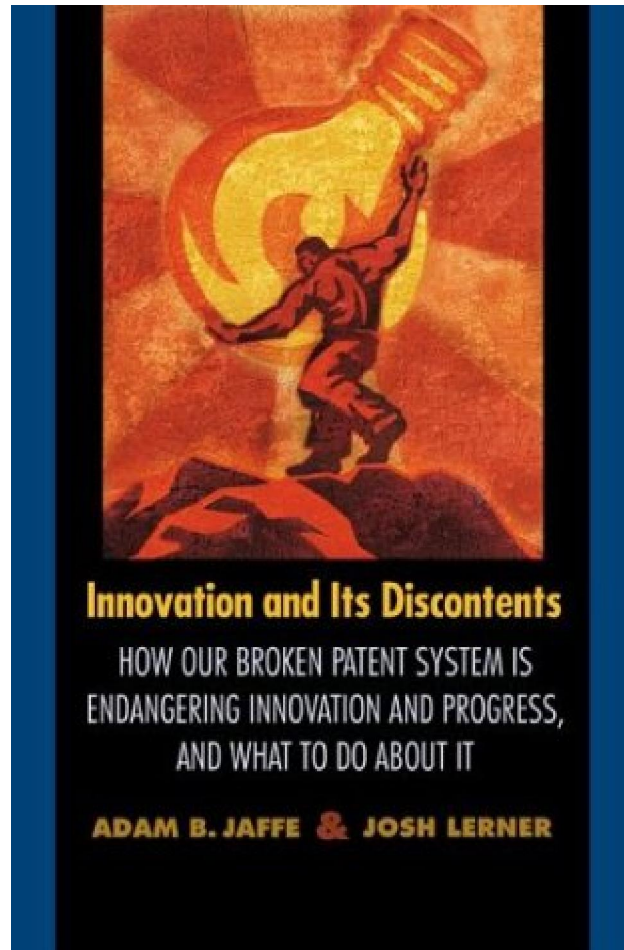


Patent Systems for the 21st Century Knowledge Economy

Adam B. Jaffe
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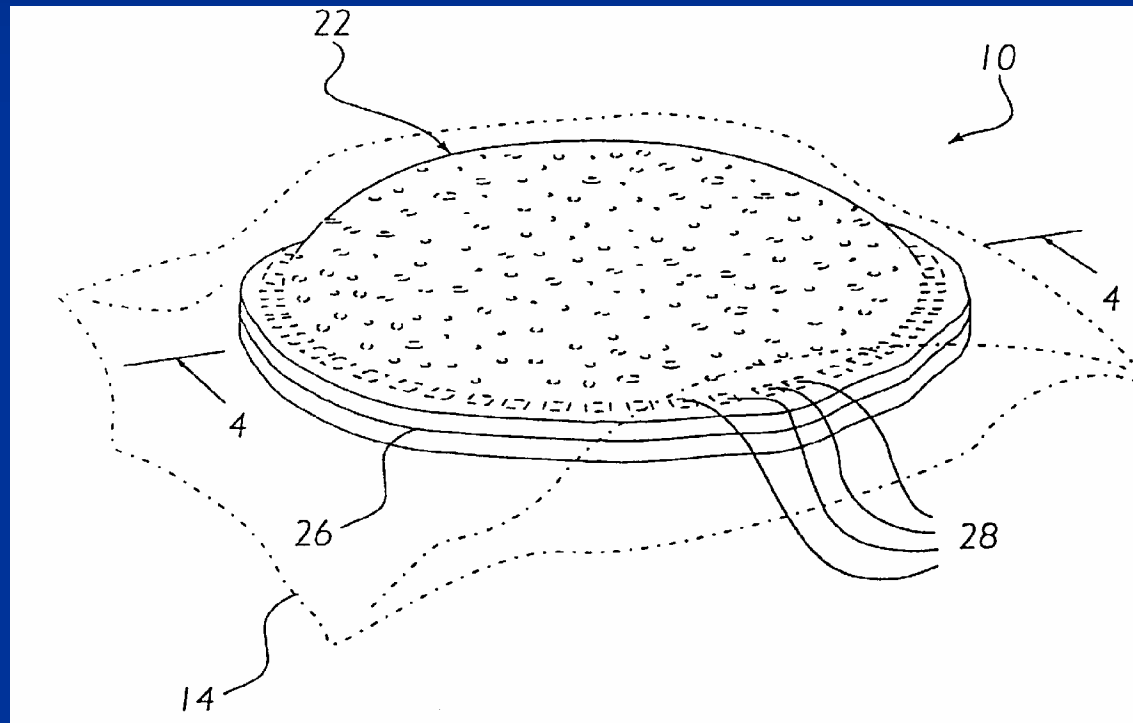
Intellectual Property and the American Economy
Council on Foreign Relations, February 2005



