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# IMPROVING PATENTS TO SPUR INNOVATION

## INTRODUCTION

Many advocates of a national industrial policy argue that American business today is in some way incapable of the kind of innovation that stimulated the dramatic surges in economic development of previous generations. To compensate for this alleged deficiency, they continue, Congress should establish a national investment bank or similar institution to channel taxpayer resources into new areas.

This argument is fallacious for it assumes that Americans have lost their spirit of inventiveness--something that must be compensated for by a new bureaucracy in Washington. In fact, the blunting of America's inventive edge is due not to the lack of government programs, but to barriers and disincentives created by government. The tax system discourages risk taking, for instance, and the antitrust laws discourage the pooling of research capacity needed to compete on world markets. Another obstacle, often overlooked, is that the erosion of patent protection in the U.S. has inhibited the flow of new ideas--the seedcorn of economic growth. If the patent laws were restored to their full strength, America should see a dramatic increase in business innovation.

It is ironic that the U.S. should be seen as falling behind in the technology race. From the earliest days of the republic, its economic progress has been linked inextricably to technological advance. As in no other nation, the creative mind has been free to experiment and reach its full capacity. Time and again, Americans have witnessed the birth of whole new industries founded on nothing more tangible than an idea. And most often these ideas were not the result of some collective effort, but the product of inspired individuals.

Names such as Whitney, McCormick, Edison, and Bell constitute a parade of American genius that testifies to the free market's ability to nurture the imagination. It is doubtful, however, that these brilliant individuals could have achieved their great accomplishments in today's environment.

At the heart of the problem is a patent system under which protections have been steadily eroded over the last five decades. Nearly 80 percent of all U.S. patents challenged in court are now overturned. In other industrialized nations the ratio is reversed. This apparent willingness--indeed eagerness--of the U.S. court system to overturn patents has caused many inventors to give up even seeking patent protection, viewing it as worthless.

If innovation is to take place, the intellectual property of inventors clearly must be protected against unscrupulous imitations. If innovation can be encouraged, patents must once again be made meaningful. While there is no single action that will alleviate the ills of the patent system, there are a number of steps that should be taken immediately. These include:

- Elimination of the standard of "obviousness in the whole" as a basis for challenging patents once they are granted. If an idea were "obvious," it would have been in use at the time a patent was issued.

- An amendment to the patent law containing an explicit statement of the principle that mere simplicity may not be taken as evidence that a patented device is obvious.

- A time limit in the period of issuance of a patent during which its validity can be challenged, unless fraud or outright theft is proved.

- A prohibition on firms challenging a patent from manufacturing the patented item while the challenge is in process.

- Criminal penalties for anyone convicted of "willful infringement" on a patent.

- An automatic award of treble damages in civil patent cases where infringement is proved.

- Strict sanctions on foreign firms that infringe on U.S. patents, including at least a one-year suspension of their right to export anything to the U.S. after conviction on a first offense, a five-year ban on exports to the U.S. for a second offense, and a permanent ban following a third conviction.

- Replacement of the current system, requiring the payment of annuities to keep a patent in force, with a system based on fees assessed on the net profits earned through a patent.

- Exemption of an individual inventor's proceeds from an innovation from federal income taxation for the first ten years of the original patent.

- An increase in the number of examiners at the Patent Office.

- Modernization of the filing system used in the Patent Office.

If enacted quickly, these steps would help to reverse the erosion of patent protection. More important, they would recreate an environment in which innovation would once again be able to flourish.

## THE ORIGINS OF THE SYSTEM

The roots of the British and American patent systems stem directly from the Litterae Patentes or Letters Patent issued by English kings. These covered everything from the grant of an exclusive right to a process to an exclusive right to trade in a certain area. Both the Hudson's Bay Company and the British East India Company gained their charters through the issuance of Letters Patent in the early 18th century.

The breadth of early patents eventually gave rise to growing fears over their abuse, since a patent gave its holder a monopoly on whatever process or product or activity it covered. This led to legal cases in 17th century England that set forth many of the principles of current patent law. Among them are the notion that a patent is granted for a limited period of time; that it is granted in recognition of the special sacrifice, or contribution made by the individual to whom it is issued; and, most important, that the purpose of a patent is the encouragement of new and useful inventions within a society.

In keeping with their British roots, the American colonists appreciated the value of encouraging innovation; many of the colonies enacted statutes to give patent protection. Patents and copyrights were a major point of debate during the Constitutional Convention in 1787. There was no disagreement on the notion of encouraging innovation, only how best to do so.

One view held that the best method was by awarding a monetary subsidy. Another view, more in keeping with a free market approach, held that an exclusive franchise to investors and authors was preferable. The latter position prevailed, and the power to issue patents and copyrights was specifically enumerated in the Constitution. In fact, Article I, Section (8) of the Constitution, which contains this authority, is the only explicit acknowledgment of individual property rights to be found anywhere in the document.

Another indication of the importance the new nation attached to patents was the decision by the First Congress to require that the Secretary of State, Secretary of War, and Attorney General

personally review each application for a patent, and that the President and the Secretary of State personally sign each one issued. This complicated practice soon fell into disuse, however, and for the next forty years, almost all patents were granted on application.

