The rotating shaft was now removed, and a spring was soldered to the plate at the point to which the nut was originally affixed, and from which it extended, so as to press upon the anterior approximal surface of the first bicuspid, as seen in diagram No. 4. This spring in a few days moved this tooth so as to leave sufficient space to receive the cuspidatus. The original collar, adapted to the posterior approximal surface of the lateral incisor, was extended and curved so as to press upon the labial surface of the cuspidatus; and within a week from this application we had the satisfaction of seeing it within the arch it was originally intended to occupy.

While this machinery had been at work, nature had come to the rescue and supplied the hitherto hidden second molar, so that the mouth is now in the condition indicated in diagram No. 5. To the best of my knowledge this is the first instance in which an apparatus of the character in question has been employed for correcting irregularities of the teeth. At the Annual American Dental Convention, assembled in Boston in 1857, Dr. W. H. Dwinell, of N. Y., spoke of the employment of the 'simple screw and nut in conjunction with plates' for the correction of
irregular teeth. He also stated that he had met with great difficulty in making fixtures that were strong enough, while they were sufficiently small to be practicable, until he had employed steel screws with zinc attachments to prevent rust. In using the simple shaft, as employed in the foregoing case, independent of any plate, there is no difficulty in making the apparatus of sufficient size and strength to widen the maxillary arch of even an adult. The shaft in question was made from sixteen-carat gold wire No. 13, according to Stubbs's gauge. Finer gold may be used, for instance, that alloyed with platinum as usually employed for clasps; but this is inferior to the first, as its hardness renders the cutting of a good and perfect thread more difficult.

"I have since employed the same style of apparatus with equal success in correcting irregularities of the incisors when they overlap each other. For this purpose I employ an apparatus as represented in diagram No. 6.

No. 6.

The collars at either extremity are intended to rest upon the palatine or lingual surface of the bicuspids when the wrench is applied to the shaft, as already described. In these cases it is only necessary to secure sufficient space, when the irregular tooth may be turned in their sockets without difficulty, and may be so easily fixed in correct position. When the cuspids are both outside the arch, and the patient is not too old, so as to render the treatment impracticable, the apparatus should have a single collar at each extremity, as seen in figure 2, diagram No. 7, which represents a tubular nut with collar affixed.

"These collars should rest upon the palatine or lingual surfaces of the second bicuspids, as the first cannot be moved outward without augmenting the difficulty sought to be corrected. When the arch has been sufficiently widened, the first bicuspids may be moved posteriorly, by the apparatus exhibited in figure 1, diagram No. 4, the nut through which the shaft revolves being soldered to a plate adjusted as described in diagram No. 2. When sufficient space has been secured for the admission of the cuspids, they may be brought into the arch, as already described.

No. 7.

"The uniform and gradual pressure exerted by this apparatus cannot fail to commend it in the strongest terms for correcting the general irregularities of the tooth. It offers but little impediment to articulation, and the ease and rapidity with which it accomplishes the work is as gratifying to the patient as it is satisfactory to the operator."