

SOME FEATURES OF FIELD CAMERAS

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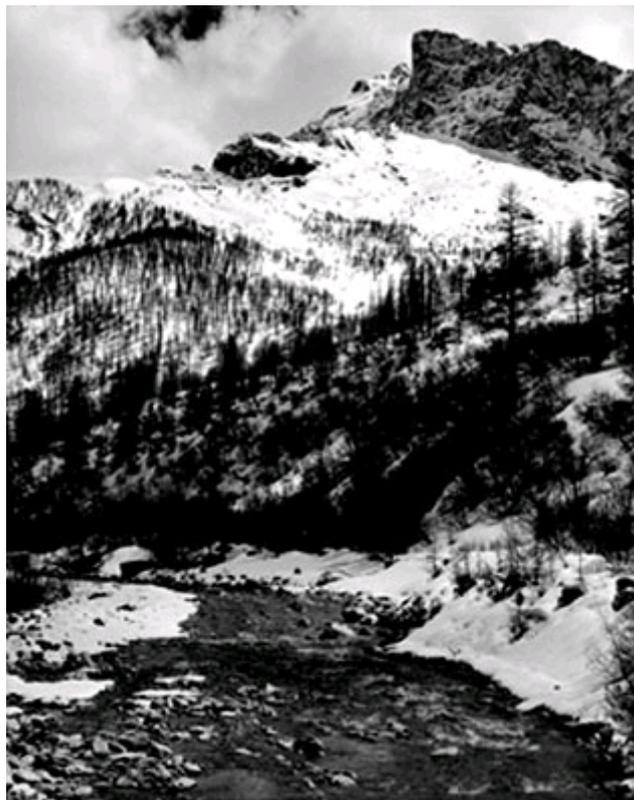
The first characteristic that catches the eye when observing a field camera is its easy transportation. Once it is closed, it is a medium weight small case that can be neatly fitted into a backpack. If one does not exaggerate with accessories, but is happy with a couple of lenses, an automatic release and an exposure meter besides the inevitable dark cloth, one will notice that all together it does not weigh much more than a medium format equipment. The weight of the film holder can also be reduced by resorting to rapid loading systems (Fuji Quickload or Kodak Readyload), that imply one only film holder for sheets packaged in light and thin cardboard slipcases.

Field cameras made in metal are generally rather heavy, but for outdoor use they prove more resistant than the wooden ones. The latter are lighter and nicer to look at, thanks to their slightly retro design, but they are definitely more delicate and unsuited to a, let's say, sportive use. They are fine if one limits oneself to transporting them by car and taking photographs from the edge of the road, but if placed in one's backpack together with many other objects, they will inevitably end up being scratched, despite all precautions. Moreover, if they happen to fall to the ground or if they are knocked, the possibility of damage or breakage is much greater than in the case of metal field cameras. Another important difference lies in the rigidity of the body: when the wind is blowing, metal cameras prove less sensitive to the vibrations than wooden ones. Atmospheric conditions constitute another determinant factor. Though adequately seasoned, wood proved more sensitive to sudden changes in temperature and humidity. This may harm the precision of focusing. Finally, metal field cameras generally offer a wider and more articulated range of accessories (reflex viewers, lens-hoods for the back and so on).

Some models are characterized by the presence of a more or less sophisticated range-finder, that either comes with the camera (as in the case of the Linhof Master Technika 45 or the Graflex models that are still in circulation), or is optional (Linhof Master Technika 2000). In theory the range-finder's purpose is to focus independently from the focusing screen, thanks to a system of cams connected to the bellows extension, and should thus facilitate the free hand use of

the camera. In actual fact, nature photographers will practically never use this function, especially because the free hand use of this type of camera would imply very rapid times and consequently apertures too large to grant an acceptable sharpness. Needless to say, an aperture greater than $f/11$ is critical for the great majority of lenses destined to the large format. Not to mention the drastic decrease in the depth of field when using large apertures, especially due to the lenses' focal lengths. Therefore, if with a small format camera one can photograph free hand with a normal 50 mm lens set at $f/5.6$ and a shutter speed of $1/125$ while maintaining an acceptable depth of field, with the large format this would prove impossible: the aperture would be too large and the time would be too slow to guarantee sufficient sharpness, and the depth of field would prove seriously insufficient, since a normal lens has a focal length of 150 mm (and as we know, the apparent depth of field decreases proportionally to the increase of the focal length).

