



INDICATION



PREPARATION



RESTORATION

FIG. 1—A technic lower first molar having simulated incipient caries in the occlusal surface.

FIG. 2—Same molar with the cavity prepared to receive a GOLDENT restoration.

FIG. 3—Same molar with the GOLDENT restoration built up and polished.

Easiest way of getting started with GOLDENT

is by restoring a tooth having an incipient one-surface carious lesion in a surface that is easily accessible.

HOW SUCH A GOLDENT IS MADE

Field of Operation: Preliminary to making any GOLDENT restoration in the mouth is the insuring of a field of operation that is absolutely dry and surgically sterile. It is discussed inside, under "GOLDENT'S SIMPLE PRELIMINARIES."

Cavity Preparation: The next step is that of preparing the cavity. The general principles of cavity preparation for GOLDENT restorations are explained inside, under "GOLDENT'S Cavity Preparation." As to their specific application to the preparation of the present cavity in particular, the carious lesion is entered with a No. 35 inverted cone bur for the air-rotor handpiece. The depth of the penetration is usually of the thickness of the occlusal enamel.

Changing to a No. 700 or No. 170-L tapered fissure bur, the occlusal grooves are then followed out so as to establish the cavity outline. Extension along the developmental grooves is carried out till all defective fissures have been removed entirely. Care is exercised also not to make the isthmus channels of the preparation any wider than necessary.

With all the defective fissures removed entirely, and the cavity outline established properly, the floor of the cavity is evened and smoothed so as to be of the same depth throughout. That is done best with the No. 35 inverted cone bur. By virtue of its flared cutting end, this bur, in evening and smoothing the floor of the cavity, also cuts slightly into the buccal and lingual walls, automatically producing undercuts for adequate retention.

The preparation of this cavity makes sure also of the following:

1. That the enamel margins are perfectly clean-cut. Any irregularity or jaggedness is planed even and smooth with the No. 170-L bur.
2. That the lines of the margins are regular or definitely rounded, with no sharp angles.
3. That overlying enamel that has inadvertently been weakened by excessive undercutting is removed.
4. That the buccal and lingual walls are parallel or closely so, and the mesial and distal walls diverge slightly in the direction of the occlusal. The retentive portions are of course excepted.

Annealing: This simple operation of far-reaching consequence is explained inside, under "GOLDENT'S Care and Annealing."

Condensation: The hows and wherebys of condensing GOLDENT thoroughly are described inside, under "GOLDENT'S Condensation."

Building Up the Restoration: The general principles of building up GOLDENT restorations are explained inside, under "GOLDENT'S Building Up." As to their specific application to the building up of the present restoration in particular, the restoration is started by placing in the central pit of the cavity the largest GOLDENT pellet that the cavity can accommodate (were the cavity larger, two pellets), in the distal pit a pellet that is moderately large, and a pellet of the same size in the mesial pit. These pellets are pressed lightly against the floor of the cavity and into the angles, and spread out over the floor of the cavity so as to cover it from one of the opposing walls to the other with a loosely cohering base of gold that

is one pellet thick. If this base of gold fails to cover the floor of the cavity completely, any void is filled with an additional pellet, of a size to fit.

The foregoing is done with the No. 20 condenser, of which one end is used in the buccal and lingual grooves, while the other end is used in the isthmus channels.

This same condenser is used also for thoroughly condensing the loosely cohering base of gold, with a force of 6 to 8 pounds, into a solid, hard, and smooth mass, taking due care to wedge the gold thoroughly and securely into the angles and against the walls forming the angles. The first thrusts are directly downward, toward the floor of the cavity and at right angles to it. They are made along the edges of the base of gold, in such a way as to wedge the gold into the line angles. That is followed by stepping the condenser across the entire surface of the base of gold in the manner described inside.

With one end of the No. 20 condenser used hatchet-like and the other used hoe-like, it is feasible to reach satisfactorily all areas of the cavity other than the ends of the grooves. The latter can be reached satisfactorily with the No. 25 condenser. If the area of the mesio-pulpal line angle presents any difficulty, it can be overcome with the round end of the No. 21 condenser. The gold is then worked into the mesial line angle not by thrusts, but by an action that is more like pulling.

The base of gold thus firmly locked in between opposing cavity walls is to be sufficiently thick and strong not to buckle or loosen, anywhere. Also, its surface is to be even and smooth. Any hollow or lump is corrected, filling the hollows with pellets that are small or fragmented, and leveling the lumps.

The building up of the restoration on the solid, even base of gold is started by filling the ends of the buccal and lingual grooves. The pellets, of medium size, are lightly pressed to place at the ends, and thoroughly condensed so that the mass slopes toward the central pit. In filling the grooves, the line of force is distinctly in the buccal and lingual directions, respectively. Care is exercised not to hump the gold in the central portion of the groove, or to leave a void along the edges of the condensed mass.

The latter is corrected by working fragments of a pellet into the void with a thrusting or pulling action of the condenser, and then condensing it thoroughly.

The building up is continued by filling the distal pit and the isthmus channel separating the distal transverse ridge of the occlusal surface. One medium pellet at a time is condensed in the pit and against the distal wall in a manner similar to that in filling the buccal and lingual grooves. Again care is exercised to insure against voids at point or line angles. When the gold is level with the distal marginal ridge, additional pellets are shingled on so as to build the gold up past the distal dovetail and mesialward through the distal isthmus channel. Those procedures are performed with the Nos. 20 and 25 condensers.

