

## FURTHER NOTES ON THE NORTHERN ARMY WORM.

BY PROF. C. V. RILEY.

## HOW FAR IS BURNING OVER A PREVENTIVE?

That fields which have been burned over in the winter are free from the destructive presence of the worm is a fact in the history of its visitations. But opinion has varied as to the precise effect produced by the burning over. I have shown that it destroys the appropriate nidus for the laying of the eggs by the moth in the spring. Now that larval hibernation is established, we can readily see that the fires would destroy these hibernating larvæ and prevent the appearance of the moths and of a second destructive brood from them. But we must not suppose that the burning over would prevent all appearance of the worm; it merely prevents its appearance in destructive numbers. The moth will, when exceptionally numerous, lay her eggs without concealment and upon plants, such as clover, which the larva does not relish.\* In such cases of exceptional abundance we may well suppose that the moth will fly into fields which had been burned over and supply them with eggs, but the instances in which this would result in material damage to the crop would be very rare.

## CONNECTION OF WET AND DRY SEASONS WITH ARMY WORM INCREASE.

That the army worm appears in destructive numbers after a period of dry seasons is a fact already recognized, and is in accordance with the experience of the present year. The portions of our country visited by the worm this year were afflicted with drought last summer, and the winter was remarkable for its mildness and the slight fall of snow. Fitch's theory of the appearance of the worm required that this spring should be a wet one in order to drive the moths from the swamps and cause them to lay their eggs on the upland. But the facts are just the reverse. Farmers from Virginia to Vermont have complained loudly of the excessive drought. Rivers in some of the Atlantic States have not been so low for a generation, and alluvial meadows which have been subject to a spring flooding have this year remained dry. These facts clearly disprove Fitch's theory, and we must believe that the army worm is most likely to appear after dry seasons, regardless of the wetness or dryness of the season in which it occurs. A critical examination of Fitch's arguments in support of his theory shows that he not only had no personal acquaintance with the worm, but also made some astonishing errors in meteorology, such as comparing the rainfall of India (?) with the appearance of the worm here. With equal reason might we argue that 1879 was wet in our Atlantic States because of the excessive precipitation in the British Islands during that year. It is evident that Fitch was hard pressed for arguments to support the theory. That the season of 1861 was remarkably wet in the Eastern States Fitch gives no evidence. From the well known connection of the presence of plant lice with dry seasons, and from the memorable depreciations of the grain aphid in that year throughout the Middle and New England States, it is very questionable whether 1861 was wet. It is far more probable that the season was a dry one like the present, in which also various plant lice have done great damage.

The view that the army worm has its proper home in the wild grasses in the swamps, as Fitch has assumed, must also be considered erroneous. The moth prefers matted grass amid which to lay its eggs, and the more tender grasses are those first selected by the worms. Old neglected fields, whether their location be low or high, are the most natural breeding places for the insects. That the worms most often appear in low lands, or in the neighborhood of such, doubtless finds more correct explanation, first, in the highly probable fact that the parent moth gets more appropriate food at such places, either in saccharine exudations, the natural "sweat" of the plants, or moisture from the ground; secondly, in the well observed fact that such lands afford the greatest extent of neglected meadows where the insect has opportunity to multiply unnoticed and undisturbed.

## Dangerous Freight.

A case marked "benzine" or "benzoline" exploded with terrific force on the Pacific Steam Navigation Company's steamer Coquimbo, at Valparaiso, recently. A breach nearly twenty feet in length was made in the side of the vessel, fortunately above the water line. One man was killed. The immediate cause of the explosion is not given. The carrying of such dangerous freight may have something to do with the too frequent disappearance of ships at sea.

## American Ironware in New Zealand.

A former resident in Birmingham, England, writes from New Zealand: "I was much interested in noticing how your staple trades were represented here. One article your town stands unrivaled in—lamps; but in every other branch of the hardware trade the vigorous Yankees beat you. In agricultural and gardening implements, stoves, domestic notions, and the thousand and one articles of hardware, English makers are nowhere here. For quality, adaptability, and price, the American articles bear the palm. I was one day in the store of one of our leading hardware merchants,

\* I have recently received from Professor Lintner, State Entomologist for New York, what are apparently the pressed eggs and egg shells of this moth, thickly covering clover leaves, and mixed with an abundance of white gummy matter with which the moth usually secretes them, all indicating that in this instance the moths (doubtless from excessive numbers) had "slopped over." Professor Comstock likewise informs me that he has found the eggs laid between the folded lobe of a clover leaf.

when a miner came in for a pick and shovel. He was asked which he would look at, English or American. 'Oh, Yankee tools for me,' said the man; 'English are too clumsy.' My friend explained that the English will persist in making the tools their grandfathers used."—*N. Y. Sun.*

## DECISIONS RELATING TO PATENTS.

U. S. Circuit Court—Northern District of Illinois.  
WHITTLESEY *et al.* vs. AMES *et al.* SAME vs. ZIMMERMAN.  
SAME vs. DEAN.—PATENT BEDSTEAD FRAMES.