There follows, that the free hand use of these cameras is strongly discouraged, unless one uses very rapid shutter speeds together with flashlights (as Wegee used to do with his Speed Graphic). But, as we shall see, large format cameras are used on the field almost exclusively for shooting static subjects at a medium-long distance, such as natural landscapes or architecture, thus the use of the flash ends up having a definitely limited scope.



The choice of subjects is strongly conditioned by the possibility of extending the bellows and by the lenses available. Some models have rather short bellows that limit their use to the wide-angle and normal fields. With some limitations it is also possible to mount not too powerful telephoto lenses, thanks to their particular optical construction (back focus shorter than the nominal focal length). Unfortunately this choice often means having to renounce to close-up focusing and what is worse the possibility of using camera

movements, which is what characterizes the large format compared to the smaller formats. This is because the telephoto lenses, conceived to photograph at infinity, do not benefit from a circle of coverage sufficient to allow movements. To make an example, the 250 mm Schneider Tele-Artor and the 270 mm Nikkor-T ED cover the 4x5 format without however allowing a sufficient range of movements. A high price, if we consider that in the large format these focal lengths are to be considered little more than normal (comparable to a 70-80 mm in the 24x36 format).

It is therefore preferable to use lenses with large focal lengths but a traditional design, which allow a wide range of movements. Unfortunately these also imply an extension of the bellows equal to their focal length just for shooting to infinity, and an extension double their focal length to shoot to a scale of 1:1. A 300 mm requires bellows of 30 cm just for landscape, and this is enough to cause problems to more than a few models currently in circulation.

Another problem lies in the dimensions of the lensboard. Many of them do not allow the mounting of the Copal 3 shutter, not so much because they have a greater diameter than the width of the lensboard, but because the hole would be so big as to drastically reduce its strength: it is not wise to mount a one pound lens on a lensboard reduced to a narrow frame little more resistant than a sheet of paper! Now, since lenses of a focal length greater than 240 mm are generally mounted on Copal 3 shutters, we have a problem that appears of difficult solution. Thus the dimensions and strength of the lensboard are also determinant choice factors.

But what must be more carefully considered is the range of camera movements offered by the model that one intends to acquire. Some cameras allow exclusively front standard movements, and even these are rather limited; others feature moderate tilt and swing movements of the back on the horizontal axis. The cameras that provide a range of movements comparable to those of the studio view cameras (even though substantially more limited) are really very few. In this case as well, it is necessary to think of the kind of photography one intends to be prevalently dedicated to, taking into account that the movements of the front and back bodies are not only useful in architecture and still-life: even the trees in the woods can present problems in the convergence of vertical lines, just to make an example. Not to mention the possibilities of increasing the depth of field and controlling the subject's shape that the tilt and swing movements guarantee.

To resume what has been said so far, in conclusion it can be said that the use of large format cameras into the wild presents some limitations that the photographer must be aware of:

1. Free hand photography is practically impossible, and in any case is definitely discouraged;
2. The range of usable lenses is limited to normal and wide-angle focal lengths; larger focal lengths present problems of bellows extension (insufficient in some models) and of shutter dimensions (incompatible with many lensboards). The solution would lie in

using telephoto schemes (many of which are mounted on Copal 1 shutters), but only if one accepts heavy limitations of camera movements, besides the impossibility of taking short distance shots; 3. The movements are definitely more limited than those of studio cameras. Their range varies considerably according to the models.

All this makes the field camera unsuited for certain kinds of photography, such as for example that of wild animals, insects in their natural environment, or subjects in movement. On the other hand, the negative's large format and the presence of movements are ideal for landscapes, shots of human environments and close-up photography of static objects such as flowers, rocks and leaves.

(to be continued)