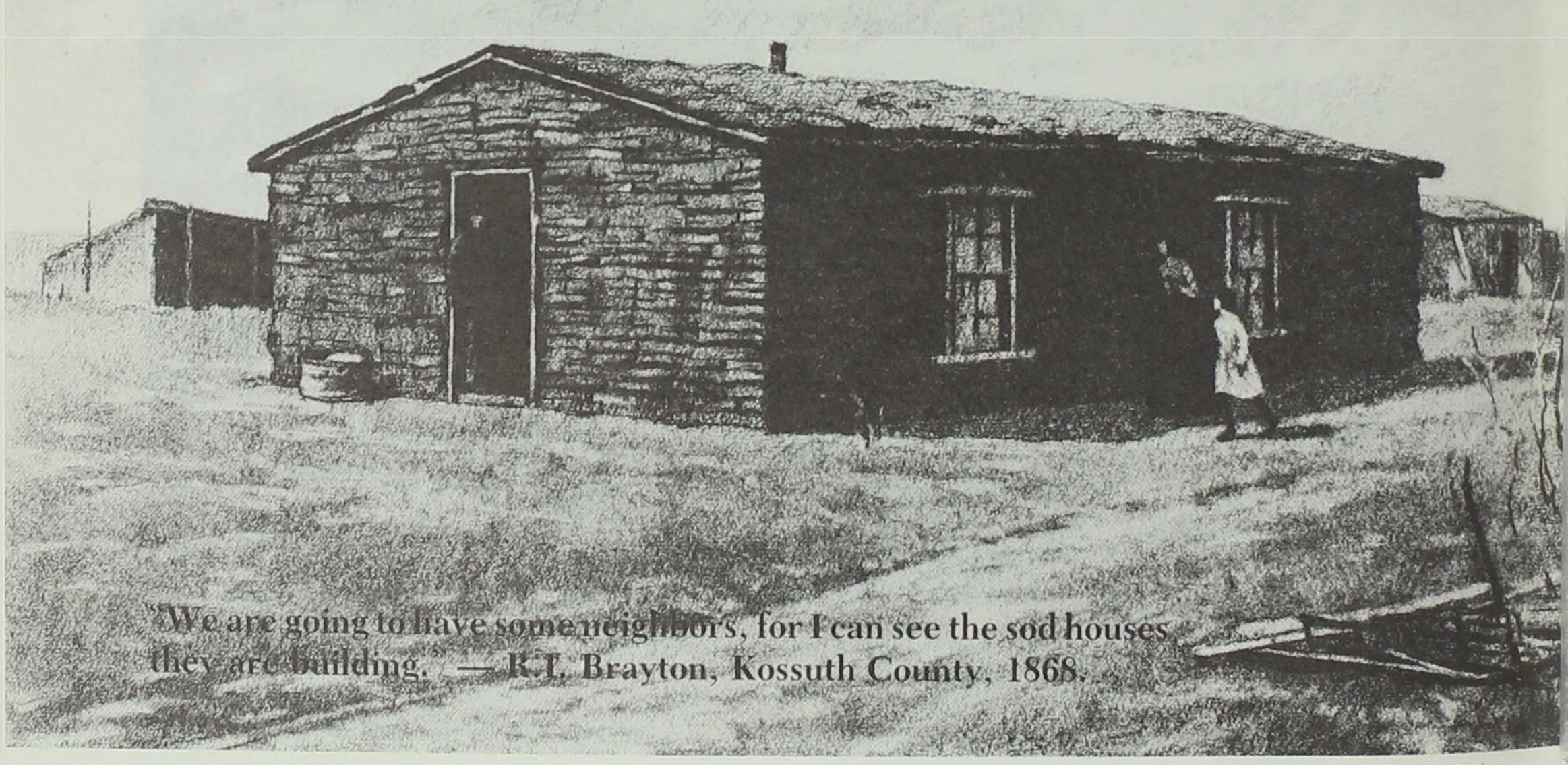
Sod Dwellings in Iowa

by Rita Goranson



"We are going to have some neighbors, for I can see the sod houses they are building." — R.I. Brayton, Kossuth County, 1868.

(charcoal sketch by Edith Bell; SHSI)

Early in Iowa's history many sod dwellings could be seen on its western prairies. These homes were often dirty and crude and presented the pioneers with many problems. Yet the use of sod dwellings showed the adaptability and determination needed to settle Iowa soil.

Though Pottawattamie County had a dugout as early as 1845, the sod era in Iowa generally began during the 1850s with the settlement of the western part of the state. As settlers expanded to the prairie lands of north central and northwestern Iowa, the need for shelters to protect them from the environment became an immediate concern, and sod dwellings seemed to answer this need. The period of sod dwellings ended in the 1880s when frame houses replaced the last sod homes.

There were a variety of reasons for using sod dwellings in Iowa. Not only did the government encourage such construction with the Homestead Act, but these dwellings were relatively inexpensive for the settlers to build. They provided a quick means of gaining protection from the elements in places where lumber was scarce, and they provided comfort and warmth on the plains, especially in the winter.

