

## Inventing in Iowa

People from Iowa were joining the list of American inventors while it was still a territory. On January 20, 1843, John Godden of Pittsburgh, Van Buren County, received Patent No. 2,922 for his flax and hemp breaking and cleaning machine. His invention added a second frame of slats which made the cleaning of flax and hemp more effective. Godden had lived in the area for at least a year or two. In the early 1840's the Iowa territorial government had granted him and his family exclusive rights to build a dam across the Des Moines River.

The next Iowan to receive a patent was J. Hobart of Dubuque. He patented a new process for auger mining on May 23, 1846. In the early years of statehood, few were concerned with inventing new machines or developing new processes. Only 168 patents were issued to Iowans through 1860.

The inventions for the first ten years covered many needs. They included an awning for horses, barrel head cutting machines, a cultivator axle, a water wheel, digging machines, an extension table, fence, hand looms, an excavator, an engine governor for side wheel ocean steamers, a process for making white lead, a locomotive cow catcher, a

locomotive for ascending inclined planes, airtight mail bag, paper clip, seed planter, plow, smut machine, stoves, windmills, brick presses, a candle mold, a machine for making clothespins, a lathe for turning fancy handles, a worm tub for stills, a railway car coupling, and a head support for railway cars.

The inventors came from a number of towns—New Oregon, Muscatine, Burlington, Cedar Rapids, Osceola, Iowa City, Mt. Pleasant, Columbus City, Dubuque, Madison, Clay, Salem, Davenport, Harrisburgh, Charleston, Oskaloosa, and Farmington.

As the Civil War neared its end, there was an upswing in the number of inventions. In 1865, 104 inventions were patented. Between 1843 and 1873, the peak year was 1867 with 247 patents being issued to Iowans. After that year, there was never less than 201. A total of 2,325 patents were granted to Iowans during the thirty year period.

These more than 2,300 inventions were produced by 1,910 inventors. In some cases two or more persons worked together to get a patent. An inventor did not always work with the same person. For instance, H. C. Kellogg of Quasqueton joined with T. Langdon to patent a broom. In 1863 J. B. Edgell and E. A. Alexander were Kellogg's partners in patenting a churn. These three were joined by G. P. Martin the same year in in-

venting a grain binder. Kellogg was the lone inventor of a combined sower and cultivator in 1869. In a few cases the invention was the joint effort of an Iowan and someone from another state.

A total of 344 Iowans received two or more patents. G. R. Moore of Lyons was the most prolific among Iowa inventors. His 18 patents included a corrugating machine, three drains, two fire chamber cleaners, two coal and two heating stoves, a stove pipe connection, doors for a stove, a water pipe valve, two car couplings, a flat iron heater, a damper for a flat iron heater, and a process for the construction of corrugated sheet metal boilers.

Edwin J. Toof of Fort Madison received 14 patents. His inventions were a comb cleaner, a three horse draft equalizer, a hay elevator, a horse rake, a lamp extinguisher, a paper clamp and inkstand, a paper holder, four sewing machine rufflers, a try square, and a wick regulator.

A. Johnston of Ottumwa patented 12 attachments for sewing machines, including a needle setter, threader and cutter, a tuck creaser and embroidery, gathering, ruffling, and plaiting attachments. Likewise, the eight inventions of R. J. Mann of Burlington were closely related. He received patents for metallic sieves, a method for constructing them and for machines to construct sieves.

The eight patents received by H. P. Jones of Davenport were more varied. They were two dough kneaders, two steam valves, two washing machines, a tating shuttle winder, and a binding attachment for reapers. The inventions of A. Ingalls of Independence pertained to farming, sugar making and blacksmithing. His eight patents were for a grain drill, a plow, a seeder and cultivator, a seeding machine, a mill for crushing sugar cane, a saccharine juice evaporator, a tire heater, and a tire upsetting machine.

A further breakdown shows five persons receiving seven patents, eight receiving six, 13 receiving five, 29 receiving four, 67 receiving three, and 216 receiving two patents.

Sometimes the patents received by an inventor were concentrated in a single field. Johnston and Mann are good examples. There were many others of a similar nature. In other cases the inventor was interested in a variety of things as we have seen with Toof, Ingalls, Moore, and Jones. Some concentrated mostly in one area but did do other things. For instance, David Hargar of Des Moines was well-known for his patents on furnaces; he also patented a car coupling and a formula for a roofing composition.

The inventors came from 395 cities, towns, and townships. Davenport had the largest number with 100. Des Moines had 80, Dubuque 70, Burlington 57, and Muscatine and Oskaloosa 53 each.

