Instruments, appliances, etc. for crown-, bridge- and metal work : Hollingsworth system of crown- and bridge-work. Various methods of setting Logan crowns / S.S. White Dental Manufacturing Co.

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Instruments, Appliances, Etc.

For

Crown-, Bridge- and Metal-Work

Hollingsworth System of Crown- and Bridge-Work. Various Methods of Setting Logan Crowns

LOOK FOR THE

TRADE- -MARK

WHEN BUYING DENTAL GOODS

THE S. S. WHITE DENTAL MFG. COMPANY

Chestnut Street, Cor. 12th, Philadelphia, Pa., U. S. A.

BRANCHES

NEW YORK: Spingler Building, 5, 7, and 9 Union Sq.; Charles Building, Madison Avenue, corner 43d Street
BOSTON: Walker Building, 120 Boylston Street
CHICAGO: Atlas Building, Randolph Street, corner Wabash Avenue
BROOKLYN: Nassau Building, 356 and 358 Fulton Street
ATLANTA: Grant Building, North Broad and Walton Streets
ROCHESTER: Chamber of Commerce, Main Street East, corner South Avenue
NEW ORLEANS: Maison Blanche, corner Canal and Dauphine Streets
CINCINNATI: First National Bank Building, Fourth and Walnut Streets
SAN FRANCISCO: Butler Building, 135 Stockton Street
LOS ANGELES: Mason Building, corner Fourth and Broadway
OAKLAND: Oakland Bank of Savings Building, corner Twelfth and Broadway
TORONTO (Can.): Confederation Life Building, 110 and 112 Victoria Street
MONTREAL (Can.): Birk's Building, 14 Phillips Sq.

EUROPEAN BRANCH:
BERLIN, W., Mauerstrasse 83-84

Prices Subject to Change without Notice

Crown and Bridge,

Not Living From Hand to Mouth

DENTISTS frequently in being shown through our main store and tooth factory express surprise at the immense stock of Porcelain Teeth we carry. They forget that we have to be prepared to supply the dentists of the world.

That is the idea—"prepared." We don't, in our stocks of goods, including Porcelain Teeth, "live from hand to mouth," as it were; don't wait till the orders come in before we get ready to fill them. We aim to be always ready to fill all orders from the profession and our branch houses and the dental trade; and we do fill 90 per cent. of all orders at once.

An instance: Some time ago a dealer in the antipodes sent by the same mail orders to us and to another house in the United States. We were ready,—"prepared,"—shipped the goods promptly. The same steamer which carried back the teeth and other supplies ordered from us took back from the other house the acknowledgment of their order,—the goods reached the dealer a month or so later.

We are prepared, because we have confidence in our goods, confidence that they will sell, still more confidence that they will "make good," which is the secret of their continuous selling power. We show that confidence when we take a crude idea submitted to us, put money into its development, through months, perhaps years, until we have expanded that crude idea into a practical dental help; then by putting more money into it stocking up, getting prepared to fill the orders which our confidence in the efficiency of the devices leads us to expect.

Which were better,—to buy from a house which holds itself ready to fill your orders or from one which holds itself ready to get ready when you order it to?

Send for our Catalogs; they cover your professional needs.

Crown-, Bridge-, *and* Plate-Work

Appliances and Methods

IN this Catalog of Appliances for use in constructing and mounting dental crowns and bridges, we have endeavored to group the different articles according to their uses, in order that they could be easily referred to. Many of the articles advertised here have other uses in dentistry and are included in some one or other of our class pamphlets. Many more of them are specially made for the help of the crown- and bridge-worker. As gathered together they constitute a quite complete list of high-class instruments, appliances, and materials for the work which they are intended to cover. By "high-class" we do not mean high-priced, but excellent in quality, adaptation, and usefulness.

We also show a few appliances used in plate-work and not included in our other catalogs.

In addition, we have collated a number of descriptions of methods of making and mounting Logan Crowns, which we trust will be found useful to those who have the catalog.

The S. S. White Dental Mfg. Co.

MATERIALS FOR CROWN AND BRIDGE WORKERS' APPLIANCES

STEEL

The steels which we use in dentists' tools are made from formulas which were carefully prepar to provide just the qualities needed for the work. Not a rod of steel is accepted from the makers til it is tested and found to meet the requirements. The tempering is skilfully done to give eac in- strument the degree of hardness best adapted to its work.

CORUNDUM

The abrasive power of Corundum was for many years the mainstay of dentists for the trimmin of crowns and roots and other thousand and one uses which is found in practice. The various ap- ances are formed by incorporating Corundum powder with a binder and molding the compound to the requisite forms, which are then hardened.

Corundum Disks, Wheels, and Points should always be used wet, because the materials used binders, while insoluble in water, are susceptible to heat. Running Disks, etc., dry would develop s ficient heat to soften the binder and render the appliance useless. Keeping them wet eliminates t risk. Disks and Points are mounted on mandrels with shellac.

GEM

The material known as "Gem" has won a high place because of its great abrasive power and i durability. It cuts fast and clean. The appliances of Gem or hard baked, a process which apparent intensifies the original abrasiveness of the material fitting them for hard, rough work. They a uniform in texture and continue effective working till worn down to the mandrel.

A great advantage of the Gem appliances is that they cut rather better dry than wet. They d not need to be pushed; simply holding them to their work will result more satisfactorily.

Gem Points are mounted on mandrels with cement,—not with shellac.

DIAMOND

Diamond tools are, when rightly made and properly used the "perfection of clean, sharp, rapid- cutting devices for dentists' use." The Diamond Drills, Disks, Wheels, and Points which we sell are made in our own factories, and every tool is tested before it is put into our sales stock. They are made right.

In use, they must be kept wet, and they must not be pushed. Reversal of either of these rules will ruin any diamond tool ever made. Diamond tools are expensive, and dissatisfaction will surely result from hasty or careless use. On the other hand, as evidence that with the right sort of manipulation, they may be depended upon, we frequently drill several hundred cavities in porcelain teeth with a single Diamond Drill.

Trade-Mark

VULCARBO

Reg. in U. S. Pat. Off.

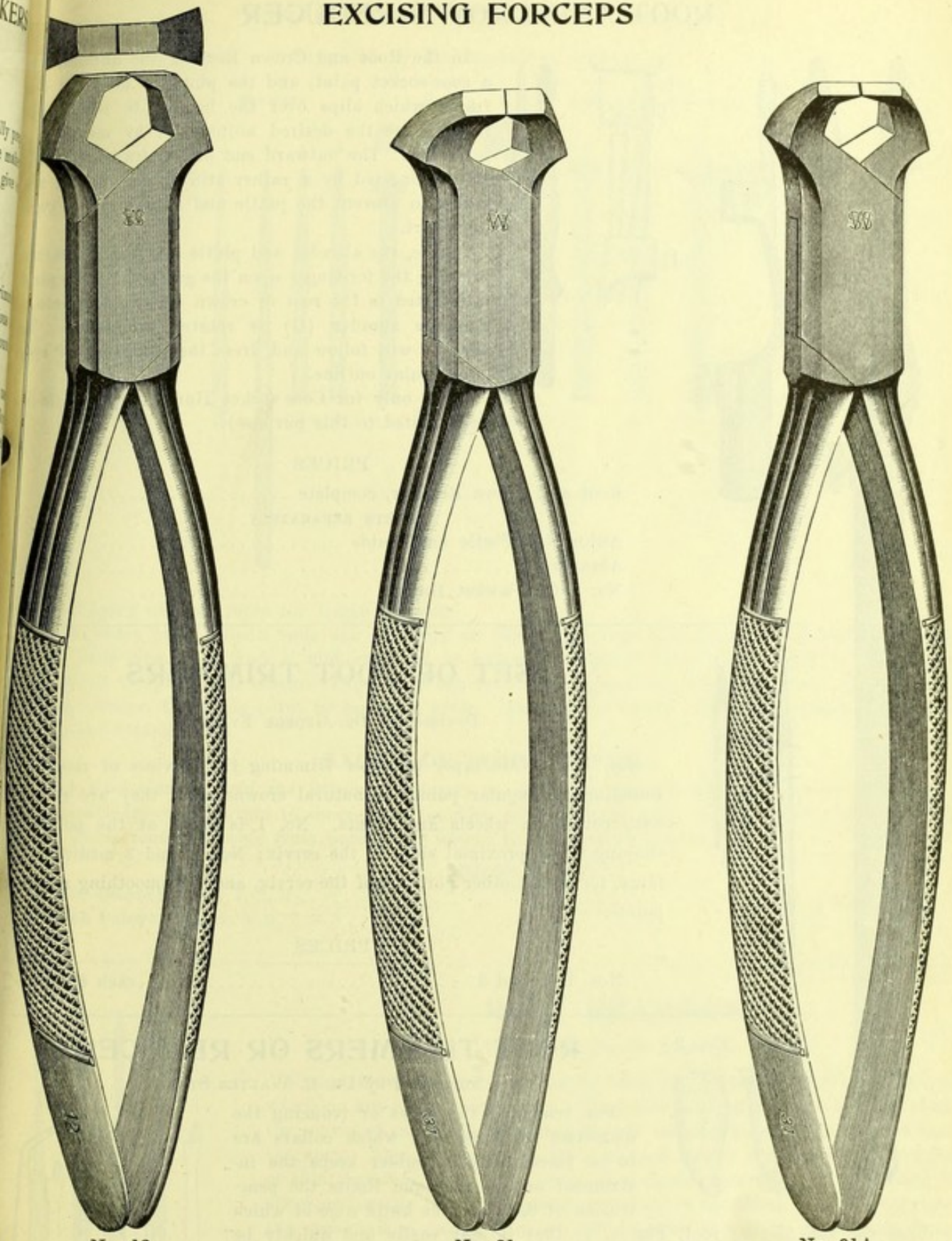
Vulcarbo is our trade name for a compound of Soft Rubber loaded with Carborundum and then vul- canized in the forms sold. The mixing is so carefully and thoroughly done that we are assured of a vulcanized product which is homogeneous in texture, free from soft spots.

Vulcarbo is stiff without being brittle. It affords the fullest cutting power of the Carborundum with a tough structure which prevents breakage under any fair conditions of use. It is extremely dur- able; wears uniformly down till there is no more usable surface. The molds are made with the utmost nicety. Disks and Points are perfectly circular,—symmetrical in shape. When mounted prop- erly they run true.

CARBORUNDUM

With the fierce cutting quality of Carborundum most dentists are familiar. In the manufacture of Carborundum Wheels, Disks, and Points, we have simply applied our usual methods; have taken the best quality of the raw product and have made it up in the best manner. Our Wheels, Disks, and Points are properly molded, are uniform in sizes, are dense and strong.

EXCISING FORCEPS



No. 12 No. 31 No. 31A

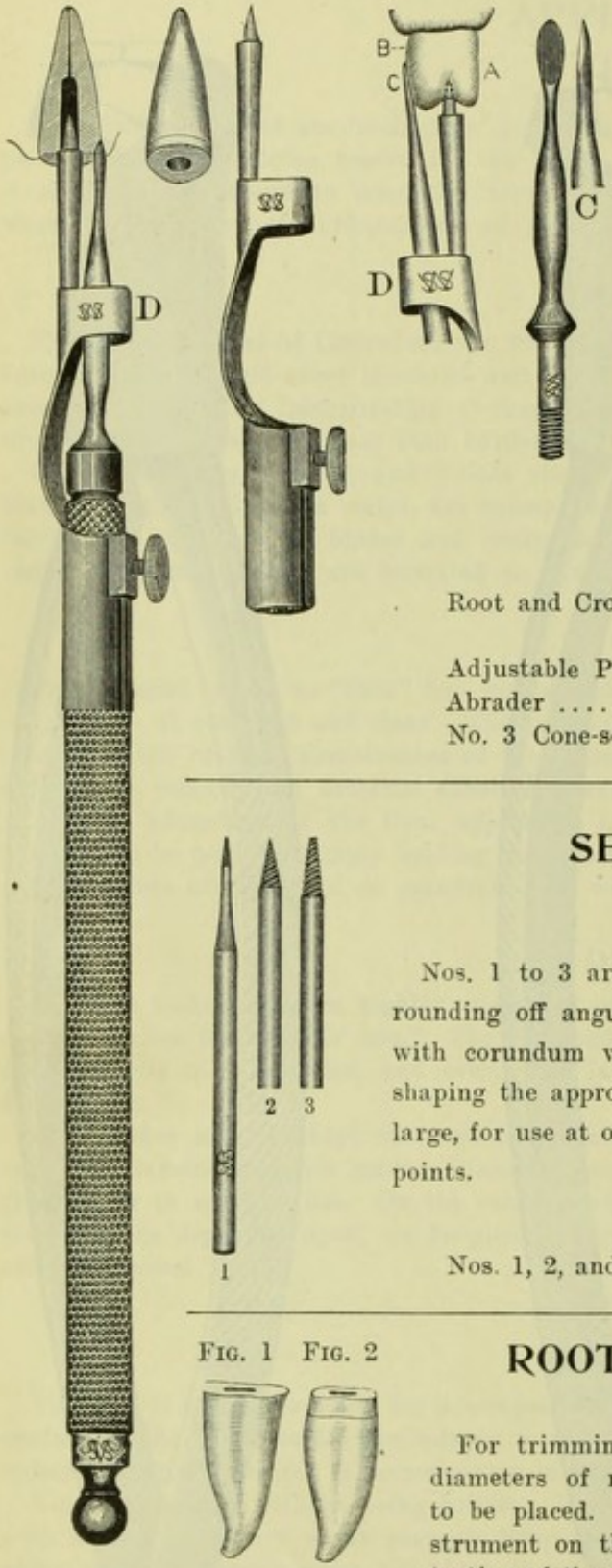
No. 12. Excising, Upper. Straight Beaks.

No. 31. Excising, Lower. Curved Beaks.

No. 31A. Excising, Lower. Curved Beaks. Like No. 31, but with narrow beaks, for preparing the root and cutting off posts in mounting crowns. Suggested by Dr. How.

Nos. 12, 31, 31A ..... each $2.50

ROOT AND CROWN REDUCER



In the Root and Crown Reducer the abrader is a cone-socket point, and the pintle is mounted in a frame which slips over the handle, to which it is fastened at the desired adjustment by means of a set screw. The outward end of the frame, to which it is connected by a rather stiff spring, serves as a guide, to prevent the pintle and abrader from twisting apart.

In use, the abrader and pintle are forced apart by pressing the forefinger upon the guide (D), the pivot is inserted in the root or crown (A) to be trimmed, and the abrader (C) is rotated around it. The abrader will follow and dress the periphery of root of irregular outline.

Made only for Cone-socket Handles (No. 3 is exactly suited to this purpose).

PRICES

Root and Crown Reducer, complete	$1.75
PARTS SEPARATELY	
Adjustable Pintle and Guide	1.15
Abrader	.45
No. 3 Cone-socket Handle	.15

SET OF ROOT TRIMMERS

Devised by Dr. George Evans

Nos. 1 to 3 are taper burs for trimming the cervices of roots and rounding off angular points of natural crowns after they are reduced with corundum wheels and points. No. 1 is small at the point for shaping the approximal sides of the cervix; Nos. 2 and 3 medium and large, for use at other portions of the cervix, and for smoothing angular points.

PRICES

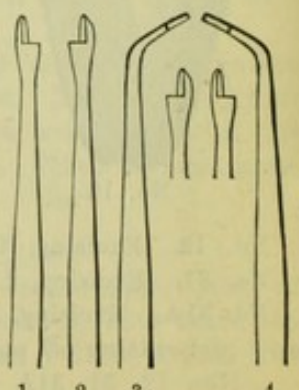
Nos. 1, 2, and 3 ..... each $0.35

ROOT TRIMMERS OR REDUCERS

Suggested by Dr. R. Walter Starr

Fig. 1 Fig. 2

For trimming the edges or reducing the diameters of roots over which collars are to be placed. The shoulder keeps the instrument on the root and limits the penetration of the spur, the knife edge of which scrapes the side of the root, Fig. 1, so that it may easily and quickly be given the shape of Fig. 2, or any similar form. Made right and left; the straight pair, Nos. 1 and 2, for use on the superior roots anterior to the molars, and the curved pair, Nos. 3 and 4, for use on all the other natural roots.

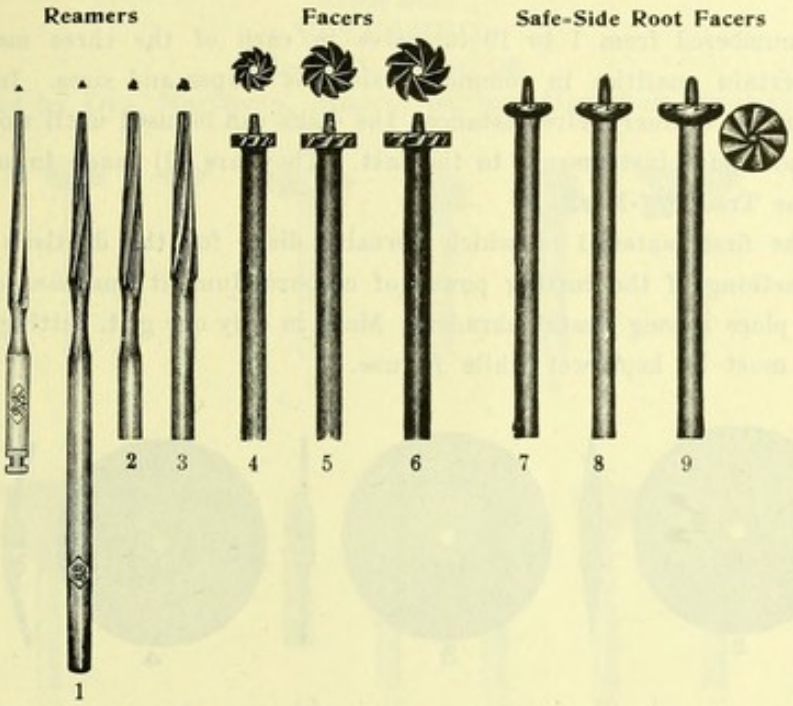


Price ..... each $0.45

Made for Cone-socket Handles only.

ROOT REAMERS AND FACERS

Suggested by Dr. Rodrigues Ottolengui



For shaping natural roots for Logan Crowns.

The reamers have smooth ends and cut only on the sides. They correspond in size with the Logan Crown Pins Nos. 1, 2, and 3, and are used to enlarge the canal after it is drilled to the proper depth to fit the pin of the crown. The end of the root is then quickly, smoothly, and safely shaped with the Facer, the guide point acting as a pivot. For use in chuck and cone journal Handpieces and Angle Attachments.

SAFE-SIDE ROOT FACERS

These Facers supplement the Ottolengui Facers as means for paring the labial border of the root end beneath the gum margin to conceal the junction of the crown with the root. The rounded side of the Facer renders it safe from liability to wound the gum at its free margin.

PRICES

Root Reamers, Nos. 1, 2, 3 ..... each $0.60
Root Facers, Nos. 4, 5, 6, 7, 8 9 ..... " .80

ROOT REAMERS

Devised by Dr. F. A. Peeso

Designed especially for preparing roots for Richmond and other crowns which do not have tapered pins. The guide point carries the Reamer along the course of the canal, enlarging it to a uniform diameter to a point near the apex. This conformation gives a much firmer attachment for crowns of this character than if the canal were made tapering. The root itself is stronger because less of the tooth structure is sacrificed. When necessary, the canal can be enlarged at one side to allow the pin to be bent, by bearing to that side after the canal is reamed out. A suitably shaped cavity for the Logan Pin can be made in the same manner.

Made in three sizes to correspond with Nos. 13, 14, 15 round wire, to fit chuck and cone journal Handpieces and Angle Attachments.

PRICES

Nos. 1, 2, 3 ..... each $0.60

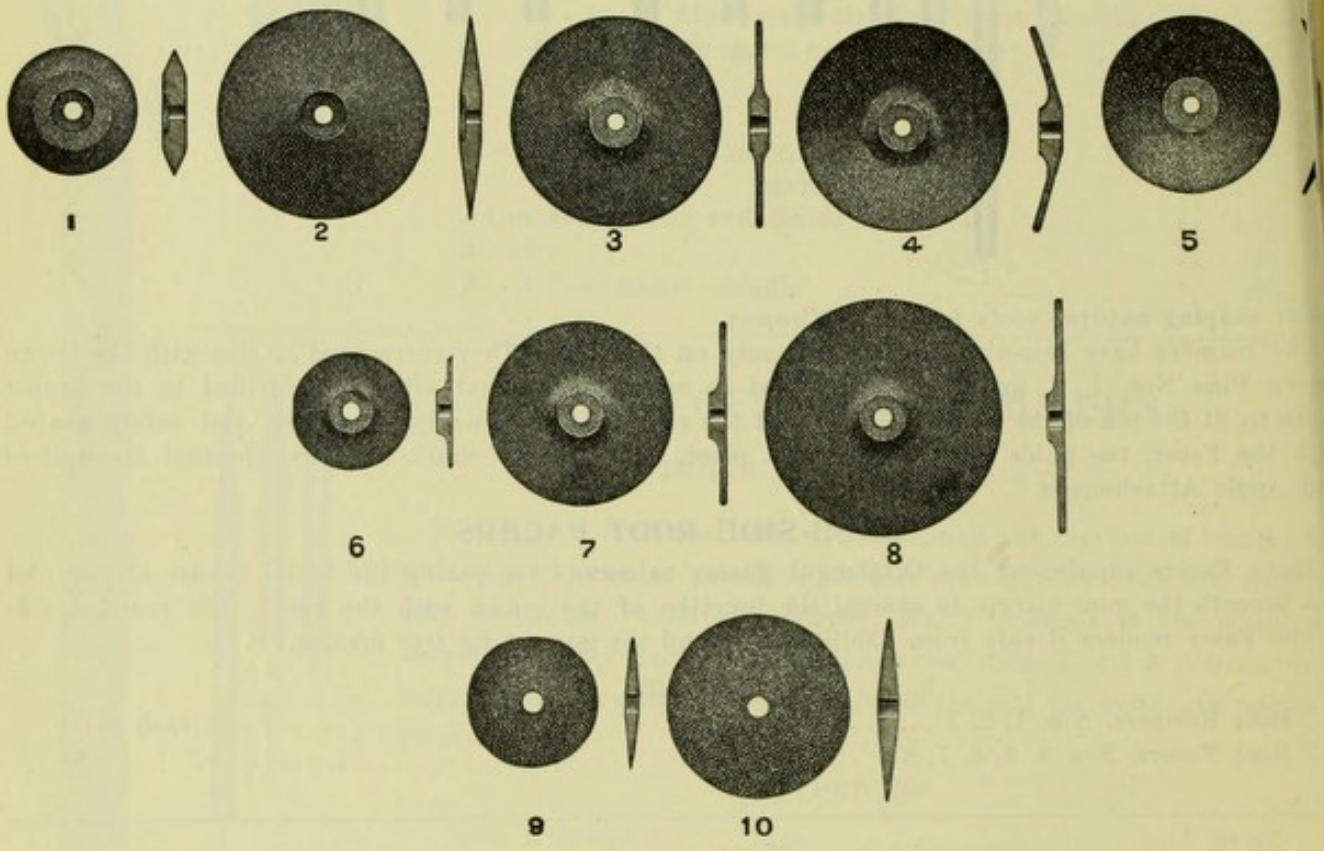
DISKS

CORUNDUM, CARBORUNDUM, VULCARBO

We make forms numbered from 1 to 10 inclusive in each of the three materials named a ve. These disks have certain qualities in common beside the shapes and sizes. In each the materi is homogeneous, and under ordinary circumstances the disks can be used until worn nearly to the un- drel and be true and useful instruments to the last. They are all made in our own factories nd are put up under the Trade-SS-Mark.

Corundum was the first material of which abrasive disks for the dentist's use were made, though it lacks something of the cutting power of carborundum, it possesses qualities which en le it to hold the first place among dental abraders. Made in only one grit, cutting.

Corundum Disks must be kept wet while in use.



Carborundum is the hardest and keenest cutting abrasive ever discovered with the exception of diamond dust. As used, it is a vitrified product, and disks, wheels, etc., may be run either wet or dry. Our carborundum goods are made in our own factories and are sold under the Trade-SS-Mark. Made in two grits, fine and medium.

Vulcarbo is the name we have given to a compound of carborundum and rubber, possessing the cutting power of carborundum with the toughness of rubber. The materials are thoroughly mixed, thus avoiding soft spots. Made in one grit, medium.

Vulcarbo Disks must be kept wet while in use.

For fuller description of materials see page 2.

PRICES

Disks, Corundum,	Nos. 1 to 10	each	$0.05;	per doz.	$0.50
" Carborundum,	" 1 to 10	"	.08;	"	.90
" Vulcarbo,	" 1 to 10	"	.05		

ABRASIVE POINTS

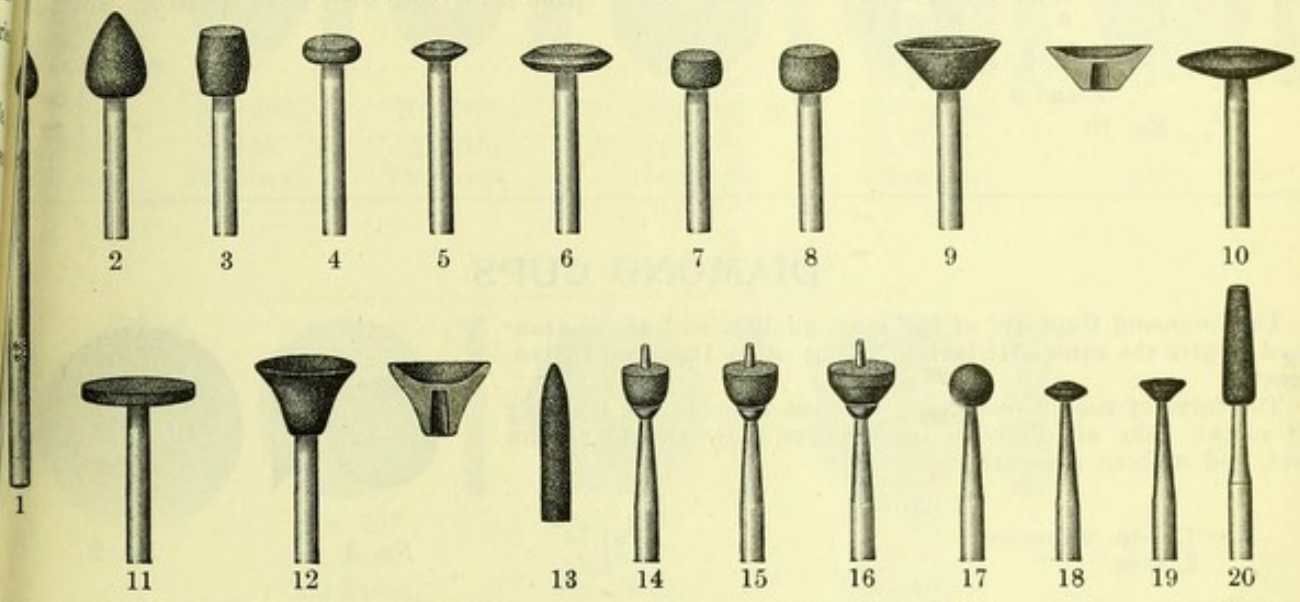
CORUNDUM CARBORUNDUM

Trade-Mark

VULCARBO

Reg. in U. S. Pat. Off.