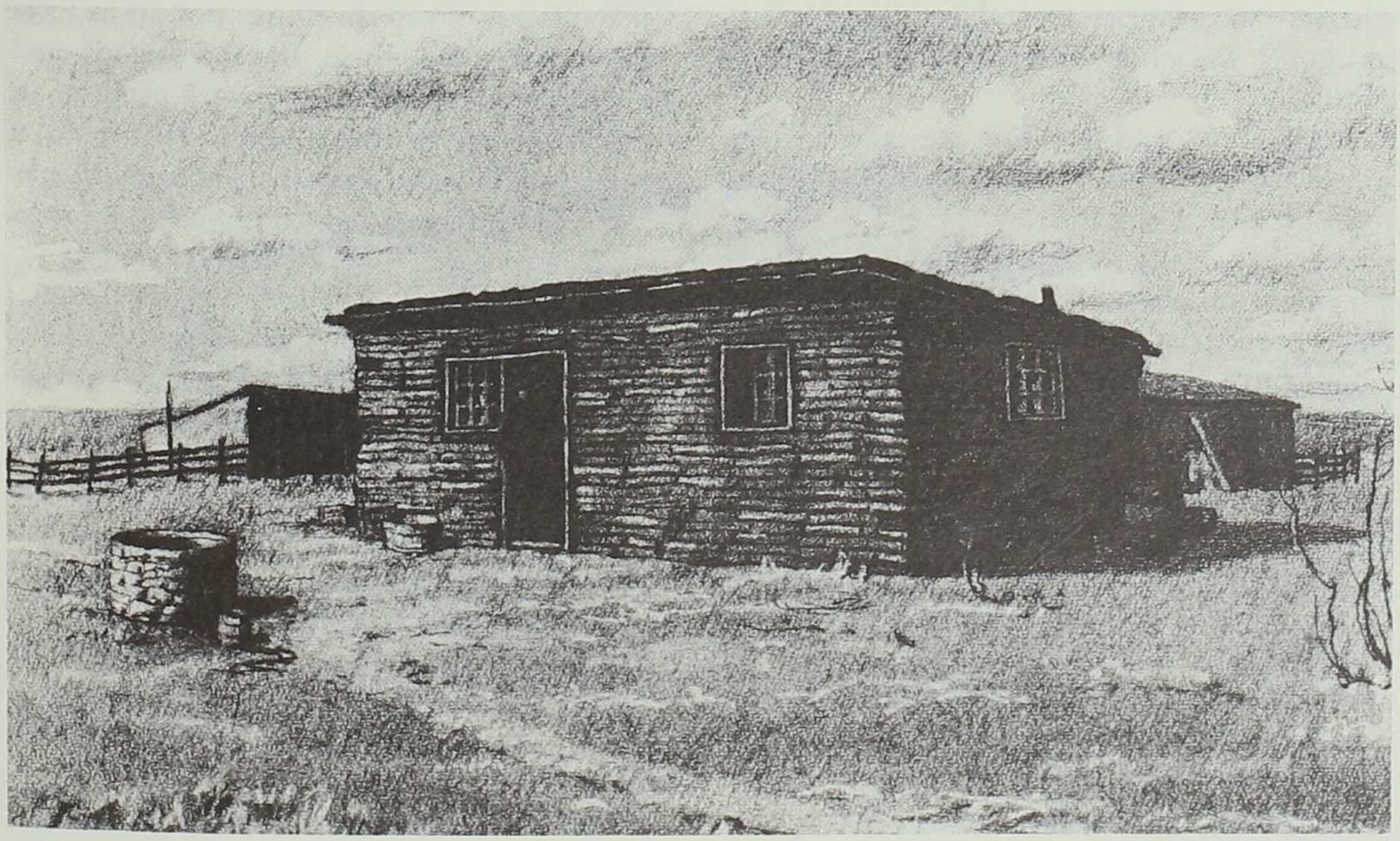
Congress enacted the Homestead Act in May 1862. It required that settlers live on and improve their land for five years. When the Civil War ended people looked westward at available land opportunities and Iowa received

a significant increase in settlers during the late 1860s. Many of these settlers put up sod dwellings as soon as possible in order to immediately improve their land. The land office required building improvements that included the construction of a roof, door, floor, and window. A sod dwelling served this purpose as well as any more elegant home with gabled roof or bay window. For example, Mr. Perkins and Mr. Butterfield, in O'Brien County, built a six-by-eight-foot sod house, with a few boards on top for a roof. They spread a used horse blanket on the floor, put in a window frame (though the frame had no glass), and leaned a piece of lumber against the building to serve as a door. Simple homes could be left while the homesteaders went to file their claims with little fear that the homes would be disturbed while they were away.

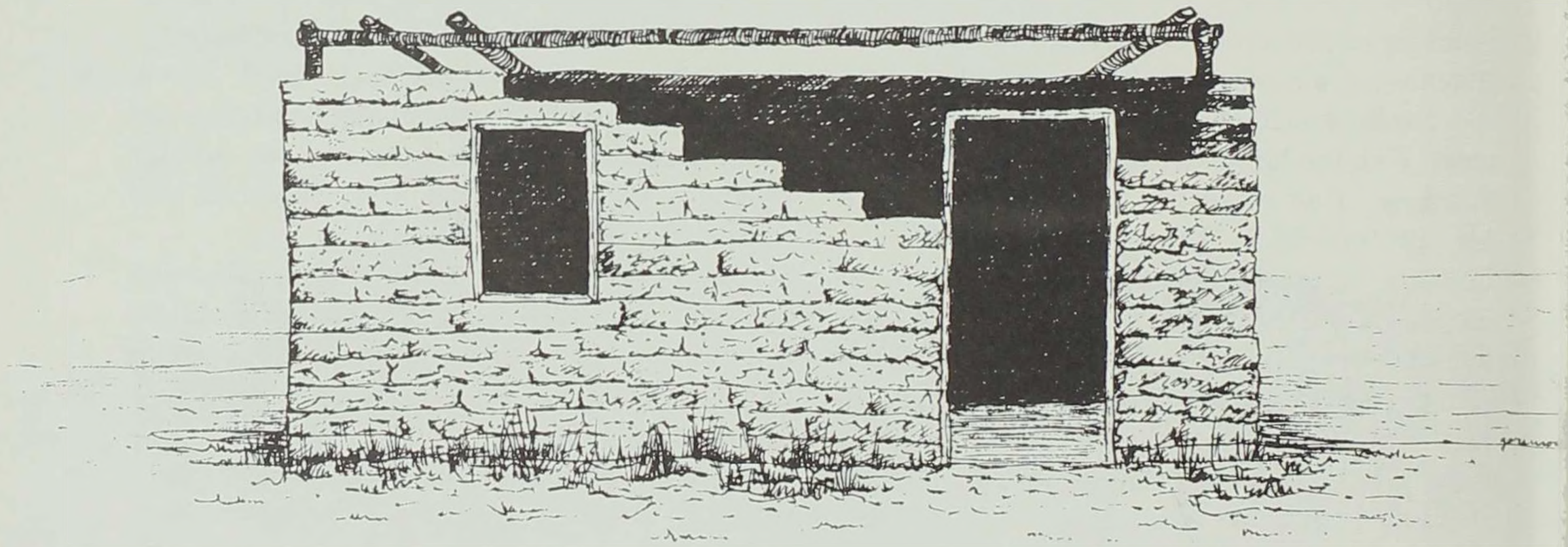
Most of the pioneers that came to western Iowa in the 1860s and early 1870s were poor people who looked to the land for their sustenance as well as their livelihood. Sod dwellings were economically built. Lumber became costly during and after the Civil War. Depending on the kind of wood purchased, lumber could cost from twenty-eight to forty-five dollars per thousand board feet. If oak trees were close by for the inside trimming and cottonwood or elm for framing, the settler needed only to purchase the clapboards and roof boards for a frame house.

