

character has to walk behind a prop (a fence, table, or anything that has been painted on the background) the outline of this, or these objects, has to be accurately recorded and all drawing throughout that particular scene registered to them.

While all these preparations are being made the animators with their assistants have been experimenting with the new characters, looking for any subtle movement required by the story. The projector in the local cinema screens the film at a rate of 24 frames a second. The animator, as a result, has to make, for all movements, 24 drawings a second. One frame, however, may be a composition of anything from 4 to 20 drawings. For reasons of production each object to be animated is portrayed on a separate layer of paper or celluloid. The character may be on one, the flames from the fire on another, the smoke from the fire on another, the pot boiling over the fire on another, and soup trickling over the rim of the pot on yet another, and so on. By co-ordination of the various technicians and the key instructions of the Layout department a unity of proportions and size and shape is maintained.

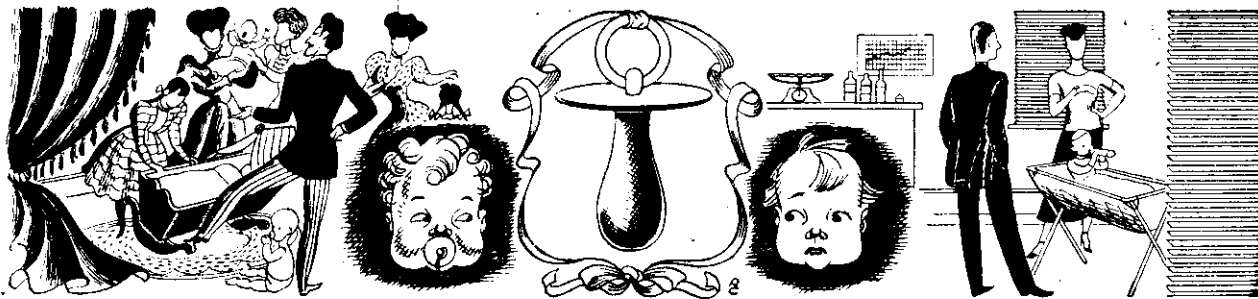
Over 14,000 Drawings

When the final instructions come from the Layout department the animators, now familiar with the character, begin production animation. I repeat that at this stage their drawings are very rough. On completion of a scene the pile of drawings is sent to Camera, where one by one they are photographed. When processed they are viewed in the negative along with a preliminary copy of the sound track. Alterations are suggested and noted and the scene is once again with the animator. Again the entire scene is photographed. One drawing after another is once again viewed. This process is repeated with all scenes until the desired effect is created and passed by the director. Taking 24 drawings a second as an average, there would be in a film lasting 10 minutes 14,400 drawings.

Immediately the animation is passed it is sent on to the "clean-up" department where the previously rough drawings are worked on. It is here that the drawing is put into the scene. Again the entire scene is photographed, processed and viewed for possible errors, and again this is repeated until the desired standard is reached.

It is now that the Tracing department takes over the production—14,400 drawings to be traced individually on to celluloid, by hand. Next the 14,400 tracings are filled in with colour and are at this stage in place underneath the tracings on celluloid of the cartoon characters. The negative is processed by Technicolour and some time later the film is reviewed in a final state. Except for the adjusting of colour "levels" in processing, wedding of the re-recorded sound track, and numerous other little tasks the film is complete.

There is an air of expectancy in the Studio prior to the first public showing of the film. Eventually the day arrives and the studio staff mingle with the cinema audience. Scattered throughout the auditorium from the fourpenny's to the four-and-sixpenny's they endure the main feature and live for their own 10 minutes. Audience reactions are studied and points are noted for future productions.



BACK TO THE CRADLE?

PROFESSOR OF PSYCHOLOGY

I HAVE no very decided opinions about the cradle, but if it comforts the child I think it might be quite a good idea. The irregular feeding of infants is perhaps the most controversial point. I think most contemporary psychologists would support Dr. Thoulless in this. It is generally considered a good idea to comfort a child when it needs comforting and not just when it suits the mother. In supporting regular hours for feeding pediatricians are reflecting the needs of middle-class parents who want time, at worst, for bridge parties or, at best, for hobbies or other occupations. One would imagine that dummies would not be necessary if the infant receives enough oral pleasure by other means. If he can indulge his pleasure whenever he is hungry and needs comfort and cuddling he should not want a dummy. All this is all right in theory from the child's point of view, but it is difficult in practice. In our civilisation a mother has to organise the life of the family. She has no hope of giving all this attention to an infant if she has meals to prepare for a family, other children to mind and all the other things that go with our way of living.

