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An Entertaining Excursion Into Intellectual Property

No. 1

Styles reflect stile's evolution

By Jonathan M. Hines

Fences have been used for centuries to separate lands, keep livestock in pastures, and keep predators out. Of course, a structure stout and large enough to corral a thousand-pound cow presents an obstacle to the farmer, too. Thus appeared the need for a means – stiles – allowing humans to traverse a fence while keeping the animals in and varmints out. Much ingenuity has been applied to the problem of making stiles easy for humans to use and hard or impossible for animals to cross. Most of them are based on a difference in size, dexterity, or ingenuity between man and beast. These structures—these inventions—were not conceived and built by engineers, but by farmers, herders and landowners who recognized a problem and came up with widely

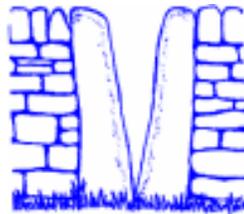
varying solutions. These different structures illuminate the depth of imagination and creativity that any motivated person can apply to a problem to achieve an effective solution.

(See 'Stiles are Fertile' on page 2)

Here's an A-frame ladder stile with narrow treads (right).



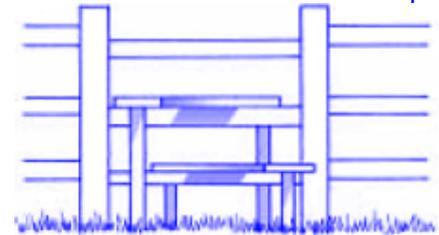
Illustrations courtesy www.Harrogate.gov.UK



The simplest kind of stile, and one of the earliest types, is a V-shaped opening just wide enough for a person to squeeze through (left).

Easily constructed wooden step stiles are quite common and can be easier to climb than ladder stiles. (below).

Another early type is simply a set of steps protruding from the outside of a stone wall (right).



When is an invention perfect?

By W. Thad Adams III

The short answer is "never." No matter how well-adapted to a particular use, any product can always be improved. However, some inventions have gotten so close to the ideal that there is very little reason to work at further improvement. The problems – and demand for improvement – are so slight that the benefits obtained from further improvement are simply not worth the effort.

A few nearby examples come to mind: the wooden pencil, thumbtack and paperclip. The conventional paperclip, made of cheap wire looped on itself and used by the many millions every year, has been around for a long time. There have been improvements to be sure – grooves in the wire to provide a better grip on the paper, plastic coating to prevent rust and scratches on plastic sheets, for example.

Nevertheless, for the purpose it serves, it is hard to beat. The paperclip is incredibly cheap, easy to make, reusable, quickly applied, quickly removed, holds a wide range of thicknesses without damaging the paper, and provides an easy, ready-at-hand way of releas-

ing nervous energy by bending the loops back and forth on each other until the wire breaks from fatigue. While there are many types of fasteners, the paperclip has been around for a long time in an essentially unchanged form, and will likely hang around for many years to come. Enough about paperclips.

Other inventions achieve a degree of perfection because the basic idea is widely variable. One such invention is the *stile* – the featured subject in this issue of *Asymptote Review*. In its simplest form a stile is merely a means of allowing a person or small animal to get through or over a fence or wall while preventing a larger animal from doing the same thing.

A stile allows easy transit by farmers and hikers, for example, across land where livestock is kept. It offers the advantage over a gate of being open and closed at the same time, thereby preventing livestock from escaping because a thoughtless human leaves the gate open.

Stiles have been around for as long as there

(See 'Perfection' on page 2)

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Stiles are fertile ground for creativity

(Continued from page 1)

The adjacent picture shows a simple but imaginative stile. This stile is actually a small gate next to a larger gate – and the hinges are old rubber boot soles! They flex to allow the gate to be pulled open. When released, the soles then return to their original molded shape, closing the gate behind the user.

