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#### THE COPYRIGHT QUESTION.

There is a decided inclination among our legislators to regard the international copyright question from a purely mercantile point of view rather than from the moral one, which has been recommended them. They discovered that such a law would give the foreign publisher a great advantage over the American publisher without in any way furthering the interests of the American reader, and that was, to their minds, a sufficient reason for refusing their assent to its passage. Without desire to give an opinion as to the truth or fallacy of the reasoning and its conclusion, we propose to review the main arguments. Hand labor in Europe is, of course, much cheaper than here: typesetting, the most costly part of making a book, is done in England, for example, at about half our rates, and other labors pertaining thereto in somewhat similar proportion. Under a copyright law, a foreign work, even if it were necessary to republish it here, according to the provision made in Senator Hawley's amendment, to the original bill, could only be sold to the American reader under the restrictions as to price made by the foreign publisher, which, there is little doubt, would make it far more expensive than now, if it did not take it altogether out of the reach of the general public. Without the amendment referred to, many great publishing houses on this side the water, which employ thousands of workmen, would, it is said, be driven from the business, and the American market flooded with cheap reprints of foreign works. Thus the general public, though able to get old works sufficiently cheap to prevent competition from American publishers, would be forced to pay an exorbitant rate for new books or go without them.

Mr. Andrew Lang, the writer, in an article on International Copyright in Longman's Magazine, says: "For my own part, I cannot pretend to care much about the matter as [here he refers to an American cheap publisher] does not sell my engaging works on the "Evolution of Ritual," and so forth, at sixpence. Perhaps it would not remunerate him to do so. But the person one is sorry for is the American novelist. How can the young and ardent literary 'schoolmarm' hope to sell her 'Popsy's Ways; a Connecticut Idyl,' for \$1.50, when you can have 'Treasure Island,' 'Kidnapped,' and the 'New Arabian Nights,' all in one hideous pamphlet for ten cents? The native American producer is ruined by English cheap labor, by kidnapped labor, by labor which is not even paid for its keep, though the laborer has one of the privileges of slavery, and is both flogged and preached at, sometimes, in the land of his captivity."

Mr. Lang makes a good argument, but of a kind which rarely, if ever, appeals to the consciences of legislative economists, whatever their nationality. Such persons invariably seek to discover on which side a favorable or unfavorable decision would bring the balance of trade, taking less account, perhaps, than they should of what the severe moralist would regard as international justice. In the present case, our legislators believe that, whereas an international copyright law might bring a few more dollars to a handful of American authors, it would deprive thousands of American workmen of remunerative employment.

As to the piratical incursions of the American publisher, Mr. Brander Matthews has shown in a recent paper that the British publisher goes a peg further in literary effrontery. The American cheap reprint of the foreign author's work invariably bears his name and reports him verbatim, whereas in England the pirated editions of American authors frequently bear fictitious names and suffer various forms of mutilation. Those portions which are supposed not to be suitable for English reading are cut out, changed, or rewritten, and American scenes are changed to English. Sometimes the whole tenor of the story is changed, and in the case of Dr. Holland's "Arthur Bonnicastle," the last chapter was altogether rejected, a new one, written by some unknown person on the other side of the water, taking its place. Gen. Lew Wallace, on a recent visit to England, discovered that an English publisher had issued his "Ben Hur" under another title, and with a new preface, to which his name was affixed. Many similar instances could be cited.

# Casting a Great Steel Gun.

On Wednesday, January 11, the largest gun ever made by direct steel casting was cast of Bessemer steel at Pittsburg, Pa. Sixteen thousand five hundred pounds of melted iron were charged into the converters. After the blow the fluid steel was run into the mould. The latter stood on end in a casting pit. Two minutes sufficed for pouring the metal into the flask. All went well apparently, but it was only after its removal from the mould that an opinion as to the success of the operation could be pronounced. On Monday, January 16, it was taken from the mould, and the casting was pronounced perfect, both by Superintendent Hains worth, of the Pittsburg Casting Co., and by the government representatives. The gun is to be of 6 in. caliber, with 71/2 in. powder chamber; largest diameter, 23 in., and outside diameter of muzzle, 10 in.; initial velocity of projectile, 2,000 ft.; pressure in cham-

ber, 15 tons. Its total weight when finished will be 5½ tons. After completion it will be subjected to extremely severe tests at Annapolis, Md.