The building up is further continued by filling the mesial pit. At this point it helps to switch from the pen grasp of the condenser to the palm grasp, with the thumb braced against the bicuspid. Using the round end of the No. 21 condenser, a medium pellet is condensed against the mesial wall and the mesial

line angle, with a distinctly pulling action in a mesial or a mesio-buccal direction. Additional pellets, one at a time, are lightly pressed to place and thoroughly condensed till the gold is level with the mesial marginal ridge. Then additional pellets are shingled on so as to build the gold up past the mesial dovetail and distalward through the mesial isthmus channel and into the central pit. When thorough condensation along the mesial marginal ridge has been assured, the remaining building up may be done with one of the other condensers.

The building up is completed by filling the central pit. Because of the anatomical contours, the central pit does not require much bulk. And its cavity walls and margins are built up ahead of its center.

Finishing the Restoration: After making sure that the contours are adequate, and all the margins are properly covered, one is ready to proceed with the finishing, at the same sitting. The general principles of finishing GOLDENT restorations are explained inside, under "GOLDENT'S Finishing." As to their specific application to the finishing of the present restoration in particular, the entire restoration is first reduced to its natural contour, and any excess gold that may have been condensed over the margins is carefully scraped off with a No. 4 pear finishing bur in an air-rotor handpiece.

The bur is rotated from the center toward the margins. And the tendency to heating from friction is counteracted with a steady stream of cooling air.

To define grooves, pits, and terminal edges of occlusal slucic ways, one uses a No. 2 round finishing bur.

If a fragment of excess gold remains at the end of a groove, it is removed with a small coarse-grit inverted-cone finishing stone in a slow-speed straight handpiece. Like the burs, it is rotated from the center toward the margins.

Grooves so finished are made velvet-smooth and lustrous with a cleoid. It is grasped firmly and used with a heavy burnishing action. It takes only a moment also to superburnish with it the entire main surface. That is in the nature of final hardening of the entire completed restoration, final tightening of the margins, and final smoothing of the surface, all with heavy pressure.

Polishing the Restoration: If finished properly, the surface of a GOLDENT restoration is so velvet-smooth and so lustrous, there is no need of polishing it with a polishing agent. However, a flexible rubber cup and an extra-fine polishing agent like Amalgloss or tin oxide can impart to it a luster that is even softer and more beautiful, a silky luster possible only with GOLDENT and with gold foil.

After making two or three such restorations and getting the feel of working plastic, easy-working GOLDENT, you'll see that any dentist proficient in restoring with amalgam can easily transfer his skill to the technic of making more beautiful, more serviceable restorations with GOLDENT. And you'll rejoice in GOLDENT'S wide range of opportunities for rendering your patients a higher service at a lower cost.



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FIG. 4—The hand condensers with which this restoration is built up. Obtainable from your dealer.

1/10 oz. of
GOLD FOIL



FIG. 5 — Note GOLDENT'S far greater density — far heavier mass in a given bulk.

1/10 oz. of
GOLDENT

Nature's munificence
long and universal
bounty, in the service
to an extent never

WHAT GOLDENT IS

As the newest type of cohesive gold for dentistry, GOLDENT represents a metallurgical breakthrough that is truly revolutionary—the first major advance in lasting dentistry in over 60 years.

GOLDENT is a balanced blend of various pure-gold powders of almost microscopic fineness, specially compacted into small roundish pellets of unequalled density, and then wrapped in gold foil. Thus GOLDENT is 100% gold, 100% cohesive, and 100% homogeneous.

GOLDENT'S Distinctive Characteristics

In addition to the characteristics as a finished restoration that it has in common with the other types of cohesive golds for dentistry—indestructibility, compatibility, density, hardness, strength, beautiful finish, lustrous polish, etc.; in addition also to the manipulative characteristics common to all types of cohesive golds for dentistry—weldability in the cold state, adaptability, contourability, freedom from variables, etc.; GOLDENT is distinguished by manipulative characteristics possessed by no other cohesive gold.

One such characteristic is that of distinct plasticity. Not only is GOLDENT inherently cohesive, but, owing to its finely powdered structure, as well as to the special, exclusive Morgan-Hastings process, it is peculiarly plastic.

Again owing to its finely powdered structure, GOLDENT is up to 10 times more dense than other types of cohesive golds for dentistry. A pellet of GOLDENT of a given size contains up to 10 times as much gold as does a pellet of the same size of other types of cohesive golds.

GOLDENT'S Exclusive Advantages

GOLDENT'S distinctive manipulative characteristics have their concomitant exclusive advantages clinically.

Thanks to its peculiar plasticity, GOLDENT yields to condensing pressure much more readily than does non-plastic gold foil, and thus can be condensed far more easily. It can indeed be condensed with the ease almost of silver amalgam.

And thanks to its far greater density, requiring up to 10 times fewer pellets, the GOLDENT restoration can be built up far more rapidly.

GOLDENT'S Unique Benefits

GOLDENT'S distinctive characteristics co-operate with its exclusive advantages to produce a number of unique benefits, both to the dentist and to the patient.



FIG. 6 — Note the short time it took students at a dental school to build up and polish each of the GOLDENT'S shown here.

By condensing far more easily, plastic GOLDENT requires not only less force to condense it properly, but less time to complete the restoration; with the collateral benefits of less exertion by the operator and of less stress on the patient, as well as of less likely trauma to the tooth or its supporting tissues.

And by building up far more rapidly, GOLDENT further shortens the time required to complete the restoration, with the collateral benefits of further reducing the exertion by the operator and the stress on the patient.