If all the lumber had to be purchased from a mill, however, the cost of a home could be quite high. For instance, in Monona County in 1865 the lumber for William Cook's frame house, twenty-four-foot square, cost about $600. Another home built in Cherokee County in this same period cost $800. These purchases did not include the homesteader's time or costs in traveling to the nearest mill with a wagon and team to get lumber. Such a trip might involve considerable distance, difficult travel conditions, and several days' time.

In contrast, a sod home cost between fifteen



(charcoal sketch by Edith Bell; SHSI)



(drawing by the author)

and thirty dollars. The dugout belonging to the Seine Menning family in Sioux County cost $26.50, for example. The Mennings had lost all their money and possessions in a boat accident when crossing the ocean, and thus the price of a sod home was about the only one they could afford.

Putting up a sod dwelling was also a quick way to build a home. That was important when there was a need for shelter on the open prairie, especially in the early spring and late fall when the chances of a sudden snowstorm were present. Clement Osgood of Osceola County put the finishing touches on his sod house October 9, 1873, as the snow began to fall. The three-day blizzard that followed would have been disastrous for his family without the warmth and shelter of their humble abode. These homes were warm, with walls up to twenty-four inches thick. With generally small areas to heat, they were quite comfortable during the worst of storms.

Building a sod house was not complicated, but did take time and much hard work. In Kossuth County, Elijah Hurburt piled up sod for a home while breaking up the prairie. In Pocahontas County in 1871, Betsey Nelson, the only adult in the family, worked hard to build her sod house.

The types of sod dwellings put up in Iowa were the sod house, the sod dugout, and the sod shanty. Such homes were used on an average of one to three years. However, a pioneer might need to use a sod home for as long as sixteen years before replacing it, as in George Swenson's case in Monona County.

Before building a sod house the homesteader would generally look around his land for a spot that was level and dry, but as close to water as possible. The outside dimensions of these structures varied from six-by-eight feet to sixteen-by-thirty feet. Most common was the twelve-by-fourteen-foot or the sixteen-by-twenty-four-foot size home. Once the builder decided on a site and the dimensions of the house, he would cut the prairie grass down to where a plow could be used on the sod. (The cut grass would then be bundled and used later on the roof.)

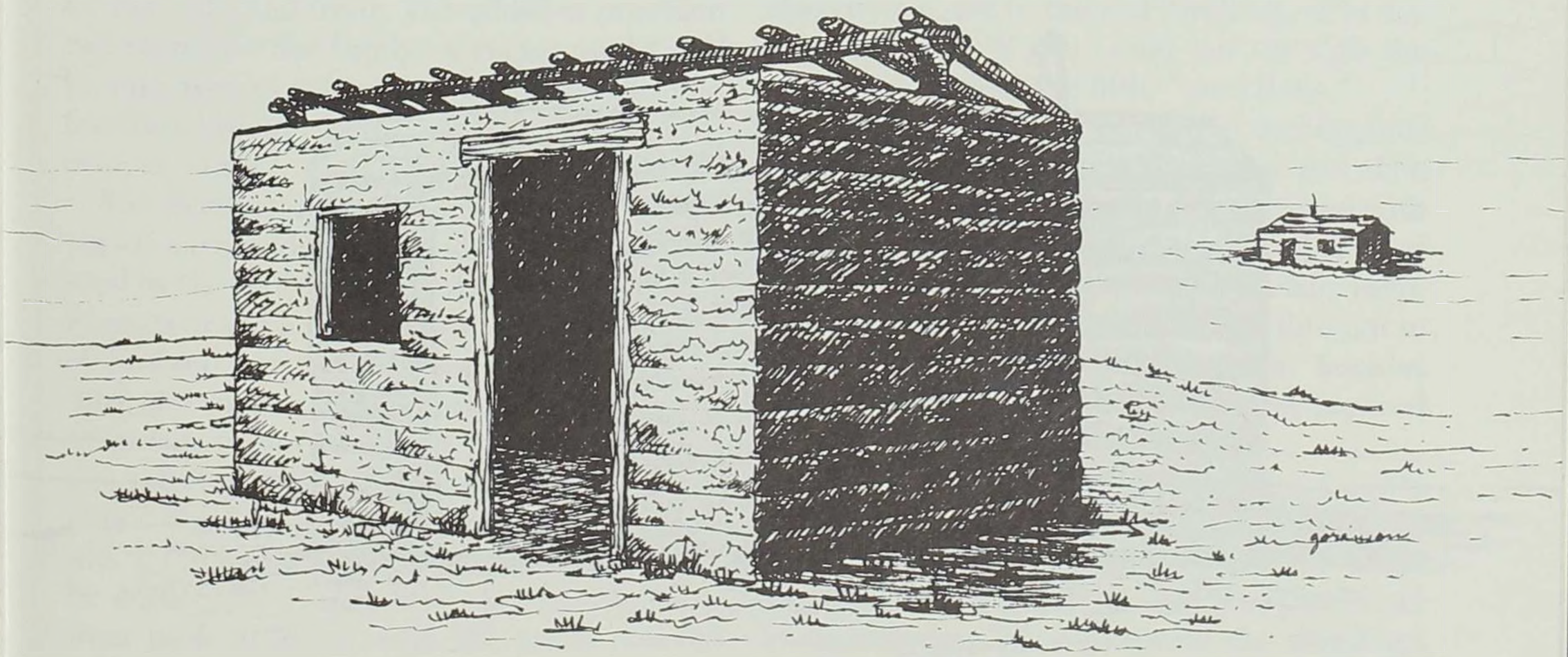
Next, with a yoke or more of oxen the builder would use a breaking plow to cut long lengths

of sod in widths of eighteen to twenty-four inches. The sod was about six inches thick. These strips of sod were then cut into two-foot lengths with an ax or spade. Finally, the sod strips were laid as bricks with dirt as filler in the cracks between the strips.