Blodgett, J.:

1. Reissued letters patent No. 7,704, dated May 29, 1877, for an improvement in bedstead frames, declared to be for the invention embraced in the original patent, granted November 30, 1869, and claims 1 and 2 thereof construed, in view of the prior state of the art, and sustained.

2. A patent will not be defeated by evidence of prior similar devices which were of an experimental character simply and which were subsequently destroyed.

3. Although the efforts of prior unsuccessful experimenters may have suggested to the patentee the construction which he finally adopted and perfected, and may have been of profit to him as far as they went, his patent will not be invalidated thereby.

## By the Commissioner of Patents.

LOVRIEN vs. BANISTER *et al.*—APPEAL FROM THE EXAMINERS-IN-CHIEF.—INTERFERENCE.—PIPE TONGS.

Marble, Commissioner:

1. Where a patent has issued to two or more persons as joint inventors, and an application is subsequently made by one of them as sole inventor for a patent for the same invention, an interference will be declared, and the question of priority of invention will be determined by the weight of evidence, the burden of proof being upon the sole applicant to overcome not only the testimony of his adversary, but also his own former oath of joint invention.

2. The right of the sole applicant to a patent, where the testimony is conclusively in his favor, will not be precluded by the mere denial by his co-patentee of the fact of sole invention.

3. The decisions of the Commissioner in the case of *De Lill vs. Avery & De Lill* (C. D., 1870, p. 128) and the case of *Chase and White vs. Chase* (C. D., 1873, p. 99) commented upon.

Application of C. H. Lovrien, filed August 14, 1879. Patent No. 213,376 granted to H. Banister and C. H. Lovrien, March 18, 1879.

On February 10, 1879, Henry Banister and Charles H. Lovrien made an application as joint inventors for a patent for an improvement in pipe tongs, and on March 18, 1879, a patent was granted to them.

Charles H. Lovrien, one of the joint applicants and patentees, on August 14, 1879, filed an application as sole inventor for a patent for the invention already patented to himself and Banister jointly, and on September 16, 1879, an interference was declared between Lovrien, sole upon the one part and Banister and Lovrien upon the other.

It is contended on behalf of Lovrien that the entire invention embraced in the patent and in this application was made by him alone; that he desired, however, that Banister, for a consideration, should have a half interest therein, and that by reason of his own ignorance of patent matters he allowed Banister to attend to the procuring of the patent, and supposed that the joint application, which he claims not to have carefully considered, simply secured to Banister his interest. Banister, on the other hand, claims that the invention was a joint one, and that it was so regarded by Lovrien at the time the joint application was made. The Examiner of Interferences decided priority of invention in favor of Lovrien, while the Board of Examiners-in-Chief held Banister and Lovrien to be joint inventors of the matter at issue, and decided in their favor.

The question to be determined in the case is clearly one of originality rather than of priority of invention. It is urged by counsel for patentees, and such appears to have been the ground taken by the Examiners-in-Chief, that where a patent has issued to joint applicants, and a sole application for the same invention is subsequently made by one of them, a patent cannot issue upon such application if the fact of sole invention is denied by the other party. Two decisions are cited in support of this position. In the first of these (the case of *De Lill vs. Avery & De Lill*, C. D., 1870, p. 128) the following language occurs:

"It is a matter of grave doubt whether one who joins another in an application for a patent, which he declares under his signature, verified by his oath, to be the joint production of himself and his co-applicant, ought ever be permitted to deny that oath and seek a sole patent. It would appear that a sound public policy would require that he should suffer the consequences of his mistake, even if it be innocent. But however this may be, it may be stated as a rule that wherever the facts are disputed the joint patent will not be disturbed. In the present case the burden of proof is of course upon De Lill to show that he was the sole inventor of the improvement covered by the joint patent. He must overcome his own oath, which cannot be treated as a nullity, and he must overcome the oath of Avery."