The ultimate collateral benefit from so speeding up the operative procedure and increasing operative productivity is that of reducing the GOLDENT'S cost, and thus of putting lasting dentistry within the reach of vastly more patients:

GOLDENT'S Supreme Practicality

GOLDENT'S characteristics, advantages, and benefits add up to the superior modern material,

the material that from the standpoint of practicality, tops all other restorative materials.

The GOLDENT tops the relatively permanent cemented cast inlay. It is made more easily, more rapidly, and more economically. At one sitting. An elementary substance, GOLDENT is free from all the variables and complexities incident to the processing of the cemented cast inlay, and hence is controlled more easily. Hence also success with it is more certain. And compared with those of the cemented cast inlay, the GOLDENT'S inherent factors of permanence, determining its life-expectancy, are decidedly superior; including the paramount factor of adaptability to the cavity walls and margins.

The GOLDENT tops even the lifetime gold foil. While not fully the equal of gold foil in manipulative characteristics — there is no substitute for that pre-eminent material — GOLDENT is its best practical alternate. It is made more easily, more rapidly, and more economically; with less exertion by the operator and less stress on the patient, as well as with less likely trauma to the tooth or its supporting tissues.

The GOLDENT ranks even more above the semi-permanent silver amalgam. It is more beautiful, more serviceable, and more compatible with the living tissues. Being free from all the variables and complexities incident to amalgamating, it is controlled more easily and is more certain of its attainable success. And it is so far superior in the inherent factors of permanence as to be capable of outlasting the amalgam by decades. Yet any dentist proficient in restoring with amalgam not only can easily transfer his skill to the technic of making the superior GOLDENT, but can make it in only little more time. At one sitting. And the consequent long-range extra benefits to the patient, in money saved, discomfort saved, appearance saved, and, often, in the saving even of the tooth itself, are worth many times the little difference in cost originally.

The GOLDENT ranks still more above the cosmetic compounds — the acrylics, the "adhesives," and the silicates — universally lamented as of very limited permanence. Not only are they less serviceable, less compatible with the living tissues, and beset by variables and complexities that make their control more difficult, and hence even their attainable success less certain; they are so fatally deficient in the inherent factors of permanence as to rate only little better than short-lived expedients. Falling short of lifetime permanence by decades and decades, and entailing by their successive failures progressively worsening ills, impairment, loss, and expense, such inadequate, short-lived fillings are clearly anything but economical. As so pointedly urged by Dr. Wm. T. Sayre Smith, "There is no saving in inadequate restorations which later require bridges, partials, and sequelae from loss of teeth."

The truth is that from the standpoint of economy, not only are such short-lived fillings really no bargain; they too often end up even in grief. And considered even cosmetically, their only plausible claim to consideration, the truth is that their harmonious blend with the enamel of a particular tooth may be less lasting even than the filling. Whereas the GOLDENT'S intrinsic harmony with the tooth at the time of insertion is immutable and constant — can remain unaltered, unmarred, and pleasing throughout the longest lifetime; a compound's match with the tooth at the time of insertion is changeable and inconstant — is foredoomed to progressive deterioration by the natural and inevitable progressive alteration in the shade of the tooth itself. The GOLDENT indeed remains at the peak of its beauty for life!

Thus, compare it as one will, easy-working, rapid-building GOLDENT is truly the material

of supreme practicality — truly the best value for the patient's dental dollar, as well as dentistry's best ally for rendering a higher, more lasting service to the greatest number of patients.

GOLDENT'S MANY USES

Happily GOLDENT'S supreme practicality is utilizable in a wide range of successful applications. GOLDENT'S legitimate indications in present-day dental practice are estimated at about 25% of all cavities that receive restorations.

In general, this superior modern material for all ages is favored for cavities of small or moderate size, in marginal areas that are easily accessible, and in surfaces not subjected to abnormally heavy attrition or occlusal stress. In a recent nationwide poll of dentists who have been using GOLDENT routinely for several years, the percentages favoring it for each class of cavity were as follows:

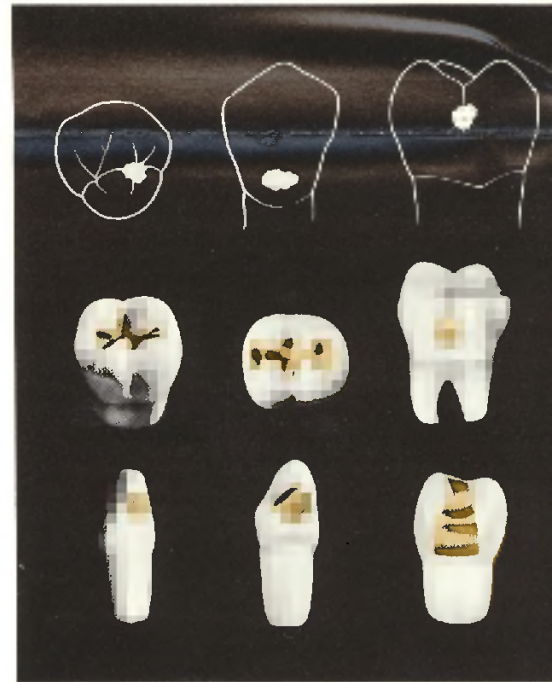


FIG. 7 — Some indications for widely versatile GOLDENT in simulated carious lesions. Note the vent in the gold.

CLASS I.

Cavities in pits and fissures of small or moderate size. Favored by over 90%. A typical comment: "For simple occlusal pit fillings, we have almost completely replaced amalgam with Goldent."

Also praised by pedodontists for children's teeth in particular.

CLASS II.