Forms devised by Drs. Northrop, Moore, Butler, Morsman, Brophy and others



These Points are sold either mounted or unmounted except No. 13, which is always unmounted because it is to be used in a porte-polisher. When purchased mounted they will always be found to run true and will probably give better satisfaction than if the dentist mounts them himself.

Points Nos. 1 to 13 are for general work in finishing fillings and grinding teeth and roots.

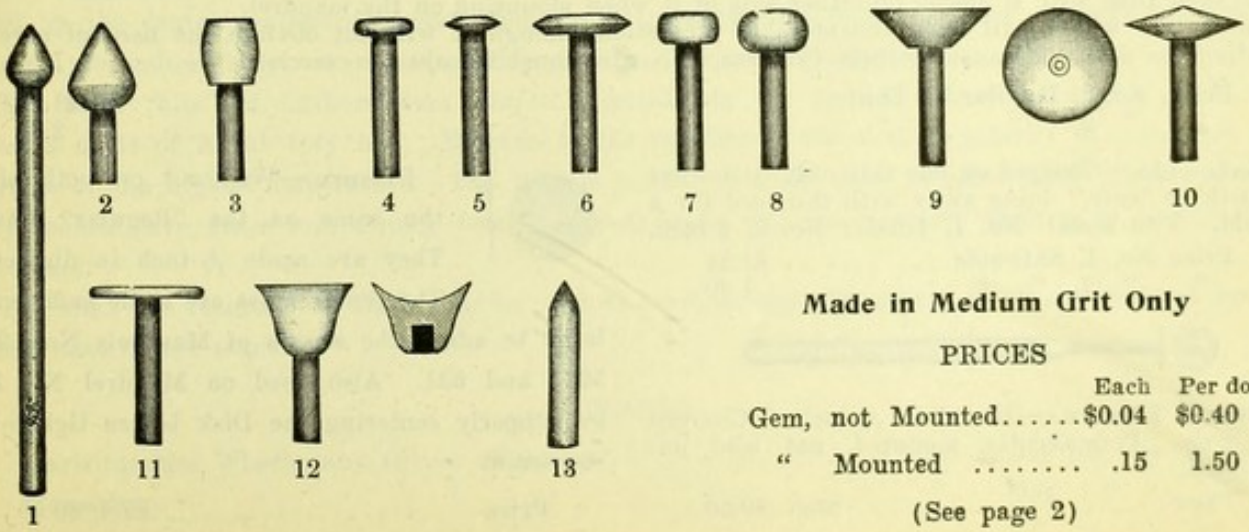
Nos. 14, 15, and 16 are especially for preparing roots to receive crowns.

Points 17, 18, and 19 are designed for finishing margins of cavities prepared for fillings. They will be found especially useful in the preparation of cavities for porcelain inlays.

Point No. 20, a new form by Dr. J. W. Wassall, for inlay work, is made in Corborundum only.

PRICES		Not Mounted	Mounted
Corundum Nos. 1 to 19, medium grit only	each	$0.04	$0.15
" " " " " " "	per doz.	.40	1.50
Carborundum Nos. 1 to 20, fine and medium grits	each	.04	.15
" " " " " " "	per doz.	.40	1.50
Vulcarbo Nos. 1 to 13, medium grit only	each	.04	.15
" " " " " " "	per doz.	.40	1.50

GEM POINTS



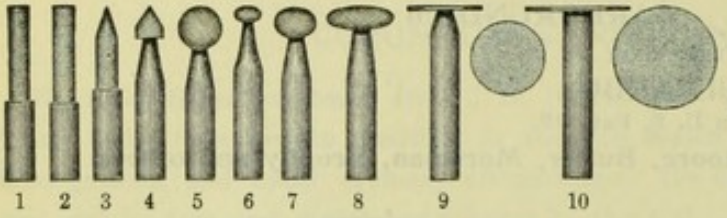
Made in Medium Grit Only

PRICES

	Each	Per doz.
Gem, not Mounted	$0.04	$0.40
" Mounted	.15	1.50

(See page 2)

DIAMOND POINTS



The forms of these Diamond Points were selected specially for their applicability to the needs of crown- and bridge-workers, to which they will be invaluable. Made of copper, Points charged all over with Diamond. (See page 2.) Used with Porte Polisher No. 30

Price, Nos. 1, 2, 3, 4, 5, 6, 7	each $0.60
" " 8 and 9	" 1.00
" No. 10	" 1.30

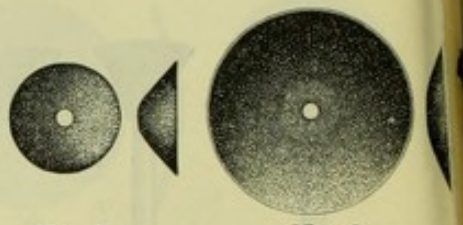
DIAMOND CUPS

The Diamond Cups are of the same quality, and are guaranteed to give the same satisfaction as our other Diamond Instruments.

The form of these Cups exactly adapts them to the dressing of roots. Like all diamond instruments, they should be run wet, and without pressure.

PRICES

No. 1, ½-in. diameter	$1.75
" 2, ⅞-in. "	2.25



No. 1 No. 2

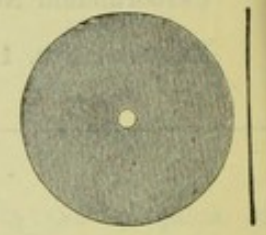
DIAMOND DISKS

Diamond Disks are made of copper charged with diamond. They are the perfection of clean, sharp cutting devices for dentists' use, excelling other disks in strength, in thinness, in cutting qualities, and in durability. Satisfaction in their use depends upon the observance of these two rules. *They must not be run dry. They must not be pushed.*

If kept wet when in use they will cut faster and last longer. If too much pressure is applied they will chatter and jerk;—they should simply be held to their work and allowed to feed themselves.

They are made in the following varieties and sizes:

Regular.—Two sizes: No. 1, ¾-inch, and No. 2, ⅞-inch, about the thickness of the line shown in the illustration, charged all over,—that is, will cut on the edge as well as the sides.



The Regular are always sent unless "Thin" or "Safe-side" is specified.

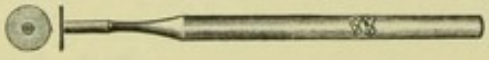
Thin.—Same size as the Regular. Charged all over.

These (Thin) Disks are made thin to permit their use in very narrow interspaces. Undue pressure or a sudden twist while in use jamming the edge in a crevice may buckle them or tear out the center. The two little washers supplied with each Disk will, if placed on either side of it when mounting on the mandrel, form a hub which will be a considerable protection, though it will not obviate the need of care in guiding the disk. Because of their thinness, this care must always be exercised.

Price, No. 1, Regular or Thin	$1.75
" " 2, " " "	2.25

Safe-side.—Charged on one side only, the other smooth or "safe," doing away with the need for a shield. Two sizes: No. 1, ¾-inch; No. 2, ⅞-inch.

Price No. 1, Safe-side	$1.25
" " 2, " "	1.50



Small Fissure.—Diameter $\frac{3}{16}$-inch. Charged all over. Permanently mounted, not sold unmounted.

Price ..... each $0.50

Fissure.—Will cut on both sides the same as the "Regular" Disks. They are made $\frac{5}{16}$-inch in diameter. The center holes are made sufficiently large to admit the screws of Mandrels Nos. 303, 303½ and 321. Also used on Mandrel No. 304 by properly centering the Disk before tightening the screw.

Price ..... each $0.50

CARBORUNDUM AND CORUNDUM WHEELS

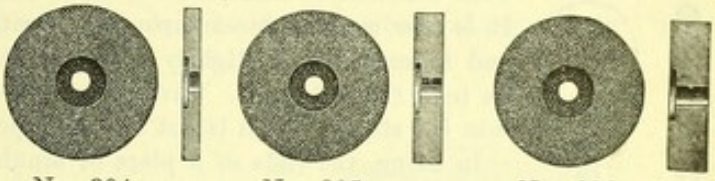
HALF-INCH SIZES

No. 301 $\frac{1}{16}$-Inch Thickness

No. 302 $\frac{1}{8}$-Inch Thickness

No. 303 $\frac{3}{16}$-Inch Thickness

FIVE-EIGHTHS-INCH SIZES

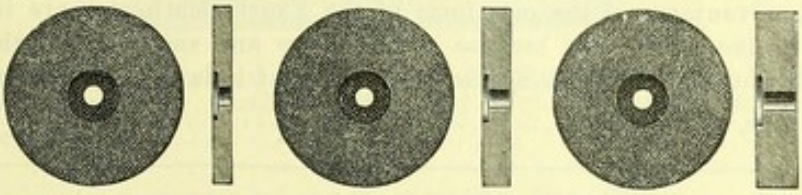


No. 304 $\frac{1}{16}$-Inch Thickness

No. 305 $\frac{1}{8}$-Inch Thickness

No. 306 $\frac{3}{16}$-Inch Thickness

THREE-QUARTERS-INCH SIZES

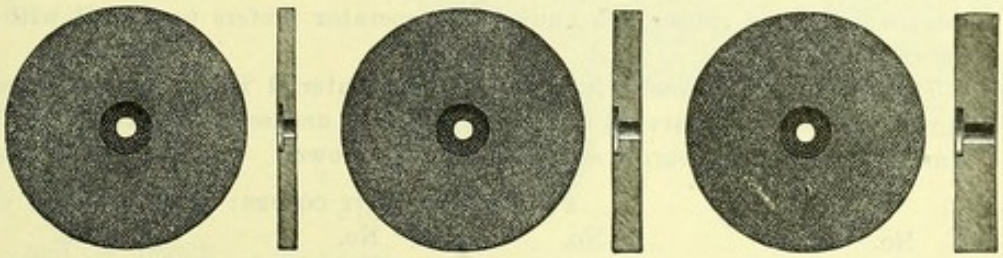


No. 307 $\frac{1}{16}$-Inch Thickness

No. 308 $\frac{1}{8}$-Inch Thickness

No. 309 $\frac{3}{16}$-Inch Thickness

ONE-INCH SIZES



No. 310 $\frac{1}{16}$-Inch Thickness

No. 311 $\frac{1}{8}$-Inch Thickness

No. 312 $\frac{3}{16}$-Inch Thickness

Our Corundum Wheels for the grinding operations done with the dental engine have been widely used by the dental profession almost from the introduction of that appliance. Carefully made, of selected corundum, they are reliable, efficient helps. In medium grit only.

The fierce "bite" of Carborundum adapts it peculiarly for certain classes of engine work, and Wheels made of it cut very fast. Because of the rapidity of its work, regularity of shape and texture is of the highest importance. The Wheels which we make excel in particular. They are properly molded, are dense and strong, free from soft spots, and the sizes are uniform in diameter and thickness.

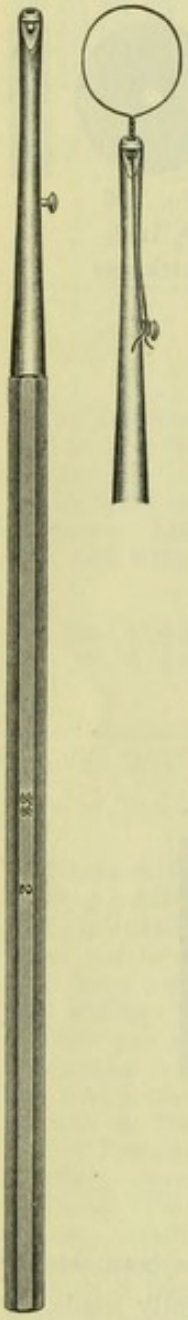
The sizes are identical in Carborundum and Corundum, and the centers of all are recessed for the screw head of the mandrel.

PRICES

Carborundum Wheels, any size or thickness ..... each $0.08; per doz. $0.90
Corundum " " " " " ..... " .05; " .50

EXACT DENTIMETER No. 2 (Improved Form)

Designed by DR. EDWARD C. KIRK



The improvements in the Exact Dentimeter No. 2 have to do with enhancing the e with which it is manipulated, and incidentally allow a considerable reduction in pr It is now made of steel throughout, with octagon handle an eighth of an inch throu and tapered shank slightly enlarged at the head, with a stud about three-quarters an inch from the end. Directly in the end a hole, about one-eighth inch deep is bo into the shank, which is cut out on opposite sides to expose the hole.

In using, the ends of a piece of binding wire four to five inches long are passed in the opening in the face of the head, out through the side perforations, and drawn form a loop large enough to pass readily over the tooth or root. The loop is th applied to the neck of the tooth, the wires tightened till the head of the Dentimeter against the neck, and then wound around the stud in opposite directions. Rotating th Dentimeter in one direction conforms the loop perfectly to the neck, giving when remove and cut the exact length of a piece of plate to make a collar for the root.

The advantages of the new form of the Exact Dentimeter are that it gives a bette view of the work, that because of the shape and smallness of the handle it is mor readily rotated in tightening the wire, and that it is easily sterilized.

Price, nickel-plated $0.35

HARVARD CEMENT

Harvard Cement is a superior filling material, adhering closely to the bottom and walls of the cavity, becoming very hard and being insoluble in the fluids of the mouth. The range of colors in which it is supplied makes it possible to match any tooth so that the fillings shall be inconspicuous.

Harvard Cement sets in from ten to fifteen minutes, during which time it should remain under the rubber dam, unless the operator prefers to coat it with sandarac or paraffin.

The qualities that make it a good filling material insure its usefulness in setting crowns and bands. Harvard Cement flows freely, and sets promptly, yet giving sufficient time to permit the accurate adaptation of the crown.

TWELVE DIFFERENT COLORS:

No.	No.	No.	No.
1. White	4. Light Yellow	7. Light Pearl Gray	10. Green Gray
2. Bluish White	5. Yellow	8. Pearl Gray	11. Bluish Gray
3. Yellowish White	6. Gold Yellow	9. Gray	12. Brown

PRICES

1¼-oz. Packages, one color..per pkg.	$2.25	Powder only .....per bot.	$0.63
Liquid only .....per bot.	1.13	1¼-oz. Packages, four colors.per pkg.	2.50
Powder " ..... "	1.13	Liquid only .....per bot.	.65
½-oz. Packages, one color...per pkg.	1.25	Powder " ..... "	.50
Liquid only .....per bot.	.63		

HARVARD QUICK-SETTING INLAY CEMENT

A specialized form of the regular Harvard Cement for luting purposes. It is very fine, gives the necessary strength with a very thin film, sets quickly, and adheres tenaciously. Much used for cementing inlays, crowns, bridges, etc.

In the same variety of colors as the regular form.

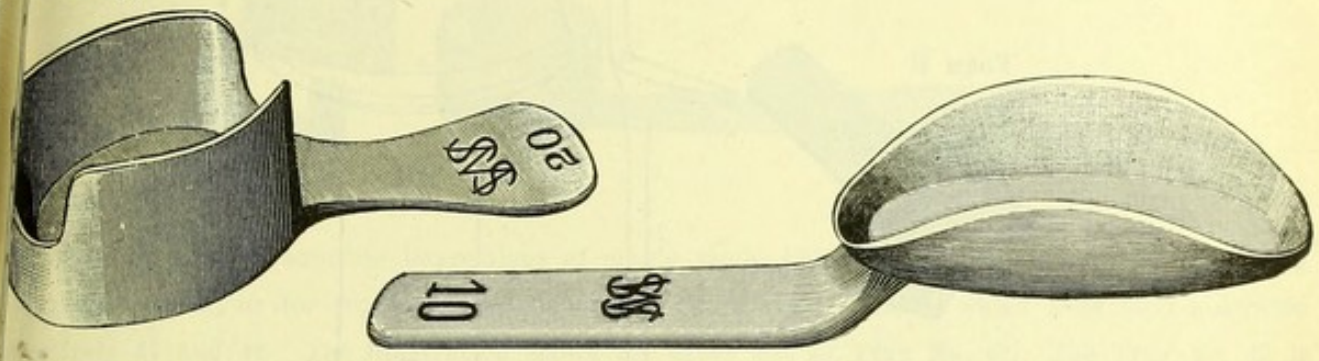
Single Color, ½-oz. Powder, Liquid, and Varnish	per box	$1.25
½-oz. Powder, any color	per bottle	.63
Twelve-color Box, ¼-oz. each Powder, 4 bottles of Liquid, and Vial of Varnish..per box		5.00
¼-oz. Powder, any color	per bottle	.30
Liquid	"	.63

IMPRESSION TRAYS

PARTIAL UPPER AND LOWER TRAYS

Our line of Impression Trays is unequaled in the completeness with which it covers the entire needs of the dentist. A few of those more especially adapted to the uses of crown- and bridge-workers are shown here.

The Catalog of Impression Trays contains a very full abstract of the methods of many expert users. Free on application.



Nos. 10 and 20 (the former suggested by Dr. L. M. Matthews, the latter by Dr. Geo. W. Melotte) are two useful trays, suitable for partial cases in any part of the upper or lower jaw.

Price (No. 10 or 20) ..... each $0.25

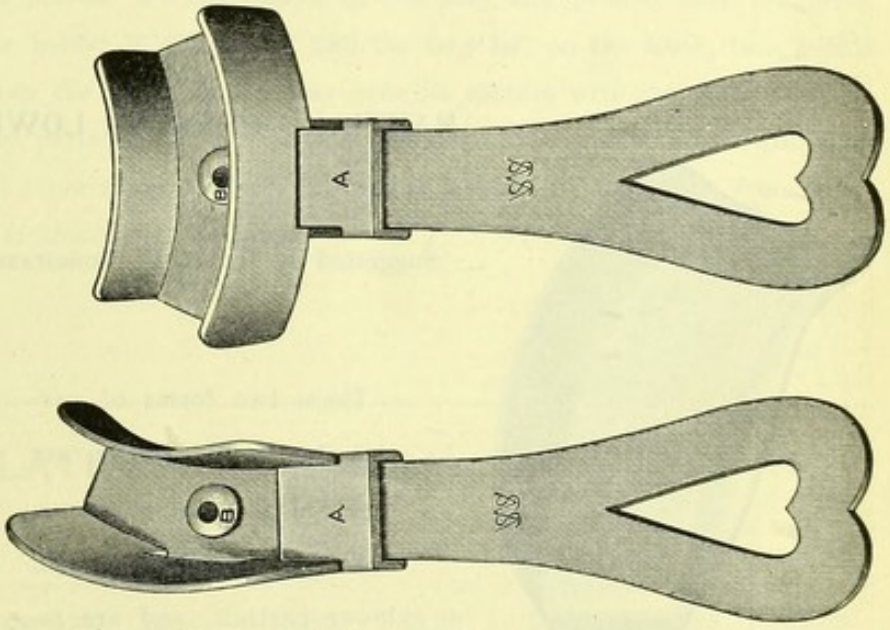
ADJUSTABLE PARTIAL TRAY No. 40

Pattern furnished by Dr. Justus Stolley

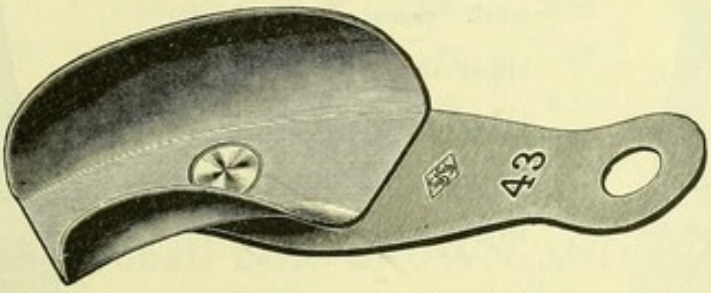
This device conveniently takes the place of three partial impression trays.

The Tray proper rotates on the pivot B, and is thus perfectly adapted for use in the front or either side of the mouth; and is firmly held in either position by the sliding guard A.

Price $0.60



BRIDGE TRAY No. 43

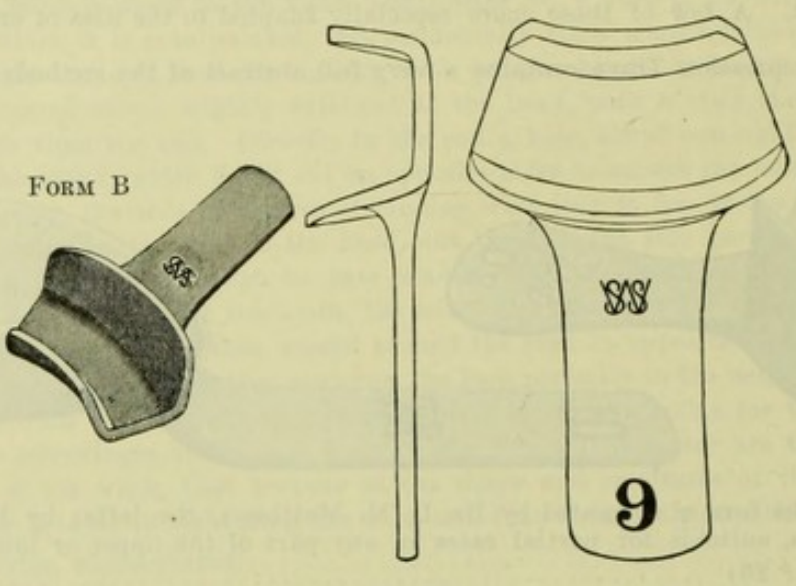


This Tray, for partial impressions, is so constructed that it has an independent swiveling motion, so that it can be adjusted to any angle, and can be applied to any portion of the mouth. It thus gives the functions of several trays in one appliance.

Price $0.20

IMPRESSION TRAYS—(Continued)

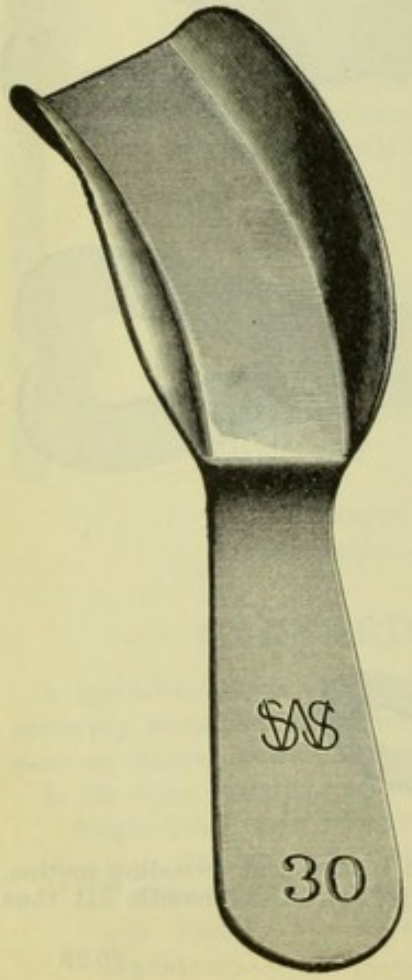
PARTIAL UPPER



Form B illustrates a Partial Upper Tray for one or two teeth. Useful in crown- and bridge-work

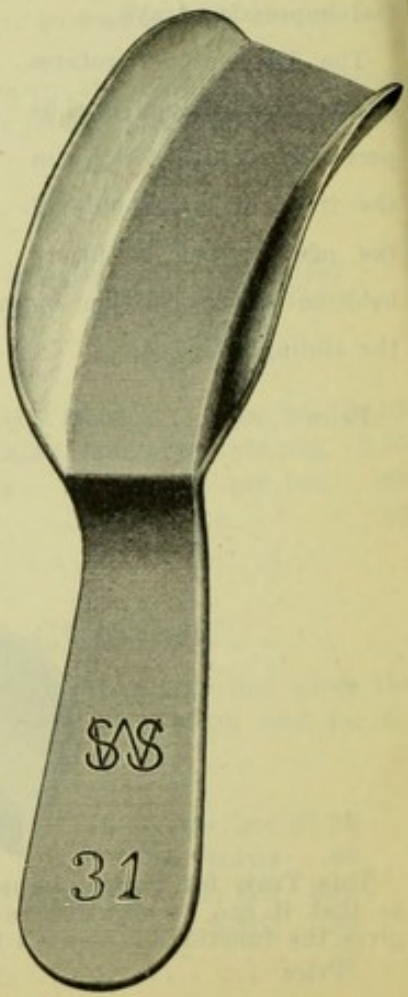
Price $0.20

PARTIAL UPPER OR LOWER



Suggested by DR. H. H. BURCHARD

These two forms of partial Impression Trays are designed for taking impressions of both upper and lower partials, and are especially adapted for bridge-work cases; No. 30 for either the upper left or the lower right, and No. 31 for the upper right or the lower left, as the case may be.



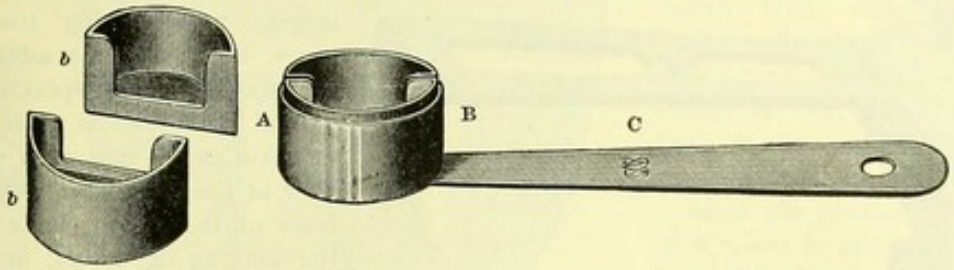
PRICES

Nos. 30, 31..each $0.25

IMPRESSION TRAYS—(Continued)

PIER CROWN Nos. 41 and 42

Devised by Dr. C. P. Wilson



Designed to produce accurate impressions of single teeth which are to serve as piers for dental ridges and plates, or for regulating attachments. There are two sizes, which have been numbered respectively 41 and 42. The illustration shows the exact size of Tray No. 41. The Tray No. 42 is one-sixteenth inch larger.