The roofs of these homes would either be sloped or low-gabled. For a sloped roof, one side of the sod structure was built up several rows of sod higher than the other side. Corner posts for the higher side were made of saplings with crotches at the top to hold the pole used to support the roof. From this pole additional poles were stacked for the rafters. If the roof was low-gabled, center posts with crotches were used, sometimes with corner poles, to support a ridge pole from which additional poles were then used for rafters. When ridge poles had to be joined to span greater lengths, posts were used inside the structure to help support the weight of the roof.

Corner posts were not a necessity in construction. However, if a homesteader did not use a ridge pole to support the weight of the roof he needed to use a roof plate — a series of poles around the top edge of the building. Without a ridge pole or roof plate the weight of the roof would push on the walls and could cause them to collapse outwards, as J.K. McAndrew of O'Brien County learned. In building his sod house McAndrew did not take the time to make a wood frame. The home fell down almost immediately and had to be rebuilt with a frame.

On top of the rafters, settlers placed the bundles of tied prairie grass or some willow brush, and then more sod, this time dirt side up to keep water from running down inside. When new, the roofs shed water well. Sometimes the homesteader had enough boards to use for the roof, which made the house even more waterproof. Usually frames were pur-



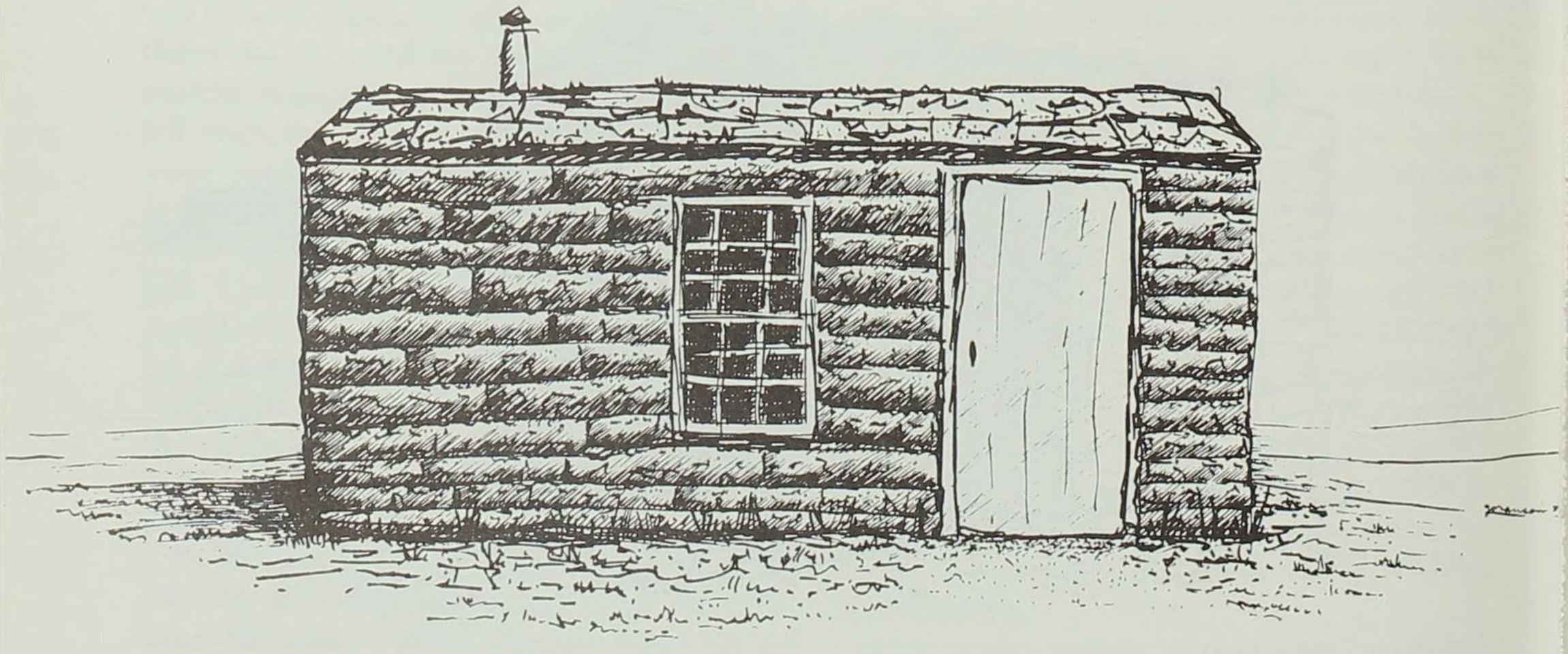
(drawing by the author)

chased for the door and window, with the door then made of lumber and one- or two-sashed windows installed. If a trip to town wasn't anticipated in the near future animal skins, rag carpet, or an old quilt might cover the window openings until such time as glass could be purchased. Windows were usually placed on the south side of the sod dwelling, and high in the wall, to allow as much light as possible.

The dugout, referred to occasionally as an "oversized gopher mound," was built in several ways. One way was by digging a hole in the ground, perhaps five feet deep. Poles were then put in the center ends to support a center ridge pole. Then, from the center ridge to the ground sides, more poles were put on for the rafters. Upon this was laid prairie grass or willow bundles. Sod slabs were then added. A shingled roof was put on if any boards could be found. Sod was laid-up for both gable ends, with a door and window, preferably on the south end. Another window could be added at the other end, if desired. Finally, steps were cut into the ground to reach the floor level. When the steps wore out, board were put down for reinforcement.

Niels Hanson used a variation of this style in his home in Pocahontas County. He dug down two feet, laid three-foot high sod walls on the sides for a total interior height of five feet, and then roofed the structure. To make a more comfortable home, he plastered the interior walls. G.A. Slocum of Pottawattamie County built a dugout, similar to Mr. Hanson's, which measured sixteen-by-thirty feet. The house was the largest one known of the type in the state.

