

thorough investigation than it had ever before received from me. My labors have been rewarded with, I believe, a correct solution of the chief causes of the aggravation. They are defects easily remedied; and being removed, ordinary care, in other particulars, will effectually prevent a recurrence.

The evil has two roots—*defective galleys and untrue sticks*—and the evil itself is the forerunner of another: one of such magnitude that few employers can contemplate it without having their equanimity of mind seriously disturbed.

Disregard of evenly-balanced niceties in the constant use of brass galleys twists the ends and springs the middle, and when in this condition, though but slightly so affected, it is an utter impossibility to empty, perfectly *square*, the entire length of the galley if the measure be wide—the twists of the ends work toward the middle in a zig-zag course, while the depression produces a decided swag.

That the springing of galleys is one of the parents of *bottle-arsed* type, I have no doubt, for type emptied on such galleys, it is demonstrable to any one, will be higher on the sides than in the middle—thus, there is room for the *grinding* and *spreading* process in taking the proof. The process is slow, but none the less sure, and, a fair start once being had, the work of mutilation cannot be arrested.

It is self-evident that type which is true when received from the foundry cannot become *bottle-arsed*, except it first get off its feet.

If a stick is simply *sprung* at the point of the slide, the cure is plain; but if either or both the end-guard and the slide are *worn* to a slight bevel, the nuisance had better be abated as recommended in a previous article. Using *true* type in *faulty* sticks, *square* composition is impossible; but type that have become *bottle-arsed* readily adapt themselves to the *inequality* of the sticks—the incongruities of the one overcoming the irregularity of the other, and, per force, *bottle-arsed* type, when composed in true sticks, produce an opposite result.

For the reasons given, I dissent from the generally accepted view, that the foundation for *bottle-arsed* type is laid at the imposing stone.

What is the remedy for type off its feet? The most durable (at the same time guarding against an increase in weight), would be to substitute a properly tempered steel for the brass

bottom-galleys; but this would not be practicable unless the liability to rust can be overcome.

In this connection, and the remark applies as well to brass as to steel, I would suggest that galley-racks should present a perfectly even surface about one inch less in width than the galley, with sufficient room for hand-play at the back, and run its entire length.

Open racks, the ends of the galley only resting on supports, in my opinion, should be discarded because of the evils attending their use. So, also, because of the tendency to produce bowing, the galley stand should not be constructed with rests for the upper edge of the galley, but should be built so that their surface would present the proper inclination, with as many divisions as may be desired—thus:



One other suggestion, and I am done: The rim and centre-piece of a case are higher than the boxes, so that when a wide galley is resting on a case the depression of the middle is visible. This may be overcome by fitting in boards of the necessary thickness to take up the space.

These things may be *small matters*, nevertheless, they are important in their bearing.

#### Proof-marks.

Consequent upon the absence of settled principles, the daily experience of proof-readers in overcoming the *gymnastics* of compositors has brought about a multiplicity of individual marks:

Passing beyond the range of the ordinary and common, it is rare to find two readers who do not use different and dissimilar signs to convey the same meaning. Occasionally it occurs that a common sign is used by two or more, but radically differing in application and significance—hence the perplexity often produced in the mind of the corrector, not unfrequently leading to error.

If there is any one department of typography demanding more systematization than another in order to an intelligible appreciation of its ramifications, that department is proof-reading. System will preserve its *mysteries* without confounding our senses.

As the result of several years' study and observation I present the following marks with their significations, believing them to be almost