The device consists of a tray B, made in two parts, *b*, *b*, and a holder A, which telescopes over the tray, attached to a handle B. In use the two parts, *b*, *b*, are to be placed in the holder so that the dividing line of the tray may be mesio-distal when the handle is turned to a convenient angle for taking the impression; thick mixed plaster is then placed in the tray and pressed over the tooth. When the plaster has hardened, the holder is slipped off and the tray left on the tooth, then a thin knife or excavator is forced between the parts of the tray near its contact with the gum. This effects a lateral separation of the two parts of the tray, and a fracture of the plaster which will allow the parts to be readily rejoined and replaced in the holder, forming a complete impression from which a perfect plaster model, or several of them, may be made.

Price No. 41, small $0.40
" " 42, large ..... .40

PLATE FILES (Grobet)

					3 in.	3½ in.	4 in.	4½ in.	5 in.	6 in.
Half-round,	Bastard,	No.	0	Cut	per doz.	$2.90	$3.05	$3.20	$4.10	$4.35	$5.00
"	Smooth,	"	2	"	each	.29	.30	.32	.41	.43	.50
Round,	Bastard,	"	0	"	per doz.	2.05	2.25	2.50	3.25	3.35	3.70
"	Smooth,	"	2	"	each	.20	.22	.25	.32	.33	.37
Flat,	Bastard,	"	0	"	per doz.	2.80	3.00	3.15	4.15	4.35	4.80
"	Smooth,	"	2	"	each	.28	.30	.31	.41	.43	.48

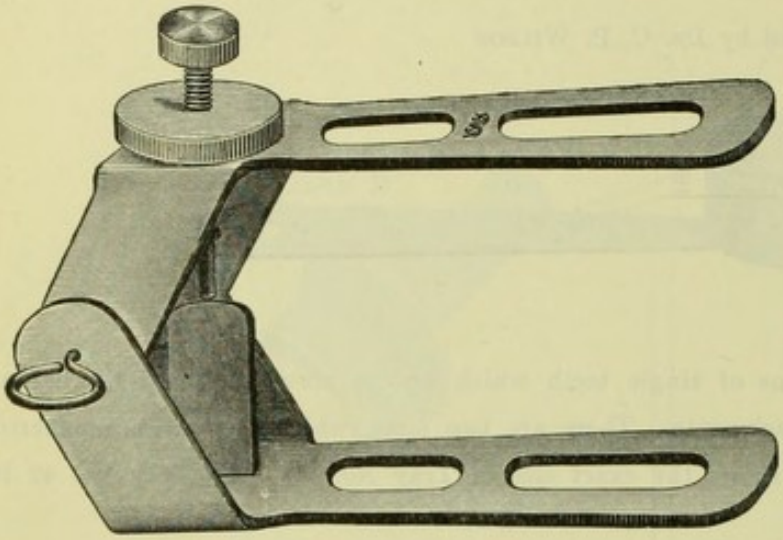
SPECIAL FILES (Grobet) FOR CROWN AND BRIDGE WORK

Half-round, 3-inch Smooth, No. 6 Cut ..... each $0.31; per doz. $3.15
Flat, 3 " " " 6 " ..... " .31; " 3.15
" 5 " " " 6 " ..... " .50; " 5.00

CROWN ARTICULATORS

No. 5

Suggested by DR. P. G. C. HUN



This Crown Articulator has en largely used during the last tw years, because of its advantages in adjustment and adaptation of smal partial dentures. It is especially us in these cases, inasmuch as it affor view of the palatal as well as the bu faces of the teeth. It is also useful the making of inlays, or in any sm work on the lines indicated.

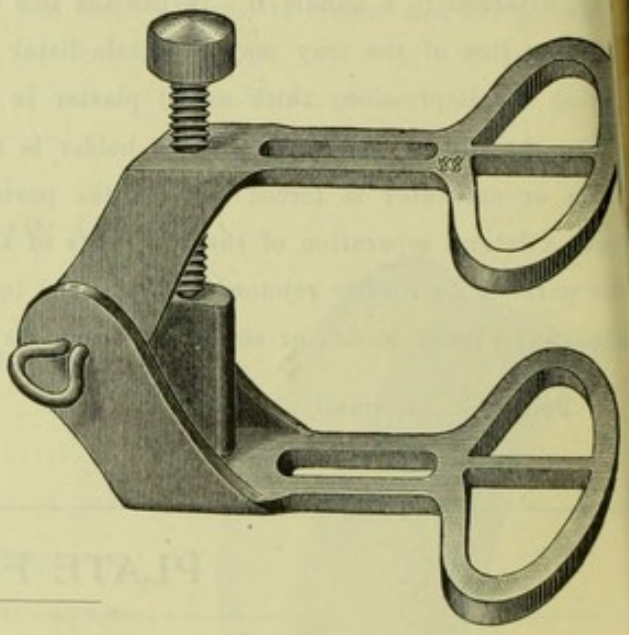
As now sold these Articulators made of wrought metal instead of ca producing a stiffer and better applian

Price .....each $0.40

No. 8

Crown Articulator No. 8 is a modification of Dr. P. G. C. Hunt's well-known pattern to adapt it more particularly for anterior bridge work. When the model is long enough to take in the natural anterior curve of the jaws, this modified form will accommodate it without having any projection at the ends. It is also well adapted for posterior work. The appliance is neat, and its shape makes it acceptable to the hand in manipulation. Nickel dipped.

Price $0.50



No. 9

Suggested by DR. P. G. C. HUNT; Modified by DR. JAS. F. GWINNER

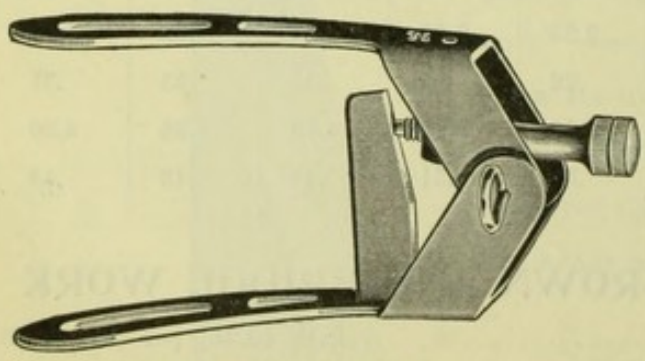


Illustration about ⅔ size

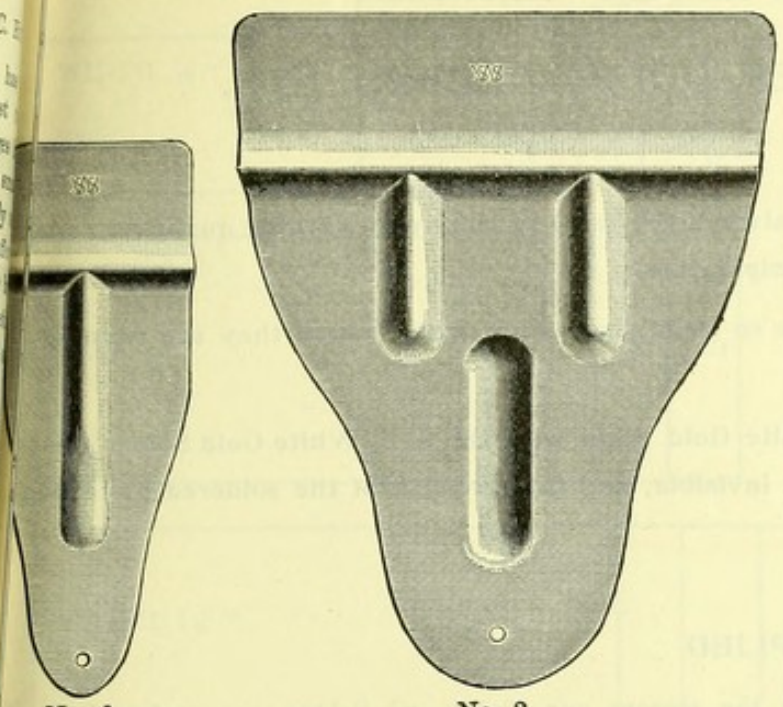
The Hunt Articulator for crown- and bridge-workers filled a long-felt want so well that it made a place for itself at once.

Articulator No. 9 has several improvements. The jaws are slightly curved instead of straight, so that it can be used for partial anterior cases as well as for posterior. The set screw is placed at the end instead of on top, so that it is out of the way in manipulating, and is not liable to be clogged with plaster when the model is run. Both lingual and buccal or labial surfaces of the model are exposed to view.

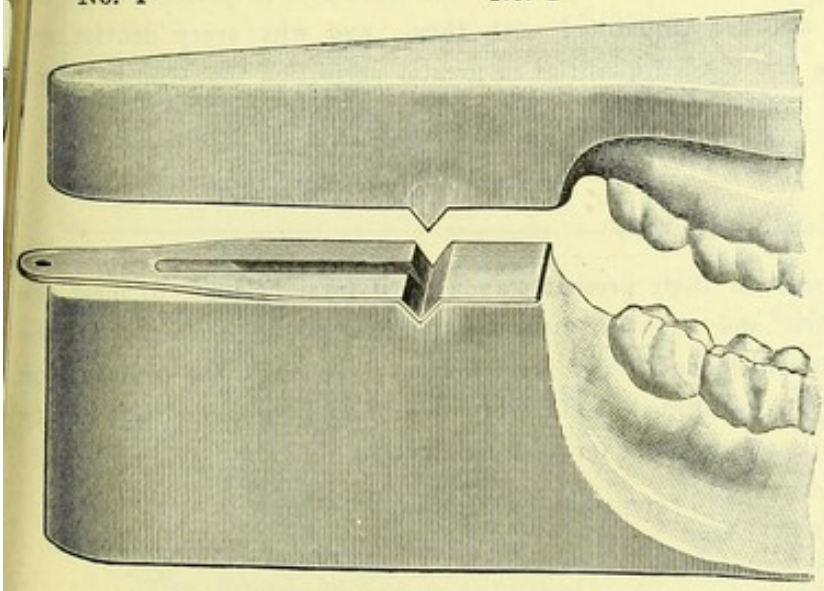
Articulator No. 9 will be found of almost universal application in partial articulations and will be especially useful to crown- and bridge-workers.

Price $0.50

ARTICULATING PLATES



No. 1 No. 2



Designed by DR. FRED A. PEESO

These "Articulating Plates" are of metal, thin, shaped between dies with corrugations to expedite the making of "dowels" or grooves and ridges in the opposing faces of the heel of an articulating model, by molding them in the plaster.

After the plaster for the first half of a model is poured in one side of a "squash" bite, instead of waiting till it sets thoroughly to carve dowels or grooves, an Articulating Plate is slightly imbedded in the surface while still plastic. In three or four minutes the Plate can be removed, the surface of the plaster coated with parting fluid, and the second half run. The corrugations made by the Plate in one-half in intaglio will be found in the other half in relief, so that the two cannot help fitting together.

The work is done quickly and cleanly. If several models are to be run the saving of time will be considerable.

If the model is run on a piece of plate glass it will always have nicely squared surfaces.

Made in two sizes, No. 1 for crown- and bridge-work and partial cases where the articulation of one side only is required; No. 2 for full dentures. Full directions for use accompany each plate.

Price, No. 1.....each $0.10
" " 2..... " .15

DIE AND COUNTER-DIE METALS

We sell the base metals used in making dies and counter dies, in half-pound ingots, each ingot stamped with the name of the metal, whether zinc, tin, lead, Crown Hub, or Babbitt metal, and, as a guarantee of quality, with the initials of the Company.

Our Babbitt metal for dies and Counter-die Metal are made from Dr. Haskell's formulas. All of our base metals are of high quality.

PRICES

Babbitt Metal (Haskell's formula)	per lb.	$0.60
Counter-die Metal " "	"	.25
Zinc	"	.15
Tin	"	.60
Lead	"	.12

GOLD PLATES, GOLD SOLDERS, ETC.

CHARACTERISTICS

The plates of any given karat are always the same in color and working qualities, and g the same results under the same manipulation.

The solders run like water, and are so clean that you can see where they are running a what they are doing all the time.

Working a given karat of S. S. White Gold Plate with the S. S. White Gold Solder for th plate, the fusion is perfect, the joint invisible, and the strength of the soldered piece hom geneous.

THE NEEDED QUALITIES SUPPLIED

These three sentences express clearly the reasons our Plates and Solders are preferred by th thousands of crown- and bridge-workers who are acquainted with them; and why every dentist no already using them should. They have the needed qualities in greater perfection than can be foun elsewhere.

THE STANDARD FOR TWENTY-SIX YEARS

Our Plates and Solders were introduced in their present standardized form in 1885, to meet the needs of crown- and bridge-workers. Then, and not till then, the dentists found certainty in the working of plates and solders. The traits which made their introduction an epoch in the construction of crowns and bridges are maintained by painstaking care in every step of their preparation. Purity of metals and exactness of manipulation is the formula for their production.

THE KARAT MARK

The karat mark on our Gold Plates truthfully indicates the fineness of the plate. The mark on our Gold Solder indicates the karat of the Plate with which it is intended to be used.

Gold Plates sold in any quantity, size, or shape desired.

Gold Solder sold in envelopes, in any quantity from 1 dwt. up.

QUANTITY RATES

We have established Quantity Rates on Gold and Platinum Plates, Wires and Solders which give a substantial advantage to the purchaser who buys one ounce or more at a time and an additional advantage to purchasers of five ounces or more at a time. These Quantity Rates are for SPOT CASH ONLY; see next page.

Either the 1-ounce or 5-ounce quantity can be made up of assorted lots from any of the items noted, being charged at its respective rate.

THE S. S. WHITE GOLD PLATES, SOLDERS, ETC.

Standardized High-grade Unvarying Quality

WIDTH 5/8″				
GAGE	28	29	30	31

WIDTH 1″				
GAGE	28	29	30	31

WIDTH 1¼″				
GAGE	28	29	30	31

As a possible help in ordering, we show here approximate lengths of 22-K Gold Plate in widths of ⅝, 1, and 1¼ inches for gages 28, 29, 30, 31, weighing respectively 3, 5, and 10 dwts.

	Less than 1 oz.	1-oz. Lots	5-oz. Lots
Gold Plate, 18-K	$0.87 dwt.	$0.82 dwt.	$0.82 dwt.
" " 20-K	.97 "	.92 "	.91 "
" " Coin	1.05 "	1.00 "	.99 "
" " 22-K Light (non-oxidizable)	1.05 "	1.00 "	.99 "
" " 22-K Dark	1.05 "	1.00 "	.99 "
" " 24-K	1.13 "	1.08 "	1.07 "
" " Clasp } " " Crown Metal (Gold and Platinum)	Prices subject to Platinum fluctuations.		
" Shells, 22-K	$1.07 dwt.	$1.02 dwt.	$1.01 dwt.
" Disks, 22-K	1.05 "	1.00 "	.99 "
" Wire, Round, 18-K	.93 "	.88 "	.88 "
" " " 20-K	1.00 "	.95 "	.95 "
" " Half Rd., 18-K	1.00 "	.95 "	.95 "
" " " " 20-K	1.06 "	1.01 "	1.00 "
" " Clasp, Rd., and Half Rd.	Prices subject to Platinum fluctuations.		
" " Ligature, 18-K	$1.25 dwt.	$1.20 dwt.	$1.18 dwt.
" Solder for 14-K Gold Plate	.65 "	.60 "	.58 "
" " " 16-K " "	.75 "	.70 "	.68 "
" " " 18-K " "	.85 "	.80 "	.78 "
" " " 20-K " "	.95 "	.90 "	.87 "
" " " Coin " "	.93 "	.88 "	.87 "
" " " 22-K " "	1.00 "	.95 "	.92 "
" Ingots 24-K (1½ and 2 dwts.)	1.13 "	1.08 "	1.07 "

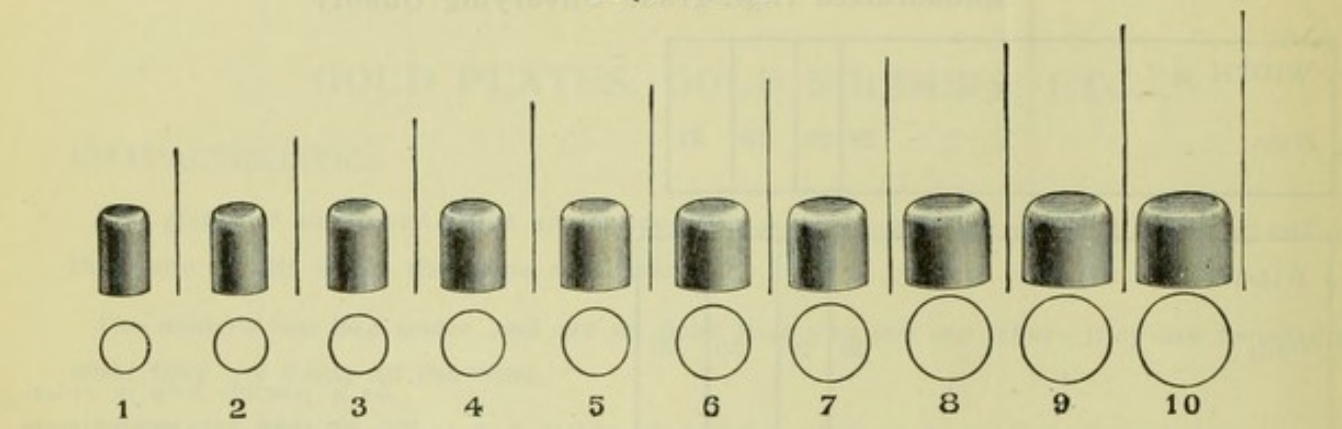
All of these prices are subject to change without notice.

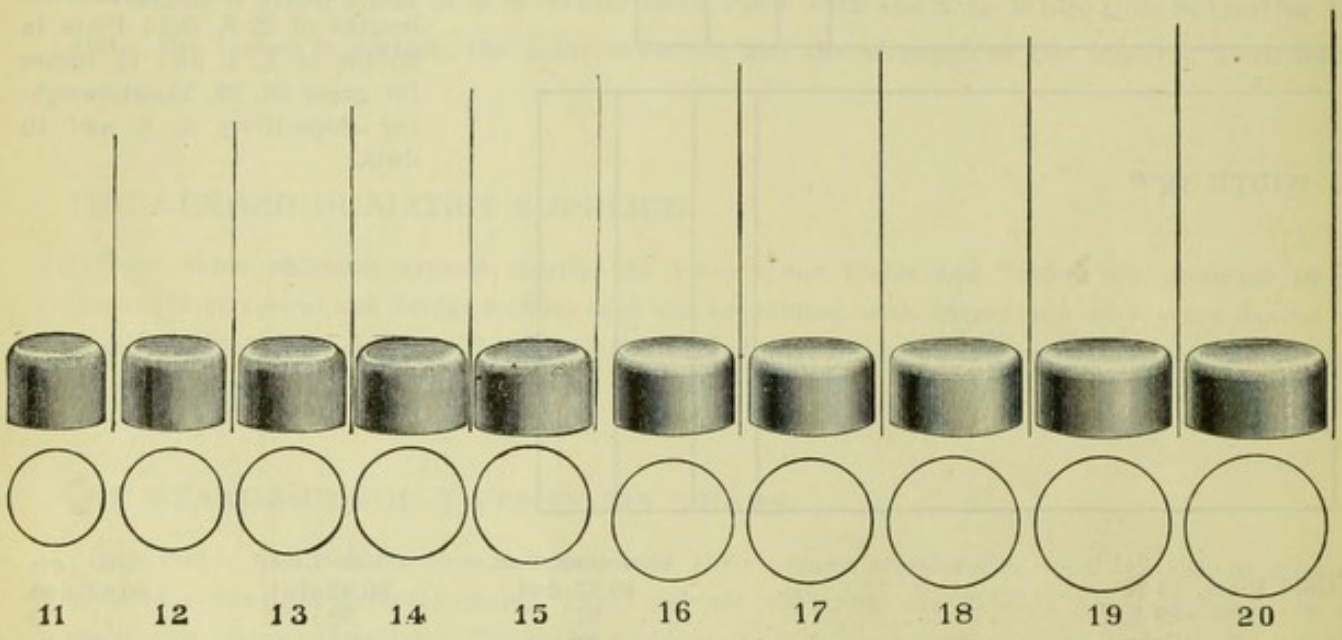
The quantity rates here are exceptionally low, to favor the dentist, and are always available at our houses.

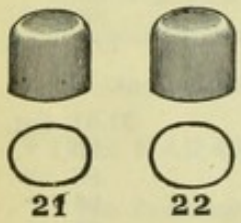
The 1-ounce and 5-ounce rates are for SPOT CASH ONLY, and they do not apply to Plates cut to pattern.

Either the 1-ounce or 5-ounce quantity can be made up of assorted lots from any of the items, noted, each being charged at its respective rate.

SEAMLESS GOLD SHELLS, 22 KARAT, FOR MAKING CROWNS







These Gold Shells are ready to be swaged and contoured into perfect Crowns.

Nos. 1 to 20 are round, ranging in regular gradations from the smallest to the largest size needed, each succeeding number having a diameter .02 of an inch greater than the size next smaller.

The inside circumference of each shell is accurately shown by the line to its right.

Nos. 21 and 22 are elliptical in form corresponding in size with Nos. 5 and 6.

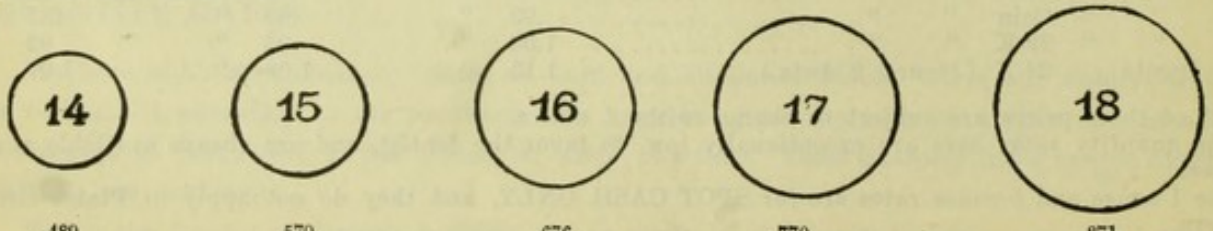
Made seamless of 22-karat Gold Plate, Nos. 1 to 17 inclusive, in three lengths, ¼ inch, ⅜ inch, ½ inch, Nos. 18, 19, 20, 21, and 22 in two lengths, ¼ and ⅜ inch.

The crowns are of No. 29 gage and the side walls of No. 30 gage.

22-KARAT GOLD DISKS IN GAGE 30

These disks are carefully and exactly made. Gages and diameters are exact, and the Plate has nearly the softness of pure Gold, with the necessary strength.

Numbers and diameters:



.489 .579 .676 .770 .871

For Prices, see Page 17

PLATE SHEARS

S. S. WHITE FULL CUT No. 1

It is something like two years ago that we entered upon the investigation of Plate Shears, exactly as we had entered upon the investigation of Engine Excavators nearly a third of a century before. We tested thoroughly all the different makes with which we were familiar, but found no perfect shears among them. Some cut well near the heel. others at the point, still others in the middle. Not one would start cutting with the jaws wide open,—at the heel,—and continue to shear straight through to the point. The only way to make most of them cut was to find that part of the blades which would cut the best and use this part with rapid, short strokes, with the plate pushed hard into the shears.

The difficulty was sought and found, but how to remedy it was not revealed until after many models were made and much testing done. It meant a remodelling of forms, a refining and maintaining of curves. Through this we have worked out a form of Shears which will make a clean cut from heel to point, every part of the blades cutting equally well. Snipping with the points can be easily done. Very few shears will do this.

But making blades which would actually shear is not the only improvement we have worked out. The handles also have been re-formed on practical lines. Do you observe how they stand apart, how they have bosses on the finger-hold to keep them apart? That formation gives you a better grip, lets you apply greater power on the cutting blades with less exertion of strength.

Try it for yourself. Your most effective grip for transmitting power is not when thumb and fingers are extended nor when they are tightly clenched, but when they are curved like the talons of an eagle seizing its prey. The handles in the Shears illustrated apply this principle. Their widest "open" is about where your grip becomes effective. As they are brought toward each other its power increases, and they come to a stop—the blades closed—while the increase of power is still going on. Thus you get the greatest power as the cut nears the points of the blades, just as it ought to be, and there is no tendency of the blades at any point to push the plate away from them. They bite into it.

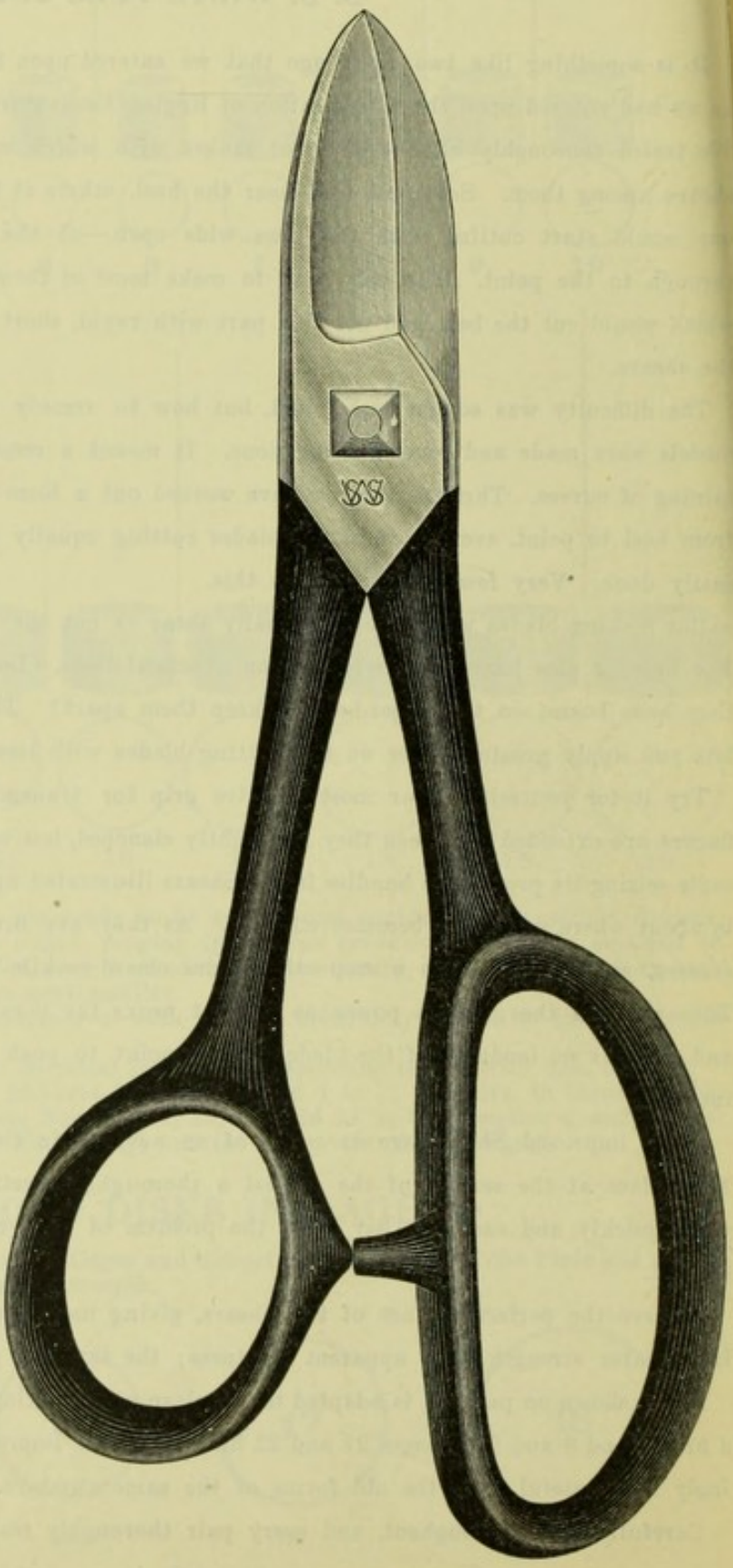
These improved Shears are as much of an advance in their way as were our "Revelation" Burs. They place at the service of the dentist a thoroughly effective, practical tool, one which will do its work quickly and easily. They solve the problem of plate-cutting, they lift shears making out of the rut.