Dugouts were also built into the side of a hill so that three sides were closed and only one end was laid-up with sod. The walls of these houses were often shored up with boards to make "warm, cozy and strong, though perhaps not beautiful" homes, as Ephraim Strauss'



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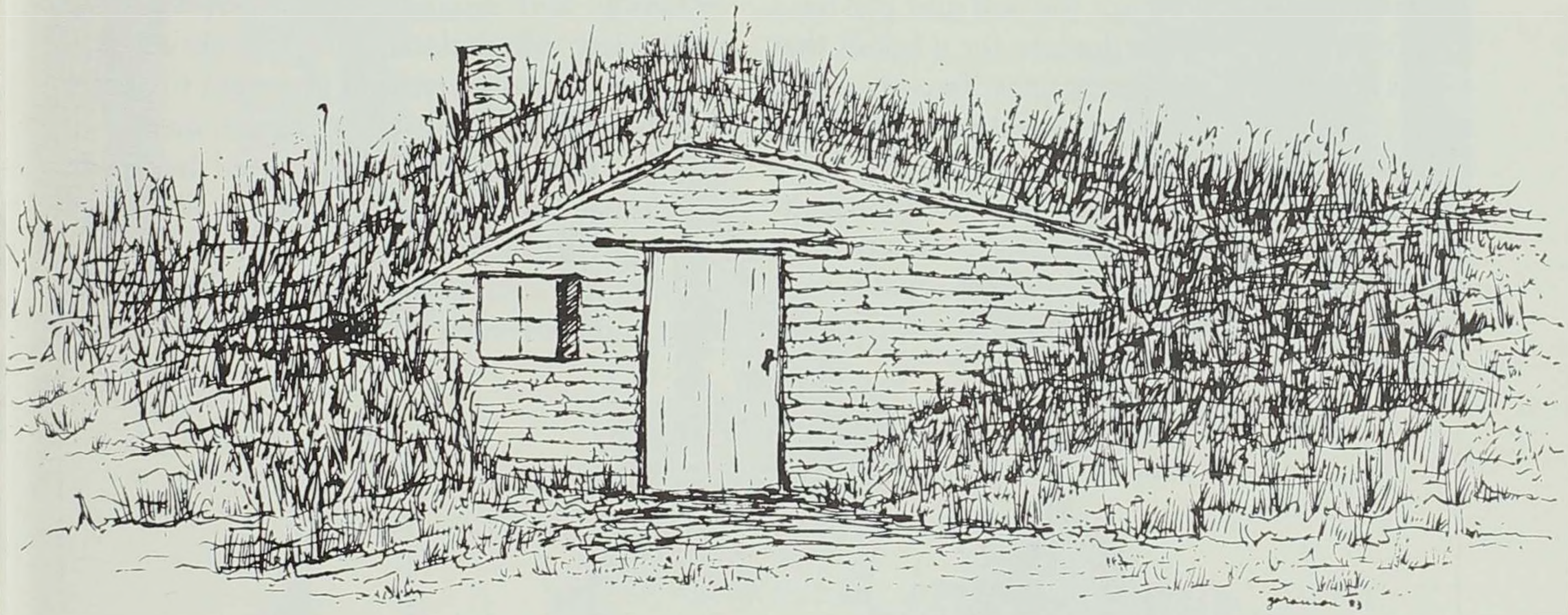


(drawing by the author)

"prairie palace" in Harrison County was described.

Many dugout owners added to the front of their structures after a good season, using sod for the walls and front. The addition provided two rooms for the family. A visitor might well be surprised to enter these dwellings and find furniture brought from back East, and perhaps even an organ.

Sod shanties, a frame construction of rough boards surrounded with sod, were frequently used by the settlers. Shanties were better than dugouts or sod houses because they were freer of dust and dirt and kept out snakes and such. Also, the walls could be decorated with paper or pictures more easily. These abodes were also referred to as slab houses, or "clapboard huts." The roof was made either of boards or sod. If the roof was made of boards they would be eight- to ten-inch wide boards, running from peak to eaves, with the joints covered with small boards. Finishing touches included a wood plank floor and plastered walls.

As with all homes, the inside reflected the nature of the owner. Some homes were cheery and bright with wall hangings, pictures, and maybe even a mantel clock. One was always welcome in the sod dwelling, as in any pioneer home, if one could put up with the inconveniences of the little "mud dens."

