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THE FOURTH OF JULY CELEBRATION IN 1914

The Fourth of July has again come and gone. A sufficient time has passed to collect and to verify all reports of deaths and serious injuries. All cases of tetanus developing from injuries received in the celebration have been recorded, and the tabulated statistics of all casualties are printed this week on another page.

DEATHS AND INJURIES THIS YEAR

The returns show a continued increase over the casualties of two years ago, there being 1,506 this year as compared with 1,163 last year and 988—the lowest number—in 1912. There were 40 deaths this year as compared with 32 last year—the lowest number—and 41 in 1912. There were only 3 cases of tetanus—the lowest number—compared with 4 last year and 7 in 1912. These returns are very low, however, when compared with 130 cases of tetanus, 215 deaths and a total of 5,307 casualties, which was the record for 1909, only five years ago. Again, the fact that there were two days for celebration both last year and this (Sunday coming next to the holiday), may have had considerable to do with the comparatively slight increases of the last two years.

EVIDENCES OF PROGRESS

In spite of the slight increase in the numbers of killed and injured there are abundant reasons why those who are laboring for better forms of celebration should feel encouraged. Never has any cause been taken up so effectively by the public press as has this movement for a "safe and sane celebration of the Fourth of July"—an expression which has become so familiar in a few brief years. Never before has public sentiment been so unanimous or positive as in the overwhelming demand for a cessation of the noisy and destructive methods of celebration. And this year these evidences were more marked than ever. Besides the splendid service rendered by the newspapers in the work for reform, societies and associations, municipal, state and national in their scope, have been unusually active.

PROHIBITIVE MEASURES

In at least eight states—Arkansas, Indiana, Kansas, Nebraska, New York, Ohio, Pennsylvania and Texas

—just prior to the Fourth, the state fire commissioners sent special communications to the cities and towns throughout their states urging that the use of fireworks be discontinued or carefully safeguarded. In one state, Kansas, a model prohibitive ordinance was circulated which, according to the report, was adopted and enforced in over a hundred cities. This is a plan worthy of being followed elsewhere. It points to the prompt solution of the problem since the control of the use of fireworks clearly rests with city and town governments. Reports of the enforcement of prohibitive measures came from hundreds of cities in all sections of the country. This positive method of stamping out lawlessness, noise and destruction is clearly sweeping the land. That many of our larger cities have greatly improved their records in recent years by such measures may be noted in Table 9 on page 781.

NEWER AND BETTER METHODS SUBSTITUTED

Mere prohibitive measures have been surpassed in effectiveness, perhaps, by the wide adoption of better forms of celebration. Band concerts, picnics, parades and programs of various sorts have never been so generally in evidence as on the Fourth of July this year. This is the strongest indication that the reform is to be permanent. Never before has there been so general a display of flags in both public and private places. From all over the land came reports showing the cessation of noise, the absence of fires, formerly so common, and less need of constant vigilance by the police to restrain the more noisy celebrants. From everywhere came comments regarding the absence of deaths and injuries from the use of fireworks. How different from the awful results reported annually up to only a few brief years ago!

SIGNIFICANCE OF THE CHANGE

The watchword of this country has been personal liberty, which was heralded to the world by the Declaration of Independence, the signing of which is celebrated on the Fourth of July. The manner of observing this day, therefore, may be taken as a fair index of other tendencies in our national life. The individual was at liberty to celebrate the Fourth of July just as he was given the widest freedom in religion, in business and in other walks of life. But as the absence of restrictions led to abuses in the business world, so unlimited freedom gradually led to abuses in celebrating our Independence Day. The nation is learning that the greatest liberty to the greatest number demands that certain restrictions be placed on the liberty of the individual. In order to correct abuses in the business world in recent years much publicity has been given to political and commercial trickery and graft in high places and low, and there is a decided trend toward improvement.

The liberty to use fireworks in the celebration of the Fourth of July gradually degenerated into an annual orgy during which hoodlums held free license to kill,

to maim and to destroy. So general and so free had the use of fireworks become that even babes were suffered to handle fireworks, so often deadly even to adults accustomed to handling them. So bad had conditions grown that the celebration was annually demanding a toll of hundreds of children dying in the agonies of lockjaw, burned to death, shot down or otherwise slain, while thousands of others were blinded, maimed for life or otherwise injured.