Observe the perfect balance of the Shears, giving maximum power; the distribution of metal, giving greater strength with apparent lightness; the tapering points with ample strength.

No. 1, shown on page 20, is adapted to cut clasp plate, taking the place of our old Nos. 1 and 2. Nos. 4 and 5, and 8 and 9 on pages 21 and 22 have the same improvements and will be found correspondingly more useful than the old forms of the same numbers.

Carefully made throughout, and every pair thoroughly tested before being put into stock.

Plate Shears, S. S. White "Full=cut," No.



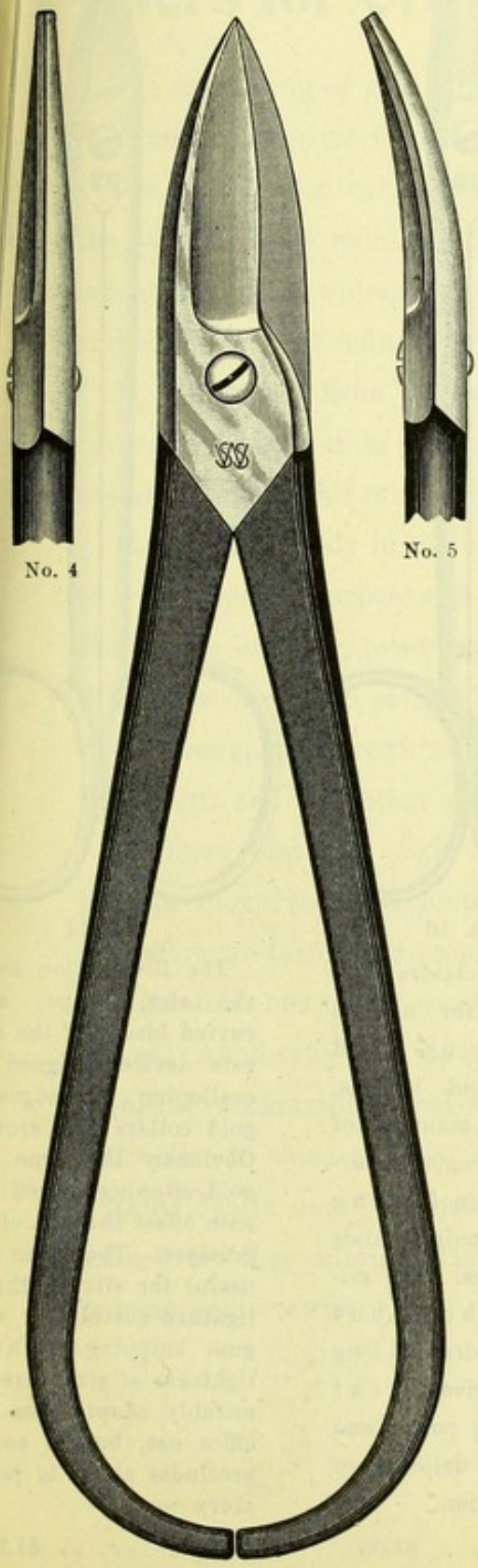
Every dentist who uses Gold Plate is interested in what is said, on the preceding page, of these shears. It concerns the means for cutting plate, shows the faults of former devices, and tells how they have been eliminated through an exhaustive study of the entire problem.

We used to think we made very fine Plate Shears; and so we did, according to the standards then known—better Shears than anybody else did, because we paid that special attention to materials and workmanship which is the basis of the superiority of our products. But that the former standards were wrong, we have now demonstrated convincingly.

Price, "Full-cut" Plate Shears No. 1 ..... $1.25

Plate Shears for Crown=and Bridge=Workers

FULL-CUT PLATE SHEARS Nos. 4 and 5



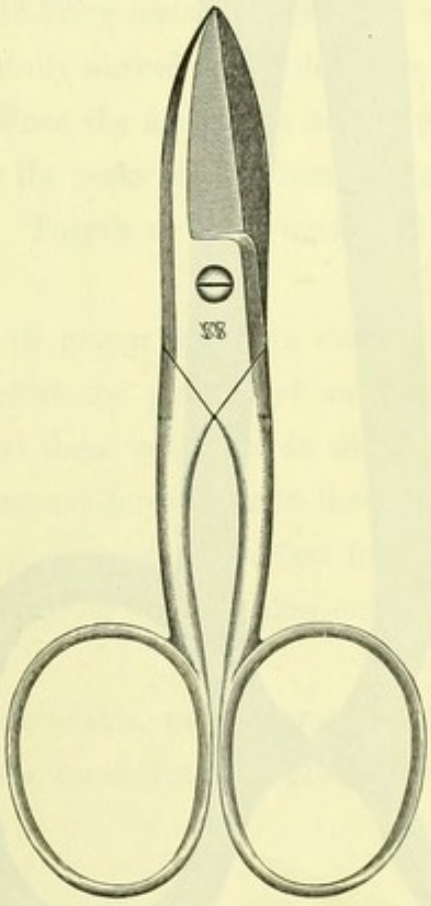
No. 4 No. 5

Plate shears Nos. 4 and 5, shown on this page, and 8 and 9 shown on page 22, are made on the same lines as No. 1 shown on page 20. They are "Full Cut" that is they easily cut plates such as are used by dentists with any part of the blade from the heel to the point.

No. 4 is straight, No. 5 curved.

Price, No. 4 ..... $1.00
" " 5 ..... 1.15

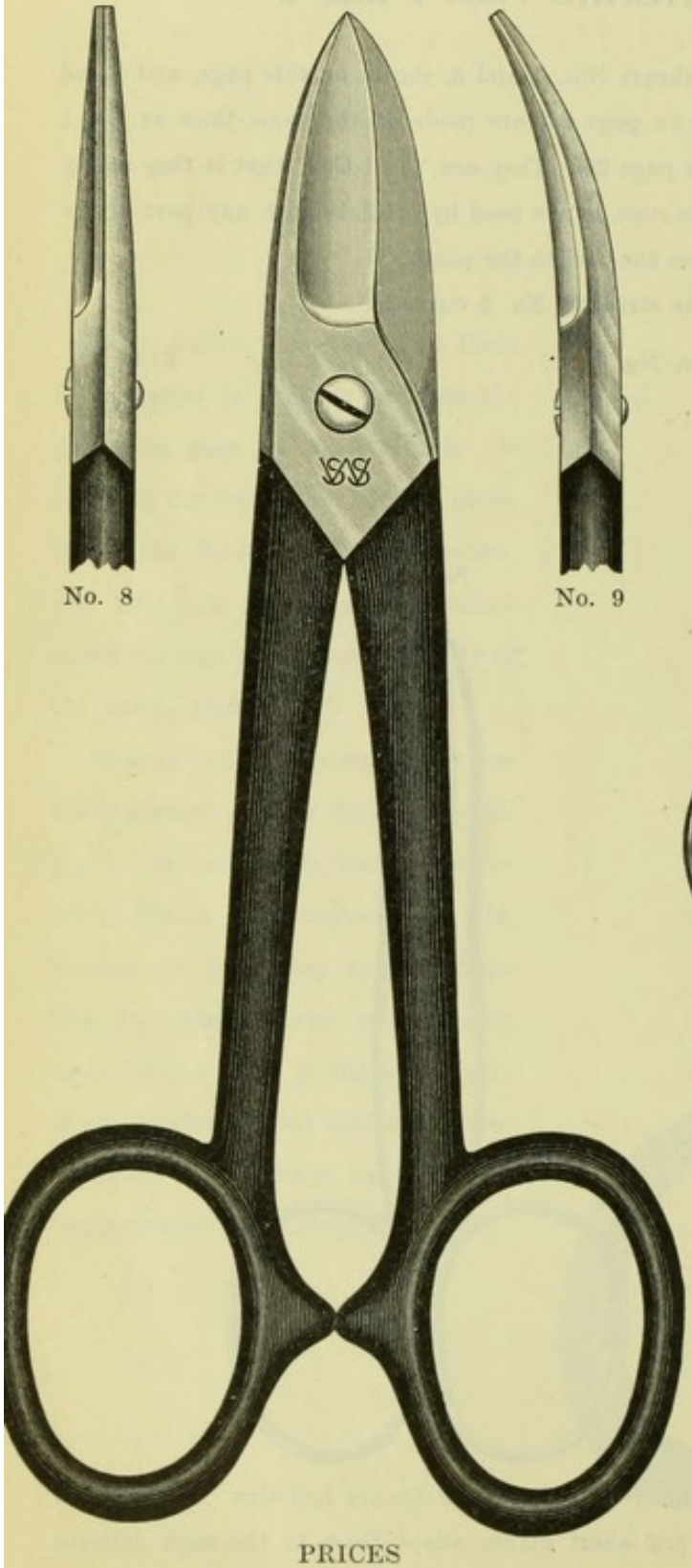
No. 3



The illustration shows the Shears full size. The scissors handles and short blades adapt them to the most delicate work in trimming bands and crowns.

Price $1.00

Full-cut Plate Shears Nos. 8 and 9



No. 8 No. 9

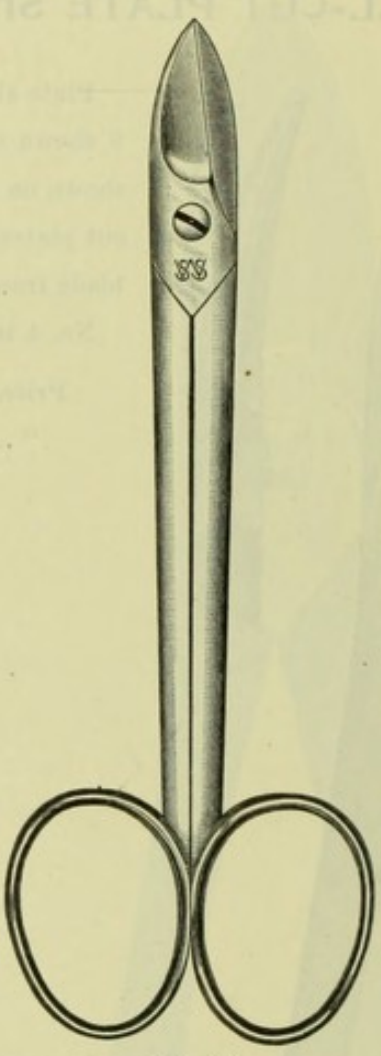
PRICES

No. 8, Straight $1.25

" 9, Curved 1.40

Crown Scissors

Pattern by Dr. J. G. Lane



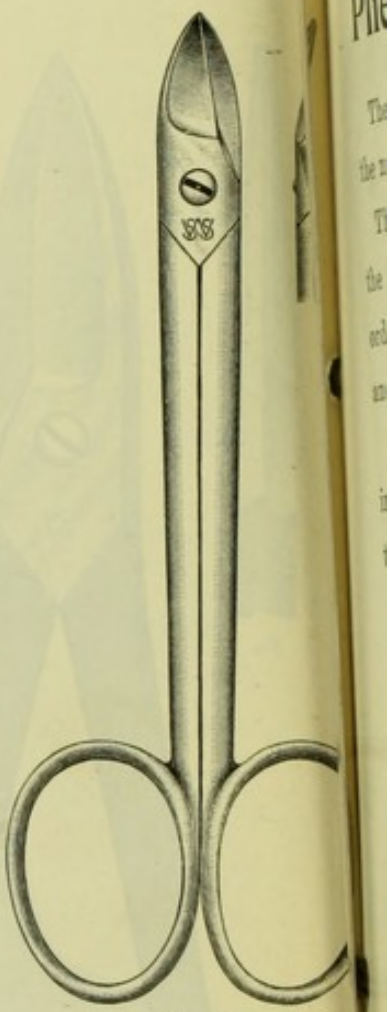
No. 10

These Scissors were designed for use in making up gold crowns and bridges, for all manner of plate cutting, and particularly in fitting and festooning bands and collars. The relatively short but stocky blades and long handles give great cutting power and ease and delicacy of manipulation.

Price $1.00

Collar and Crown Scisso

Suggested by Dr. H. Beebee



No. 11

The illustration shows the size, shape, and curved blades of the delicate device designed for scalloping the edges of gold collars and crowns. Obviously the time and gold clippings saved will soon offset the cost of the Scissors. These are also useful for silk or thread ligature cutting, or even gum snipping. Their lightness of structure admirably adapts them for office use, but of course precludes abuse in laboratory work.

Price $1.25

Pliers for Crown- and Bridge-Workers

The contouring of gold crowns is a task presenting many difficulties; else why the numerous devices for its accomplishment?

The line of Contouring Pliers Nos. 112 to 138 in pages following illustrate the point. They represent for the most part forms which have survived the ordeal of years of widespread use; others are later devices suggested by experience and showing great refinement of design.

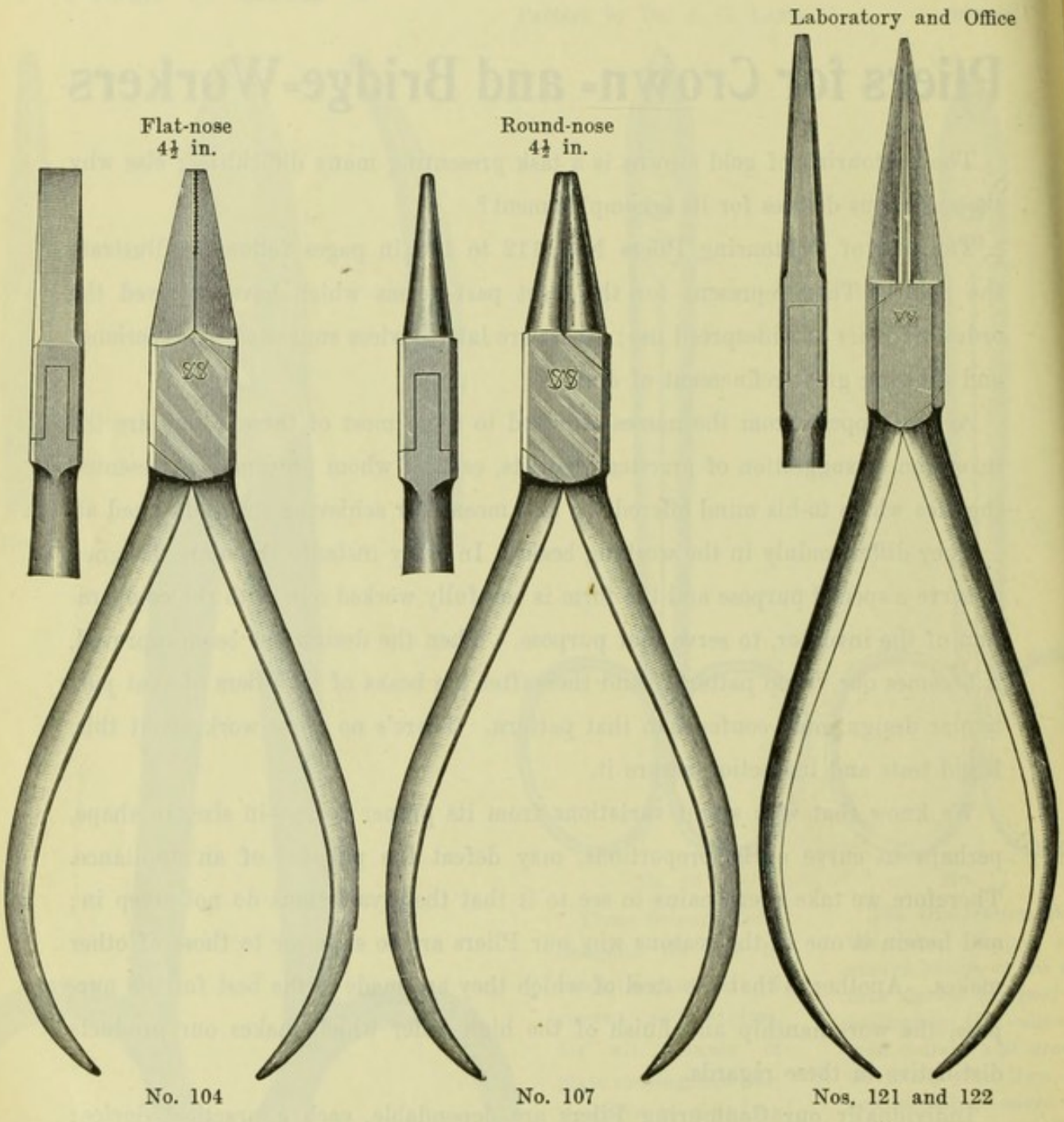
As will appear from the names attached to them most of these Pliers are the invention or suggestion of practical dentists, each of whom presumably presented the idea which to his mind offered the best means for achieving the end aimed at.

They differ mainly in the working beaks. In every instance these are designed to serve a special purpose and the form is carefully worked out, with the co-operation of the inventor, to serve that purpose. When the design has been approved, it becomes our "shop pattern," and thereafter the beaks of all Pliers of that particular design must conform to that pattern. There's no guess-work about this. Rigid tests and inspection assure it.

We know that very slight variations from its proper form—in size, in shape, perhaps in curve or in proportions, may defeat the purpose of an appliance. Therefore we take every pains to see to it that these variations do not creep in; and herein is one of the reasons why our Pliers are so superior to those of other makes. Another is that the steel of which they are made is the best for the purpose, the workmanship and finish of the high order which makes our products distinctive in these regards.

Individually our Contouring Pliers are dependable, each a practical device; collectively they afford a wide choice of means for solving the problem of contouring gold crowns.

Flat-nose and Round-nose Pliers



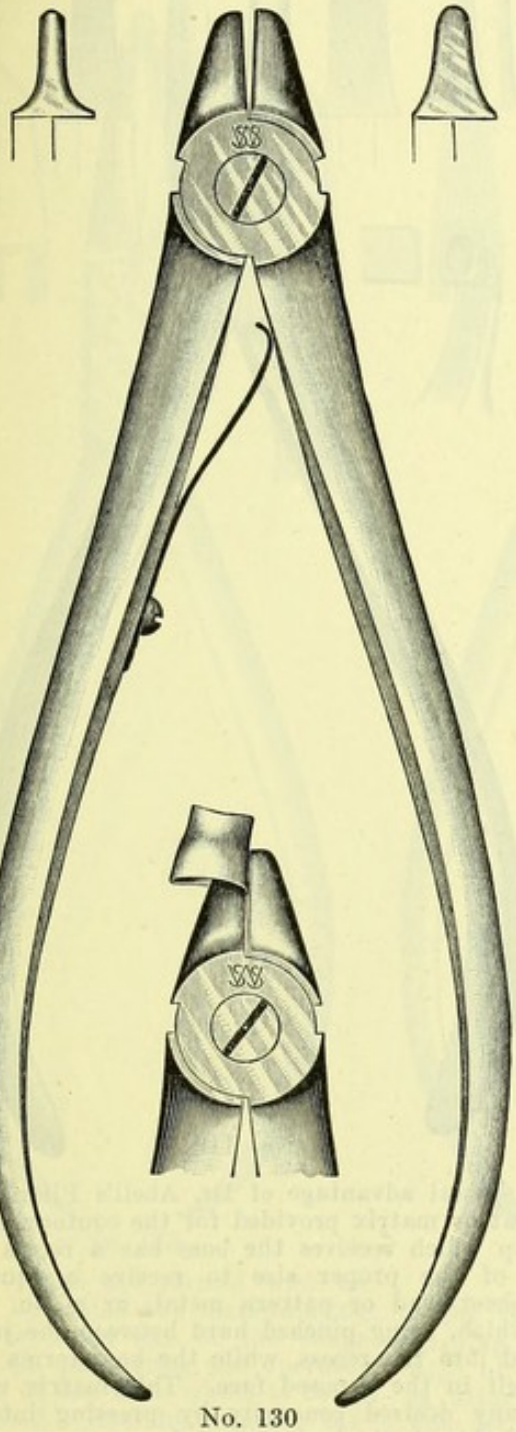
The line of Laboratory Pliers made in our factories is of the finest steel, beaks and body finely polished and bright nickeled. The handles are shaped like those of our regular line of crown- and bridge-workers' pliers, draw filed, and finished in unpolished nickel. The finish of the handles gives a perfect grip and affords a neat appearance. No. 121 has serrated beaks, No. 122 smooth beaks.

PRICES

Flat-nose Pliers No. 104, 4½ inch	$0.90
Round-nose Pliers No. 107, 4½ inch	.90
Laboratory and Office Pliers, Nos. 121 and 122 ..... each	1.50

Stretching and Contouring Pliers

Designed by Dr. Fred A. Peeso

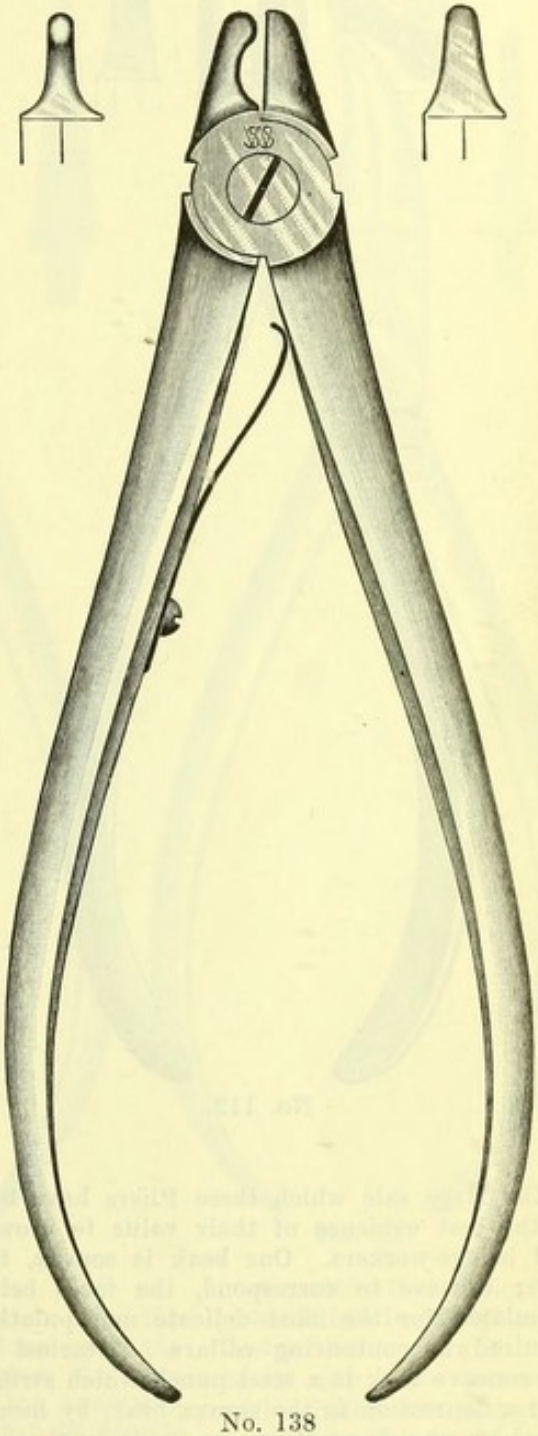


No. 130

The comparatively great length of the handles of these Pliers enables you to put all the necessary leverage upon the short, strong beaks to stretch the band. One beak has a rounded face, the other is flat and much wider to permit the band to be pinched in any direction. They can be used to shape the band to the tooth, to contour gold crowns, to enlarge the entire circumference of a band (stretch it) if found too small or to flare it to make a full contour. Used with the round-faced beak inside.

Price $2.50

Devised by Dr. C. W. Benson



No. 138

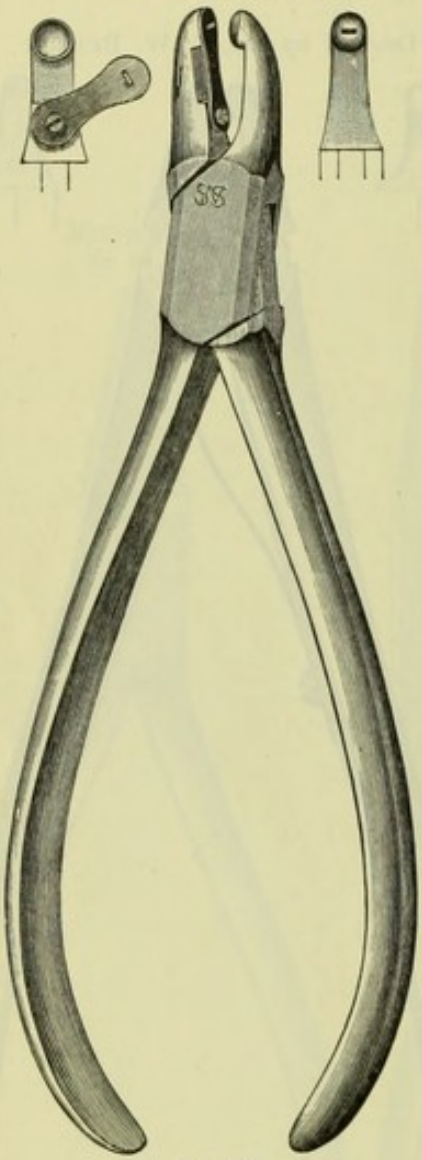
This modification of the Peeso Pliers possesses the same enormous leverage and short, strong beaks, differing from them only in that the working beak is in the form of a ball which makes a rounded indentation in the metal. By means of this a band or crown can be nicely and quickly contoured not by bending, as it is with most contouring pliers, but by actually stretching the metal, as with the Peeso.

A little practice will enable you to do an astonishing amount of satisfactory work quickly.