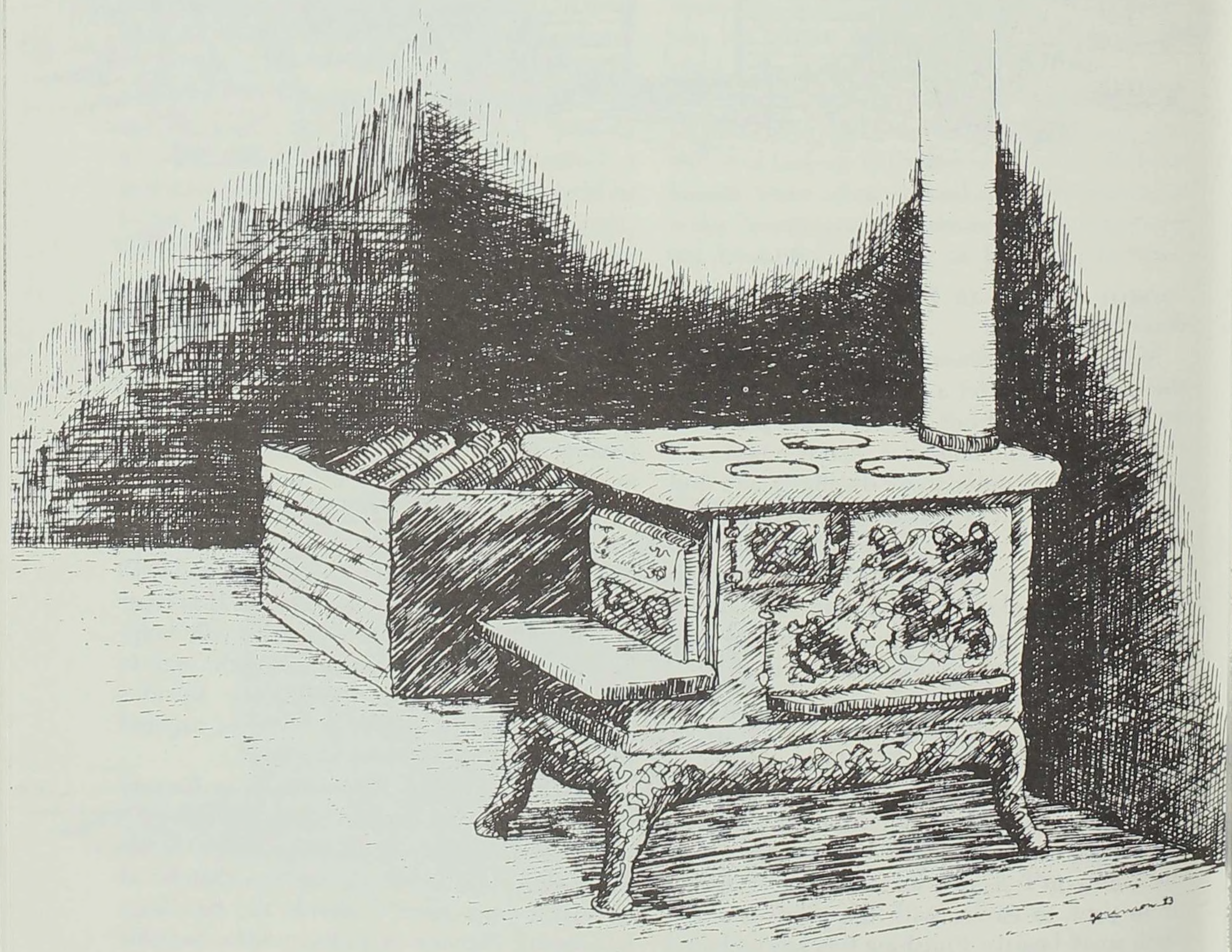
The interior walls of sod houses and dugouts could be smoothed with a broadax and then plastered with clay. Clay would be mixed with water and troweled on the walls in a thin layer or several layers. This proved especially helpful in keeping fine dirt from sifting through to clothes, furniture, and inhabitants. Besides plastering, some energetic housewives papered the walls with newspapers.

The dugout of Peter Schut in Sioux County had a ledge around the walls, covered with store box boards a half-inch thick. The ledge was used for additional seating. Sometimes sod or boards were used to divide the dwellings into rooms. Blankets or quilts could be hung for privacy at night.

Inside, heating and cooking facilities were most commonly one and the same. Very few settlers built fireplaces of sod because the extra time required to lay up the sod and plaster a chimney was not worthwhile for a home that was not meant to be permanent. Occasionally a clay oven was used for cooking, as George Dailey used in his sod home. Generally, however, cast iron cookstoves were used for heating as well as cooking. They took up little space, could comfortably heat the small area of the home, and were much easier to cook on than fireplaces.

Finding wood on the open plains was difficult, so many homesteaders spent time in the evenings and during the winters twisting prairie hay into fuel. The six- to eight-foot tall grass needed to be twisted just right to hold it together tightly. Prairie hay burned nicely but quickly, and mountains of twisted hay were required to heat the abode. Stacks of twisted hay crowded the one-room dwellings.

Other fuel sources included cow chips, corncobs, and even corn on the cob. Corn burned



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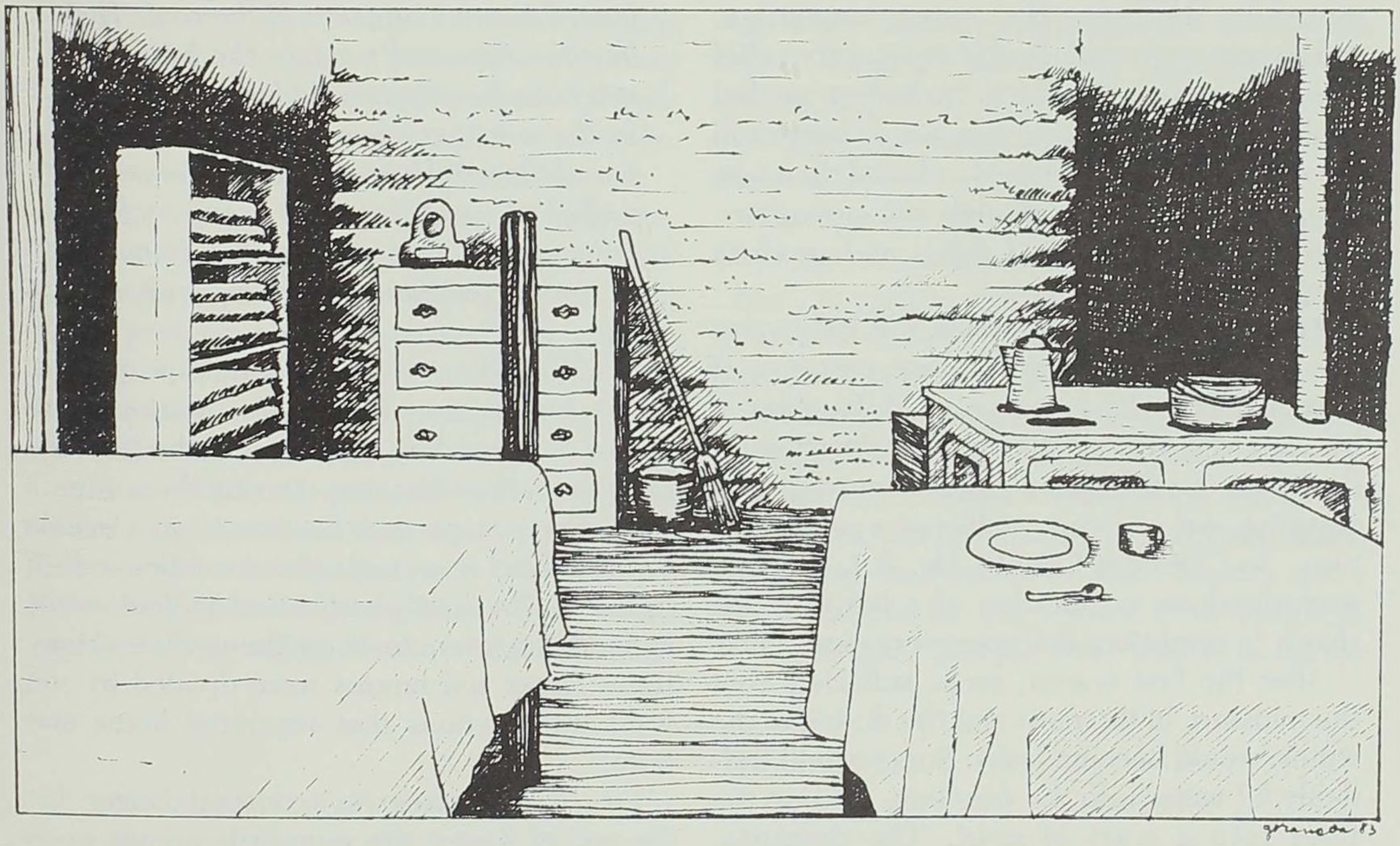