Incipient cavities in the proximal surfaces of bicuspids and molars. Favored by over 50%.

CLASS III.

Cavities in the proximal surfaces of incisors and cuspids. Favored by over 70%.

As evidenced by special courses developed by dental schools, postgraduate as well as undergraduate, as evidenced also by its growing use for this purpose in school operative clinics, GOLDENT has proved to be eminently suited for inconspicuous Class III restorations.

Also praised by pedodontists for children's teeth in particular.

CLASS V.

Cavities in the gingival third of labial, buccal, and lingual surfaces. Favored by well over 90%.

CLASS VI.

Worn cusp tips. Favored by over 60%.

GOLDENT is being used increasingly also in combination with gold foil. The following procedure is typical of the current practice of many operators who use gold foil routinely: "I use it successfully to build up bulk of filling in large Class Is and Class Vs. I start with gold foil, fill bulk with Goldent, and veneer it with gold foil. I build up rapidly, and get a good finish."

ent bounty to gold has been recognized fully. Now **GOLDENT** augments that grace of humanity through dentistry, known before.

Among incidental uses of GOLDENT, a popular favorite is that of plugging up the vent drilled in a gold crown for seating it better or for endodontia. The popularity of this use, as well as that of correcting or repairing faulty margins in gold inlays and gold crowns, has grown phenomenally.

Another incidental use is that of replacing amalgams, silicates, or other compounds adjacent to a new gold bridge. Some use it even for giving artificial teeth in dentures a simulated natural look.

Verily GOLDENT has ushered in dentistry's golden era!

GOLDENT'S SIMPLE PRELIMINARIES

An elementary substance, GOLDENT'S preliminary procedure is the simplest. Unlike the cemented cast inlay, requiring complex and variable processing; unlike the silver amalgam, requiring proportioning, intermixing, etc. of two or more substances, of unlike properties and working qual-



ENT. Illustrated are GOLDENT restorations and
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ities; unlike the compounds — the acrylics, the "adhesives," and the silicates — requiring the like in other ways; GOLDENT is free from the complexities and variables that beset multi-substanced materials. Except for annealing, to drive off volatilizable surface impurities, GOLDENT is introduced into the cavity exactly as it comes from the manufacturer.

GOLDENT and The Rubber Dam

As with any other type of dental restoration, whether the acrylic, the "adhesive," the silver amalgam, the gold foil, the cemented cast inlay, or the silicate, the proper performance of the operative procedure of restoring with GOLDENT requires that the field of operation be absolutely dry and surgically sterile, throughout the operation. Saliva, in particular, must be prevented from contaminating the gold and impairing its cohesiveness. Where that cannot be insured with absorbents, it becomes imperative to rely on the foolproof rubber dam.

Operators who rely on the rubber dam routinely, point out that, once it has become a habit, the few minutes it takes to place it pay rich rewards in easier, faster, and smoother operations, in safer operations of true surgical sterility.

GOLDENT'S Cavity Preparation

The preparation of cavities for restoring with

GOLDENT is fundamentally and essentially the same as that for restoring with amalgam or with gold foil. As between that for amalgam and that for gold foil, it depends on how conservative are to be the outline form and the retention form.

Thus the widely accepted general principles of "extension for prevention," and of the necessity of the "box" form in cavities internally, apply to GOLDENT equally. All GOLDENT cavities are to have their margins terminate in solid, sound enamel, with extension into areas where recurrence of caries is minimized. And they are to be given a box-like shape with walls and a floor, with their walls as plane surfaces joining one another so as to form definite line and point angles, and meeting the tooth surface at right angles.

The only significant modifications of the accepted preparations for amalgam and for gold foil are those dictated by the GOLDENT pellet's greater density. In general, its far greater density requires (1) more convenient access for placing and condensing the pellets, so that all line angles, point angles, and margins are easily accessible, (2) retention that is well defined and, as compared with gold foil, even distinctly accentuated, with the cavity well undercut, (3) avoidance of sharp flares and all but minimal bevels, (4) the planing smooth of all enamel margins with sharp hand instruments or a fast-cutting fissure bur, and (5) that cavosurface angles should be as close to a right angle as feasible. The reason flares and bevels are to be avoided or kept minimal is that far denser GOLDENT condenses and finishes more satisfactorily against a butt joint.

The most significant modification is that of the greater access required by the preparation for the maxillary Class III GOLDENT restoration. However, the additional access comes out of the lingual surface, and so the larger cavity opening does not make for greater display of the gold.

So essential is convenient access to every point of a cavity that it is best for the retentive angles to be not only well defined and clean-cut, but sufficiently wide, and that they be rounded instead of sharp.

Of the dentists polled recently, the majority favored for Class I, Class II, Class V, and Class VI GOLDENTs the same cavity preparation, fundamentally and essentially, as that for amalgam, and for Class III GOLDENTs they favored the same cavity preparation as that for gold foil, modified according to the requirements of the GOLDENT pellet's far greater density.

The Inconspicuous Class III GOLDENTs were favored on maxillary teeth only. It was generally held that, because of their size, shape, and location, mandibular teeth should be operated on from the labial.



FIG. 8—Typical outline form for a maxillary Class III GOLDENT restoration. Note the wider lingual access required by the GOLDENT pellet's greater density.

GOLDENT and The Matrix

The use of a matrix in making with GOLDENT proximal and proximo-occlusal restorations, to serve as a wall in place of the missing proximal surface, is a matter on which opinion is far from unanimous. Of the dentists polled recently, those who favored it just barely outnumbered those who did not.