Price $2.60

Contouring Pliers

S. S. White, with Punch



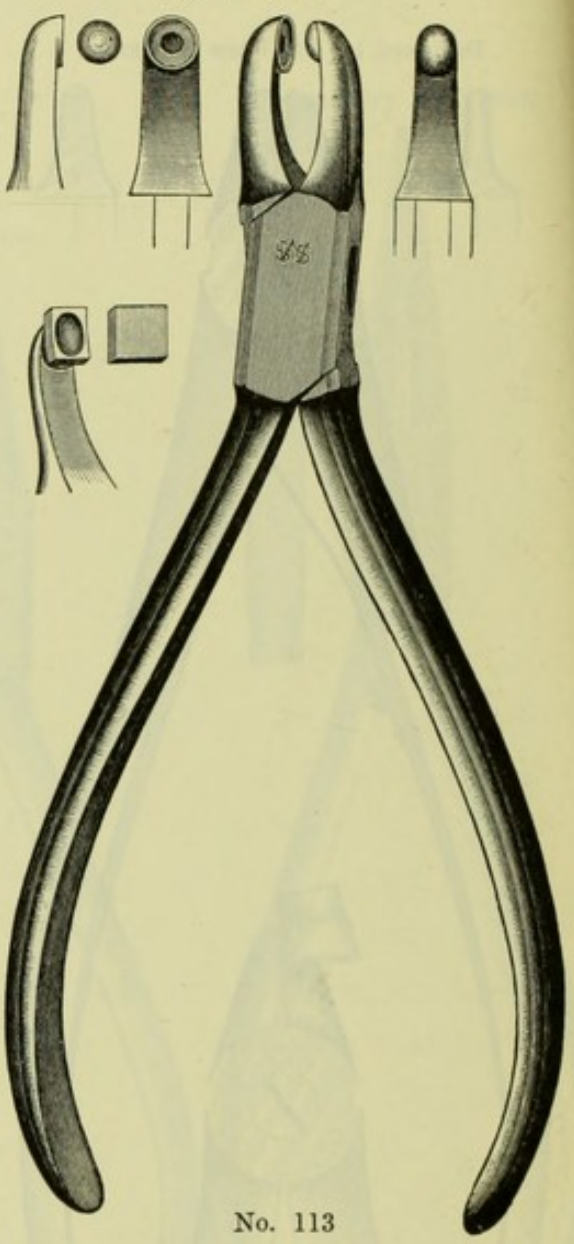
No. 112

The large sale which these Pliers have had is the best evidence of their value to crown- and bridge-workers. One beak is convex, the other concave to correspond, the faces being calculated for the most delicate manipulation required in contouring collars. Attached to the concave beak is a steel punch which strikes into a depression in the convex beak, by means of which guards or stops are made in the collars to prevent their being forced too far under the gum. The depression being slightly larger than the punch, the metal is not cut through, but merely raised on the side opposite to the punch. When the Pliers are in use for contouring, the punch attachment is swung to one side.

Polished and nickel plated all over, except the punch attachment, which is blued.

Price $2.00

Dr. Abell's



No. 113

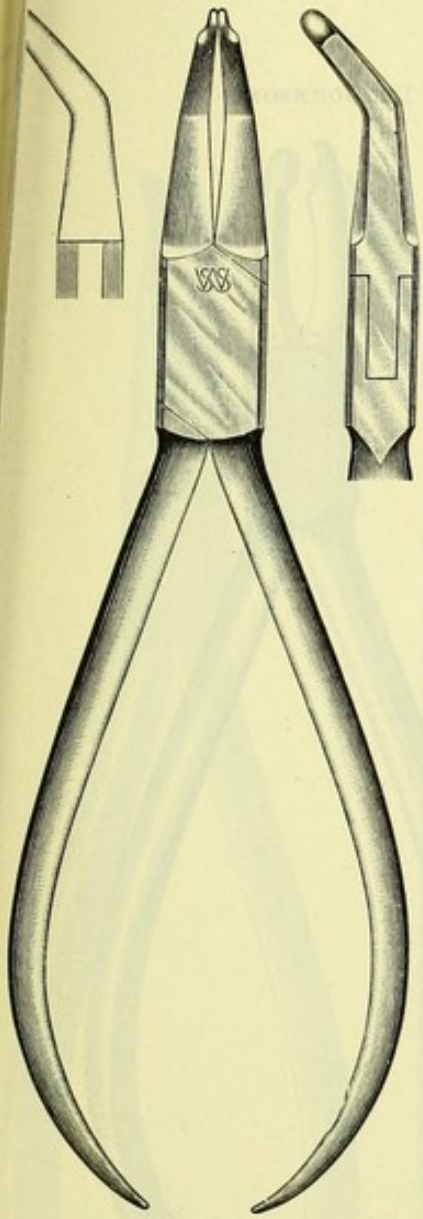
The special advantage of Dr. Abell's Pliers is the lead seat or matrix provided for the contouring boss. The cup which receives the boss has a recess in its center of the proper size to receive a square of thick sheet lead or pattern metal, or a No. 5 lead shot, which, being pinched hard between the jaws, is crowded into the recess, while the boss forms a seat for itself in the exposed face. This matrix may be given any desired concavity by pressing into it a piece of thin or thick sheet metal.

The forms of the jaws permit the operator to contour a crown very close to the edge without stretching it, or to contour a shell close to and continuous with the stamped top-piece of an Evans Crown, for instance, or to contract a shell without cutting it and without buckling. The inventor has frequently contracted crowns as heavy as No. 26 standard gage. The surface of the crown or collar is unmarred. The shot is easily replaced when worn out. A package of shot accompanies each pair of Pliers. Finely finished.

Price $2.00

Contouring Pliers

Designed by Dr. J. H. Prothero

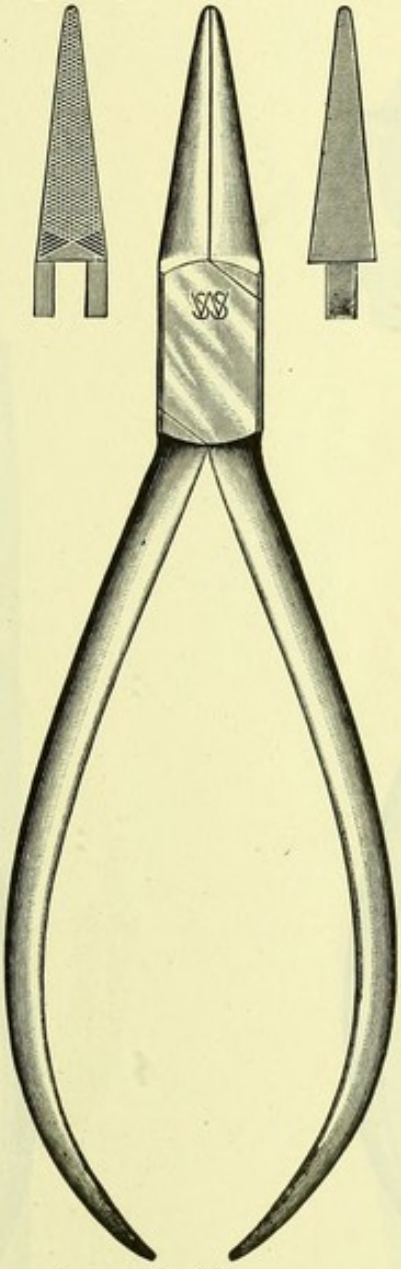


No. 135

The beaks are formed with an angle, by which the manipulating hand is taken out of the range of vision, permitting the operator a view of the work which is being contoured. Rounded contact surfaces permit of the convex contouring of crown bands without marring the axial surface of the band material. Still another advantage is the shaping of the tips of the beaks so that by placing them inside of the band opposite the points where approximal contact is to be made, and opening the handles, the contact desired is easily secured.

Price $1.60

Designed by Dr. Hart J. Goslee

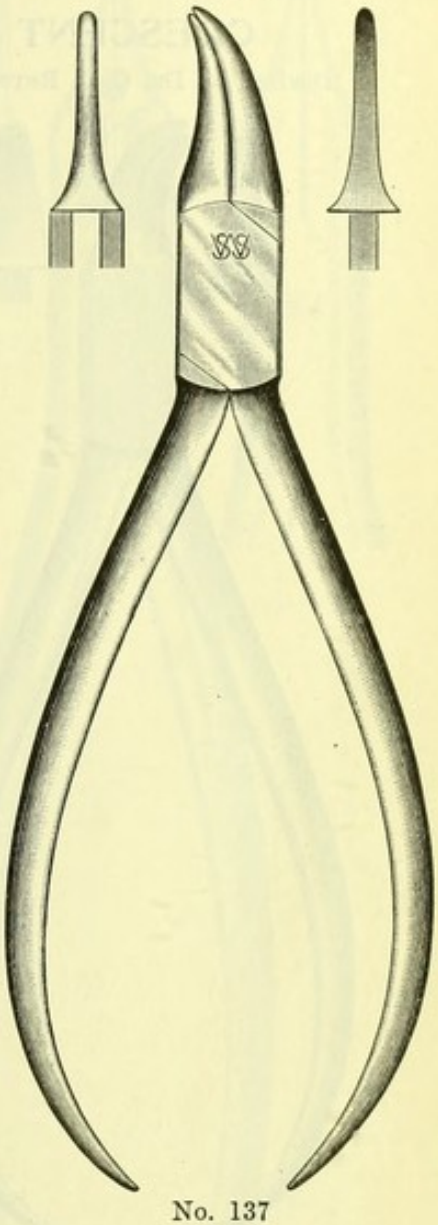


No. 136

Dr. Goslee says that, "as the shaping should be done upon the edge of the band before the cusp is attached, all of the necessary and artistic results can be accomplished with pliers the beaks of which are straight, tapering, and come closely together." The Pliers here shown, he says "will meet the general requirements when properly used. The rounded edges and one smooth beak prevent defacing the gold, while the flat surface and one serrated beak, and the tapering form for stretching, add to their general usefulness."

Price $1.60

Suggested by Dr. J. D. Gordon



No. 137

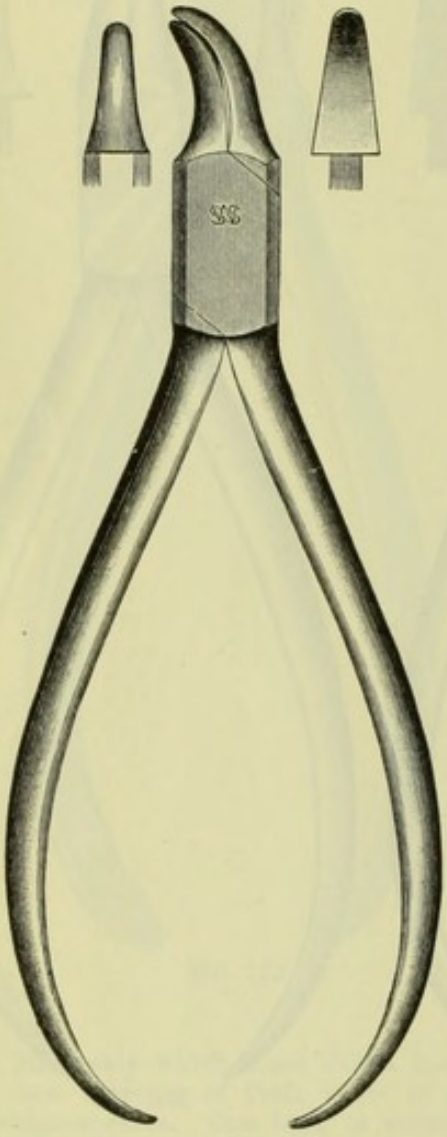
A modification of the Reynolds Pliers is offered in the device here shown. The beaks are made narrower, with slightly less curvature, a conformation found useful in forming convex or concave surfaces in all sizes of collars. Its advantages are well demonstrated in forming the approximo-cervical portions of bicuspid and molar bands to obtain the proper clearance between the teeth at that point.

Price $1.60

Contouring Pliers

CRESCENT

Devised by DR. C. J. REYNOLDS

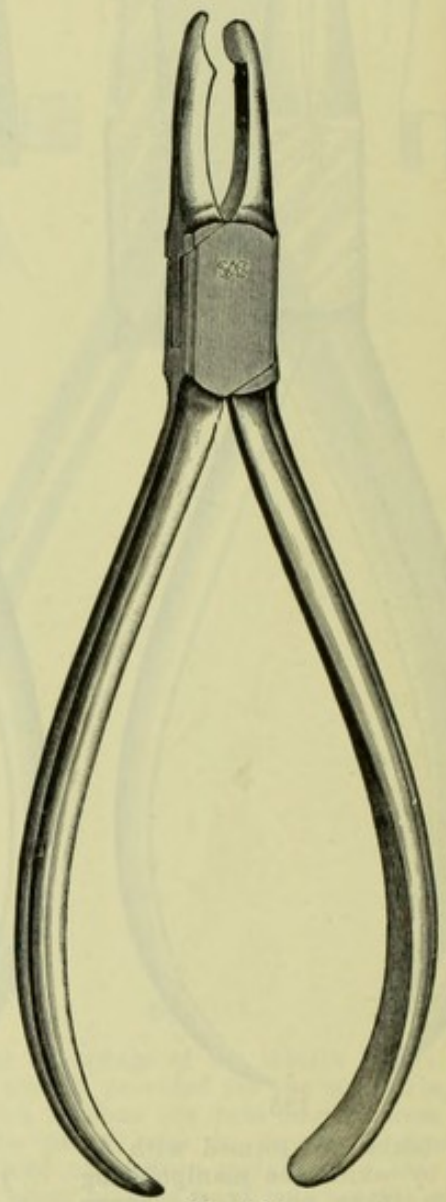


No. 115

This latest improved form of Dr. Reynolds' Contouring Pliers has been proved to be an exceptionally convenient and efficient tool for imparting any desired degree of crown contour, and also for constricting and conforming the cervical part of the crown or band. Simply pinching the band border between the beaks, and at the same time bending the border slightly inward, repeated progressively to the right or left, will reduce the size of the band as desired.

Price $1.75

DR. JOHNSON'S

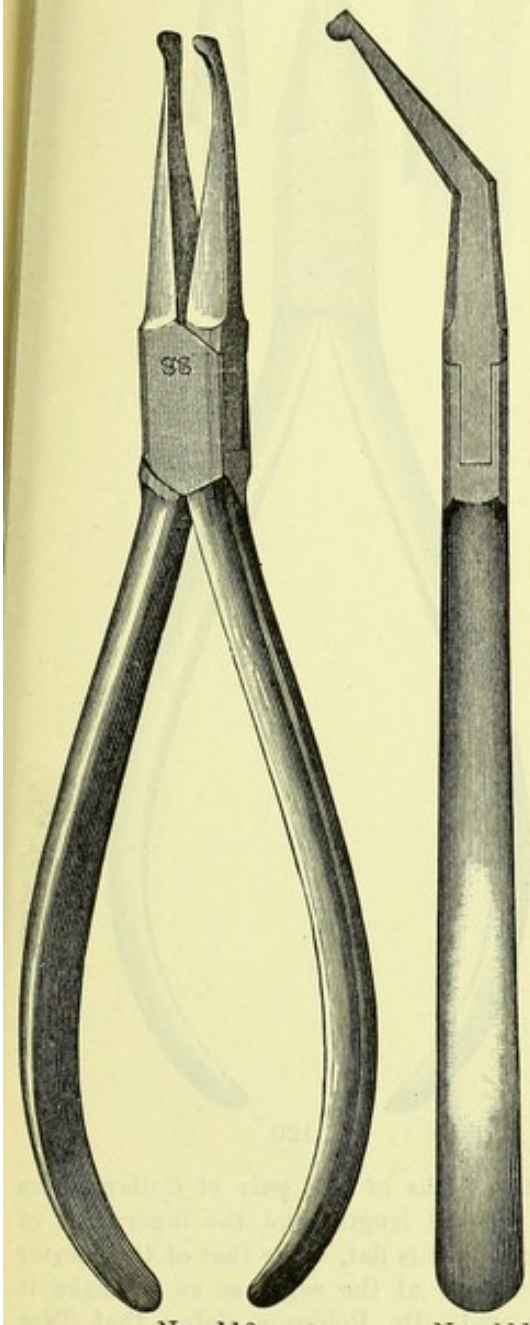


No. 114

One of the beaks of these Pliers is scalloped out to meet an oval boss formed on the interior surface of the other, making an excellent shaper for the gold in contouring gold crowns or fitting bands to roots. The instrument is of neat design, finely finished with smoothly rounded handles.

Price $1.75

How's Crown Pliers



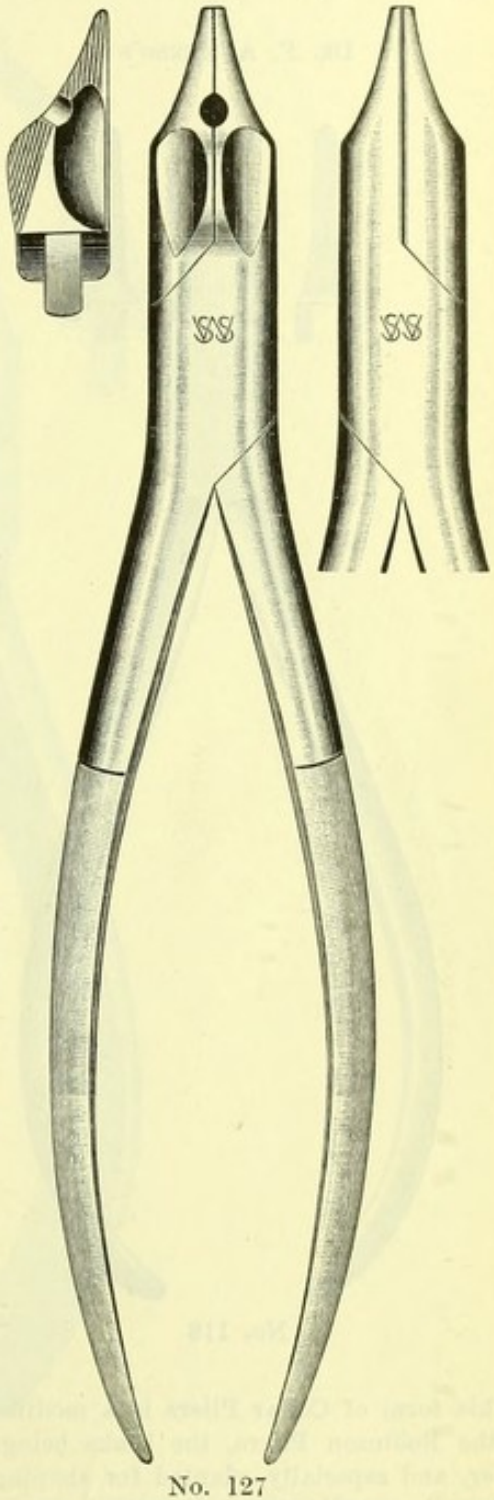
No. 110 No. 111

Nos. 110 and 111, straight and curved Pliers for bending pins over posts in Dr. How's process of mounting artificial tooth crowns.

PRICES

No. 110, Straight	$1.60
" 111, Curved	1.75

Pin-roughening, Cutting, and Bending Pliers



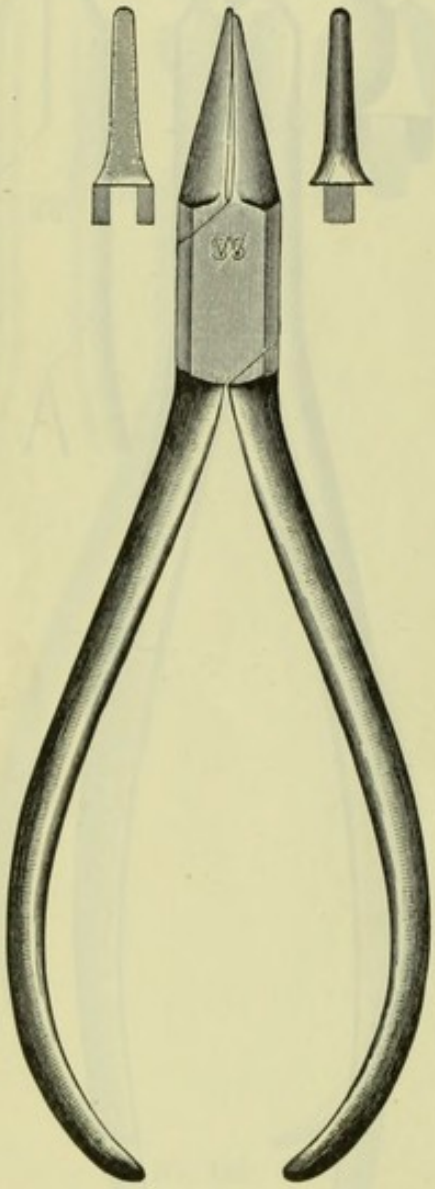
No. 127

Designed for roughening and bending at right angles the pins of plate or long-pin teeth for vulcanite work. An excellent combination tool for wire cutting, post roughening, or light clasp bending, but unsuited for the heavier work which belongs to plate benders, nippers, etc.

Price $2.50

Collar Pliers

DR. F. A. PEESO'S

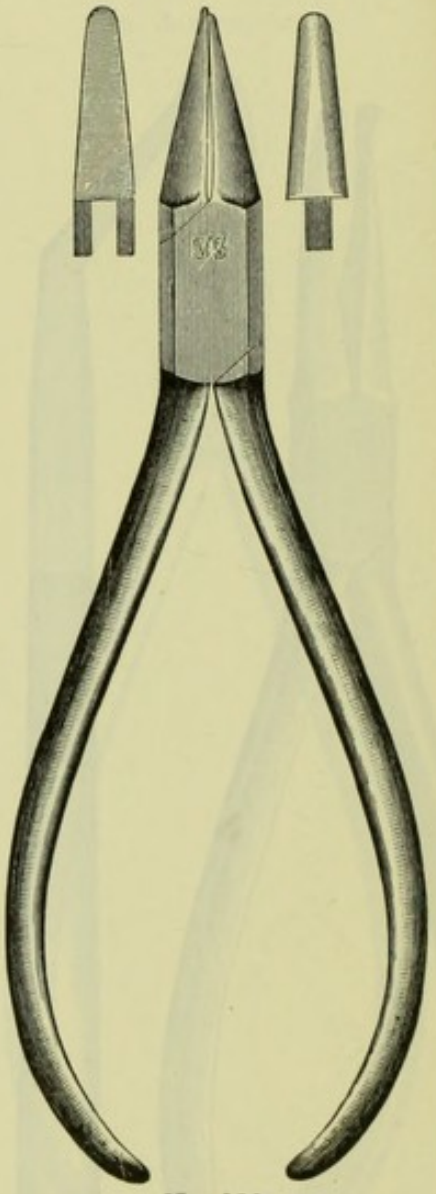


No. 118

This form of Collar Pliers is a modification of the Robinson Pliers, the beaks being narrower, and especially adapted for shaping and fitting the small curves of lateral, lower and bicuspid collars or cap crowns; in fact, collars of whatever size may be formed with them, and the shorter rounded-end beak can be used to impart a considerable degree of contour to a cap or collar. Bridge- and crown-workers will find them very useful.

Price $1.60

DR. C. L. ROBINSON'S



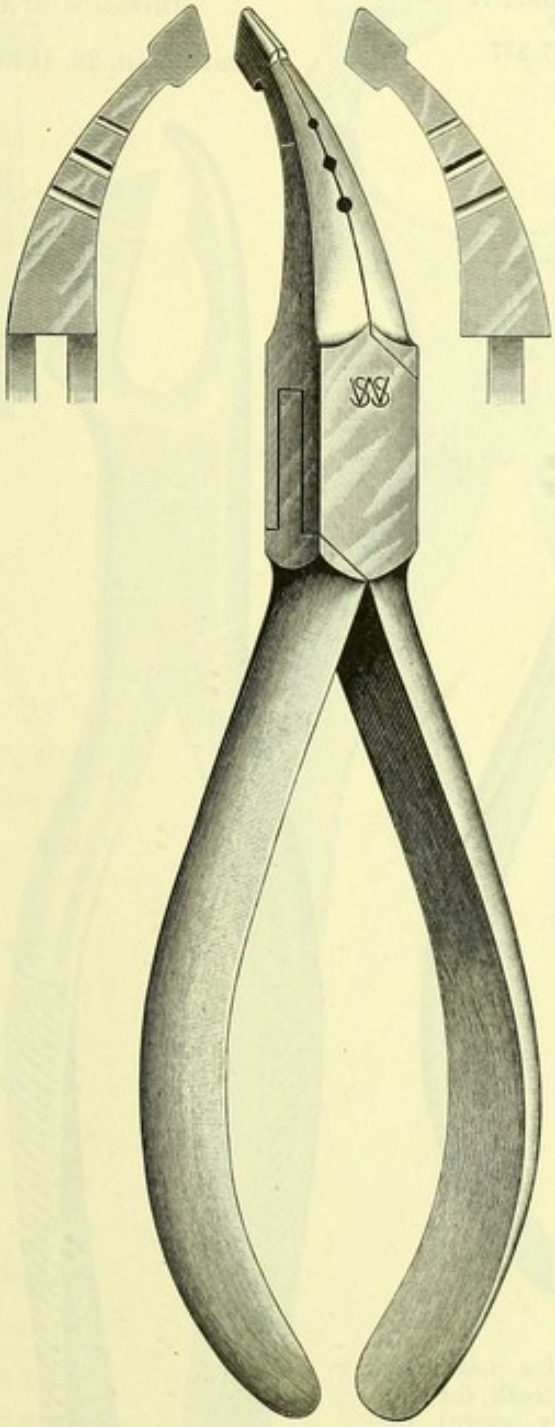
No. 120

The two beaks of this pair of Collar Pliers are of unequal length, and the inner face of the longer beak is flat, while that of the shorter is rounded off at the edges so as to make it slightly oval. Dr. Robinson claims that "Not only can a band (collar) of any required size for crown-work, from the smallest lateral to the largest molar, be shaped with equal facility, but the drawing in or drawing out of bands for gold crowns (contouring) at any point necessary to give them an artistic appearance as well as useful form can be readily done."

Price $1.60

ANGLE'S BAND-FORMING PLIERS

Patented Sept. 13, 1898



No. 123

The Band-forming Pliers are made especially for pinching or forming the plain bands about the crowns of teeth in regulating, and about roots in crowning.

The angle of the beaks and plurality of operating faces make them equally adapted to forming the seam upon the lingual or labial surfaces of the teeth in either jaw without requiring a cramped position of the hand.