This pro forma system led to chaos, since the procedure invited abuse and mistakes. A new patent law was enacted in 1836, creating a Patent Office in the State Department. This office is now within the Department of Commerce.

## CONTEMPORARY PATENT LAW

Although patents have always been subject to legal challenges, judicial sentiment began to turn strongly against inventors in the 1930s. Some jurists felt that the monopoly patents granted to inventors amounted to an unfair restraint of trade, and therefore sought to strike down patents whenever possible. As successive court decisions steadily eroded patent protection, Congress began to take notice. In 1952 it moved to restore patent protection with a new Patent Act. Under this law, a number of classes of inventions were established and remain in force today. These include a process, a machine, a manufacture, a composition of matter, or a material. A basic scientific principle, however, may not be patented.

Despite the efforts of Congress, a strong judicial bias against inventors remains--some courts have not upheld a patent for three decades. Many small inventors simply lack the financial resources to mount a successful patent defense in this atmosphere. Faced with legions of corporate lawyers and expensive depositions, many inventors simply give up.

### "Obvious" Inventions

The biggest problem is with simple inventions, because it is easy for would-be imitators to argue that they are "obvious" and therefore should not be protected by a patent. Among the examples of a patent being overturned on this basis was the "weed eater," a device that employed a thin plastic line in place of a blade to trim grass and hedges. Invented by a Texas real estate developer, who was duly issued a patent, the weed eater was held "obvious" by a California judge when the inventor challenged a number of firms which had infringed on his patent. But while the idea was undoubtedly simple, to suggest that it was obvious was a serious misinterpretation of the language in Section 103 of the 1952 Patent Act, which states:

> A patent may not be obtained...if the differences between the subject matter sought to be patented and the prior are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

The invention of the telephone, the lightbulb, and the cotton gin probably would not have withstood this test in today's courts.

### Patent Theft

Another major problem with contemporary enforcement of patents is the light penalties imposed in those rare cases when a patent challenge actually succeeds. In virtually no instance is the inventor fully compensated for the loss of income incurred, not to mention legal fees. Even when juries are sympathetic to the inventor's case, awards are often reduced to nominal levels on appeal. This encourages the unscrupulous firm to chance infringing the patent rather than to pay royalties. In most cases, the legal fees and damages--if they are amended--are less than paying royalties.

Foreign firms are especially inclined to infringe on patents. Unless an inventor has filed for patents abroad, as well as within the U.S., he may find that he has no case whatsoever when he challenges a foreign firm. Moreover, he has little recourse in the U.S. court system to stop infringements. This problem is particularly severe in the case of Far East imitations, when U.S. goods are counterfeited exactly and exported to America, where they compete with the goods of the pirated firms.

## REFORMING THE PATENT LAW

### Closing Loopholes for Theft

To close loopholes that allow the unscrupulous to infringe on patented devices and processes, the "obviousness of the whole" standard should be eliminated in court challenges. At the very least, what constitutes "obviousness" must be clarified.

The very notion of obviousness is highly questionable. If a device or a process were obvious, it presumably would have come into common use. The fact that it is not should be taken as evidence that it is not obvious. But if obviousness is retained as a standard, the law should contain an explicit statement specifying that simplicity in and of itself should not be taken as evidence that a device is obvious. In addition, judges who strike down patents on the obvious test should be required to state in their decisions how they arrived at that conclusion. It is easy to conclude that something is obvious once it is explained in court testimony. But that does not mean that, in the absence of such an explanation, the inventor's idea was self-evident.

A second loophole to be closed concerns firms that continue to manufacture or use a disputed device while a challenge is taking place. This puts the small inventor at a great disadvantage, because he lacks the resources to compete with a large imitator during litigation. Since a patent is assumed to be

valid unless overturned in court, the inventor's rights should be protected while his patent is in litigation. Enjoining those firms challenging the patent from manufacturing the disputed device would recognize this principle and put the inventor on a more even footing with the challenger.

There should also be a time limit on the period during which a challenge can be filed. Such a limit would prevent firms from waiting to see if a device is successful in the market, and then infringing the patent.

Disincentives for Willful Infringement

Disincentives should be created to discourage willful infringement of patents.

Observes one successful inventor: "If you steal a hubcap off my car valued at over $75, you can go to jail for up to five years. Yet if you steal my intellectual property worth hundreds of millions of dollars, the odds are that you will escape with impunity if convicted, or at least suffer relatively little economic hardship." Time and time again, inventors have learned this painful lesson. They have relatively little recourse under the law if their intellectual property is stolen. Indeed, some firms make a business of stealing inventions rather than innovating.

To stop this, tough criminal and civil penalties should be imposed for patent theft. It would only be necessary to classify patent theft as a felony similar to grand theft. Where willful infringement is proved, the penalties for the responsible individuals should be at least as severe as other forms of grand theft--say five years in prison and a heavy fine with even stiffer punishment for additional offenses. Such penalties would make patent pirates hesitate before preying on the small inventor.