In the subsequent case of *Chase and White vs. Chase* (C. D., 1873, p. 99), Mr. Commissioner Leggett, in commenting upon the above decision, said:

"It was held by Commissioner Fisher in a similar case (*De Lill vs. Avery & De Lill*, decisions, 1870, p. 128), in substance, that a party to a joint patent was estopped from asserting

his sole proprietorship where it was denied by the other party. I have no doubt of the soundness of this opinion. But certainly if this were not the case it ought to be clearly proved on the part of such an applicant that he was in fact a sole inventor. I concur with the board that 'Chase is very far from proving himself to have been the sole inventor.' The weight of evidence is decidedly the other way."

While from these cases it would appear that the ruling urged by counsel for the patentees was there made, yet in these very cases it is also seen that it was not followed, for in each a decision was rendered against the sole applicant, not upon the mere denial of the fact of sole invention by his co-patentee, but because the weight of evidence was found to be against him. Were I to give to these decisions the construction asked for by counsel for Banister and Lovrien, I should feel but little hesitancy in departing therefrom, as I fail to find, either in law or reason, any warrant for so arbitrary a rule. The Supreme Court of this district, in the case of *Ex parte L. O. Crocker* (MS. Appeal Cases, vol. 4, p. 269), held that where a patent had issued to two persons as joint inventors, and an application was subsequently made by one of them as the sole inventor of the same subject matter, the doctrine of estoppel did not apply, but the proper course for the Office was to declare an interference between the parties to determine the question of priority of invention, as in other cases.

In the late case of *Barsaloux, James & Lyon* (16 O. G., 233) the Attorney General used the following language:

"After a joint patent has once been issued upon an application of two or more persons as joint inventors, if the application erroneously described the invention as joint instead of sole, it is not, as I have just intimated, within the power of the Department to remedy the matter by changing the term of the patent already issued. The parties interested may file a new application, which, if seasonably done, can be made the basis for the issue of a new patent; but such new patent will not retroact by way of confirmation of the original."

If, then, a sole inventor is not estopped from making an application by reason of the fact that through mistake he has already applied for and obtained a patent for the same invention jointly with another, and if, as held by the court in the above cited case, an interference proceeding is the proper one in which the fact of such mistake can be determined, there can be, in my judgment, no sufficient reason for allowing the issue in such interference to depend upon the mere denial of one party, no matter how conclusive may be the proofs introduced by the other to rebut the same. The mistake of supposing that joint interest in an invention is the same as joint invention is a common one, to guard against which the Office has found it necessary to give notice in the rules that "the fact that one furnishes the capital and another makes the invention will not entitle them to make application as joint inventors; but in such case they may become joint patentees." Should a meritorious inventor, having made this common mistake, seek to have the same rectified by means of a sole application, the Office would readily declare an interference, which, under the ruling asked, would prove a mere nullity, if his co-patentee should prove dishonest enough to deny his rights. If the decisions cited are precedents for such a ruling, I must decline to be governed thereby. Undoubtedly, under familiar rules of evidence, the burden of proof is upon the sole applicant to show conclusively his right to a patent, and he is to overcome not only his adversary's testimony, but his own former oath of joint invention.

It appears from the evidence in the case that on the 23d or 24th of January, 1879, Banister and Lovrien first discussed together the invention in controversy. With regard to what occurred at this meeting the testimony is conflicting. Banister claims that Lovrien at that time suggested the cubical bit or block, while the adjusting screw and holding pin, both essential features of the device at issue, were supplied by himself. Lovrien, on the other hand, swears that he made the entire invention in controversy as early as the summer or fall of 1877, and at that time embodied the same in an operative device; that early in January, 1879, prior to his meeting with Banister, he disclosed such invention to others, and that on January 24, 1879, he fully communicated the same to Banister. This testimony of Lovrien as to the fact of his disclosure of the invention to Banister is contradicted by the latter, but is supported by the testimony of a party who was present at the time and who claims to have heard the conversation and to have seen the drawing made by Lovrien to illustrate his device. Further testimony is introduced by Banister to show that Lovrien regarded him as a joint inventor, and that he carefully considered and fully understood the joint application before the same was filed. This testimony, however, is not of a conclusive character, and is far from sufficient to overcome the direct and otherwise uncontroverted testimony of the several witnesses introduced by Lovrien to show that he had completed and disclosed to others the invention prior to his meeting with Banister, and which is fatal to the latter's claim as joint inventor. The weight of evidence is, in my judgment, clearly and conclusively in favor of Lovrien, and shows, beyond any reasonable doubt, that he had completed the invention long prior to his meeting with Banister, and such work as was done by the latter was but that of a mechanic and not of an inventor.

The decision of the Board of Examiners-in-Chief is accordingly reversed, and judgment is rendered in favor of Charles H. Lovrien.