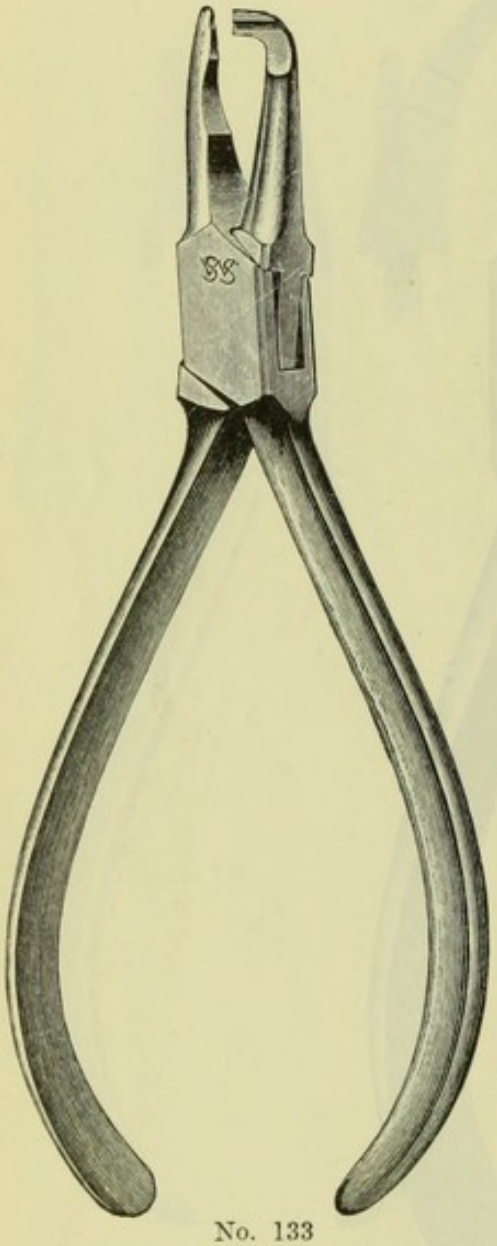
Between the beaks are square and round grooves for holding wire, nuts, etc.

Price **$2.80**

Tooth-pin Bending Pliers

Devised by DR. F. A. GREENE

D. R. G. M. No. 327,337



No. 133

These pliers afford an effective means for bending the pins of long-pin teeth for any purpose. They are especially useful for bending the pins down upon a metal backing because they grasp the pin in such a way that the bending puts no strain upon the porcelain or its hold upon the pin. After the pin is bent over it may be pressed down upon the backing without fear of checking the porcelain.

In the use of long-pin teeth for vulcanite work the pins can be readily bent in any direction to form the staples which give the vulcanite its hold.

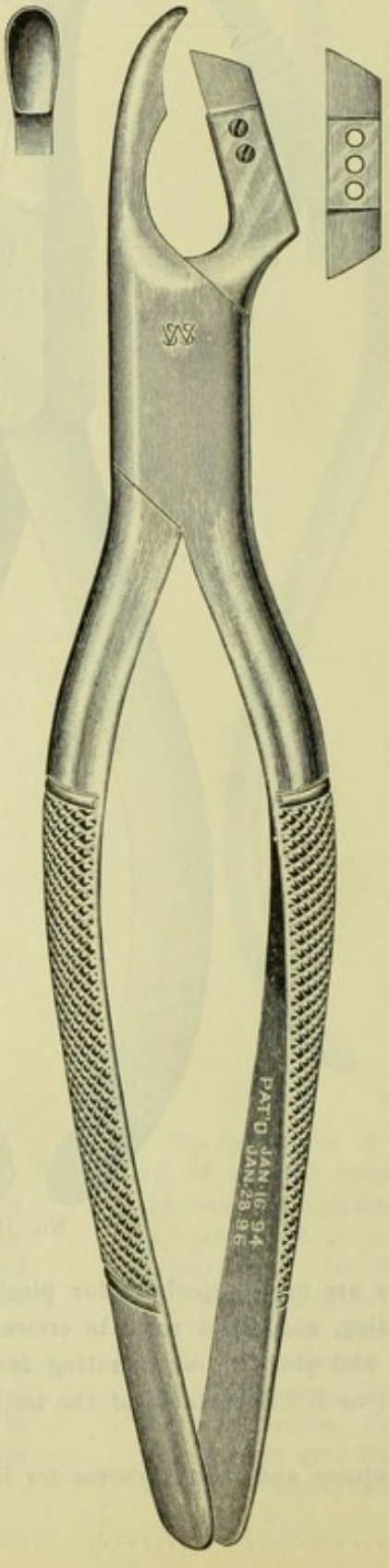
Price $1.75

Cap-crown Slitter No. 3

Reversible Blade

Invention of DR. J. B. MONFORT

Patented Jan. 28, 1896; other patents applied for



The present form of our well-known Cap-crown Slitter for the removal of gold crowns embodies a reversible cutting blade and an improved method of attaching it, which gives it a higher efficiency and a longer life.

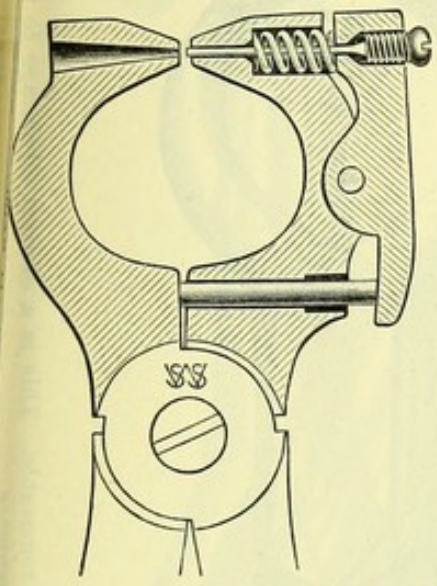
The blade is double ended, with three screw-holes, two of which only are utilized at one time to hold the sharp pointed blade in the slotted jaw of the appliance. As the point wears the blade can be moved up one hole. When still more worn, so as to fail to work in the new position, the blade can be reversed, and the same process gone through, affording in effect the service of two blades.

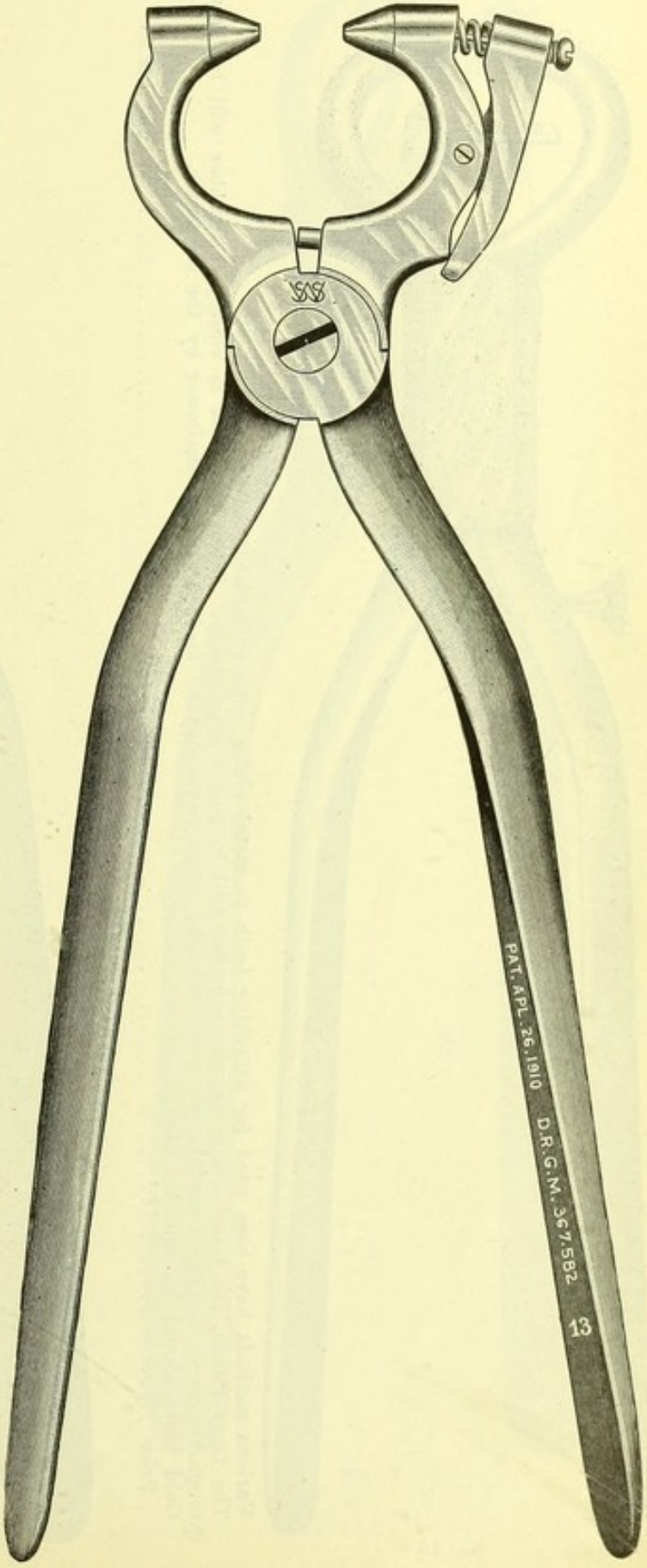
The method of attaching the blade is better mechanically than in the old form, the two screws giving a longer, surer bearing. The other jaw of the appliance is curved, with a spoon-shaped beak. In use the point of the cutter blade is inserted under the cervical edge of the crown to be removed, the spoon is placed upon the cusp end, and by properly closing the handles the crown may be slit and then lifted off.

Handles of the well-known Commonsense form. Nickel-plated all over except the cutting blade.

Price $3.00

S. S. White Plate Punch No. 13





The Plate Punch which actually punches a clean-cut hole in any plate used by dentists, and which the instant the grip on the handles is relaxed releases itself automatically.

It repeats these operations—instant punching and automatic release—as fast as you can close and release the handles, with never a hitch or halt in either.

You have no conception of how efficient a plate punch may be till you've had our No. 13 in your working hand and a piece of plate in the other. And it's durable, will last a lifetime; nothing to wear out but the little punch pin, for which a new one can be substituted in a moment. The S. S. White Plate Punch No. 13 is well worth its price.

Price $5.00

Loop Punch

Devised by DR. PECK

No. 10

Various methods have been used for attaching teeth to metal plates with vulcanized rubber. The Loop Punch, the latest device for the purpose, will be found satisfactory. When the flask is closed, the rubber will be forced through the loops, making a perfectly secure attachment. The loops may be made deeper or shallower by the set screw. Gold plate should be annealed always before punching.

Price $2.25

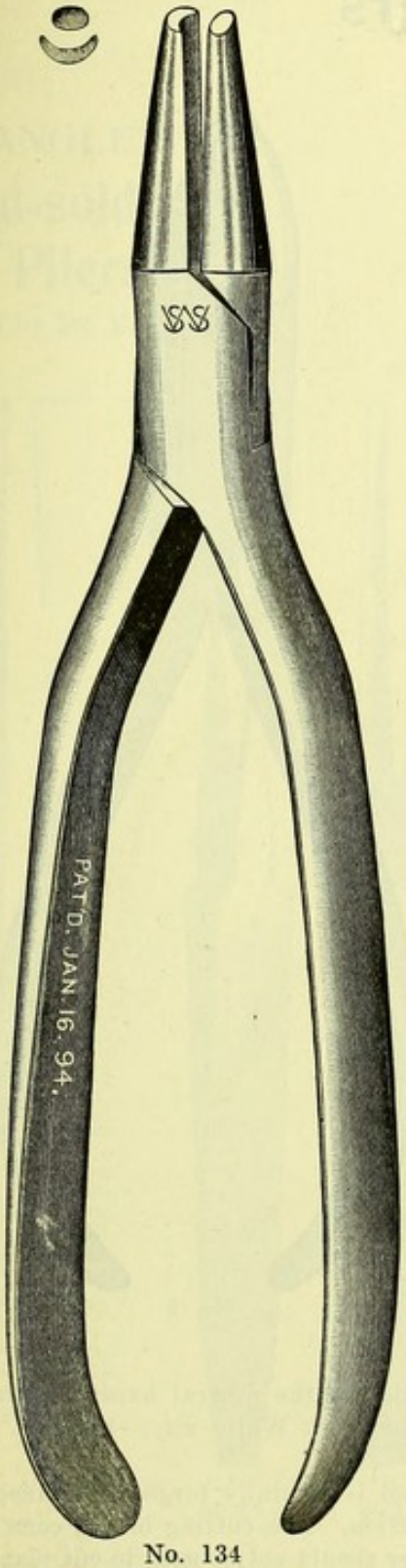
Plate Punch

No. 14

Plate Punch No. 14 is similar to our former Plate Punch No. 1 except that the pin is removable. This is a distinct advantage to the dentist, enabling him in case the pin breaks to insert a new one with little cost or inconvenience.

Price .....

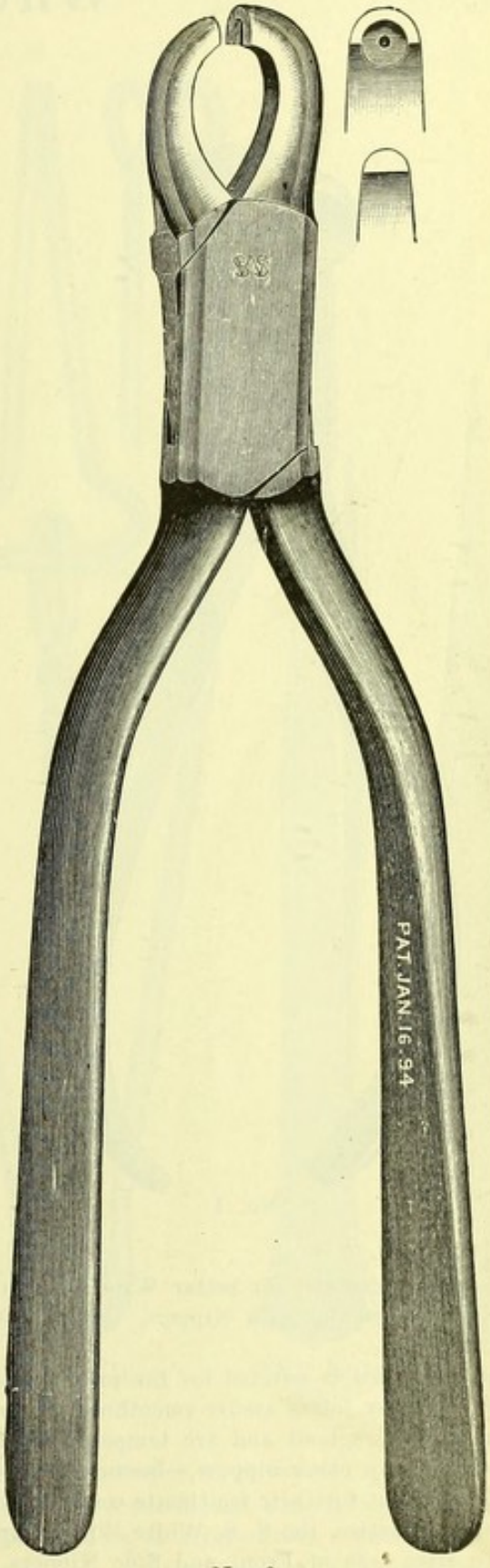
Clasp-bending Pliers



No. 134

Clasp-bending Pliers No. 134 is an improvement on our Clasp-bending Forceps. The oval shape of the beaks and the improved form of the handles are their special features.

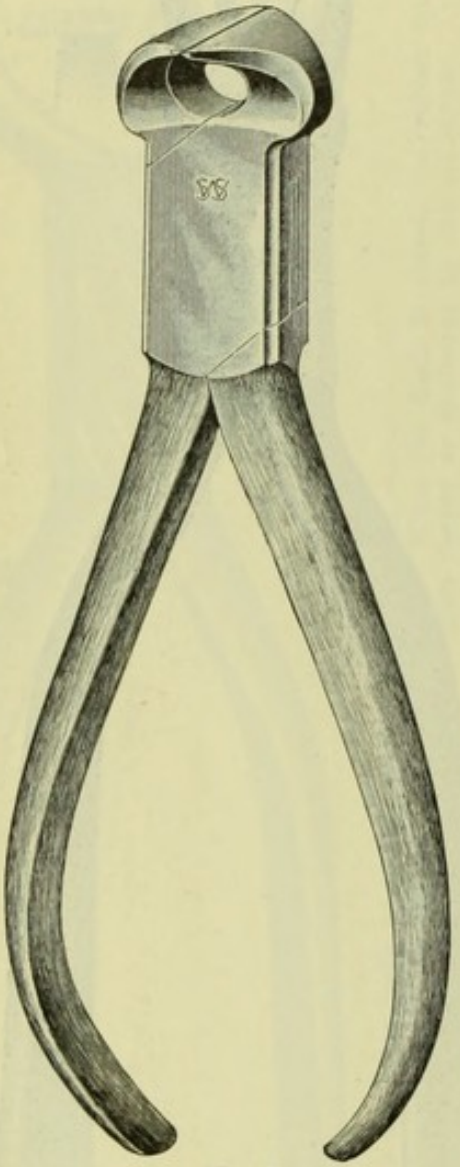
Plate Nippers



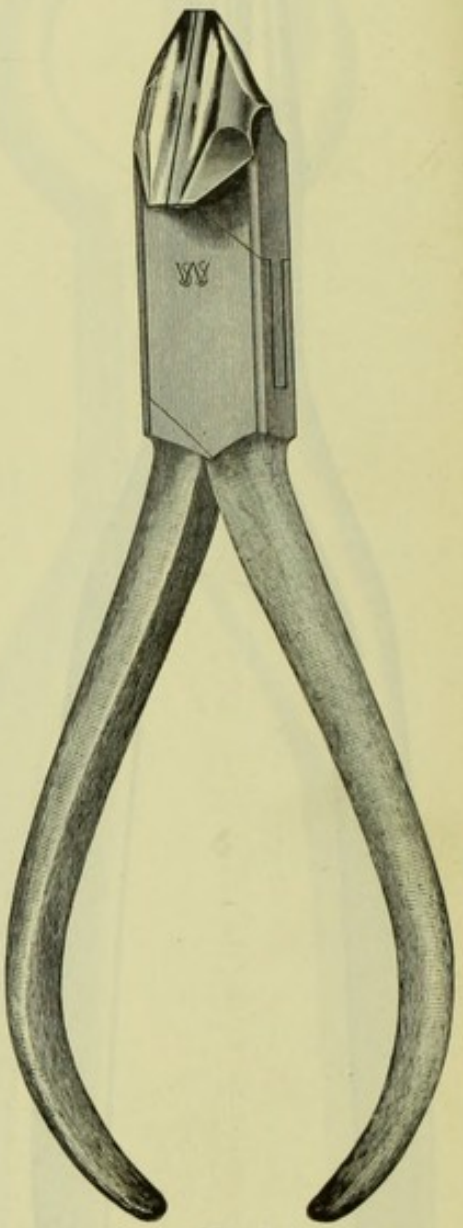
No. 3

No. 134, Clasp-bending Pliers	$1.75
" 3, Plate Nippers	2.25

Wire Nippers



No. 1



No. 3

There is a demand for better Wire Nippers than those made for the general hardware trade. We supply that demand with Nippers, side and front, made in the S. S. White way,—the best we know how.

The steel used is selected for the purpose, and the entire tool is carefully forged and finished. The finely made box joints assure smoothness and correctness of action. The cutting blades come together accurately throughout and are tempered for their work. They should not be used to cut piano wire,—nor should any other nippers,—because it is hardened and tempered steel and requires a special instrument. But for their legitimate work, the cutting of the soft steel and brass wires so much used in dental practice, the S. S. White Wire Nippers are unequaled as an effective, durable tool.

Two sizes each of Front and Side Nippers, No. 1 front, 4½ inches; No. 2 Front, 5 inches; No. 3 Side, 4½ inches; No. 4 Side, 5 inches.

Nickel plated all over, blades polished, body and handles dull finished.

Price ..... each $1.50

Solder Tweezers

ANGLE'S Band-soldering Pliers

Designed by Dr. E. H. Angle

No. 125 $0.70 | "A" $0.25 | "B" $0.10 | "C" or "D" $0.15 | "E," 4½ in. $0.15 | "F," 5 in. $0.20

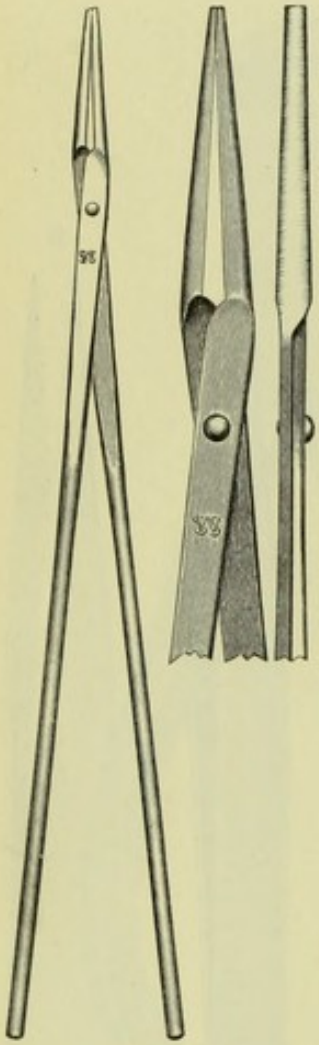
The great advantage of Angle's Band-soldering Pliers will be readily appreciated.

With them pressure is made to bear evenly at the exact point required and away from contact with the solder, while the angle of the beaks renders them little liable to injury from overheating.

Solder Tweezers A, B, C, and D are old and well-known forms. E and F were more recently brought out. They have sharp, delicate points and an easy spring, combined with broad surface for hand hold. They will be found a very convenient addition to our laboratory instruments, particularly for crown- and bridge-workers.

Solder Tweezers "G"

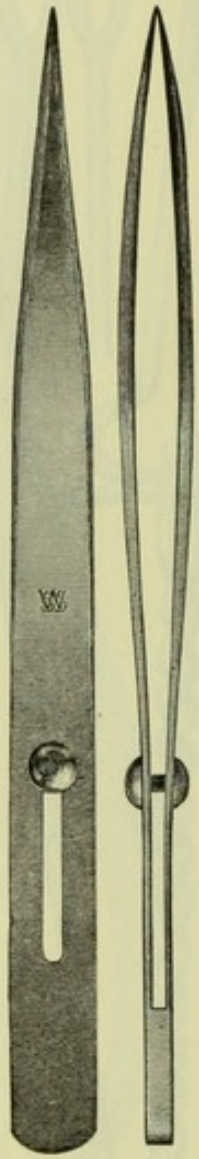
Pattern by
DR. F. S. BELYEA



These Solder Tweezers are made long and slender in order to afford extreme delicacy of manipulation. The least pressure at the ends of the handles holds the solder or collar, and the slightest movement of one or both handles releases it. The beaks are shown full size in the side view. The full length is 8½ inches. Dull nickeled.

Price $0.30

Locking Tweezers, "K"



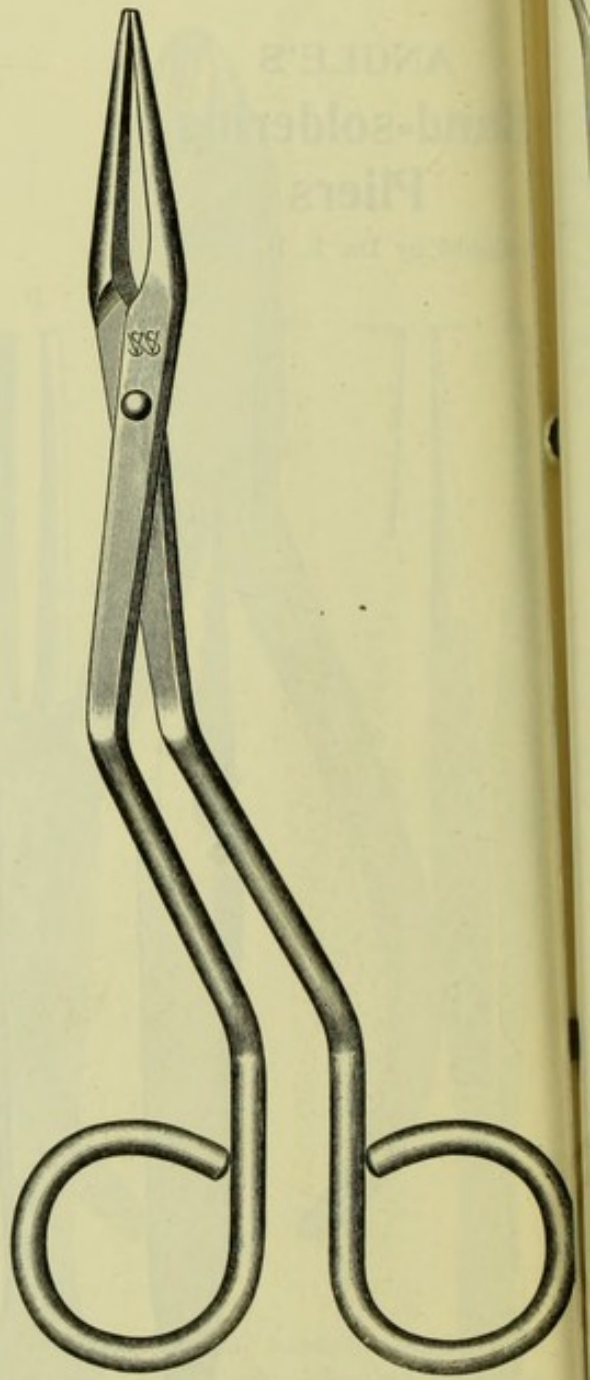
Locking Tweezers "K" are for the convenient handling of inlays or crowns in porcelain work or the holding of bands. They are spring tempered and are provided with a sliding locking pin.

Price..$0.75

Solder Tweezers, "L"

Price, $0.30

Furnace Tongs "M"



Designed especially for placing trays containing porcelain inlays, crowns, etc., in the dental furnace and removing them. The bend in the handles allows the hand to do the work without being exposed to the heat from the furnace.

Price $0.35

Solder Tongs

The length of the Solder Tongs, 9 and 12 inches, will enable you to handle work without discomfort from the heat. All steel, made strong and durable. Many uses will be found for them in the Laboratory.

9 inches long $0.60
12 " ..... .65

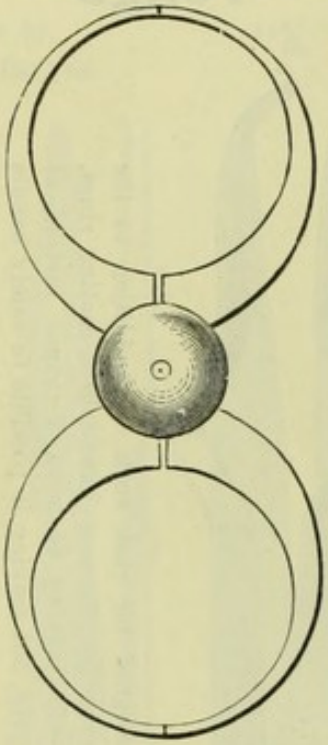
Solder and Inlay Flask Tongs

A convenient pair of Tongs for many uses in the laboratory, especially designed for cast work. In addition to the curved beaks for picking up small objects, the bowed portions adapt the tongs for the easy handling of casting rings, flasks and other round objects when they are hot. A recent modification,—the making of bows V-shaped instead of round—gives a four-point hold—thus not only affording a firmer and surer grip, but making it possible to safely handle articles with a greater range of sizes. 12 inches long.