The opposition to the use of a matrix with GOLDENT rests mainly on doubts as to whether it can be made sufficiently secure and rigid to withstand satisfactorily the force of condensation and give the restoration form proximally.

However, as illustrated here, the matrix has so been used with apparent success. The matrix of choice was the compound-wedge type, suggested

by Dr. James Sweeney. As explained by Drs. McGehee, True, and Inskipp: "A piece of 0.003 inch steel or brass is placed between the teeth. A wedge is placed at the gingival, both buccally and lingually. . . . After wedging, modeling compound [or self-curing acrylic resin] is placed both buccally and lingually around the exposed portion of the wood. While still soft, an arch cut from a metal paper-clip is placed in the compound. When the compound has hardened, the matrix is very secure and can withstand considerable pressure."



FIG. 9—A Class II GOLDENT made with the aid of a matrix.

A matrix may be used also in a Class III preparation having a labial margin that is rather extensive. The completed preparation is slightly overfilled labially with gutta-percha. Self-curing acrylic resin is then placed around the labial surface, taking care to insure retention by tabs of the acrylic resin that lap over the incisal edge so as to grip the lingual surface. When the acrylic resin has polymerized, the gutta-percha is removed, leaving a matrix against which to condense from the lingual.

GOLDENT'S EASIER TECHNIC

GOLDENT does not require the learning of a new skill. It is the easiest way of making a lasting restoration. Easier and faster than making the cemented cast inlay. Easier and faster than making the gold foil.

GOLDENT'S Care and Annealing

In making a restoration with GOLDENT, the initial step is that of annealing — of driving off volatilizable surface impurities. Though a simple operation, its consequences can be far-reaching. If cohesive gold is not free from surface impurities, it coheres only imperfectly or not at all, making it impossible to condense it thoroughly.

The best method of annealing GOLDENT, just before its introduction into the cavity, is that of pellet by pellet — one at a time — in the flame of an alcohol lamp. The pellet is passed through the flame at the tip of the inner cone — neither close to the wick nor through the upper portion of the outer cone. It is passed through the flame — not held — at a rate that will bring its every particle to a dull red. If kept in the flame till it shows a bright glow, it is liable to become overannealed before it can be withdrawn. After it is cooled for 3 or 4 seconds, it is carried to the cavity.

The alcohol, whether from wood or from grain, should be chemically pure. Denatured alcohol is seldom satisfactory; most denaturing agents yield an overplus of carbon and are contaminating. An increasingly popular brand of alcohol is that known as Methanol.

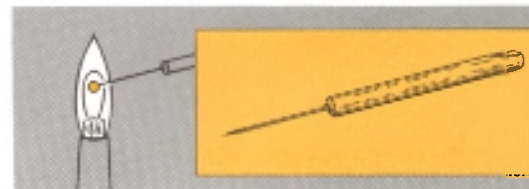


FIG. 10—Correct point at which to pass pellet through the flame.

The instrument best adapted for spearing a GOLDENT pellet and carrying it to the flame, and then to the cavity, is one with a fine, smooth point. One such instrument can be made by the operator simply by sharpening and smoothing one end of a piece of 16-gauge nichrome wire (obtainable at any electrical-supply store), bending it like an explorer, and setting the other end into a broach-holder. Another such instrument consists of a special spring-steel wire set into a plastic dowel of a suitable length and weight.

In addition to keeping GOLDENT away from solids and liquids that can impart to its surface an adhesive impurity on contact, the stopper of its vial should always be replaced tightly.

GOLDENT'S Condensation

The condensation of GOLDENT differs from that of any other restorative material, to its decided advantage both in manipulation and in results.

Being plastic and yielding to condensing pressure much more readily than does non-plastic gold foil, GOLDENT can be condensed not only more easily, but with less force. As compared, for example, with a force of 15 pounds required by gold foil when condensed with a point that is one millimeter in diameter, GOLDENT requires a force of only 6 to 8 pounds. And the smaller the diameter of the point, the less the force required.

On the other hand, GOLDENT'S plasticity, unlike that of amalgam, of cement, or of the compounds, is not wet and flaccid, but dry and metallic. Consequently the condensing force it is capable of sustaining is materially greater than that sustainable by wet, flaccid mixes. And so it is capable of far superior adaptation to cavity walls and margins, adaptation that takes advantage of the dentin's elasticity so as to form with it a tight, interlocking union of lasting permanence.

As to the best method of GOLDENT'S condensation, the majority favor hand pressure alone, with the shaft of the condenser held with the pen grasp recommended by Dr. G. V. Black, relieved, for comfort, convenience, or greater power, by the palm grasp and the thumb bracing against an adjacent tooth. Others like to combine hand pressure, to press the pellet securely in place, with malleting, to weld it and adapt it to cavity walls and margins. As to the mallets, 46% favor the pneumatic, 32% favor the electric, 17% favor the hand, and 5% favor the mechanically automatic.

Except for starting restorations, especially larger ones, it is best that the pellets be small. Should even the smallest pellet not be small enough—for minute recesses or points difficult of access—it may of course be broken up.

Before its final, firm condensation, every pellet, regardless of its size, regardless of the method of condensation, is to be spread out well.

If the condensing is done by malleting alone, every GOLDENT pellet is first to be pressed securely in place by hand pressure.

The best condenser is one whose nib is small, finely serrated, slightly convex, and most nearly conforming to the shape of the cavity. As between one such condenser and another in a given situation, the choice is determined not only by the cavity shape, but by convenience of access. In the case of malleting, as small a point as feasible, with the condensing blows of less force but delivered with greater frequency, will appreciably tend to reduce the chance of trauma.