PSYCHIATRIST

I HATE to say I approve of Dr. Thoulless's ideas, because it sounds as if I want to make life harder for New Zealand women, who are hard-worked enough as it is. However, his ideas are fundamentally sound—though there are many practical difficulties. Dummy? Yes, it's a perfectly adequate institution. Rocking? Yes, if it makes a baby happier, and there's someone to do it. Feeding when he wants it? Definitely. Remember that to the baby withholding food is the same as withholding love. A baby should have the complete security that comes from never knowing the meaning of frustration. It's anatomically unfitted for discipline. The baby who has never been frustrated has a much better chance of resisting later frustrations. One of the troubles to-day is that women have got out of the way of being guided by their intuition.

DENTIST

THERE is a certain amount of disagreement among orthodontic specialists as to whether dummies and thumb-sucking do permanently injure bone formation. My own opinion is that these habits if persisted in would eventually have an injurious effect. In point of fact it is very seldom that thumb-sucking persists after, say, the age of

SHOULD infants be rocked to sleep, fed when they cry, and given dummies to soothe them? Dr. R. H. Thoulless, a reader in educational psychology at Cambridge University, achieved some prominence in the news-columns the other day for advocating a return to these practices and challenging regular feeding and other modern methods of infant care. Two "Listener" mass-observers, probing for New Zealand reactions to Dr. Thoulless's views, returned with a mass of opinions of which those printed below are a fair sample. It should be emphasised, however, that they do not represent a complete cross-section of public opinion. The floating voter, as usual, was elusive.

five and that is not too late for the mouth to right itself. So I could not honestly say that in my opinion dummy-sucking would be likely to have a lasting injurious effect on a child's mouth. From other points of view, those of general hygiene and digestion, it could well be condemned as deplorable.

MATRON

I REALLY didn't think Dr. Thoulless's remarks were worth taking any notice of, as I felt that all recent advances in science have proved just the opposite. All the recent trepds in pediatrics have emphasised the importance of bringing up children in as simple and natural a way as possible. We have long ago discarded the artificial methods of soothing a child, such as the cradle and the dummy, as contrary to nature. A ewe doesn't rock her lamb. It isn't necessary. No animals do, so why should we? It isn't a matter of harming the digestion or forming bad habits. A healthy child doesn't need to be rocked. Why should he? As for regular feeding of infants, it seems to me that from the point of view of the physical development of the child it has been shown again and again that the child who is accustomed to regular feeding hours and a regular routine is the healthy and contented child. Health and happiness are closely bound up with each other. I have had children brought to me again and again who have not had the regular routine in upbringing and so often they are in a mess physically and temperamentally. Just at the moment I have a child who is a typical example. She is three years old. I imagine all her feeding whims have been pandered to and she is still on the bottle. She can't

chew properly because she is only used to sucking and she is really most discontented and unhappy. She has now been sent to be broken of her bad habits. It is, especially in the early stages, easy for the mother always to give in to the child's whims, but it isn't fair to the child. I haven't found any problem children in my experience, only problem parents. The good of the child should come first and regular habits in feeding and sleeping and living give the child a sense of security and that, after all, is what most psychologists tell us the child most needs. As for dummies, I am not a specialist and cannot make any statement about their effect either in adenoids or in jaw deformities. But it seems to me a matter of common-sense hygiene that a dummy that drops on the floor or even just around a pram is extremely likely to pick up foreign bodies. We teach mothers to be very careful to boil all bottles and teats and keep their babies scrupulously clean. No one can tell me that a dummy can be kept continuously clean! Surely all sorts of germs and dirt must get lodged behind the bone ring and so find their way into the child's mouth.

WOMAN DOCTOR

DR. THOULLESS's statement is definitely a step backward. The methods he advocates have been so thoroughly disproved over the past years that I don't feel he is worth taking any notice of.

MOTHER OF THREE

I QUITE agree with Dr. Thoulless. I brought my first child up on a very rigid schedule, and I sometimes wonder if the emotional difficulties I've had with her may not

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"A baby is anatomically unfitted for discipline"