A key attraction with stiles is they enable landowners to control *where* a fence is crossed. Stiles are most often placed near fence corners or boundaries so that the walker is walking along the edge of a field instead of across the center. During the recent “mad cow” scare in the UK, pans or buckets of disinfectant were located at stiles so that those crossing the stile could first disinfect their boots before crossing. The stile limited the crossing locations and reduced the



number of disinfecting sites needed. From these simple openings evolved more sophisticated stiles, often with moving parts. The so-called “kissing gate” (see diagram and caption below) has a panel which swings between two other sections formed in the shape of a “Y”. This stile’s alluring nickname is attributable to the fact that the free-swinging section moves freely from one post to the other – “kissing” one side and then the other.

Humans can traverse the kissing gate by swinging it first one way, stepping into a relatively narrow space between the gate and a curved (or squared) fence, then swinging the gate in the other direction, allowing easy exit on the opposite side. The small size of the gap and the sequence of steps prevent animals from passing through.

As the American West was opened and developed in the 19th Century,

(See ‘Progression’ on page 3)

The (almost) Perfect Invention Steps Up Time and Again

(Continued from page 1)

have been fences and walls. Of course, when the fence or wall is intended to prevent all passage, a sturdy gate with lock and maybe some barbed wire across the top will do nicely. In other situations, a stile serves a necessary function efficiently and inexpensively.

No one knows exactly how stiles developed. The idea may have been suggested to some ancient farmer simply because a narrow section of his stone wall fell over and conveniently provided access through instead of over the wall. At any rate, there is now a vast variety of stiles all over Europe, designed and built according to ancient custom, convenience and the availability of materials.

My wife, Betty, and I have hiked all over Europe and have climbed over dozens of different types of stiles on hundreds of occasions. Some of them are illustrated and explained in this issue. I never cease to be amazed at the ingenuity of the inventors of these simple devices. They vary as widely as the circumstances of their need and use. They are very nearly perfect, and have remained essentially unchanged for hundreds of years. They add a further dimension to the enjoyment of long-distance hiking.

Nowhere else has the stile reached the level of utility as in the United Kingdom. Land laws

in the UK permit the public to pass onto and across most private land, so landowners have devised stiles for all types of fences and walls. Some are as simple as steps built into a stone wall, or next to a wire fence. Others, for example, so-called “kissing gates”, can be elaborate iron constructions that require a degree of manoeuvre, and sometimes taking off your backpack.

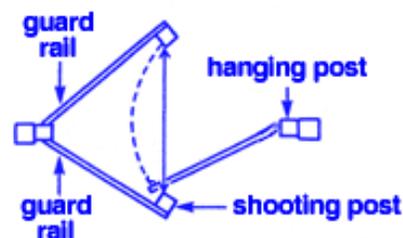
The common presence of stiles throughout the country back through history is reflected in the frequent use of the stile as a subject in poetry and art, and some examples can be found on “The Back Page” and throughout this issue.

From the ancient stile has come many modern, sophisticated “turn stiles” that are commonly found in public areas where passage must be controlled, or a payment or ticket collected from a single file of people.

Now, because of security concerns, many elevator areas are controlled by stiles that require the use of an electronic ID card, and have vertical glass panels that quickly open and close to allow visitors through, one at a time.

In the near future, face or fingerprint recognition devices may be incorporated into stiles to

further secure areas against unauthorized intrusion. However advanced, the basic idea of the stile follows a clear path back into prehistory,



A free-swinging kissing gate is actually an elaborate stile – easily allowing human passage but keeping livestock penned in, unable to bend their large bodies around the swinging gate.



Thad Adams traverses a stile on the Coast-to-Coast Trail in the UK in 2003.

to some farmer or cowherd who, perhaps tired of climbing over the same rock wall or opening same heavy, awkward gate day after day, removed a few rocks so he could just squeeze through.

I hope you enjoy this issue of *Asymptote Review*. The lead article is written by Jonathan Hines, a patent attorney at Adams Evans P.A.