The best mode of GOLDENT'S condensation is simply that (1) of firmly pressing the convex-nibbed condenser point with a rocking motion, (2) of directing the line of force toward the cavity wall to be covered and so as to condense the gold at a right angle to the margin, and, to insure against voids and bridging, (3) of stepping each succeeding pellet in orderly sequence and so as to reach last the wall being approached.

CAUTION: As even with amalgam, the very ease of condensing GOLDENT is liable to mislead the inexperienced operator into failing to exert sufficient force, and thus into condensing it insufficiently. Undercondensing can of course leave air spaces between pellets, can cause imperfect adaptation to the cavity walls and margins, as well as cause, in the surface of the completed restoration, porosity, pits, or peeling.

Complete success with GOLDENT is a matter simply (1) of annealing it properly, and thus of preventing faulty cohesion, and (2) of condensing it thoroughly, and thus of preventing deficient density.

Being an elementary substance, GOLDENT is happily free from all the variables that beset materials made up of more than one substance. It is free from the troubles and worries incident to the processing of the cemented cast inlay. It is free from its complicated, time-consuming, and variable-prone impression-taking, investing, and casting. It is free from dependence on cement for the all-vital marginal adaptation and marginal seal. And it is free from the problems, pitfalls, and uncertainties of amalgamating and of intermixing dissimilar substances.

Verily no variables means nothing can go wrong with the material—means no troubles, no worries. Verily GOLDENT is the ultimate in simplicity. It has not merely fewer inconstant or uncertain factors, but no inconstant or uncertain factors. It is subject not merely to less shrinkage or expansion in processing or setting, but to no shrinkage or expansion whatever.

GOLDENT'S Building Up

The building up of the GOLDENT is not only easier and more rapid than the building up of the gold foil, but simpler.

Holding Instrument Not Required: For one thing, in contrast to non-plastic gold foil, which under condensing pressure tends to draw in toward the center of the force and away from the walls, plastic GOLDENT tends to spread out. Consequently the holding instrument required in

starting the gold foil is not required in starting the GOLDENT. Spreading out readily even under light condensing pressure, GOLDENT does not require to be held, with a holding instrument in the operator's left hand, while it is being secured in place, with a condenser in his right hand.



FIG. 11—With plastic GOLDENT, a holding instrument is not required. In starting the GOLDENT, the entire cavity floor can consequently be loosely covered with pellets before proceeding with thorough condensation.

Starting the GOLDENT: The building up of the GOLDENT restoration is best started with one or more large pellets, depending on the size of the cavity, pressed lightly against the floor of the cavity and into the angles, and spread out over the floor of the cavity so as to cover it from one of the opposing walls to the other with a loosely cohering base of gold. This base of gold, one pellet deep, is then firmly and thoroughly condensed, with a force of 6 to 8 pounds, into a solid, hard, and smooth mass, taking due care to wedge the gold thoroughly and securely into the angles and against the walls forming the angles.

The base of gold thus locked in securely between opposing cavity walls is to be sufficiently thick and strong not to buckle or loosen.

When the base of gold has been condensed thoroughly and locked in securely between opposing cavity walls, the building up is continued by attaching each additional pellet, one at a time and successively, to the mass already thoroughly condensed, till the restoration is built up completely. Every such additional pellet is to be attached not at its center, but at an end, is to be spread out with light pressure, and is then to be condensed firmly and thoroughly. It is to be condensed thoroughly before its succeeding pellet is attached. Such additional pellets, as well as the points for condensing them, are generally to be smaller than those used for forming the gold base. And the condenser points for wedging the gold into the angles should always be sufficiently small to work the gold into the most minute recesses thoroughly and securely.

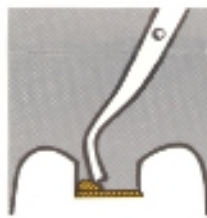


FIG. 12—When the base of gold, covering the cavity floor, has been condensed thoroughly, each succeeding pellet is in turn attached to the mass already condensed and is itself condensed thoroughly. It is attached not at its center, but at an end.

To insure convenient access to every area to be built up, the cavity walls and margins are to be built up ahead of its center. Otherwise, the humping of the gold at the center may prevent the condensing of those areas properly.

At every level of the building up, the surface is to be even and smooth, free from pits or other irregularities. Also, because of GOLDENT'S far greater density, and the consequent problem of working it thoroughly into minute recesses, it is well to be on one's guard especially against voids at cavity walls and margins.

Ordinarily, the total amount of gold to be built up should be sufficient only to cover all the margins properly, and to allow the restoration to be finished without leaving in its surface pits from the condenser's serrated nib. However, where an extensive margin requires space in an embrasure, the gold is to overflow the cavity slightly. The excess gold is useful in finishing.

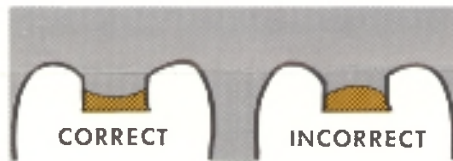


FIG. 13—Cavity walls and margins are built up ahead of its center. This, together with the correct line of force, gives the surface of a thoroughly condensed mass of GOLDENT some concavity.

Correct Line of Force: To insure over-all maximum density and optimum adaptation of GOLDENT to cavity walls and margins, the line of force—the direction of the force exerted by the condenser—must be correct. The direction of force should be toward the cavity walls and margins, but not perpendicular to the plane of the cavity wall to be covered. The shaft of the condenser should be inclined at least 6 centigrades from the perpendicular to the plane of the wall. As much as 12 centigrades may be even better. If this requirement is observed faithfully, the surface of a thoroughly condensed mass of GOLDENT that hasn't been contoured will look somewhat concave.

