Their properties are similar and their separation in small amounts would not be possible. Thus there is no discrepancy between our results and those of Cramer.

The pure olefins, 2,2,3-trimethylpentene-3, Cottrell b. p. 111.9° (760 mm.), n_D^{20} 1.4232, d_4^{20} 0.7395, and 2,3,3-trimethylpentene-1, Cottrell b. p. 108.2° (760 mm.), n_D^{20} 1.4178, d_4^{20} 0.7363, obtained by fractionation of the dehydration products of methylethyl-*tert*-butylcarbinol and dimethyl-*tert*-amylcarbinol, respectively, were hydrogenated at room temperature in a Burgess–Parr apparatus using the platinum oxide catalyst of Adams and methyl alcohol as a solvent (150 cc. per 0.25 mole). The products were precipitated by water, shaken with concentrated sulfuric acid to remove water, alcohol and unchanged olefin, and fractionated at a high reflux ratio through a 40 × 0.8 cm. packed column equivalent to 7.7 theoretical plates. The yields of octanes were 92 and 90%, respectively. The remaining isomer, 2,3,4-trimethylpentane, was made similarly from the dehydration products of 2,3,4-trimethylpentanol-3 [THIS JOURNAL, **54**, 4392 (1932)]. The properties of all the possible trimethylpentanes are

	Cottrell b. p. (760 mm.)	n_D^{20}	d_4^{20}
2,2,3-Trimethylpentane	110.2°	1.4030	0.7173
2,2,4-Trimethylpentane	99.3°[a]	1.3916	.6918
2,3,3-Trimethylpentane	113.6°	1.4074	.7258
2,3,4-Trimethylpentane	112.8°[b]	1.4045	.7197

[a] THIS JOURNAL, **51**, 1546 (1929). [b] Corrected from b. p. 111.5° (732 mm.).

The values for the first octane do not agree with those of Clarke and Jones [THIS JOURNAL, **34**, 170 (1912)], who apparently had olefin in their product.

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RAW RAMIE

Sir:

During some x-ray work on ramie fibers a property was noted which might prove of some interest to students of this material.

Untreated ramie (raw ramie) yields an insoluble lead compound when brought in contact with a solution containing lead salt (the chloride, acetate and nitrate were used). This lead compound has a characteristic x-ray powder diagram which is superimposed on the fiber diagram of the pure ramie. The diagram obtained is independent of the anion, so that the reaction product cannot be a double compound, but must be a salt. The original substance (presumably an acid, or salt of such acid) may be leached out with water from the raw fiber. When lead nitrate is added to such a solution a white precipitate settles out gradually. This precipitate yields an x-ray powder diagram identical with the one mentioned above and is therefore presumably identical with the lead salt deposited in the fiber. The precipitate chars when heated to about 150°, indicating the acid in question to be of organic nature.

Interplanar spacings (d) for some of the lines obtained in the x-ray patterns are given for comparison (intensity M = medium and W = weak).

Lead salt precipitated		Lead salt on fiber	
4.25	M	4.25	M
3.29	W	3.32	W
3.16	W	3.19	W
2.97	M	2.98	M
2.73	W	2.75	W
2.66	W	2.69	W

Various samples of refined ramie do not give any indication of forming a corresponding lead compound, which is in agreement with the water solubility of the acid in question.

The following salts of this acid are sufficiently water soluble to leach out of the fiber: Na, K, NH_4, Ca, Sr and Ba.

No attempts were made to establish the nature of the acid in question any further.

It is of interest to note that the lead salt precipitated in the fiber is entirely unoriented relative to the fiber.

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THE REACTION BETWEEN KETENE AND MERCURIALS

Sir:

Incidental to studies on the preparation of 3-aminofuran from 3-furyl methyl ketoxime, we have found that ketene reacts smoothly with organomercurials to give the corresponding methyl ketones. By this reaction, we have prepared 2-furyl methyl ketone, 3-furyl methyl ketone (b. p. 84° (21 mm.); m. p. of semicarbazone, 150°), 2,5-diacetylfuran (m. p. 94°; m. p. of dioxime, 187°) and acetophenone in 20–50% yields from the respective RHgCl and R_2Hg compounds.

If reaction proceeds here in the manner of more reactive organometallic compounds, this is apparently the first case of addition of an organomercury compound to a carbonyl linkage. The carbonyl linkage in some reactive isocyanates may undergo a like reaction.

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