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The Travellers' Curse after Misdirection

By Robert Graves (1895 – 1985)
(from the Welsh)

May they stumble, stage by stage
On an endless Pilgrimage
Down and dusk, mile after mile
At each and every step a stile
At each and every step withal
May they carch their feet and fall
At each and every fall they take
May a bone within them break
And may the bone that breaks within
Nor be, for variations sake
Now rib, now thigh, now arm, now shin
But always, without fail, the NECK

Progression to portable stile still producing patents

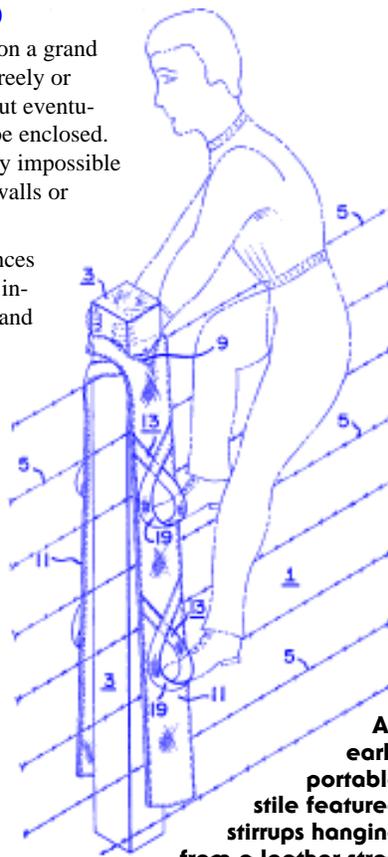
(Continued from page 2)

cattle ranching was undertaken on a grand scale. At first, animals grazed freely or under the control of cowboys, but eventually, enormous pastures had to be enclosed. It would have been economically impossible to fence these areas with stone walls or wooden fences.

The need for low-cost fences for large areas led to the invention of smooth wire, and later barbed wire in the 1860s and 1870s, followed by electric fences in the 1930s. Still in widespread use, these types of fences use rows of wires strung under tension between relatively small vertical posts (sometimes wood but more often steel).

While effective and economical, these fences do not readily lend themselves to gates, or traditional stiles. This resulted in the invention of portable fence climbers. The adjacent figure shows a simple type, made from a leather strap, with several stirrups hanging from it.

Improvements were being made in such devices as late as 1989. The

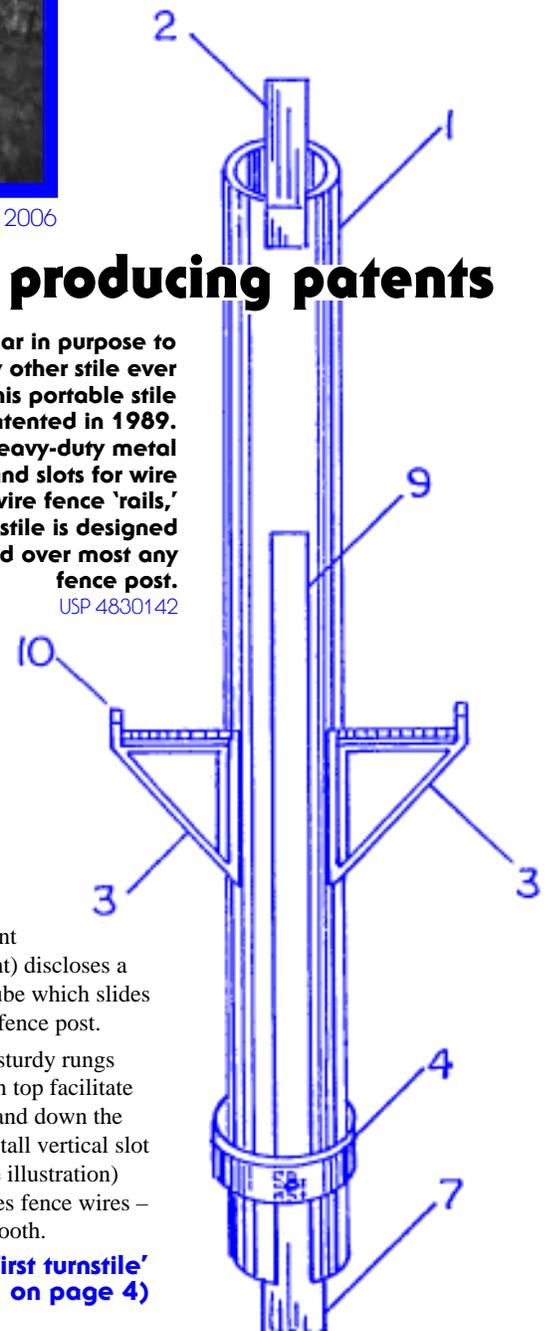


An early portable stile featured stirrups hanging from a leather strap which could be slung over most any type of fence, most anywhere along the fence.

