

ber, and most events a few years ago were dated as "three months before I saw that fellow with a panoramic camera." As the writer never saw any pictures made by this particular camera it was impossible to date events by the time of seeing such pictures. But later these cameras were much improved and simplified. The coming of celluloid film was certainly an event that stimulated the inventors. Patents were not as frequent as in previous years but they were more practical. Several cameras were placed on sale that do make panoramic negatives under careful manipulation and favorable circumstances. One reason for their scarcity is the price at which they are quoted. One New York firm has a small affair that will "take" the whole circle on a strip of film about  $3\frac{1}{4} \times 18$  inches. The machine may be stopped at the quarter, half or three-quarter circle if desired and negatives  $3\frac{1}{4}$  by  $4\frac{1}{2}$ , 9 or 13 inches secured. The lens is of the fixed focus type and a single combination. Thirty dollars is the price of this box with tripod.

Another firm offers a camera that will embrace about 170 degrees only at \$250 for  $10 \times 30$  inches and \$300 for  $16 \times 43$  inches. These prices include a couple of trays, holders, printing frame, tripod and case. The first camera mentioned above will carry enough film for five full-circle exposures without reloading. It is built on the roll-film principle. The second is built for flat films to be used in a plate holder. The number of pictures that can be taken on a trip without reloading is limited only by the number of holders carried. We have now come to a detailed description of some simple forms of panoramic cameras that can be built without much expense by almost any photographer of ordinary ingenuity. The

plans will include both of above models and a description of an attachment to kodaks.

(To be continued.)

## RAMBLING INCOHERENCIES.

No. 4.—RECREATION.

A. H. HOWARD.



HERE are many collateral advantages which the amateur will derive from his devotion to the camera or pencil. For instance, it brings him into close companionship with nature; brushes from his spirit the cobwebs which gather round it while treading the dull round of everyday business; stimulates a habit of observation, and fans the poetic flame which it is the tendency of business life to extinguish.

And let not the "clear cut, up to date, end of the century business man" smile contemptuously at that last consideration. Is not the best life that in which hard common sense is judiciously modified by an admixture of sentiment?

Bone, I believe, is composed of chalk and gelatine. Too small a proportion of chalk will undoubtedly render the bone soft and liable to bend, but without a due allowance of gelatine it would—it would naturally, of course—eh? (When this osteological illustration flashed meteor-like through my mind, it both surprised and exalted me by its apparent brilliancy and completeness as a metaphor, but while writing it down I was seized with strong distrust, not only as to its scientific accuracy, but also as to its being a perfect fit. However, as Mrs.