Correct Stepping of the Condenser: Another essential to the attainment of maximum density



FIG. 16—A GOLDENT and gold fails after several years of service in the same mouth. It's impossible to tell them apart.

and optimum adaptation is that of the correct stepping of the condenser. To prevent voids, and consequent bridging, the condenser is to be advanced, in orderly sequence, from gold last thoroughly condensed to gold next to be thoroughly condensed so as to overlap the preceding pellet to the extent of half the diameter of the condenser's nib. This halfway overlapping of the pellet last condensed as you advance with the condenser's next application is somewhat akin to the overlapping of shingles in covering a roof. After the first row of pellets so condensed is completed, every additional row is to be stepped so as to overlap not only each pellet last condensed, but even the row of pellets last condensed. And this orderly stepping is to proceed from the cavity's center toward the opposing walls, keeping the gold ahead of the condenser.

Checking for Density and Adaptation: Until the operator is sufficiently experienced to be able to recognize thorough condensation and accurate adaptation by feel alone, it is well to check the completed restoration for both. To check for the former, simply press a sharp explorer firmly against the surface of the restoration at various points. If its tine penetrates, it is evident that the mass is undercondensed. To check for the latter, simply place a sharp explorer against the surface of the tooth near the established margin and slide it over onto the gold. Without lifting the tine, now slide it back to the starting-point on the tooth. If the explorer slides back without catching, it is evident that the margin is well covered. If not, the margin is deficient and more gold is to be added.



FIG. 14—Marginal deficiency and the removal of gold that blacks access for its proper correction.



FIG. 15*—Marginal deficiency being corrected by filling the resultant enlarged void.

The former is necessarily corrected by removing the undercondensed mass of gold altogether and building up the restoration anew. The latter is corrected simply by burring away next to the marginal void sufficient gold to accommodate the smallest condenser, and then by filling the resultant enlarged void either with a small or fragmented GOLDENT pellet or with gold foil.

The inexperienced operator might do well to check for density and adaptation also at earlier stages in the building-up process. Simply press a sharp explorer firmly against the mass of condensed gold and along the margins. If the explorer's tine penetrates, the condensed mass is of course not solid, or the adaptation is faulty.

GOLDENT'S Finishing

The finishing of the completed GOLDENT restoration differs materially from that of the completed gold foil only in its burnishing. Because of the GOLDENT pellet's far greater density, the completed GOLDENT restoration must be superburnished. In addition to the usual surface-smoothing and imparting a luster, the GOLDENT'S burnishing is to be in the nature of final hardening of the entire completed restoration, final tightening of the margins, and final smoothing of the surface, all with heavy hand pressure.

Such superburnishing with heavy pressure is obviously done best, just before the final finishing touches, not with an instrument that is serrated, but with one whose surface is smooth. Especially excellent for the purpose is a cleoid, a discoid, or a beavertail burnisher.

Finishing other than the superburnishing—trimming off excess gold, contouring to form, burnishing incident to the trimming and contouring, and final finishing touches—is done with instruments and materials such as coarse-grit finishing stones, finishing burs, knives, files, carvers, burnishers, swagers, finishing disks and strips, etc., progressing from coarser instruments and materials, for initial finishing, to finer instruments and materials, for final finishing. The actual choice of the instruments and materials in any given case is determined by the class of cavity, by the restoration's particular surface, and by the operator's personal preference. In the interest of

greater efficiency, it is of course advisable to standardize, by each class of cavity, on a complement of instruments and materials of the utmost simplicity.

Where excess gold is minimal, an instrument of exceptional utility and versatility is that of the Sprately Carver. It can trim, shave, carve, and hurnish equally well. For further finishing, it may be followed with fine disks.

In using a knife, file, burnisher, or other hand instrument, work it from the center toward the margins. Also rotate toward the margins all rotary instruments.

While operating with rotary instruments, the tendency to heating from friction is to be counteracted with a steady stream of cooling air. Such tendency to heating can further be counteracted by lubricating such instruments, wherever admissible, with a thin coat of petroleum jelly.

GOLDENT'S Polishing

Like the gold foil, the GOLDENT is capable of receiving and retaining the highest polish. If finished and polished properly, they look exactly alike. Even after several years of service in the same mouth, they are indistinguishable.

Again as in the case of the gold foil, the polishing of the GOLDENT is really largely a co-product of its final and finer finishing. If the latter is done properly, the restoration's surface will be velvet-smooth and lustrous. An even greater smoothness and higher luster can be produced with a soft wheel-brush and moistened extra-fine silex, complemented, if desired, with a rubber cup and fine pumice. The greatest smoothness and highest, silky luster can be produced with a flexible rubber cup and an extra-fine polishing agent like Amalgloss or tin oxide.

All polishing is to be gentle, with very light pressure. Vigorous polishing, with excessive pressure, is liable to abrade the restored tooth form, or to injure the cementum or dentin at the margins.

GOLDENT'S EXCITING NEW DIMENSION

"To me," declared the late and great Dr. Guy B. Baird, "the greatest joy I get out of my practice is that of making gold foil restorations. It is wonderful what can be done with this most excellent material."