USP 3871351

While similar in purpose to virtually every other stile ever invented, this portable stile was patented in 1989. Featuring heavy-duty metal construction and slots for wire or barbed-wire fence 'rails,' this portable stile is designed to be placed over most any fence post.

USP 4830142



adjacent patent drawing (right) discloses a stout metal tube which slides down over a fence post.

A pair of sturdy rungs and handle on top facilitate climbing up and down the post, while a tall vertical slot (item 9 in the illustration) accommodates fence wires – barbed or smooth.

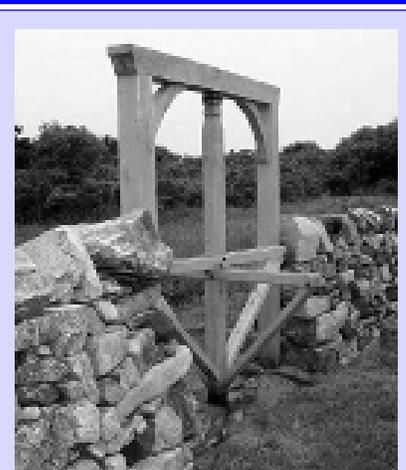
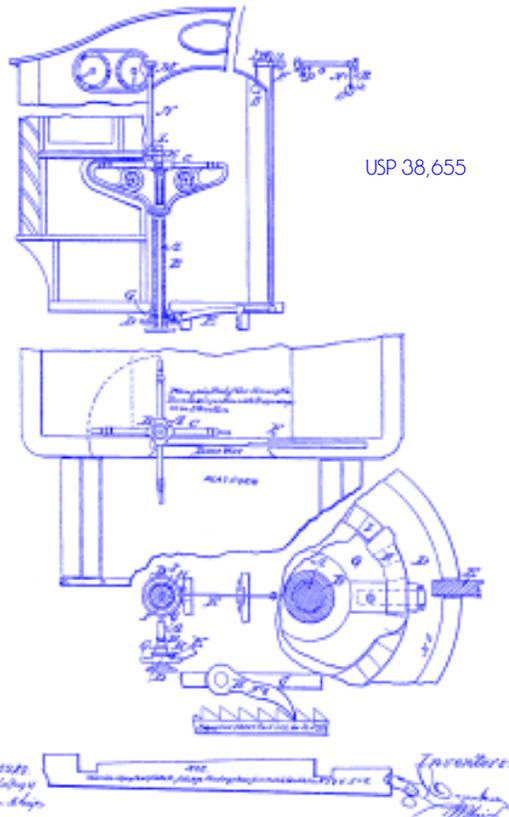
(See 'First turnstile' on page 4)

First turnstile emerges in 1863

(Continued from page 3)

Farmers need to keep animals in, but fences or similar barriers are sometimes needed for people, too. Train conductors, concert promoters, and stadium owners all need to control the human flows in and out of their venues. This need led to the transformation of simple fence turnstiles in to more complex machines.