well when dry. And because of the prevailing low prices for corn during the sod era in Iowa, burning corn as fuel was usually more economical than buying coal or wood.

Along with stoves, other furniture in the sod dwellings included homemade beds. Most often, beds were constructed of poles with rope woven between the poles for springs, and blankets and quilts on top. If the home had corner posts they could be used for a bed frame, with two additional freestanding poles. Under the beds many homes had smaller, framed, trundle beds that were pulled out and used at night. When the roof had a higher peak the top portion of the house might be floored for a small sleeping attic. The small sod home of the Van Deek family, in Sioux County, had such an attic where their five boys slept.

Many times homes were shared and families took turns sleeping in shifts. This arrangement kept beds in continual use, except when it was necessary to wash the bedding. In Kossuth County, W.A. Waterhouse had a large sod house that was shingled and proudly described as "one of the best in county." At one time three families lived in Waterhouse's sod dwelling, owing to its large size.

Boxes were often used for both storage and as chairs or benches. The most common containers were store boxes that had been used to pack the settler's belongings for the trip to Iowa. Larger boxes might be used to display "fancy dishes" and heirlooms. The table might be a dry goods box, with dishes and cutlery stored inside.

Within sod dwellings, life was a series of problems. There were also some hazards to contend with. These included pests and rodents, sickness complicated by the dirt and mud, water contamination, problems arising from sharing quarters with animals, and fires.

Bedbugs were a constant nuisance. Many children suffered the discomfort of large welts

caused by the bugs. Hot water, turpentine, and kerosene provided only temporary relief from the pests. Rodents, including pocket gophers and striped squirrels, would burrow in the sod walls. Even bull snakes found their way into sod homes and, though not poisonous, they could put up good fights and produce deep wounds.

Any sickness in the dugouts and sod homes was complicated by the constant presence of dust and dirt. The seven year old daughter of Mr. and Mrs. Revo Williams, Kossuth County, died from "hardships incidental to moving, and camping and of living in the new sod structure." In Cherokee County, Dr. R.L. Cleaver performed an amputation of a leg in a sod shanty in conditions that were very unsanitary.

After the first season, roofs, suffering from the moisture of the rains and the drying of the winds, would become leaky. Some would suddenly let water into the dwelling, turning the floor into a mass of mud. The dugouts, especially, were a problem when rainwater ran down the sides of hills onto the sod roofs. When well saturated, entire roofs could collapse, covering the inhabitants and all their possessions.

Settlers faced a variety of roof problems. The J.C. Emery family had to tie their roof down in storms. To keep the roof from blowing off and the rain from drenching them, they tied the rafters to the bed and then piled all their possessions on the bed when it looked like rain outside. Or consider the case of Diederick Beneke in Pocahontas County, whose house had a shingled roof with some open spaces. After a blizzard he woke to find himself and the entire interior of his house covered with two inches of snow.

Another problem was frost in the winter and dampness in the spring which caused the walls to crumble, rot, and sag, and endangered the lives of all inside:

> *A family in Palo Alto county was aroused from sleep by a crackling sound that came from the inner supports of the roof. They hastily arose and went to the home of a neighbor for the remainder of the night. In the morning when they returned they found their sod house a mass of ruins. The walls had spread and the heavy roof had fallen to the ground; had they remained the entire family might have perished.*

Many sod homes served a dual purpose as house and barn in the winter. Settlers were forced to bring their animals into the house to keep them from freezing. During the winter of 1871 Fred Nagg and his family in Osceola County lived in a single-room sod house with his oxen. The family had to find and cut weeds to feed the oxen to keep them alive. Many times larger sod houses were divided by sod walls into sections that separated home and barn.

Fire in sod houses was a constant danger. By the end of winter the snug little homes were thoroughly dried out by the heat, and in the summer natural heat dried out the home. Storing hay inside could also create a fire hazard. In January 1870 the sod house of Stephen Harris, which had a thatched roof, caught fire. The woodwork inside caught fire first from the stovepipe. With little water available, the fire couldn't be contained. The inside was completely gutted, including Mr. Harris' best suit of clothes, his books, and all the furniture he possessed.

In an 1871 prairie fire A. Himan and Gus Peterson lost their sod houses, hay sheds, grain, and all their possessions. So did Joseph Brinker who, when he saw the fire, hauled his possessions out of the house and placed them 330 feet away. A burning tumbleweed caught his belongings on fire, however, and he lost nearly everything. Twice prairie fires burned the sod roofs of John and Frederick Johnson, who lost everything they had. These people all lived in Pocahontas County, but fires occurred in all parts of the prairies.