Among the counties Scott County had the most with 112 inventors receiving 143 patents. Lee County was next with 108 inventors and 139 patents. Other counties with more than 80 inventors were: Henry County, 85 inventors and 95 patents; Polk County, 84 and 99; Dubuque County, 82 and 126; and Buchanan County, 81 and 102.

Six counties had between 50 and 80 inventors; 15 counties between 25 and 50. Twenty counties—14 in the northwestern part, three in the north central and three in the southwestern part of the state—were not represented by any inventors before 1874. They were still largely frontier areas, slower to become populated, and probably more concerned with establishing homes and earning a living than in applying for patents.

The apparent need for a new machine, process, or method of operation probably led to many of the inventions. Some inventors had an urge to make something new or different and were constantly looking for new ideas to develop. Undoubtedly others were motivated by the lure of profits.

Some inventions were closely related to the trade, business, or manufacturing in which the inventor was engaged. Some were the result of long periods of trial and error; others were probably largely spontaneous in nature.

Many inventors did not receive patents the

first time their ideas were submitted. After being rejected, portions of the applications were revised, claims of new ideas were modified, and the applications were resubmitted. Many inventors possibly never even bothered to apply for a patent.

An 1869 account in the *The Iowa State Register* (Des Moines) of the development of a corn harvester provides an interesting story of how new inventions were sometimes developed. Henry Hospers of Pella had a son, Nicholas, who might soon be classed "with the 'inventors of the nineteenth century,'" the paper said.

Young Nicholas had a workshop in the upper part of the barn where he spent all of his time on rainy days. About a year before, he had decided there might be a better and faster way of cutting corn than by hand. Soon he had made a machine. The first time he pulled it through the field by hand so as to keep it secret.

The machine had deficiencies so Nicholas took it back to the barn, tore it apart, and remodeled it. This time he hitched a horse to it. Before night he had cut down and laid fifteen acres of corn in nice piles.

The stalk cutter could be worked by one or two horses. A knife cut off the corn which fell into bins that held four to six hills. Then by a lever the corn was dropped into piles to be shocked later. Young Hospers did not patent his invention at once. A man from Keokuk offered him

\$5,000 for it, but Nicholas would not sell. Instead he entered into an agreement with the man, M. Sellers, and they got a patent on January 12, 1869. Later Hospers patented a churn dasher.

The writer for the *Register* concluded:

With such boys as young Hospers and Canfield [of Lyons], and many others not yet brought before the public, what the future is to develop no one can say with absolute certainty; but the reasonable inference is with these great "laborsavers" to till and harvest the crops, and our net-work of railroads reaching from ocean to ocean to carry them away, the vast farms of the west shall be reckoned by the square mile instead of the acre, and steam shall do the plowing and sowing, and the reaping and the mowing, and the gathering of the harvests, and manufactories of every kind shall be thick in the land, and newspapers shall circulate by millions instead of thousands, and fortunes will be accumulated on this continent, such as the whole world has hitherto not known.

Inventing had its political side too. When the Know Nothing Party was ascendant in several states, it was asserted that the Germans in the United States never invented anything. One Know Nothing politician asked, "Did you ever know a d—d Dutchman that ever invented anything after he came to this country?"

*The Council Bluffs Bugle* of March 16, 1859, wrote: "We are happy now if we were not then to be able to answer this question in the affirmative. Our old and esteemed German friend, G. H. Waldin [of Burlington], has invented a Watch-

maker's Lathe which bids fair to supersede all other Lathes now in use." Waldin received Patent No. 23,050 on February 22, 1859, for his invention.

The *Bugle*, quoting from the Burlington *Daily State Gazette*, said that by the use of Waldin's new and simple improvement all the more difficult portions of watchmaking and repairing, such as the turning of cylinders, verges, and pinions, could be done more easily. All kinds of pivot work could be produced with perfect accuracy.

It could be done with little labor, infinitely faster than by the old process. The article ended, "We hope to see Mr. Waldin handsomely remunerated for so important a contribution to the mechanic art."

As might be expected from an agricultural state, many of the inventions were improvements in farm implements. Many others pertained to the day-by-day life of the people. However, there were numerous inventions of a more unusual nature. They were as varied as the backgrounds, the abilities, and the interests of the inventors.

The following descriptions and illustrations of selected inventions and processes and the listings of all the patents by the different categories show the versatility, the imagination, the practicality, and the originality of Iowa inventors.