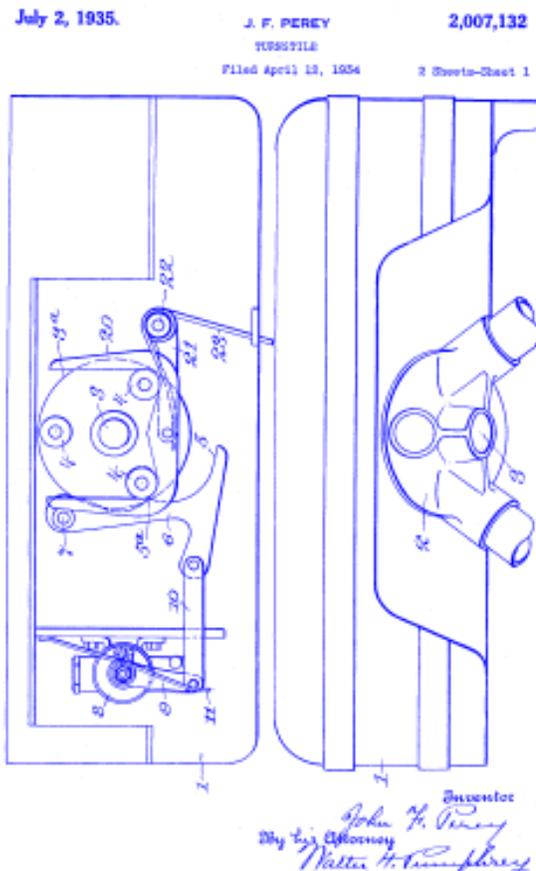
An early example of this kind of turnstile is shown in Patent 38,655 (see adjacent diagram) for an “Omnibus and Car Register”. While granted in 1863, it depicts a remarkably sophisticated device. The center shaft with turnstile arms “C” blocks an entryway to a street car, theater, or the like, and is locked against motion in the entry direction until it is remotely released by a conductor or agent. When released, it rotates a quarter-turn, allowing a single person to enter. This motion is counted on the gear-driven dials near the letter “M”. The arms are free to turn in the opposite direction so that passengers can exit without being held up or affecting the counter.



The Turnstile

By William Barnes,
The Dorsetshire Poet
(1800–1886)

Ah! sad wer we as we did peace
the wold church road,
wi' downcast feace,
the while the bells,
that mwanoed so deep
above our child a_left asleep,
wer now a_zingen all alive
wi' r'other bells to meake the vive.
But up at woone pleace we come by,
r'wer hard to keep
woone's two eyes dry –
on Stean-cliff road, 'ithin the drong,
up where, as vo'k do pass along,
the turnen stile, a-painted white,
do sheen by day an' show by night.
Vor always there, as we did goo
ro church, thik stile did let us drough,
wi' spreaden arms
that wheeled to guide
us each in turn to r'other zide.
An' vu'st ov all the train he took
my wife, wi' winsome gait an' look:
An' then zent on my little maid,
a-skippen onward,
overjy'd to reach agean
the pleace o' pride,
her comely mother's left han' zide.
An' then, a_wheelen roun', he took
on me, 'ithin his third white nook.
An' in the fourth, a sheaken wild,
he zent us on our giddy child.
Bur eesterday he guided slow
my downcast Jenny, vull o' woe,
an' then my little maid in black,
a_walken softly on her track.
An' after he'd a_turned agean
to let me goo along the leane,
he had noo little bway to vill
his last white earms,
an' they stood still.



Early in the 20th century, a new type of turnstile was invented. Sometimes called a “milkstool” turnstile, it has splayed arms carried by a hub that is mounted on an axis that is tilted downward (see adjacent figure). As the hub rotates, each arm comes up into a horizontal blocking position in sequence. The other arms rotate into a vertical position, usually into a recess in the turnstile base.

Turnstiles of this type are used both as simple counters, and for selectively blocking entry. Patented by John Perey, these turnstiles would probably be recognized by just about everyone in the modern world. The Perey company is still in business, and their turnstiles are still in wide use.

The history of stiles demonstrates once again the endless creativity that can be applied to a simple problem. Even as new designs are created for more modern, complex uses, rural areas around the world still rely on stiles invented centuries ago to control livestock while allowing passage of humans.

A Nursery Rhyme

There was a crooked man,
And he went a crooked mile,

He found a crooked sixpence
Upon a crooked stile:

He bought a crooked cat,
That caught a crooked mouse –

And they all lived together
In a little crooked house.

Money will Make the Mare to Go

“Will you lend me your mare to go a mile?
No, she is lame leaping over a stile.’

‘But if you will her to me spare,
You shall have money for your mare.’

‘Oh, ho! say you so?
Money will make the mare to go.’”
– Old Glee and Catches



This A-Frame ladder stile in the UK has uprights resembling wheelbarrow arms.



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Asymptote Review? Go to our
website www.adamspat.com
and click on the "Asymptote
Review" sidebar.