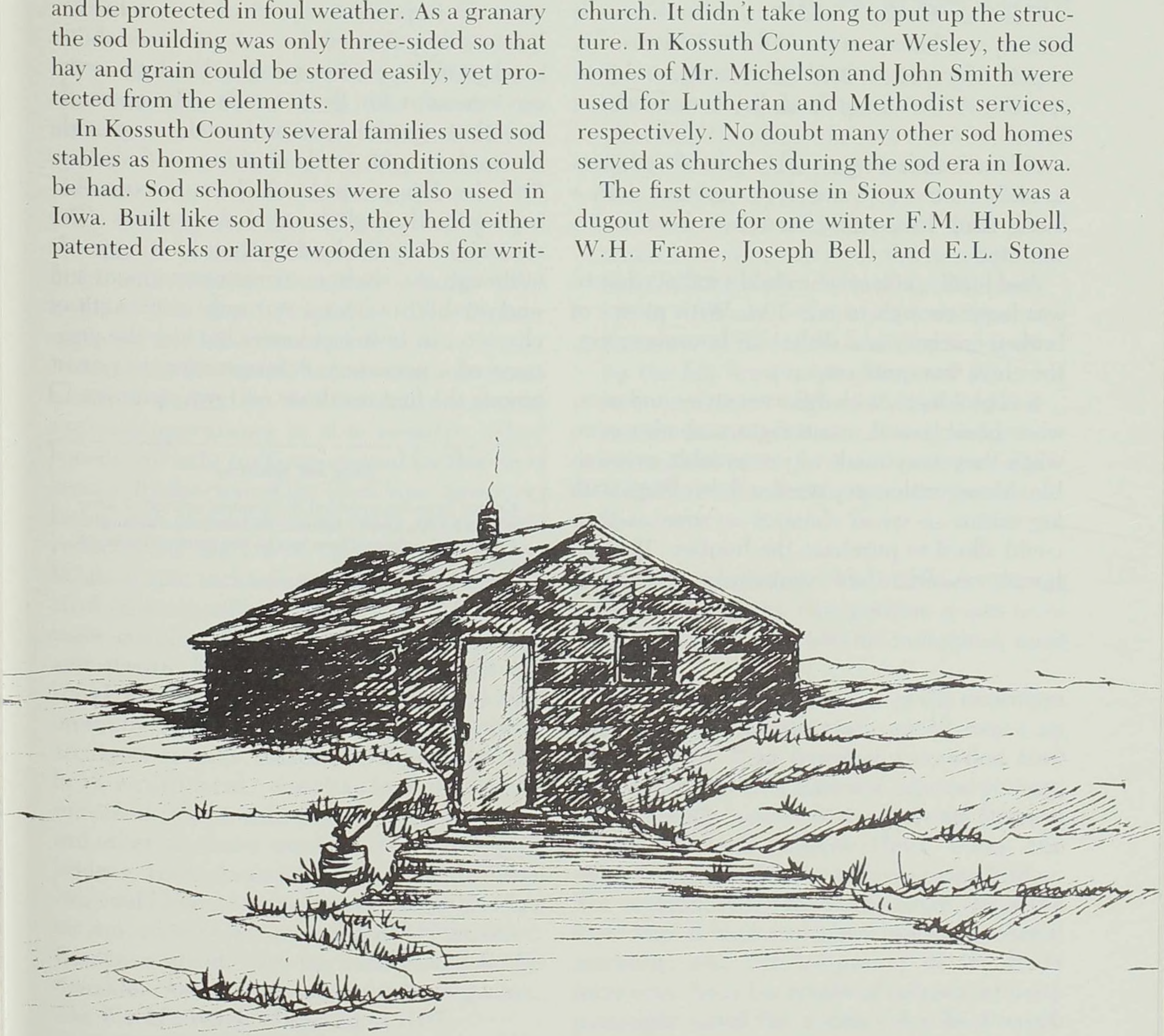
There were many uses for sod buildings besides as homes. Commonly they were used as barns, stables, and granaries. "Soddies" were sometimes used for schools, churches, and for community buildings.

A sod barn was built similar to a sod house, though with a larger door. The animals could then be kept from wandering too far at night and be protected in foul weather. As a granary the sod building was only three-sided so that hay and grain could be stored easily, yet protected from the elements.

In Kossuth County several families used sod stables as homes until better conditions could be had. Sod schoolhouses were also used in Iowa. Built like sod houses, they held either patented desks or large wooden slabs for writing, as in Clay County's schools. In the late 1850s Kossuth County had what was fondly called "Gopher College." This was a dugout in the hillside, roofed with boards, brush, and slabs of sod.

The first church in O'Brien County, built in 1871, was constructed of sod. The settlers had a "bee" to gather and cut up the sod for the church. It didn't take long to put up the structure. In Kossuth County near Wesley, the sod homes of Mr. Michelson and John Smith were used for Lutheran and Methodist services, respectively. No doubt many other sod homes served as churches during the sod era in Iowa.

The first courthouse in Sioux County was a dugout where for one winter F.M. Hubbell, W.H. Frame, Joseph Bell, and E.L. Stone



(drawing by the author)

signed county warrants and conducted other transactions.

Both Portland Township and Lott's Creek Township in Kossuth County had a section known as "Sod town." These areas had a large cluster of sod houses, which included a school, and the name provided a way of directing people to the communities.

Norman Collar's sod house in Kossuth County was known as the "Old Sod Tavern." A variety of travelers, land speculators, and prospective settlers found food, drink, and lodging there.

A blacksmith shop, with walls of sod, was used for four years and then replaced with a frame shop by August Prange in Pocahontas County.

And finally, at least one child's sod playhouse was large enough to crawl in. With pieces of broken crockery and dishes for housekeeping, the child was quite content.

Sod buildings, with different styles and uses, were humble and unsatisfactory abodes even when they were made as presentable as possible. Many settlers replaced sod dwellings with log cabins or wood shanties as soon as they could afford to purchase the lumber. The sod house was often then converted into a stable, granary, or toolshed. When the railroads penetrated most of Iowa in the 1880s, lumber became more readily available at a more reasonable cost. Consequently many fine farm homes were built, some of which can be seen in Iowa today.

Thus ended the sod era in Iowa, a loss not generally mourned. Yet these sod dwellings were an important aspect of Iowa's history because they showed the early pioneers' ability to adapt to the environment and to draw on the environment for their needs. The pioneers took their environment and used it to provide themselves with food, clothing, and shelter. Sod dwellings enabled them to survive, especially through harsh Iowa winters. The decision to use the land for their housing needs (although the shelters were inconvenient and undesirable) indicates not only a strength of character in Iowa's pioneers but also the presence of a necessary determination to persist among the first residents on Iowa's prairies. □

Note on Sources

County histories provided the greatest amount of information for this article. Information about sod dwellings in Iowa was also gleaned from special commemorative issues of newspapers.