ever, the conditions to be fulfilled, and while none can be thoroughly secured, they may be approximated to in various degrees. To do this should be the object of treatment.

First, the irritating qualities of the urine may be diminished by the use of diluents, as already recommended in the treatment of acute cystitis. Almost any of the negative mineral waters, so highly recommended by their owners, are useful for this purpose, just as good as pure spring water, or even Schuylkill (river) water, and better is distilled water. From one to two quarts should be taken daily. If the kidneys are equal to their office, a large quantity of light-hued urine, of low specific gravity and relatively weak in solids, will be secreted.

When it is proposed to go further and add to the efficiency of diluents, mistakes are often made. While one can scarcely go astray in adding alkalies to the fluid ingested in acute cystitis, it is very different with the chronic form. In this the urine is often alkaline, or ready to become so on the slightest addition of alkali to the blood. Such alkalinity of urine in turn favors decomposition, the effect of which is to convert the pus, if present, into a tenacious glairy fluid which the bladder cannot evacuate. Notwithstanding this tendency, I have known liquor potassæ and other alkalies to be administered under precisely these conditions —adding fuel to the flame. The indication under the circumstances is to render the urine acid, if possible, although this is very difficult to accomplish. Benzoic acid has the reputation of doing this, and it probably is true of it when administered in very large doses. It may be given in the shape of a 5-grain compressed pill, of which at least six must be given in a day to produce any effect. The same property has been assigned to citric acid, but this is a mistake, as all of the vegetable acids, when ingested, are eliminated as alkaline carbonates.

The second indication is to medicate the inflamed surface. Two ways, of course, suggest themselves: (*a*) by the internal administration of drugs; (*b*) by the injection of medicated liquids into the bladder.

To carry out the first method, an enormous number of infusions, decoctions, and fluid extracts of vegetable substances have been suggested, the vast majority of which are absolutely useless except as they serve by their quantity to act as diluents. Among the best known of these are buchu-pareira brava, uva ursi and triticum repens. I have never known any beneficial results from any of them, and have long ago ceased to prescribe them.

The only class of remedies I have found of service in cystitis through their internal administration are the balsams. Of these the balsam of copaiba is practically unavailable, because not one stomach in a hundred will submit to its ingestion in sufficient doses or for long enough time to permit it to be of any use. On the other hand, I have found sandal-wood oil very useful, and it is about the only remedy of which I can say this for its direct effect upon the mucous membrane of the bladder. It is also comparatively well borne by the stomach, and is best administered in capsules containing ten minims. I believe it has heretofore been the usual custom to give these and like remedies after meals, but I have recently adopted the method of giving them on an empty stomach before meals. I believe they are as well, and even better, borne than when given after food, and they pass into the blood much more quickly. It is desirable to impregnate the blood and impart to the urine a balsam odor. This is scarcely possible with less than eight capsules a day—two before each meal and two at bedtime. I think I may say that I have found the so-called Santal Midy capsules, which are, I believe, nothing but a very pure sandal-wood oil, better borne than the other specimens of the oil. I have given as many as twelve of these a day for considerable periods of time without deranging the stomach.

Both boric acid and benzoic acid are useful adjuvants to the treatment of chronic cystitis through their antiseptic effect on the urine, each in 5-grain doses rapidly increased to 10. I have used resorcin in 5 to 10-grain doses, and naphthalin in 2-grain doses for the same purpose.

The application of remedies to the bladder by injections can be conveniently considered in connection with the third indication—the getting rid of the products of inflammation, the pus and mucus, and the compounds resulting from their decomposition. The latter are, of course, not always present, but all who have had much experience with cystitis are familiar with the tenacious, glairy, mucoid matter, which will not drop or rise up in a pipette, glistening with large crystals of triple phosphate, and exhaling a stinking ammoniacal odor which quickly contaminates an entire apartment. There is only one way to get rid of this, and that is to wash out the bladder, and too often this is too long deferred. Tepid water should be first used, and the injection made through the soft catheter now so invariably adopted. Sir Henry Thompson is very emphatic in his directions that no more than two ounces should be thrown in at a time, and that this should be allowed to run out, a like quantity again injected and allowed to run out, and this repeated until the water comes out as clear as it enters. In a very large experience in washing out bladders I have never met an instance in which the amount named by Sir Henry may not be doubled with advantage, so that I begin with four ounces. When this quantity is used a much shorter time is necessary to cleanse the bladder thoroughly; and after the capacity of the bladder has been determined I often throw in more, be-