When infringement occurs, but is not clearly willful, heavy civil penalities should be assessed. An automatic award of treble damages might be appropriate. This would also encourage inventors to continue to pursue litigation in support of their patents.

Foreign firms pose a more difficult problem. If the infringement takes place overseas, it is difficult to extradite the responsible officials. Therefore, foreign firms accused of willful patent infringement should be liable to the possible suspension of import licenses for all products exported to the U.S. The licenses could be lifted for one year on conviction for a first offense, five years for a second offense, and permanently for a third offense. Since the sanction would cover all items the firms concerned sold in America, it would constitute an enormous disincentive to infringement.

Since recovering damages from foreign firms can sometimes be difficult at best, the courts should have the right to sequester

all of a foreign firm's U.S. holdings after damages are awarded in a patent case until the damages are paid, regardless of the amount in question. Since the damages in any patent case would likely be of far less value than the U.S. assets of any large firm, this would be a powerful inducement to the foreign firm to pay the assessed damages to the inventor.

## CREATING AN ENVIRONMENT FOR INNOVATION

Infringement penalties, in combination with the closing of loopholes, would help restore patent protections to the level the Founding Fathers intended. But such penalties are not enough to restore completely the environment of innovation needed to ensure America's economically dynamic future. A series of incentives and modifications of present policies are also needed to encourage innovation.

### Temporary Income Tax Exemption

Though a number of circumstances characterized the golden era of innovation in America, the most important was the simple fact that an inventor was able to reap the full rewards of his invention. This was due in part to the absence of a federal income tax. Such taxes probably are the greatest disincentive to productivity because they punish success. The greater the financial performance of an individual, the greater the tax burden on that individual. The modern Edison, Bell, or McCormick receives only partial proceeds of his genius.

The income tax is particularly damaging in the case of innovation, for it frustrates the ideas needed to create new industries and therefore new jobs. Because job growth increases the revenue flowing into the federal treasury, innovation that is discouraged by the federal income tax reduces treasury receipts. Worse still, the federal tax bite on the proceeds of a successful invention diverts capital from its development and marketing. One can only wonder how many inventions never reached the marketplace because federal income taxation made them unprofitable in the crucial early years.

There thus is a strong argument for exempting from federal tax at least the initial proceeds earned by an inventor on his or her patent, say for ten years. The inventor would then have a greater pool of available capital to invest in the invention, and would have a much greater incentive to press on despite heavy financial burdens and risk. The loss to the federal treasury from forgone taxes would be minimal compared with the new taxes paid by individuals employed in the manufacture and marketing of the new device or process. Moreover, such an exemption would be fully consistent with the desire of the Founding Fathers to encourage innovation without a direct payment from the federal government.

Financing the Patent Office

Another step that could be taken to improve the present system, while addressing the issue of how to finance the Patent Office if patent proceeds were exempt from taxation, would be to change the system of annuities required to keep a patent in force. At present, inventors have to make substantial periodic payments to the Patent Office to keep their patents valid. This penalizes inventions that take a long time to market or are only marginally successful. It also tends to discourage individuals from seeking patents.

It would be fairer to base the payment on a percentage of the proceeds an inventor realizes from his invention. This payment might be credited against federal income taxes, if a tax exemption were not given. This percentage would be set at a level sufficient to cover the costs of operating the office. In effect the Patent Office would be sharing the proceeds of the patent in return for the protection it provides.

Patent Office Modernization

A final change would be to upgrade and modernize the Patent Office filing system and to increase the number of patent examiners. The delay in examining applications and awarding patents has grown longer over the years, as the complexity of searches has increased. Yet the Patent Office still operates much as it did before the computer. It is ironic that the office most concerned with technology should be so far behind the rest of the nation in applying the processes it patents.

There are a number of important benefits, in addition to improved efficiency, that would accrue from a modernization of the filing system. First, inadvertent omissions of "prior art" (as previously filed patents are called) would be minimized. Second, sophisticated computer filing systems could aid patent examiners in making patent determinations in highly complex technology cases that would be held valid. The costly, discouraging time lag between patent applications and determinations would be reduced.

Additional examiners would also allow greater specialization. Science and technology grow more complex every day, and some of the archaic designations and classifications used in the U.S. patent system do not accurately reflect this. Specialist examiners would permit a more modern system of classifications, and thereby strengthen the patents that are issued.

CONCLUSION

The U.S. is facing a crisis in innovation that threatens the nation's long-term economic prospects. The root of the crisis is a patent system that can only be described as a shambles. A U.S. patent is no longer worth the paper it is printed on.

Fortunately, the crisis can be resolved with quick remedial action. But this action should not be the creation of a national fund for innovation. Experience shows that bureaucrats are the last people to turn to for inspired commercial ideas. Instead attention should focus on improving the climate for innovation through changes in the tax law and regulation and by strengthening the patent system. If these steps are taken, America's greatest resource, the free minds of free men working in a free economy, will assure continued progress and growth. If not, the future may be very dark indeed.

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