The Commercial

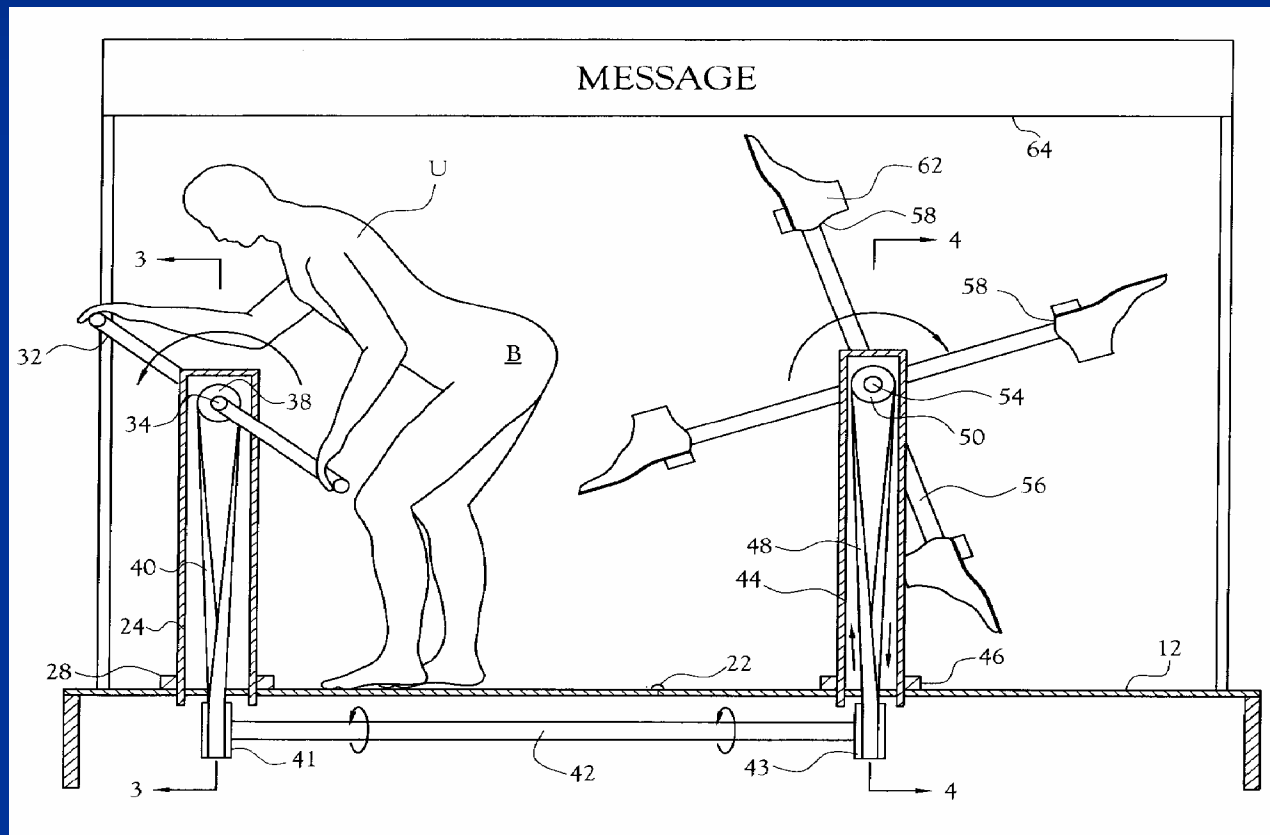
United States Patent 6,004,596, December 21, 1999

