invention exists, but that anyone is at liberty to manufacture, sell and use the same.

Nor must the caveator presume that the caveat secures the patent against all comers, because it would issue to the rival claimant, should he prove his priority as an inventor, in the interfering proceedings.

Only a few words more about drawings. It will be noticed that the Act leaves the attachment of drawings to a caveat optional. But as a matter of fact no caveat specification which admits of the use of drawings should be without them, as without them the description is apt not to be understood, misapprehended or overlooked by the official whose duty it is to compare them with the application. And it must be clear that the caveator's protection depends on his invention being readily understood from the papers filed. Of course, if the preparation be left to a patent attorney he will attend properly to that point. The usual cost of a caveat is $20.00. —*Patent Review.*

EXTRACTS FROM A MACHINIST'S NOTE BOOK.

We had a tool room with a fence around it—wire fence—right plump in the middle of the shop—had a young fellow in there who intended to be a machinist—some day; the only tool or appliance in that room, in the shape of shop equipment at which a machinist could amuse himself, was a gear cutter—no vice, mind you—not even a pin vice: and for this identical gear cutter we had about two day's work a month; this young chap could cut gears and the boss reasoned that when he was cutting them he could keep the gate locked and pass out the tools; when he was not cutting gears he was general roust-about; cleaning castings, sweeping the floor, babbitting boxes, killing time, painting machinery, and obtaining such miscellaneous mechanical and business experience incidental to the noble profession, while the sacred tool room enclosure became public common, even destitute of an intimidating "keep off the grass" bulletin.

About half an hour before quitting time each night this alleged tool room guardian would drop his work, go around the shop and hold up the boys for whatever tools they chose to shell out; if any one wanted any small drills or taps for private use, he carried home a lunch box full. What was there to prevent it? In the morning some duffer would be howling for the $\frac{3}{7}$" tap drill to finish his job; swears by everything holy that he turned it in last night with the rest of his tools, when he knows mighty well that he broke it just before quitting and threw the pieces in the sewer. Tool room chap spends fifteen minutes bothering all hands for this drill, and finally sends the kid over to the store for another; man with the unfinished job waits until he gets it, too. Where is the foreman all this time? Bless your heart, the foreman is busy!! He is what they call a working foreman; he is off at the other end of the shop running a vice, two planers, three lathes, and a couple of drill presses; the proprietor of this kind of a shop always has this kind of foreman, he does more work than any other three men; why? because he is working for the interest of the shop and the men are working for—nothing—nobody, in fact, they are not working at all half the time; they have no one to look up their material, tools, drawings, make sketches, calculations, or look ahead and so steer and engineer the work that the planers do not have to wait for the lathe hands, the drill press and vice hands wait for the planers, and a thousand and one of these many small attentions with which a brainy foreman can hustle work out of a manufacturing concern or a contracting shop. If the men never bother the foreman, he never bothers them; his sole ambition is to make a good showing, run the shop and get in from eight to nine hours a day on his own slate. The men have learned that he does not like to be bothered, and would do anything or nothing—principally nothing—rather than disturb him. Work is always in a jam; there is always some one who *could* be doing work on some piece if someone else *had* got through with it half an hour ago. The proprietor of this shop isn't rolling in wealth, exactly; and he sometimes wonders why he can't seem to strike luck and make a little on his contract work; has been so used to having customers send the work back to be fixed up a little, that he has to figure it in on his estimates, but can't quite see how he only gets about five per cent. of the work he figures on; his machinery and plant seem to compare quite favorably with his neighbors, while his foreman is a daisy, there is no disputing that fact; runs the shop, gets in eight hours a day, and only draws a salary of $25 a week, while many shops pay their foreman $30, and he don't do a confounded thing but stand around the place and figure.

Most respectfully, without any apologies.—CHIPPS, in *American Engineer.*

THE EBURNEUM PROCESS.

As the name implies, the pictures partake of an ivory character; in fact, they were photographs, principally portraits, on an artificial ivory.

The process was first introduced by the late Mr. J. M. Burgess, of Norwich, somewhere about five-and-twenty years ago.

The process, as worked by Mr. Burgess, was this: A transparancy by the wet collodion process was produced on glass, the plate, prior to coating with the collodion, being treated with wax to facilitate the subsequent removal of the film. In the development the image had to be kept exceedingly thin, while, as a matter of course, all the details had to be secured. As a rule the pictures were vignetted portraits. After the picture, or, rather, pictures—for in practice several were usually made on the same plate to save trouble—were developed, fixed, and finished, as transparencies, the plate was placed on a leveling stand, and the eburneum compound poured on. This consists of a solution of gelatine, with which was incorporated a white pigment—oxide of zinc being the one recommended by the inventor. To this mixture a small proportion of glycerine was also added, so as to prevent the gelatine becoming brittle when dry, and to secure flexibility. Sufficient of the compound was applied to the leveled plate to form, when dry, about the thickness of a thin mounting card. After the gelatine had set, the plate was reared up and allowed to dry spontaneously. When dry, the pictures were stripped from the glass and trimmed. They were then finished.

These pictures, when skilfully made, had all the appearance of being on ivory, such as that used by miniature painters, but without the objectionable grain.

The Eastman transferotype paper affords an excellent method of producing eburneum pictures of a high class. This method of making them would certainly commend itself to every one familiar with the working of bromine paper or the stripping films. The print is exposed in the ordinary way, but to obtain a warm tone a very full exposure should be given and the image brought out with a much diluted iron developer, keeping it somewhat thin, yet securing full detail. The