Solder and Inlay Flask Tongs $0.80

CALIPERS

BRASS. DOUBLE END

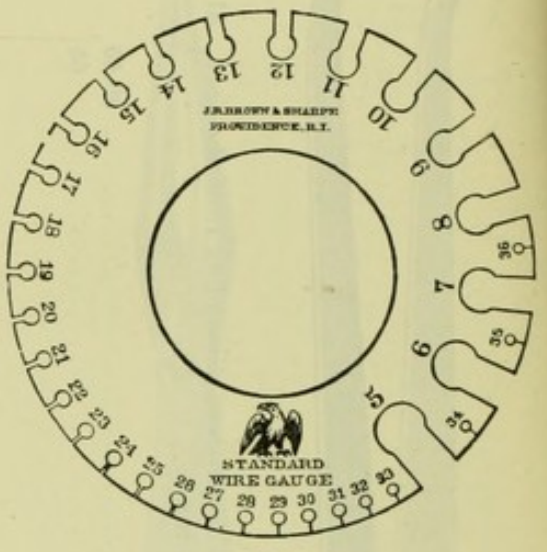


The double-end Calipers are very convenient in gaging the thickness of a plate because the two ends work together. One can see from the free points exactly what the two which are engaged indicate, without disengaging them.

Price $0.25

PLATE AND WIRE GAGE

BROWN AND SHARPE'S AMERICAN STANDARD



This Gage, universally known among plate workers for its accuracy, carries on the reverse side approximate sizes of the different openings in thousandths of an inch. With it the dentist can gage satisfactorily down to the thickness of thin writing paper.

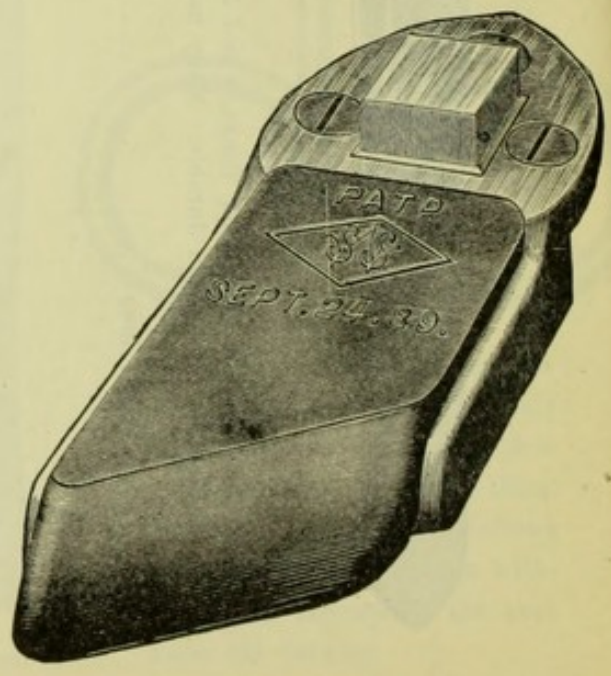
Price $2.00

BENCH BLOCK

By Dr. E. R. Magnus

The advantages of this device are appreciable at a glance. The frame is made of cast iron (gray nickel finish), surmounted by a chilled-face anvil. It carries a thick block of par-vulcanized rubber, which for the purposes of a filing block is greatly superior to any other material. The frame can be fastened to the laboratory or office bench by the three screws which accompany it. The rubber blocks can be replaced when worn. There are two sizes; the large size is 5 inches long over all by 2¼ inches wide. The small size is 4⅜ inches long by 1⅝ inches wide.

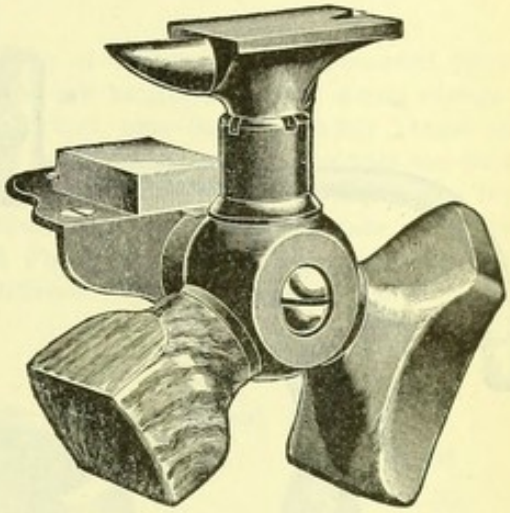
Price, Large, complete	each	$0.70
" Small "	"	.60
" Rubber Block, Large....	"	.35
" " " Small ...	"	.25



REVOLVING COMBINATION ANVIL AND BENCH BLOCK

Devised by G. W. MELOTTE, M.D.S.

This combination tool consists of a hub carrying a case-hardened steel anvil, a par-vulcanized rubber block for striking, and a wood block for the same purpose, mounted on a bracket to be fastened to the work bench of the laboratory. It is adjusted by pulling out the hub slightly, revolving it until the proper appliance is in position, then releasing, when it is held firmly as placed by a friction clutch. The bracket also affords a hammering surface.

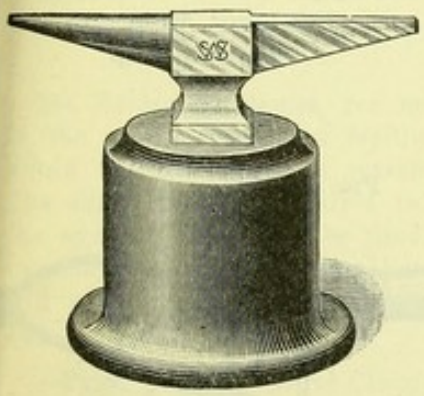


Price, complete		$3.00
DUPLICATE PARTS		
Brackets	each	$0.50
Anvils	"	1.00
Rubber Blocks	"	.35
Wood "	"	.15

THE S. S. WHITE DENTAL MANUFACTURING CO.

Sole Sales Agent for the dental trade for all countries except the United Kingdom of Great Britain and Ireland

ANVIL FOR CROWN- AND BRIDGE-WORK

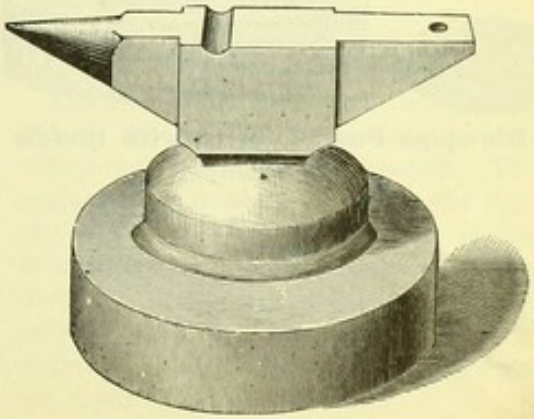


This anvil, designed specially for the use of crown- and bridge-workers, is now made in our own factories and bears the trade-SS-mark. It is made of steel, with one round and one square horn, and is leaded into an iron base. The illustration is about one-half size: the length of the anvil is 3½ inches, and the height is 3 inches; weight, 1¾ pounds. The base is nickeled, the Anvil nickeled and polished.

Price, with Base as illustrated	$1.00
" without Base	.60

"DENTIST'S" ANVIL

This form of Anvil is much superior to those usually found in hardware stores, and better adapted to dental laboratory work. The Anvil proper is 4 to 4½ inches long, 1⅛ inches wide at the square, and about 3½ inches high, including the base, which is of zinc. The weight is ample, varying from 2½ to 2¾ pounds. The illustration is about half size.

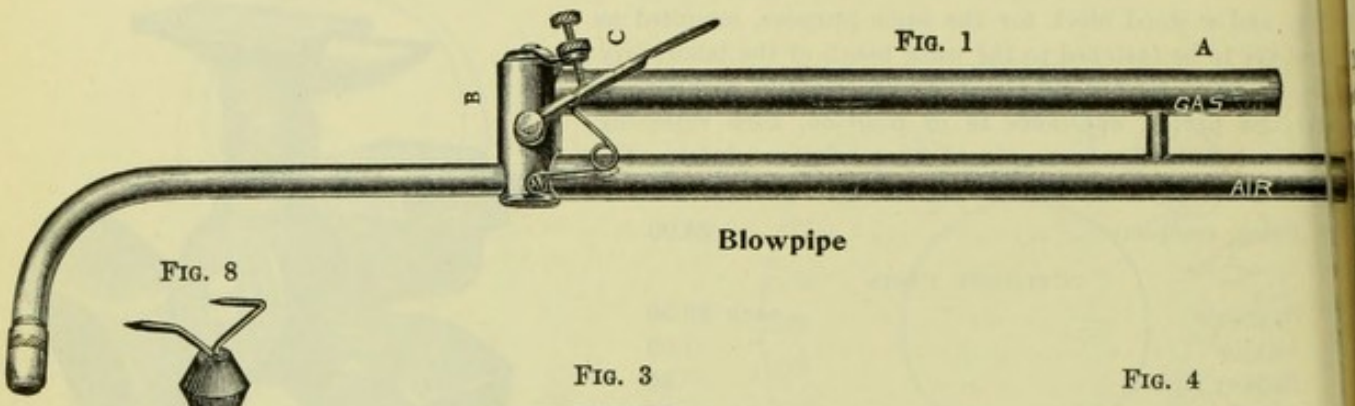


Price	$1.50

SOLDERING APPLIANCES

Devised by GEO. W. MELOTTE, M.D.S.

FIG. 1

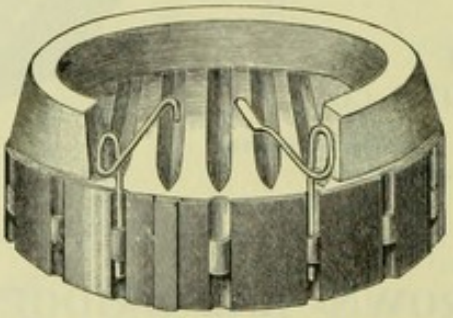


Blowpipe

FIG. 8

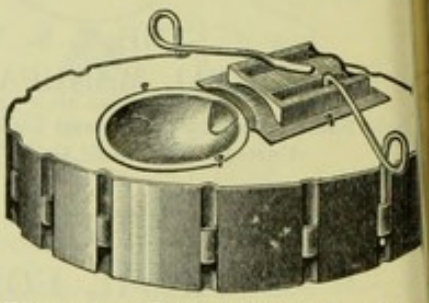
Blowpipe Pad Handle

FIG. 3



Blowpipe Pad with Rim and Clamps for Soldering

FIG. 4



Blowpipe Pad reversed, showing Ingot Mold and Melting Cup

FIG. 5

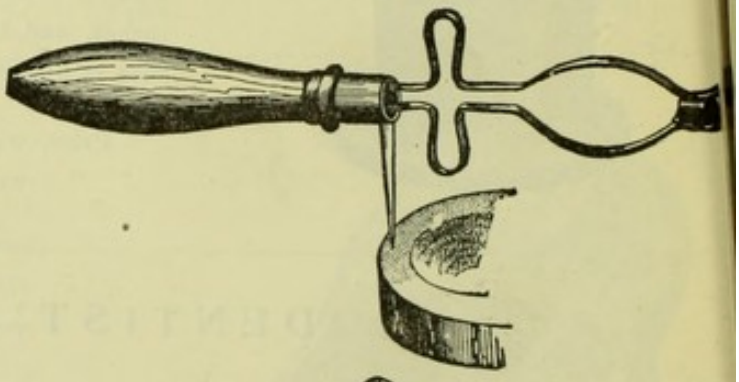
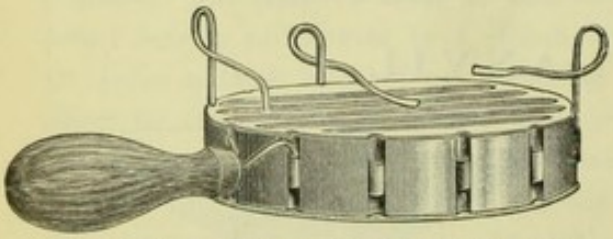


FIG. 2



Blowpipe Pad complete with Handle and Clamps

FIG. 6

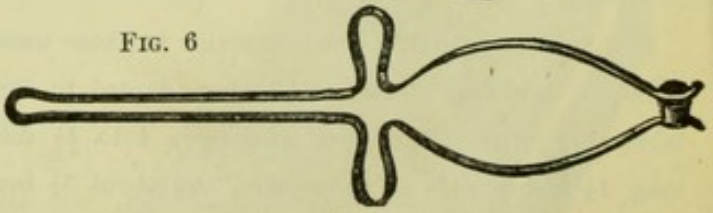
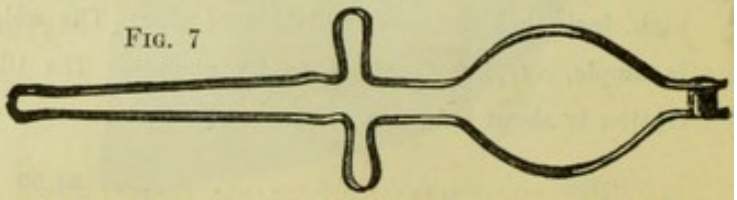


FIG. 7



Spring Soldering Clamps with Spurred Handle

DR. MELOTTE'S IMPROVED SOLDERING APPLIANCES

BLOWPIPE PAD

The Blowpipe Pad is about 4½ inches in diameter. It is made of asbestos tape surrounded by a metal band, with loops at regular distances for the reception of the handle hooks or spring clamps. The construction of the Pad makes it a perfect cushion, into which pins can be readily thrust to hold small articles while being soldered. One face is grooved for soldering, so that the heat can pass under the piece, and thus heat it from the bottom as well as the top; the other has a depression for the melting cup. Fig. 2 shows the Pad with clamps in position; Fig. 3 the grooved face with the removable rim (also of asbestos) for confining the heat, and Fig. 4 the reverse face with cup and ingot mold attached. The ingot mold has three matrices of different shapes and sizes. Fig. 8 shows the handle separately.

PRICES

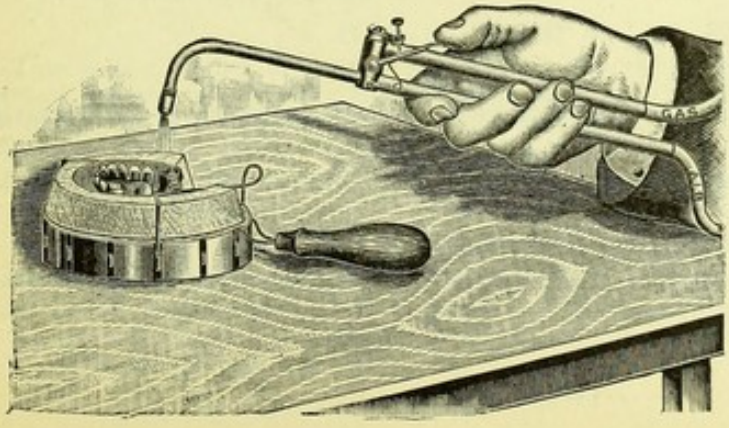
Blowpipe Pad, complete, including Removable Rim, Ingot mold, and Shield, Melting Cup, Handle, and three Spring Clamps	$2.00
The same, less Ingot Mold and Melting Cup	1.50
Extra Melting Cups ..... each $0.15; per doz.	1.50
Ingot Mold, with Shield, separately	.50
Removable Rims, separately	.25

SOLDERING CLAMPS

The Soldering Clamps, for holding gold collar crowns and caps while being soldered, have loops in the arms. The loops facilitate placing the Clamps in and removing them from the handle, and afford a ready means of rotating or changing the position of the work under the blowpipe flame. The slight pressure required to hold the work is secured by pushing the shanks into the handle, the spur of which may be fixed in the pad or in a piece of charcoal, etc. The left hand is then free to manipulate the solder while the blowpipe is directed by the right hand as usual. The handle will grip either clamp shank. The three shapes, also the spurred handle, are shown in Figs. 5, 6, and 7.

Price, per set of three Clamps and one Handle $1.00

IMPROVED GAS BLOWPIPE



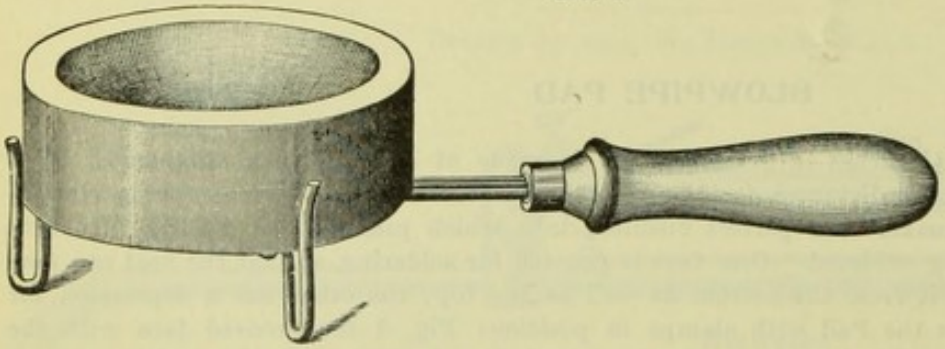
[ILLUSTRATED ON OPPOSITE PAGE]

The gas supply is received through the valved tube A, by connecting it with rubber tubing to the gas bracket. The spring valve B which regulates the supply of gas may be set by means of the thumbscrew and jam nut C to any flame desired. It can be used with the foot bellows when a more powerful blast is required, or with nitrous oxid to produce an oxyhydrogen flame.

Price $3.00

ASBESTOS SOLDERING BLOCK

No. 2



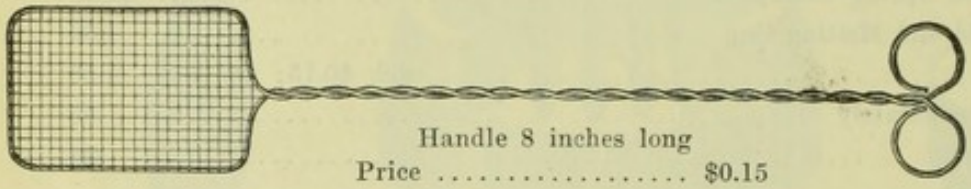
No. 2. Asbestos Soldering Block, 4½ inches diameter, 1¾ inches high. Concave top, with or without holder.

PRICES

No. 2, with Holder...$0.85
" 2, without Holder .60
Holder separately .... .25

WIRE SOLDERING FRAME

No. 1 (devised by Dr. C. L. Alexander) is suitable for holding crowns or small bridge pieces for soldering. The heat passes through the meshes of the wire readily, so that all parts of the piece can be heated evenly. Crowns are thus soldered without changing. Small bridge pieces can be held over the flame for heating up as well as soldering.



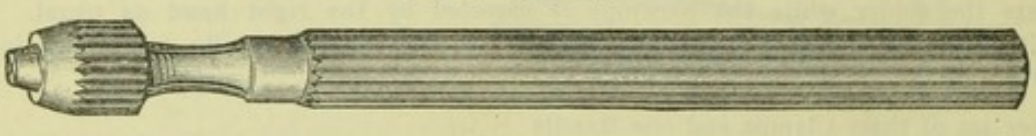
Handle 8 inches long
Price $0.15

ASBESTOS

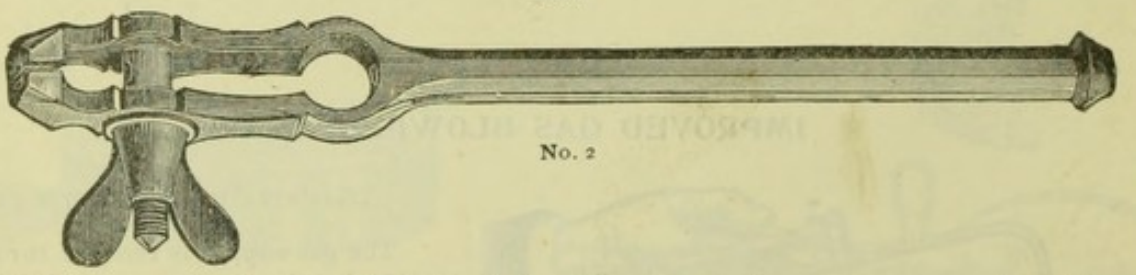
For Mixing with Plaster

Fine (Powdered) .....per lb. $0.15
Coarse (Long Fiber) ..... " .30

PIN VISES



No. 1



No. 2

These Pin Vises are invaluable aids in the fashioning of posts for crowns, inasmuch as they greatly facilitate the handling of the wire.

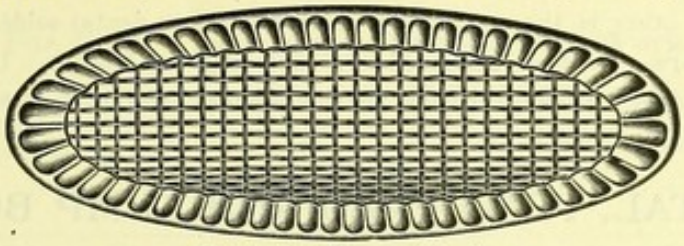
In the No. 1, the holding device is a clamping chuck, controlled by a squeeze nut. The handle is of corrugated ebonized wood.

In the No. 2, the clamping jaws ars controlled by a thumb nut. All steel.

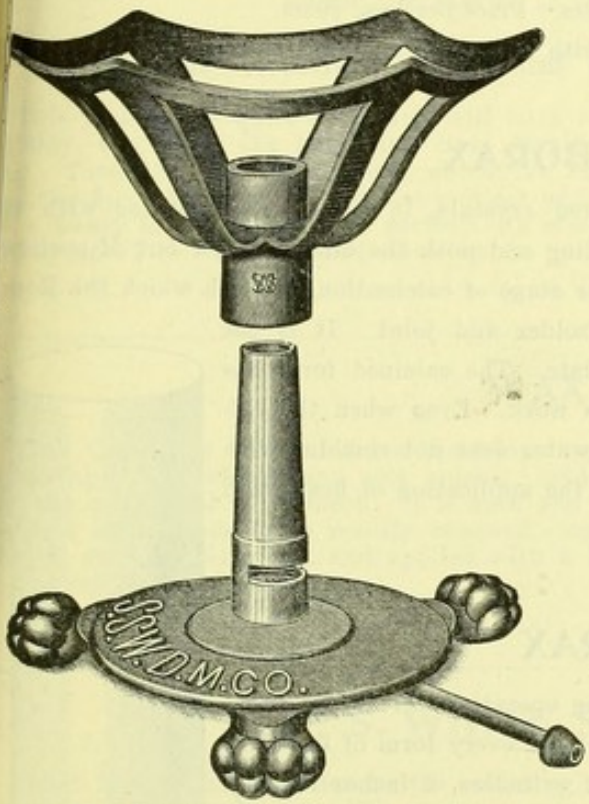
Both forms have a hole passing entirely through the handle, from end to end, so that the post wire need not be cut till the post is about completed.

Price, No. 1 ..... $0.20
" " 2 ..... .50

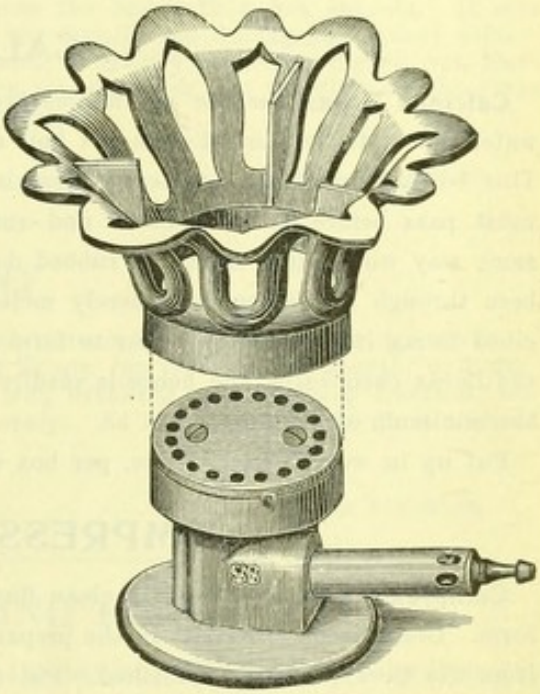
SOLDERING FRAME FOR GAS-BURNER SPIDERS



Soldering Frame No. 3



Gas-Burner No. 12, with Spider



Gas-Burner No. 13, with Spider

The new element in this combination is a simple, inexpensive wire Soldering Frame No. 3, which greatly enhances the usefulness of both Gas-burners. Heretofore they have been employed principally as heaters for vulcanizers. Equipped with the Soldering Frame, they will be equally useful for heating up cases for soldering. The case will not have to be moved or held, but can rest on the Frame while the soldering is being done, just the same as on a charcoal block. Several cases can be heated up at once, and, above all, will be heated gradually, the element of danger from throwing the blowpipe flame on them suddenly being eliminated.

The Soldering Frame is circular, with a metal rim, 4 inches in diameter, and made of wire which will stand considerable heat. Used with the No. 12 Burner it rests on the top of the Spider, the tips of the scalloped edge catching just within the rim, assuring steadiness. With the No. 13 it is set upon the internal brackets or shoulders of the Spider.

Price, Soldering Frame No. 3 ..... $0.10

GAS-BURNER No. 12, WITH SPIDER

This is the Burner ordinarily supplied for gas equipment of our vulcanizers. It is effective, has perfect combustion, or we should not so supply it. Tubes of brass, base of cast iron, japanned. Height to top of tube 2¼ inches. The Spider (of cast iron, japanned) is 3½ inches in diameter across the top.

Price, Gas-burner No. 12 ..... $0.50
" Spider ..... .25

GAS-BURNER No. 13, WITH SPIDER

The Heater, *par excellence*, for vulcanizers. The twenty jets form a solid blue flame two inches in diameter, the heating power of which is tremendous, because of the perfect combustion. It requires a Vulcanizer Stand large enough to admit the base, which is 3 inches in diameter; height 2¼ inches.

Price, Gas-burner No. 13 ..... $1.00
" Spider ..... .25

BORAX THE FLUX FOR DENTISTS

Borax in one form or other is the practically universal flux in dental soldering operations. It may be used in the crystal form—lump or powdered—or as a calcined powder. Usually the borax which the dentist uses is powdered. It may or may not be calcined, and it may or may not be put up in stick form. We sell it in all these ways.