Sealed crustless sandwich



United States Patent 6,293,874, September 25, 2001

User-operated amusement apparatus for kicking the user's buttocks



Patents in Crisis

n In the U.S.:

- n Persistent, routine questions about patent quality
- n Increasing cost and frequency of litigation
- n Broad perception of “sand in the gears” rather than spur to innovation
- n Irresolvable debates about funding, organization, competence of PTO

n Worldwide

- n Debate/uncertainty about the applicability of patent protection to new technologies (software, biotechnology)
- n Somewhere between skepticism and hostility in developing world

Why Patents Still Matter

- n Ideas are all around us. Encouraging “invention” in the purest sense is not a policy problem.
- n But converting “invention” to “innovation” is usually expensive (arguably increasingly expensive).
- n This “D” part of “R&D” is usually done most effectively in the private sector.
- n Thus fostering the investment that finances development is a KEY policy problem.
- n Patents are one important mechanism for protecting investments in development.
- n Patents are particularly important to Venture Capitalists and other outside investors.

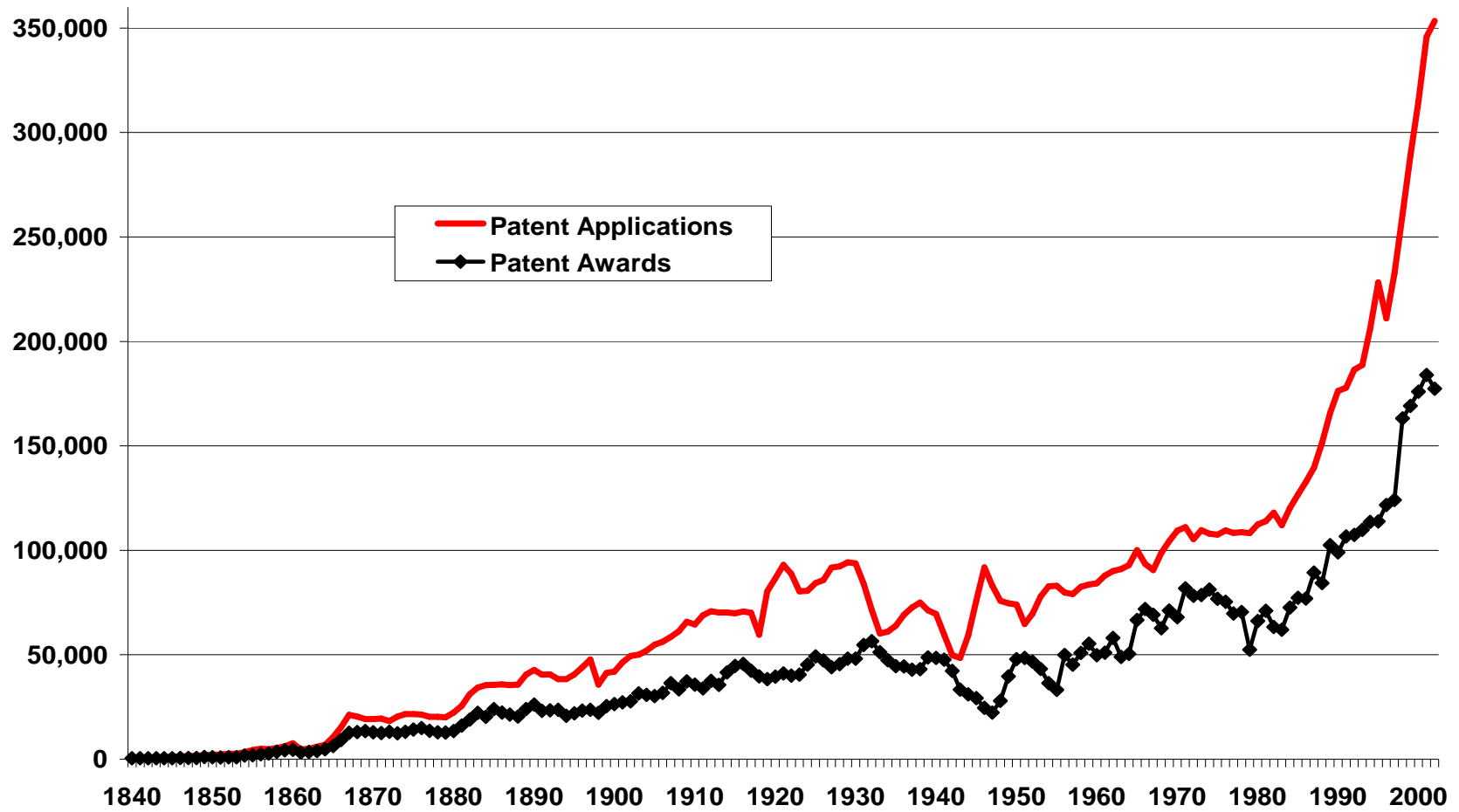
So, What's Wrong?