Were Dr. Baird practicing today, the joy he derived from gold foil would doubtless be rivaled by that he would derive from GOLDENT. He would doubtless be quick to appreciate the unprecedented opportunities for higher service to more patients implicit in a material capable of artistic, clean-cut, and serviceable restorations that can be made so much more easily and rapidly, with less exertion by the operator and less stress on the patient, with less chance of trauma, and at a cost that is but little more than that of the amalgam.

Such is indeed the actual sentiment of more and more dentists proficient in restoring with gold foil who are enthusiastically embracing GOLDENT as gold foil's best practical alternate.

And dentists unaccustomed to making gold foils find in GOLDENT a new and wonderful experience, a sense of accomplishment and satisfaction never enjoyed by them before. As they gain proficiency in its use, they increasingly look forward to appointments for GOLDENT as exhilarating and exciting highlights that brighten their daily routine.

*Most of the line drawings here are by courtesy of Dr. Stewart H. Rowberry and Dental Digest.

HOW PLASTIC GOLDENT

is displacing the less adequate non-gold plastics, as well as the less practical non-plastics



GOLDENT'S Instant and Universal Appeal! Of 38 dentists at GOLDENT'S unveiling, in October of 1962, *all* ordered it *immediately*. All 38, all leading operators, were quick to recognize its unique and far-reaching benefits and were eager to make them available to their patients. That was a response of 100%. *That was instant unanimity!*

GOLDENT'S Phenomenal Popularity and Growth! The high promise implicit in GOLDENT'S instant and universal appeal on its unveiling has since been realized phenomenally. Wherever demonstrated, GOLDENT has been a magnet for crowds of fascinated dentists. They have welcomed it enthusiastically as the long-sought answer to their quest for an easier, faster way of restoring teeth lastingly. And the longer they use it, the more they are enthusiastic about its blessed opportunities for rendering a higher service at a lower cost.

Here are some representative expressions of that enthusiasm:

"When a Goldent is finished, the operator enjoys the satisfaction of having placed a restoration of the highest quality."
Los Angeles, Calif.

"I am interested in learning more about Goldent. Dentists locally sing its praises."
South Pasadena, Calif.

"I have found that in all fairness to the patient Goldent is the only material to use in this case. The entire operation can be finished in less time than a similarly placed amalgam."
Boulder, Colorado

"Bless you all! You have brought cohesive gold back to Children's Dentistry. Goldent is a boon to the child patient."

"It can be placed in Class I and Class III cavities in young centrals and laterals without fear of trauma or necrosis of the pulp."
Denver, Colorado

"I have been using Goldent in my practice and have found it delightfully easy to work."
Honolulu, Hawaii

"Goldent is better than silicates, amalgam, and inlays."
Chicago, Illinois

"Any dentist should find Goldent easy to use."
Chicago, Illinois

"Goldent's plasticity and far greater density make possible a more rapid build-up. I feel that, in itself, will be a salvation to those using it routinely."
Indianapolis, Indiana

"I made four Goldents today and three yesterday. I like the way Goldent works. My patients like the way Goldents feel and look."
Sloux City, Iowa

"For simple occlusal pit fillings, we have almost completely replaced amalgam with Goldent. It takes little longer and the fee is not much more."
Detroit, Michigan

"I think Goldent is especially indicated for pit and fissure restorations of very conservative design, placed early as a prophylactic."
Muskegon, Michigan

"Goldent's distinctive characteristics and easier technique seem to be the answer to what the clinical operator has sought in a restorative material down through the years."
Rochester, Minnesota

"Please send me three more vials of Goldent pellets as soon as possible. I greatly enjoy using this material in my practice."
Kansas City, Missouri

"I have been using Goldent since January of last year and love it."
Plainfield, N.J.

"I've had terrific success with Goldent. I would be lost without it."
Portland, Oregon

"I have restored with Goldent 12 teeth. Four were Class I's, the rest Class V's. I firmly suggest that the clinical uses of Goldent are many and surely justified in that the simplification of its technic should induce many dentists to render this high-quality service rather than a second-choice material that is far short of being permanent."
Maple Glen, Pa.

"In five months I placed over 150 Goldents and I am very pleased with the results."
Terrell, Texas

"I made six Goldents in two days and it seems to be living up to all the claims for it. I demonstrated it to our G. V. Black Study Club last Friday and it really impressed everyone highly."
Menomonie, Wisconsin

"My colleagues participating in the course are certain to become as enthusiastic about Goldent as I am."
Captain, U.S. Army Dental Corps

"I have used my first vial of Goldent with great success and considerable pleasure."
Captain, U.S. Naval Dental Corps

"I would like to express the satisfaction and pleasure I have had working with Goldent."
As a part-time demonstrator and lecturer in operative dentistry, I have introduced the material to 4th year students, who in turn handled it quite satisfactorily after only little experience."
Burlington, Ontario, Canada

"My colleagues and I have put Goldent to various tests and have found it satisfactory in every respect. We expect to use it widely."
Paris, France

"The clinicians thoroughly enjoyed condensing Goldent."
Dental Dep't, National Institutes of Health

"We began using Goldent in the Operative Clinic of our school during the fall term of 1963. Since then [by May of 1968], we have placed approximately 11,000 Goldent restorations. The reduction in the number of hypersensitive teeth and teeth requiring endodontic treatment has been very dramatic, supporting the theory that the placement of Goldent is very much less traumatic than the placement of gold foil."
Chairman, Dep't of Operative Dentistry

"You have a great product!"
Users of GOLDENT looking in on Morgan-Hastings exhibit at meetings

Easy-working, rapid-building GOLDENT, as attested by thousands of delighted dentists over the years, is dentistry at its practical best. *Now you can benefit your patients as never before!*