- 3. After being wet they shrink in drying, causing loss through pages falling out.
- 4. They are rarely cut true.
- 5. They cause much noise in locking up.
- 6. They often cause damage to the machine by being drawn out by the rollers, or left on the forme.

Reading 9.17

The Shooting-Stick from *Typographia* by Thomas Curson Hansard (1825, pp. 485–486).

A *shooting stick* is a prodding tool that is used to tighten wooden wedge quoins in conjunction with the side and footsticks in the locking-up process. First, the quoins were tightened with the fingers and then driven home by tapping on the protruding end of the shooting stick with a mallet.

Because of the rapid deterioration of wooden shooting sticks due to the daily abuse they received from the mallet, it was inevitable that they would eventually be made of metal. In the transition period, some were made of wood with metal fittings. MacKellar (1885, p. 307) describes a rather ingenious looking shooting stick: "A novel invention is Armstrong's patent combined mallet and shooting-stick [Fig. 9.18]. This is desirable for general use, and for locking-up forms on the press, or of service where room for the use of the ordinary mallet and shooting-stick is limited to a confined space." Its action is somewhat reminiscent of a spiral screwdriver.

[*The shooting-stick*] is made of box-wood, which is the only material yet found sufficiently hard and tough to endure the action of the mallet and quoin, with the least injury to either; and, which is of still more consequence, causing the least damage to the imposing-stone. Its form is that of a perfect wedge, about one-and-a-half inches broad, and eight inches long; its thickness at the top being also about one-and-a-half inches, gradually declining to the lesser end, at which its thickness is about half an inch. The rapid wear of shooting-sticks made of box-wood, has induced the frequent trial of iron as a lasting substitute: but the still more rapid wear occasioned by this material to the quoin, mallet, and stone, has more than counterbalanced the advantage in durability of iron shooting-sticks. Still, it is frequently necessary in order to unlock the small quoins when driven up to the top shoulder of the side-stick, to use a sharper point than any box-wood shooting-stick can well be dressed to, or retain after a day's wear. For this purpose, and to remedy the inconveniences above mentioned, I have one at each stone made with a brass toe, and a socket to admit the box handle. Two angular notches are cut in the toe, having a projection between them at such a degree of angle as to catch the quoin at right angles on its top and side; the whole shootingstick being held in the usual position for the action of the mallet: and one side of the toe is filed away, at its side, still more than the other, to admit of its encountering the smallest description of quoin; all which will be seen illustrated in [Fig. 9.17].



Fig. 9.17. Hansard's shooting-stick with a brass toe



Fig. 9.18. Armstrong's patent combined mallet and shooting-stick – from MacKellar (1885, p. 307)

Reading 9.18

Sundry Tools for Locking Up Type in the Chase from *Printing* by Charles Thomas Jacobi (1890, pp. 40–41).

Throughout the nineteenth century, manual writers continued to describe and illustrate the compositor's three basic tools: the mallet, planer, and shooting stick. These tools had been in use, with little modification, since the mid-fifteenth-century.

For levelling and fastening up the type in chases sundry tools are used, among them the *mallet*, [Fig. 9.19, LEFT], and *planer*, [Fig. 9.19, RIGHT].





Shooting sticks, [Fig. 9.20], or "shooters," as they are called for shortness, are made of various kinds. We give a few varieties: *a*, *b*, and *c* are of boxwood with gun-metal tips, *d* is of iron entirely, and *e* is the original form of shooting stick, made of boxwood only. This last is the best for locking-up on the old imposing surfaces made of stone, as metal tips are liable to chip the surface, but on iron surfaces the gun-metal tips would have no effect. The one lettered *d* is a very narrow one, being adapted for unlocking formes when the quoins are very small, but care must be exercised that the stick does not injure the surface.



Fig. 9.20. An assortment of shooting sticks.