- n The shallow problems:
 - n Under-resourced, inexperienced patent examiners
 - n New technologies for which there is little experience
 - n Bad court decisions
 - n Bad political decisions
- n The deep problems:
 - n Our patent system does not have the appropriate structures and incentives to perform the fundamental function of determining who should be granted patent rights.
 - n "Presumption of validity" and resulting burden of proof interacts with right to jury trial to create disasters in technically complex litigation

The Kinder, Gentler, Patent Office

- n Patent Office reorganized in 1990 as service agency for patent applicants, to be funded by application fees
- n "Mission" is to serve the applicants
- n Examiners are evaluated on:
 - n Number of "dispositions"
 - n Elapsed time for dispositions
 - e Incentives are all to say "yes"
- Very little experience in new areas like software, biotechnology
- Lowering of standards encourages more marginal applications, which in turn overwhelms the PTO and makes it even harder to maintain standards

I-1: Annual Patent Applications and Awards



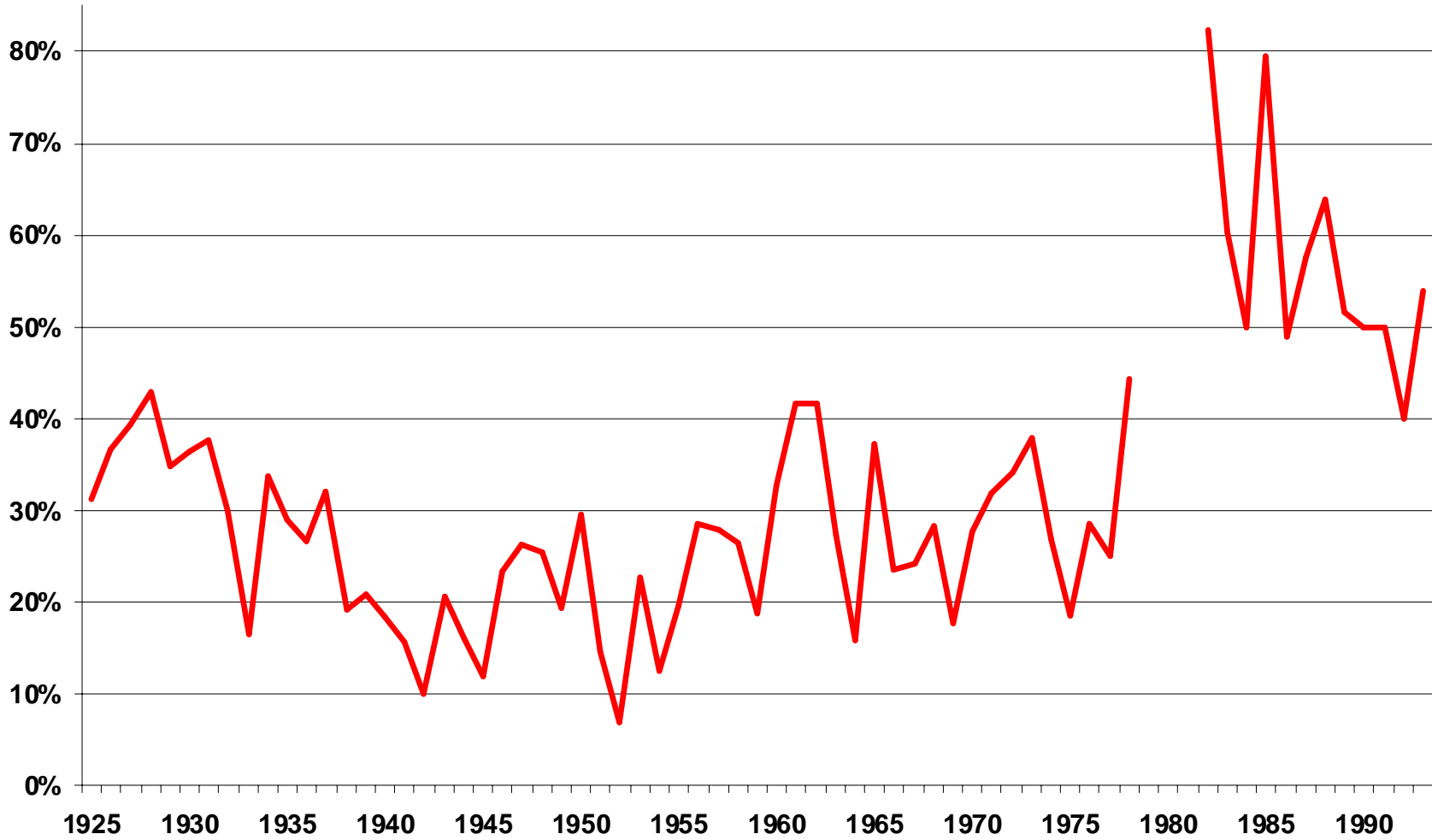
How to get the incentives right

- n Too expensive to “get it right” on every patent application
- n Need incentives to escalate attention and care for those cases that are most important
- n Pre-grant opposition
 - n Opponents can provide info (e.g. relevant prior art) to examiner, but cannot actually intervene in proceeding
 - n No prejudice to their ability to make same arguments again later in Court
- n Post-grant Re-examination
 - n New examiner
 - n Full intervention rights
 - n Loser pays winner’s costs
- n Patents emerging from multi-stage evaluation *deserve* presumption of validity

The Patent-friendly Court

- n 1984: Creation of the Court of Appeals for the Federal Circuit ("CAFC"), a special court for patent appeals
- n Patents are more often upheld
- n Larger damages
- n Preliminary injunctions easier to get
- n Jury trials have become the norm

