My invention relates to plates for teeth and is particularly designed to be used where upper and lower plates are necessary and more particularly with a full set of upper and lower teeth.

Heretofore plates have been used for upper teeth which are designed and adapted to hold the teeth in place by the palatal plate engaging against the roof of the mouth. With this form of plate for teeth it is sometimes very difficult for the person to become accustomed to the same as a portion of the normal reaction of the mouth is covered by the plate in an objectionable way.

My invention is designed to overcome the objectionable features of the upper plate with the palatal plate portion and I virtually do away with such palatal plate and accomplish a result to maintain the teeth in the plates steady and in practically a normal position, so that the person can use my plates and teeth in practically a normal manner.

It is a feature of my invention to provide upper and lower plates for teeth including resilient means for holding the plates in operative position so that the teeth of the plate can function virtually normally in the mouth.

My invention also includes a particular means or resilient member for the plates designed to operate in a simple and practical manner and being so positioned as not to interfere with the normal operation of the jaws in mastication and in no way interfering with the operation of the teeth in use.

I also include in my invention a particular means of fastening the resilient means to the plates so that the resilient means is adjustable to operate with a pivotal action and also with a swivelling action at the end of the resilient means. This permits the adjustment of the resilient means in the desired position in the mouth which is a material advantage.

These features, together with other details and objects of the invention will be more clearly and fully set forth throughout the specification and claims.

In the drawings forming part of my spec-
or of any other suitable spring material. The spring C is provided with a bifurcated connector 14 which is rigidly secured to the end of the spring C and which pivotally engages with the pin 15 by means of a small pin 16 extending through the connector 14 and the pin 15. The pin 15 is attached to the plates A and B by extending through the lug 17 which is formed integral with the plate. The pin 15 is free to rotate in the hole 18 extending through the lug 17 so that the pin can turn around in the lug 17.

In making new plates A and B the lug 17 may be molded directly on to the plate. For other plates where the lug is not formed thereon, I provide a suitable lug 17' formed with the opening 18 and provided with two pin members 20 which are anchored in the body of the plates A or B. The lug 17 or 17' is adapted to be rigidly attached in relation to the plates A or B. In use my plates A and B are placed in the mouth over the gums of the jaw and the resilient member C is adapted to curve when the mouth is closed, as illustrated in Figure 3. The spring member C illustrated is of coil spring wire and normally extends straight so that even when the mouth is open which would position the teeth similarly as illustrated in Figure 2, the spring member C is still not straight but has a tendency to press the plates A and B apart.

Thus in the use of my plates A and B the spring C provides sufficient resiliency to hold the plates operative during mastication and the movement of the jaws. In fact, I have found that in the use of my plates A and B with the resilient retainer C the plates are held in such a manner as to give nearly every advantage of the natural teeth. The large palate opening 13 makes the plate A much more desired and the springs C form sufficient pressure on either side of the plate A to hold the same in a virtually perfect position within the mouth.

The lugs 17 are so placed on the sides of the plates A and B as to most practically apply the spring pressure to hold the plates A and B with the teeth balanced in the mouth and to prevent movement of the plates in their use.

The plates may be easily removed for cleansing and the spring C may be turned either toward the front or the back, owing to the swivel movement at the ends of the spring C, thus permitting the user to easily adjust the plates in a manner to operate most effectively. I have found that in the use of my plates, when one is possibly holding something hard between the teeth, like the stem of a pipe, that it may be found desirable to turn the spring C to extend forward as illustrated in dotted outline in Figure 3, on one side, while the spring C turns backward as illustrated in full lines on the other side of the plates. This affords a better holding of the teeth and plates rigidly in the mouth. Then it is true, that while the teeth are being inserted into the mouth it may be preferred to have the spring member C extend forward until the plates A and B have been adjusted to the gums. The springs C then may be turned backward into their normal position, curving toward the back molars and being out of the way so that the teeth may be freely used in mastication.

In using the coil spring member C for holding my plates in place, the member 14 is attached to one side so as to leave the center 22 of the spring C freely accessible so that it can be readily cleaned by passing a small brush or article through the spring C. The swivel connection through the pin 15 which turns freely in the lug 17 permits the ends of the spring C to adjust the same to the operation of the plates A and B in mastication, thus at all times holding the plates in place and applying the tension in the proper manner.

The advantage of my plates is very apparent in providing a light weight plate for holding the teeth 10 and 11 which covers virtually only the gums which ordinarily support the natural teeth and providing a large palate opening with the resilient means C positioned at the sides of the plates away from the action of the tongue and not interfering in any way with the virtually natural operation of the teeth.

In accordance with the patent statutes I have described the principles of operation of my plates and teeth and while I have illustrated a particular formation and arrangement of the parts together with certain details thereof, I desire to have it understood that the same is only illustrative of a means of carrying out my invention and that changes may be made within the scope of the following claims without departing from the spirit of the same.

I claim:

1. A pair of upper and lower plates for supporting artificial teeth, said upper plate having a palate opening to virtually expose the entire palate, lugs formed on the outside of said upper and lower plates, a pin extending through said lugs, and freely rotatable therein, and spring means pivotally connected to said pin whereby said spring means may be moved toward the front or the back of said plates to hold said plates by the compression of said spring means in operative position.

2. Plates for artificial teeth including, an upper plate having a palate opening, lug members projecting from the outside of the sides of said plate and secured therein against turning, pins rotatable in said lug members and spring means pivoted upon said pins.

3. Plates for supporting artificial teeth
comprising, upper and lower members having gum grooves therein, said upper plate member having a large palate opening, spring means for holding said plates in operative position in the mouth, and means for swivelly connecting the ends of said resilient means to said plates, said connecting means including T shaped pins rotatable upon said plates and hingedly connected to said spring means.

4. A pair of upper and lower plates for supporting artificial teeth, lugs extending outwardly from said plates and secured thereto against turning, rotatable pins positioned in said lugs and at right angles thereto, means for holding said pins in said lugs, and resilient means connected pivotally to said pins.

EMANUEL FOERSTER.