The casting of this gun is an event of much importance. If the piece proves a success, it may revolutionize the construction of guns in this country. It will do much to put the great question of supremacy between cast and built-up guns to the test of practical trial. It also is a step that may bring about the trial of aluminum-bronze guns. Should it be shown that casting can produce a satisfactory cannon, then an additional inducement will be created for trying aluminum-bronze, a metal that is much easier melted than steel, and that in strength and generally resistant qualities equals or surpasses it.

The progress of the new piece will be watched with much interest both here and abroad. It is satisfactory to feel that the United States may yet inaugurate a new departure in heavy ordnance. We have already described the casting of the great guns in the South Boston Iron Works.\* The process described and illustrated will give a pretty accurate idea of the manipulations to which the new steel gun has been and will be subjected. It seems evident that if cast metal guns are to be satisfactory weapons, the proof will be given in this country. In thus casting guns the saving in expense is very great. The new piece will cost but a fraction of the sum which would be expended upon a built-up gun of like caliber.

## Protection for Horses against Fire.

It is to be hoped that before long some simple and practical way will be arrived at for preventing, or at least lessening, the terrible loss of life among the horses which has hitherto attended every stable fire of importance.

A device intended, in case of fire, not only to release simultaneously all the animals, but to turn them out of the building, has recently been put on trial in a New York stable, and seems simple enough. In the principal alleyway leading into the stable is placed a wheel about three feet in diameter, which is connected by shafts with the stalls. A heavy weight is suspended from the circumference of the wheel. Delicate therinostats placed about the ceiling of the stable are arranged so that a very slight increase of temperature will, by expansion, complete an electrical circuit which will loosen the weight suspended from the wheel, and thus set the machinery in motion. A bell will ring, the bolts of the stall will be drawn, the halters of the horses will be loosened, and lastly, a double stream of water will be thrown into the face of each horse from two jets placed over the head of the stall. The effect of this shower bath will be to cause the horse to back out of his stall. He will find himself free, the doors of the stall and the stable open, and, in his fright at the fire and the unusual commotion, will naturally secure his own safety—at least that is the inventor's programme, though whether it will be carried out in practice remains to be seen. Besides, this doesn't dispose of the question of how to save the poor beasts stabled on the second floor, and until that problem is solved we may look at any time for a repetition of the shocking scenes which attended the burning of the Belt Line stables in New York and of those in South Brooklyn a few weeks ago.-Fire and Water.

# Preservation of Meat by Sugar.

It results from a special report made to the French Minister of Agriculture that sugar is an excellent agent for preserving meat, and possesses some advantages over salt. In fact, salt absorbs a portion of the nutritive substances and of the flavor of meat. When an analysis is made of a solution of the salt dissolved by water contained in meat, we find albuminoid bodies, extractive substances, potassa, and phosphoric acid. Salt deprives meat of these substances so much the more readily in proportion as it enters the tissues more deeply or acts for a longer time. It then results that the meat, when taken from the saline solution, has lost nutritive elements of genuine importance.

Powdered sugar, on the contrary, being less soluble, produces less liquid. It forms around the meat a solid crust, which removes very little water from it and does not alter its taste. Thus preserved, it suffices to immerse the meat in water before using it. Although this treatment costs a little more than preservation by salt, account must be taken of the final result and of the loss prevented, which offsets the difference in cost between the two preservative agents. We think that navigators might profit by this.—Revue Generale de la Marine Marchande.

WE have received from James A. Alexander, 68 Wall Street, New York, General Agent of the Ætna Insurance Co., of Hartford, a statement of its condition December 31, 1887. It has a net surplus of over \$3,300,000, or larger than the capital of any fire insurance company in this country, and has paid in sixty-nine years losses exceeding sixty-one million six hundred thousand dollars.

<sup>\*</sup> See Scientific American, Vol. 55, No. 13, pp. 191, 197,