**Another easily constructed
stile utilizes large boulders
as stepping stones.**

**Removal or lowering of
fence tops is also a popular
stile technique.**



**The patented K Barrier® is a modern
stile commonly used to keep
motorcycles off walking trails.**

Directions to Adlestrop

On Leaving Kingham Station, turn right be-
side the main road. After passing a watermill,
turn right beside the River Evenlode. Eventu-
ally, pass a sewage works, cross a stile and
bear left past a line of willows to a footbridge.
Turn first left to Bledington.



**British artist Heywood Hardy (1843-1933) employs a wooden stile in his
painting, A Meeting Place.**

Who We Are

The firm specializes solely in patent, trademark and copyright law, and the related areas of unfair competition and trade secret law. Our eight lawyers have expertise in a broad range of intellectual property issues.

Our practice within this specialty is diverse, including prosecution of patent and trademark applications in the United States Patent and Trademark Office; domestic and international patent, trademark and copyright prosecution and licensing. The firm also has extensive litigation experience and regularly litigates patent, trademark, copyright and related trade secret and unfair competition matters in Federal and State Courts and before government agencies.

The firm is United States patent counsel for foreign corporations, many of whom have facilities in the Charlotte area. We assist both foreign and domestic companies and individuals in planning and executing overall patent and trademark strategy.

The firm's clients are involved in diverse areas of science and business, including the design and manufacture of textile machinery, hosiery and other apparel, filtration equipment, medical equipment, orthopedic products, child safety products, power transmission equipment, jet engines, electronic controls, microprocessor wafer processing equipment, high-speed audio and video duplication equipment, flooring products and aircraft passenger seats.

The firm also represents advertising and public relations agencies, golf courses, computer programming specialists, a nationwide photographic film processor, trucking companies, stock car racing teams, and a national restaurant chain.

Overall, approximately 50% of the firm's practice involves international issues. For this reason, we have very close relations with the international community in Charlotte, and therefore have access to information and services which are not normally available to those without such a large concentration of business in the international intellectual property area.

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The importance of the stile to rural life in England, Wales, Scotland and Ireland is reflected in the frequent use of the stile as a metaphor in many poems and other writings. Below and throughout this issue are a few we selected, accompanied by paintings incorporating stiles.

The Ballad of Keith of Ravelston

— Excerpts —

By Sydney Dobell
1824-1874

The murmur of the mourning ghost
That keeps the shadowy kine,
'O Keith of Ravelston,
The sorrows of thy line!
Ravelston, Ravelston,
The merry path that leads
Down the golden morning hill,
And thro' the silver meads;
Ravelston, Ravelston,
The stile beneath the tree,
The maid that kept her mother's kine,
The song that sang she!

I lay my hand upon the stile,
The stile is lone and cold,
The burnie that goes babbling by
Says naught that can be told.
Yer, stranger! here, from year to year,
She keeps her shadowy kine;
O Keith of Ravelston,
The sorrows of thy line!
Step out three steps, where Andrew stood
Why blanch thy cheeks for fear?
The ancient stile is not alone,
'Tis not the burn I hear!
She makes her immemorial moan,
She keeps her shadowy kine;
O Keith of Ravelston,
The sorrows of thy line!

The Briery Bush

Child Ballad 95

By Anonymous, circa 1300

O Hangman, stay thy hand,
And stay it for a while,
For I fancy I see my father
A coming across the yonder stile.
O, father, have you my gold?
And can you set me free?
Or are you come to see me hung?
All on the gallows tree?
No, I've not brought thee gold,
And I can't set thee free;
But I have come to see thee hung
All on the gallows tree.
Oh the briery bush,
That prickes my heart so sore
If I once get out of the briery bush,
I'll never get in any more.

O Hangman, stay thy hand,
And stay it for a while,
For I fancy I see my father
A coming across the yonder stile.
O Hangman, stay thy hand,
And stay it for a while
For I fancy I see my true love
A coming across the yonder stile.
O true_love, have you my gold?
And can you set me free?
Or are you come to see me hung
All on the gallows tree?
O yes, I've brought thee gold,
And I can set thee free;
And I've not come to see thee hung
All on the gallows tree.
O the briery bush,
That prickes my heart so sore;
Now I've got out of the briery bush,
I'll never get in any more.

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