4-2: Share of Patents Found Valid and Infringed on Appeal

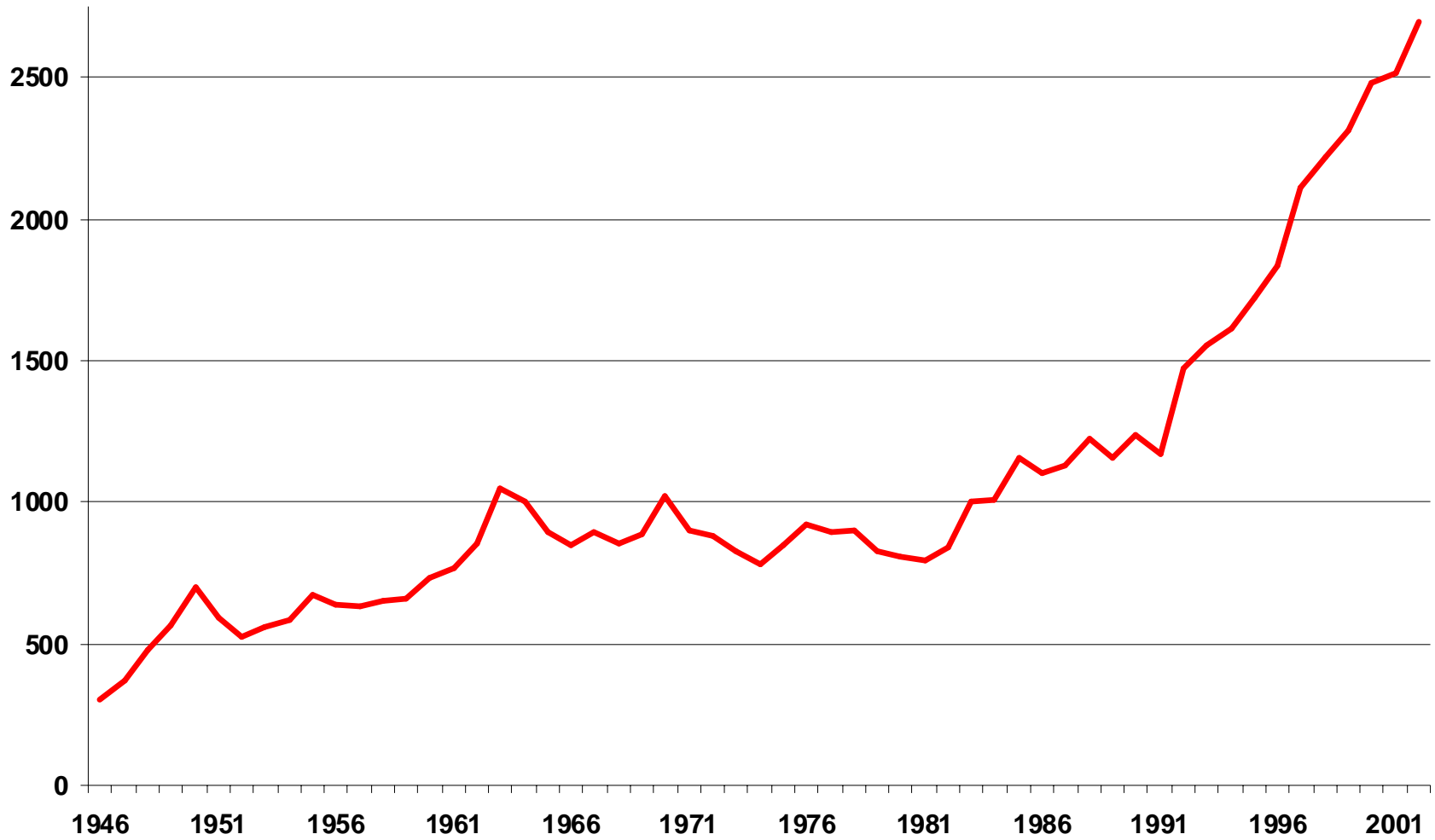


Rising tide of patent litigation

- n Better chances of success emboldens patent holders, and frightens those accused of infringement
- n Threat of preliminary injunction particularly dangerous for new products
- n Successful defense can be expensive
- n Very risky to argue complex technical issues to a jury; patents enjoy “presumption of validity”
- n Challenging dubious patent benefits everyone, but likely paid for by one defendant
- n Result: alleged infringers often settle, paying royalties or abandoning new products, even on bogus patent claims.....

.....which encourages more lawsuits!

I-2: Number of Patent Suits Initiated



Toward Legal Rationality

- n Fixing PTO crucial to establish basis for presumption of validity
- n Juries still problematic
- n Need to narrow issues presented to jury:
 - n Could judges or special masters determine key aspects of “novelty” as a matter of law?

Conclusion

- n Protection patents afford to investment in development are just as relevant in the 21st century as in the 19th and 20th.
- n PTO as currently configured creates bad incentives for potential applicants and patent examiners, and does not generate the information necessary for good decisions.
- n Need to develop new systems for determining patent validity, which endogenously generate the needed information from private parties.
- n Expense and uncertainty of patent litigation have are becoming worrisome drag on innovation.
- n Need to address asymmetry created by “clear and convincing evidence” standard when applied by lay jury.