

same plane, the third from the ventral, the fourth from the dorsal extensions of the common nucleus.

I would call attention to the fact that the average dimensions of the cell nuclei of the auditory nerve nucleus equal those of the motor nuclei of the medulla and cord, and exceed some of them, and that the same statement applies to the cells as a whole. I make this statement in view of the recent communication of Dr. Mason before the American Neurological Association, though I do not claim to make it on the same basis of careful and extensive micrometric observations that his communication was based on, but on a general impression derived from repeated examinations which I think are sufficient to determine palpable differences.

The present preliminary report is taken from a communication made by me to the *Journal of Nervous Diseases* for last June, but I trust before long to submit to your readers a more exhaustive and illustrated record of this interesting and suggestive piece of cerebral anatomy.

DRY "MOUNTS" FOR THE MICROSCOPE.

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II.

In a former paper, *SCIENCE* No. 3, I made a few remarks upon this subject, and described the methods which I had found tolerably successful, viz.: the rings made of shellac and lampblack, and those punched out of gutta-percha tissue. The former appear to answer quite well, and the changes, if any, are very slight, yet I have, in a very few cases, observed a deterioration after the lapse of a year or so, probably from imperfect manipulation. Although I have not myself observed any great change in the gutta-percha mounts, I am not certain that they will stand prolonged use with immersion objectives without injury. I have mounted many specimens of delicate test objects for the Messrs. Spencer, and they are decidedly of the opinion that the shellac ring is the better for durability, and I am informed by Mr. Gundlach that the gutta-percha ring will not stand cedar oil. Mr. Phin has suggested that in time the gutta-percha tissue will disintegrate. I have not yet noticed this, and do not think it will happen under the cover of a "mount" especially if protected by a ring of cement subsequently applied. If, however, such disintegration does, in time, happen to the tissue, this will be a great objection to its use. I have found that the "tissue" becomes so charged with electricity by handling, and also by the punching, that it interferes seriously with the latter operation, and thus makes it necessary to place strips of the "tissue" on thin moistened strips of paper, and to punch out both at the same time. The preparation of the shellac rings by the turn table obliges one to

keep on hand a large stock all the time to insure perfect drying, and to have them always ready. I am obliged to have some 1000 or 1500 on hand in advance, and this necessitates a considerable outlay in stock, which will not always be convenient for amateurs. For the above reasons I now propose a new process which appears to meet all the desired wants, and which combines the advantages of the shellac cement and the gutta-percha rings.

The very simplicity of this process causes me to wonder why it was not thought of before. I take a sheet of thin writing paper, white or colored, and dip it into thick shellac varnish (shellac dissolved in alcohol), and hang it up to dry. When thoroughly dry it should have a good glaze of the varnish on it (different thickness of paper can be used according to depth of cell required). Out of this shellac paper I cut my rings, and these can be made in any quantity, and kept for any time. The process of mounting is simple. The slide is cleaned, and the flat paper ring placed in the centre; on this the cover is placed, having the object dried on it, and the two are held together by the forceps and gently warmed; this serves to attach the ring to the slide, and cover, at several points, so that the forceps may now be laid aside. The next step is to take a glass slip, (another slide), and laying this on the cover, to grasp the two slides at each end by the finger and thumb of the two hands, and pressing them tightly together, to warm the slide gently; by looking at the ring obliquely, on the under side, one can tell at once, when all the air is pressed out, and the adhesion is complete between the cover and the ring, and also the ring and the slide, and they must be held together a moment or two to cool. If the lac is sufficiently thick on the paper the adhesion takes place quickly, and with moderate heat, and there will be no danger of breaking the cover, unless it has been warped in the process of warming, which will sometimes occur when very thin glass has been heated too much for the purpose of burning off the organic matter, or when the support is too small in diameter, or when it is not flat. I think I may be able to induce the leading opticians to manufacture this paper and also the rings for sale; for special purposes the paper might be printed beforehand, so that, when mounted, the ring would show on the under side the name of the preparer, or of the object. I cannot conceive of anything more satisfactory than these rings. Many large objects which would be crushed if one used only the shellac rings made on the slide, by the use of the turn table, by the giving way of these by softening, and under the necessary pressure for attaching the cover, are perfectly protected by the paper rings. I am satisfied that the balsam mounts will be much less frequently used, as soon as we can find some *sure* dry process. The diatoms, as a rule, show much better when mounted dry, and with whole frustules, exhibiting both the side and the front view, also the mode of attachment, etc. The dry mounts are certainly to be preferred when they are desired for anything except pretty objects, and even for this latter purpose there is often a very great difference in favor of the dry mount. Although I have not used these shellac paper rings for any very great length of time, yet I can see no reason why they should not be equal to the simple shellac ring for durability, and very much superior to it in other respects.