BEGINNING OF THE CHANGE

So settled was the nation in this annual holocaust that it had come to be looked on almost as essential, and it required that the awful results be given publicity by *THE JOURNAL* time and time again through six years before the public could be induced to shake off its lethargy, and before any check could be placed on the crimes being committed annually in the name of patriotism. For six years *THE JOURNAL*'s reports with a few exceptions seemed to fall on deaf ears. A notable exception was the *Chicago Tribune*, which as a news feature for several years immediately following the Fourth had published unverified figures of the deaths and injuries. In spite of reports, however, the total casualties continued to increase until in 1908 there were 5,623 people killed and injured! In that year *THE JOURNAL* in its report published the returns from the forty-two largest cities. The figures revealed the fact that a great majority of the deaths and injuries were clearly due to lawlessness and disorder permitted in those cities. The corollary was also made clear that the governments of these cities were responsible for such casualties, inasmuch as they could be prevented by the enforcement of prohibitive measures. From that time on a wave of public opinion demanding a change of methods has been gathering and has grown with each succeeding year. This year the demand has been so decided as to leave no room for doubt as to the final outcome—the nation is to be freed from this annual holocaust in the name of American freedom.

THE CELLS IN COW'S MILK

The importance of cow's milk in the dietary of the well and the sick alike, and its indispensability as an article of food in the nourishment of a great group in our infant population tend to keep alive a wide-spread interest in the quality and purity of the available supply.

The significance of bacteria in milk, their influence in modifying its keeping properties, their possible danger as sources of infection—all of these facts have become a part of the common store of knowledge. Information concerning them has been spread broadcast, in magazines and daily newspapers. The problem of other structural elements in milk has not reached the public eye to the same extent; indeed, it has scarcely passed beyond the stage of scientific inquiry.

Many of the secretions of the body contain cells discharged from the tissues, and these cells in general are of two kinds: (*a*) epithelial cells discharged either from the secreting portions of the glands or from the lining of ducts or general epithelial surfaces, and (*b*) leukocytes which make their way through the walls of the capillaries and the lymphatics into the epithelial layers which produce the secretion of the gland and, finally, into the secretion itself. Under certain pathologic conditions the discharge of these cells may increase greatly above the normal amount. Milk ordinarily contains such cells. They were first described in connection with colostrum under the name of colostrum corpuscles.¹ American investigators² long ago called attention to the occurrence of leukocytes in market milk; and by speaking of them as "pus" cells (as is commonly done of leukocytes in urine) an imputation of possible danger was early placed on the fluid containing them. The question of the sanitary significance of the cells in milk has since then assumed considerable importance. A great deal of confusion in the discussion of the nature of these cells and their hygienic significance has been due to the assumption by many investigators that the presence of the cells under any conditions is a pathologic phenomenon and therefore undesirable. As a matter of fact the leukocytes which have passed through the epithelial lining of the alveolus in some part of the mammary gland under normal conditions are not pus cells any more than leukocytes in the lymph and blood, saliva and other secretions are pus cells.

As often happens in the progress of experimental research, imperfect methods of investigation have furnished apparently conflicting answers to the questions here involved. At one time the sediment of milk was depended on to disclose the presence of the cells. Subsequently it was found that many of these may be missed by this method of examination because they may rise with the cream layer and thus fail to appear in the sedimentary deposits. The whole situation, which is evidently in need of revision and supplementary study, has been reviewed by the bacteriologist of the New York Agricultural Experiment Station at Geneva.³ The evidence thus far obtained indicates that the largest average number of cells occurs in colostrum milk, though equally large numbers of cells occasionally occur in milk drawn at any time during the lactation period. Several very high cell-counts have been obtained from the milk of animals nearing the end of the lactation period, and the evidence given indicates that such high counts are more common during the latter part of the period than during its height; but the average cell-counts for the latter part of the period do not seem to be markedly higher than

1. Donne, A.: *Du lait et en particulier de celui des nourrices*, Paris, 1837.

2. Stokes, W. R., and Wegfarth, A.: *The Microscopic Examination of Milk*, *Med. News*, 1897, lxxii, 45.

3. Breed, R. S.: *Cells in Milk Derived from the Udder*, *New York Agric. Expt. Station, Bull. 380*, March, 1914.