CRYSTAL, POWDERED AND LUMP BORAX

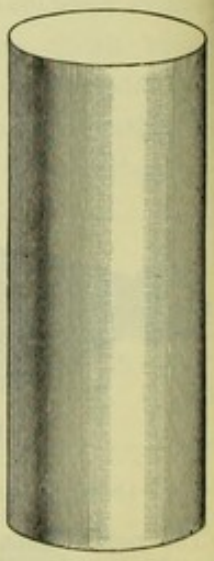
Plain **Powdered Borax** Crystals largely used in ordinary soldering operations, though this form is not suitable for fine bridge work. Put up in wood boxes. Price per box, $0.08.

Crystal Lump Borax is especially adapted to use with Alexander's Plastic Gold.

Put up in boxes. Price, per box $0.10.

CALCINED BORAX

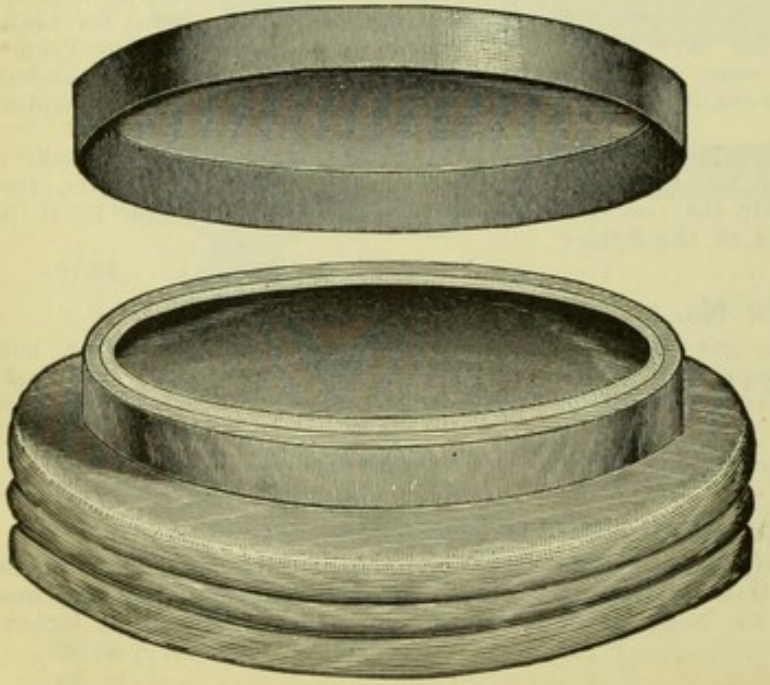
Calcined Borax has the advantages over the powdered crystals, in that, having parted with the water of crystallization, it does not boil up when melting and push the bits of solder out of position. This boiling up of the powdered crystals is really the stage of calcination, through which the Borax must pass before it melts down and runs over the solder and joint. It is the same way when lump Borax is rubbed down on the slate. The calcined form has been through this stage, and merely melts down to its work. Even when the calcined Borax is mixed with water to form a paste, the water does not combine with the Borax chemically, and hence is readily given up on the application of heat, with the minimum of bubbling.



Put up in wood boxes. Price, per box $0.15

COMPRESSED BORAX

Compressed Borax affords a clean flux for soldering operations in a convenient form. Great pains are taken in the preparation to eliminate every form of impurity from the Borax, which is calcined. Put up in form of cylinders, 2 inches long by ¾-inch diameter, covered with foil. Used by rubbing off as desired on the "Borax Slate." An unequaled flux; a clean way of using it; no waste. Price, $0.10.



BORAX SLATE

Borax ground with water to a cream-like consistence is largely used in fine soldering operations. The appliance which is here offered as a substitute for the slates ordinarily employed for the grinding is handy and cleanly for the purpose. It consists of a shallow, saucer-shaped glass dish with a ground surface let into a wood block which has a metal cover.

Price $0.35

DR. PARR'S FLUX

For Gold, Silver, Crown- and Bridge-Work

This Flux is vitrified and pulverized ready for use. It is carefully prepared and free from slag, sand, and other impurities.

Put up in boxes, directions on each.

Price ..... per box $1.00

DR. PARR'S HARD WAX FLUX

For Attaching Clasps and Teeth in Plates and Bridge-Work

This material is quite hard, and will have to be taken from the box with a hot spatula. It sets quickly, and holds the teeth and clasp firmly for trial in the mouth and during subsequent soldering. Then the wax, throughout which the flux is distributed, is readily burned or melted out, leaving the flux as a deposit over the crevices and surfaces to be joined, much like the rime on the grass of a frosty morning, ready to perform its office in the soldering.

Put up—¼ lb.—in enameled metal boxes.

Price ..... per box $0.50

WAX CEMENT

Wax Cement is unexcelled for the temporary attaching of crowns and clasps or bridge-work for soldering. It is strong and sets quickly, holding the parts firmly for trial in the mouth, and during the subsequent investment. It is hard and brittle when set, breaking with a sharp fracture, and because of the quality is readily removed, coming away cleanly. As found in the box, it is so hard that it must be taken out and applied with a hot spatula.

Put up in metal boxes.

Price ..... per box $0.20

S. S. WHITE SOLDERING FLUID

What is a "flux" used for in the soldering operations of the dentist? To clean and keep clean the surfaces to be joined.

Why is it used? Because the oxygen of the air will act on the alloys of gold and silver plate, especially when heated, forming oxids on the surface.

How does it act? It dissolves any oxids which may be present when it is applied, and forms a film over the surfaces which prevents the further formation of oxids, because it is impenetrable to oxygen.

The soldering operations of the dentist usually involve small parts, requiring always delicacy of manipulation, at places sometimes awkward to get at for the placing of flux.

The S. S. White Soldering Fluid offers an unsurpassed flux which makes it easily applicable at any point without risk of disturbing or displacing parts delicately adjusted for the fusing of the solder. The flux is held in solution in a liquid. A drop of this placed on the parts, quickly spreads over them, because of its fluidity, thus realizing the ideal condition of distribution. Under the application of heat, the liquid promptly evaporates, leaving the flux coating the surfaces to be united.

One great advantage is the minuteness of the quantity which may be used. A little pointed stick, like a wood tooth-pick, makes the best kind of a dropper, for small operations. Where pieces of solder larger than a pin head are used they may be dipped in the Fluid before being placed.

Price, 1 oz. bottle $0.30

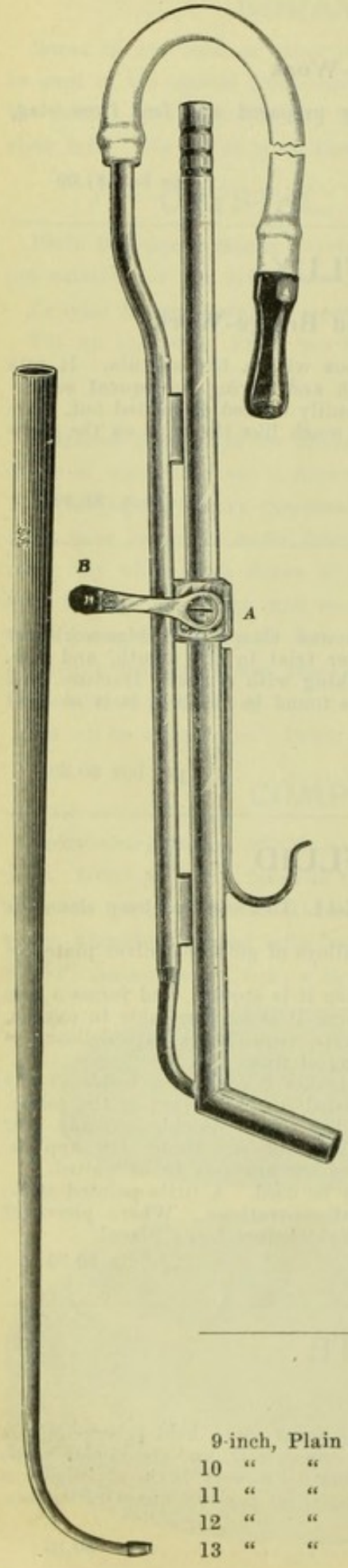
SOLDERING FLUX PASTE

Formula of Dr. A. R. Cooke

A new soldering flux which promises an advance. Its foundation is borax glass, held in vaselin. It is free from the boiling up which disturbs the relation of parts and causes pits, and the binder burns out without residue, leaving the powdered Flux to do its perfect work. "A very little of it goes a good way,"—that is, it is economical because rightly used only the smallest possible quantity suffices.

In half-ounce jars.

Price $0.15

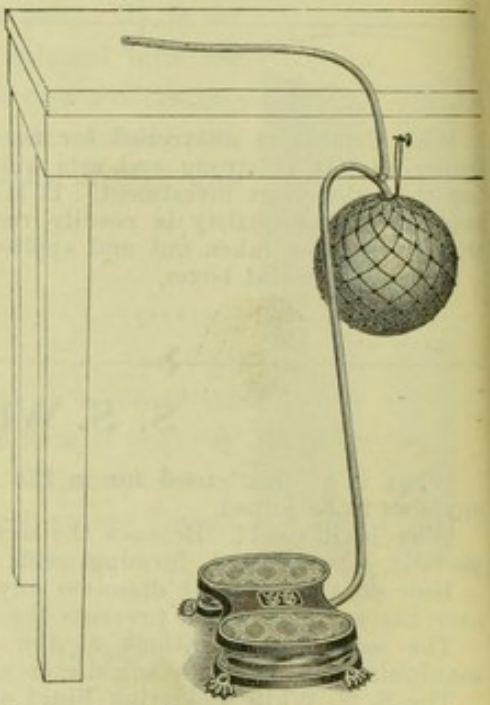


LEE BLOWPIPE

This blowpipe has a brush flame of great volume for heating u work, a very fine-pointed wire flame for flowing solder, and it kee alight. The size and character of the flame are controlled by th lever B. The screw A is used to adjust the lever B to permit it free movement under the thumb or finger and yet hold it still whe ever the lever is let be. The full, partial, or fine flame can thus b continuously directed on the work; or the lever may be moved t vary the flame instantly at will.

Price $3.50

ENGLISH PATTERN DOUBLE-ACTION FOOT BELLOWS



This apparatus consists of a double bellows, a rubber reservoir and the necessary tubing as shown. The bellows is operated by an easy rocking motion of the foot, one side being always in action, thus furnishing a continuous flow of air sufficiently powerful for any blowpipe used for dental purposes. The rubber reservoir still further equalizes the pressure, making the blast even and steady.

We have improved the appliance by the insertion of a check valve in the outlet of the bellows. This prevents the air being forced back through the bellows when the foot action is temporarily suspended. Thus the blowpipe may be laid down when the attention is momentarily diverted from the soldering, and the work resumed without loss of time.

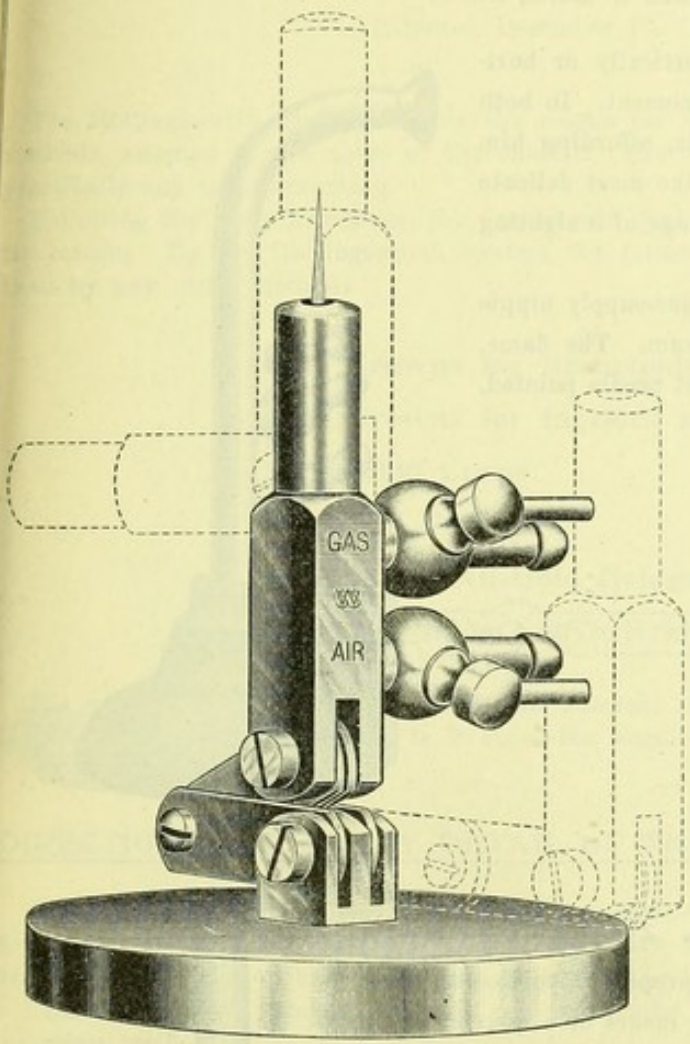
Price $5.50

MOUTH BLOWPIPES (Brass)

9-inch,	Plain	..... each	$0.16
10 "	"	..... "	.17
11 "	"	..... "	.18
12 "	"	..... "	.20
13 "	"	..... "	.22

GRÜNBERG BLOWPIPE

Designed by Dr. Josef Grünberg



Actual size

The Grünberg Blowpipe through its unique construction affords several important advantages in the soldering of small work like that of the crown- and bridge-worker, and the orthodontist.

First. It enables the operator to rest his hands firmly on the work-bench, so that he holds the piece to be soldered with absolute steadiness and brings it to the flame so as to concentrate its effect on the exact spot desired.

Second. It can be set at any angle,—even to throw the flame below the front of the work-bench,—can be raised and lowered at will. Whatever the position, it holds its place without the help of set-screw or lock; and the heavy base prevents tipping or slipping.

Third. The flame for its regular use is very small, and very steady; it may be considerably enlarged by a turn of the cocks, though it is not intended for large soldering work.

The size of the appliance, and something of the range of the upright and horizontal positions of the flame tube are indicated in the illustration.

The cocks are plainly marked "Air" and "Gas."

Nickel-plated all over. $3.00

LABORATORY GAS-BURNER No. 23

The first point about this Burner to attract attention as differentiating it from others is its inclining range. Instead of being rigidly upright it may be inclined at any angle, which is often a convenience; it also prevents foreign matter from gaining entrance and causing obstruction.

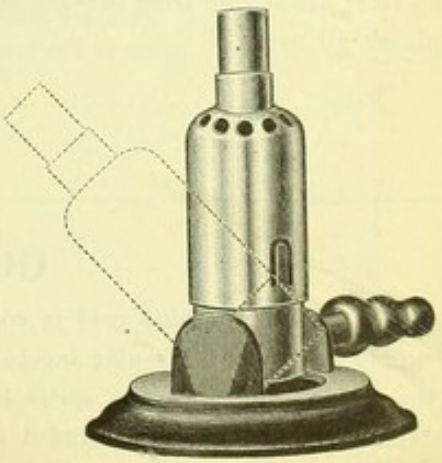
The combustion is perfect, and the flame very hot. The air is admitted at the top, and heated by circulating around the flame before it mixes with the gas. The air supply is regulated by sliding the outer tube up or down.

The Burner is entirely safe. The flame cannot blow out, nor can it recede, as the gas inlet is protected from side draft.

It is an economical Burner, producing a hot flame, with comparatively small consumption of gas.

Useful for waxing or soldering. When employed in waxing, any drip which may find its way into the outer tube through the air holes is readily moved and it cannot clog the gas pipe.

Price $0.50



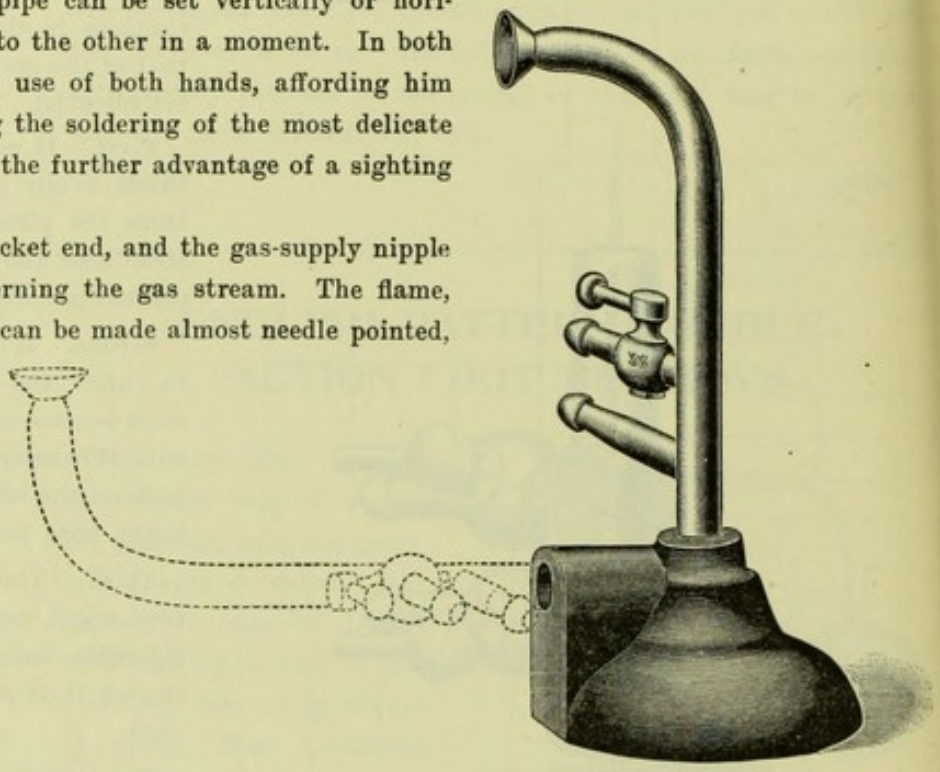
LANE BLOWPIPE

FOR ALL SMALL SOLDERING OPERATIONS

Designed by JAMES G. LANE, D.D.S.

The tube of the Lane Blowpipe can be set vertically or horizontally, or changed from one to the other in a moment. In both positions the operator has the use of both hands, affording him greater control and facilitating the soldering of the most delicate point. The fixed flame confers the further advantage of a sighting point.

The tube is plugged at the socket end, and the gas-supply nipple has a lever stop cock for governing the gas stream. The flame, which is under perfect control, can be made almost needle pointed, with a length of not over an inch and a half. May be operated by the mouth or the foot bellows. The apparatus when the tube is in the vertical position is about 5½ inches high. Tube nickel plated; base japanned.

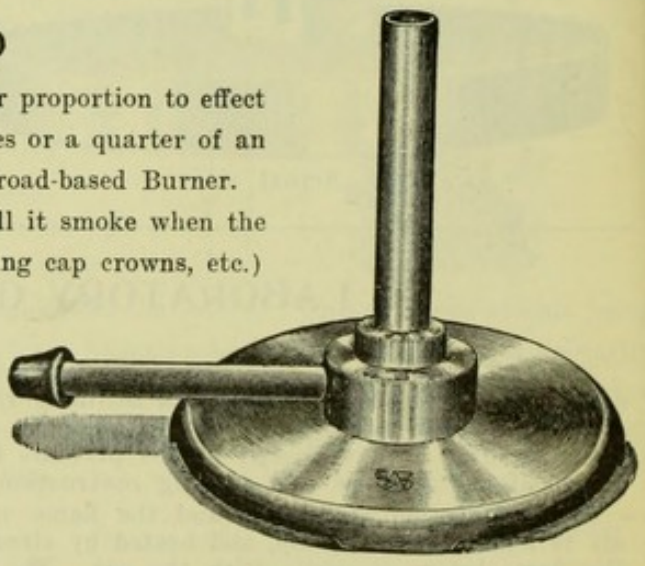


Price $2.00

GAS-BURNER No. 20

How to mix gas and air in a small burner, in proper proportion to effect smokeless combustion, whether the flame be three inches or a quarter of an inch high, has been accomplished in this neat, low, broad-based Burner.

It will not "pop" when the flame is low, neither will it smoke when the flame is quite high, and of greater volume (for soldering cap crowns, etc.) than any other Bunsen burner. Height of flame tube 2¼ inches; diameter of base 2¼ inches. Base on feet; air supply from beneath the base. Nickel plated all over.



Price $0.75

GOLD (CASTING) INGOTS

The demand for pure gold in convenient form and size for the casting of gold inlays has led us to supply it in small circular ingots of 1½ and 2 pennyweights each. These rest easily in the cup of the casting ring over the sprue hole, so that they get the full heat of the blowpipe flame. Made of 24-karat gold. Can be included as part of a mixed order for S. S. White Gold Plates and Solders at the prices quoted, see page 17.

HOLLINGSWORTH'S SYSTEM FOR CROWN- AND BRIDGE-WORK

Patented December 15, 1892; July 24, 1894

The Hollingsworth System affords the means for making artistic gold crowns and cusps by simple methods, adapted to the needs of the dentist. The variety of forms supplied assures the meeting of practically any case presenting.

Following the plain directions, the dentist will find no difficulty in arriving at accurate and artistic results. By the Hollingsworth System the following operations are performed with greater ease than by any other method:

Gold Crowns for Biscuspids and Molars

Gold Crowns for Incisors and Cuspids

Solid Gold Cusps

Porcelain Facings

Facings for All-Gold Bridges

Grinding Surface of a Bridge in one Continuous Piece

The various folding cases in which the different sets of Cusp and Crown forms are sold are shown in pages following. Figures A to F show the simple special appliances required.

DIRECTIONS FOR EVERY DETAIL OF THE PROCESS ACCOMPANY EACH SET

The illustration of Set No. 1 shows the complete set of cusp and crown forms as they are put up for sale. In the upper half of the case there are 240 cusp forms and facings for Bicuspids and Molars; in the lower half there are 40 forms for Incisor and Cuspid Crowns.

From this great number, patterns can readily be selected that will perfectly articulate with the opposing teeth.

On the same page are shown—

Fig. A, The polished plate upon which the dies are made.

Fig. B, a carbon rod for pressing the melted metal into the asbestos mold.

Fig. C, part of the asbestos sheet, 7 x 9 inches, in which dies are formed for casting solid gold cusps.

Fig. D, a box of annealed copper strips for taking the measure of the root to be crowned.

Figs. E and F, rubber rings in which the die is made from Melotte's metal.

Set No. 2 contains cusp forms and facings for Bicuspid and Molar Crowns only.

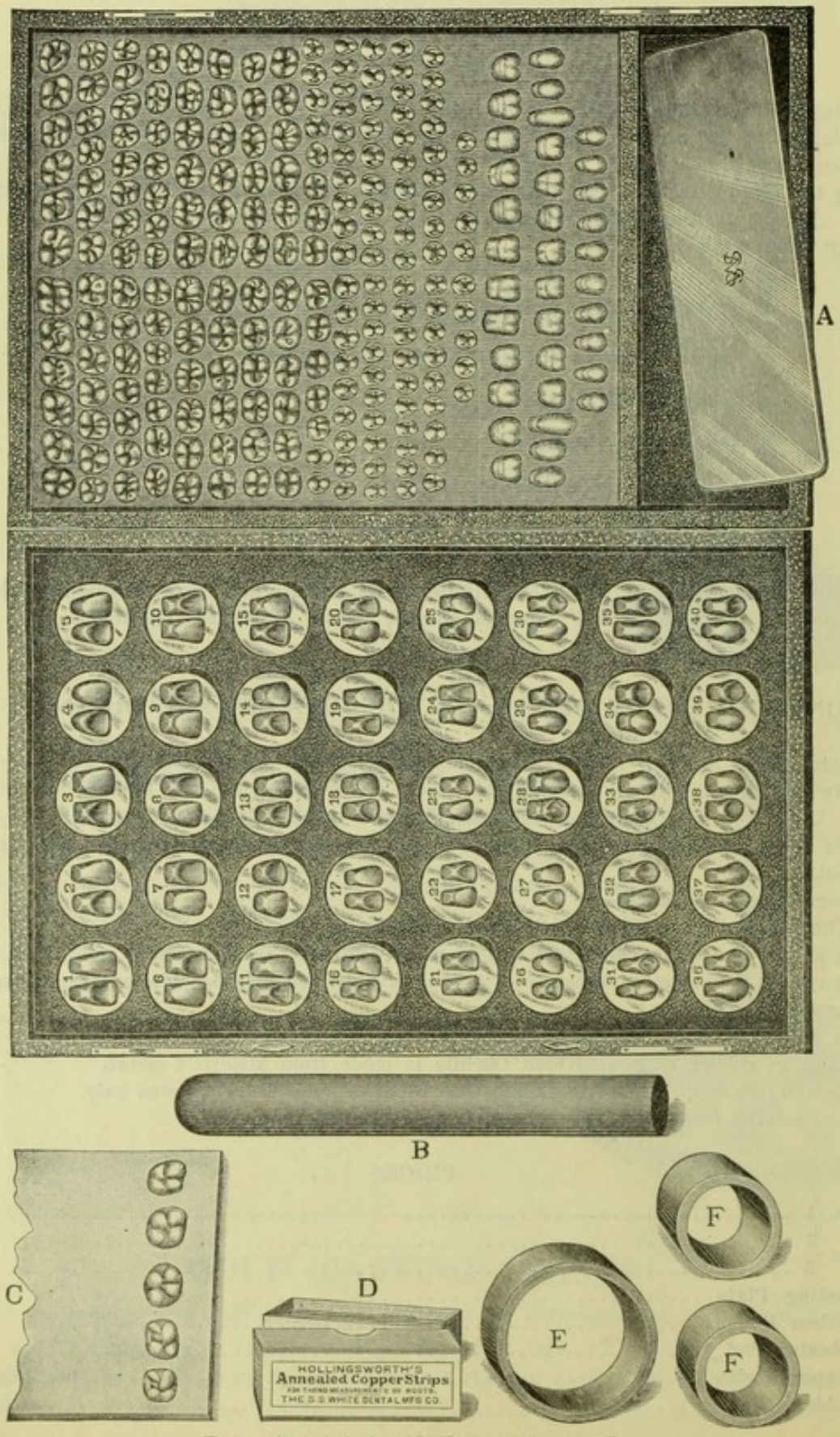
Set No. 3 contains forms for incisors and Cuspid Crowns only.

PRICES

Set No. 1		$18.00
" " 2		13.00
" " 3		9.00
A.—Casting Plate		.75
B.—Carbon Rod		.06
C.—Asbestos Pad		.20
D.—Copper Strips	per box	.12
E.—Rubber Ring	each	.15
F.— " "	"	.10

APPLIANCES FOR
HOLLINGSWORTH'S CROWN- AND BRIDGE-WORK SYSTEM

Set No. 1

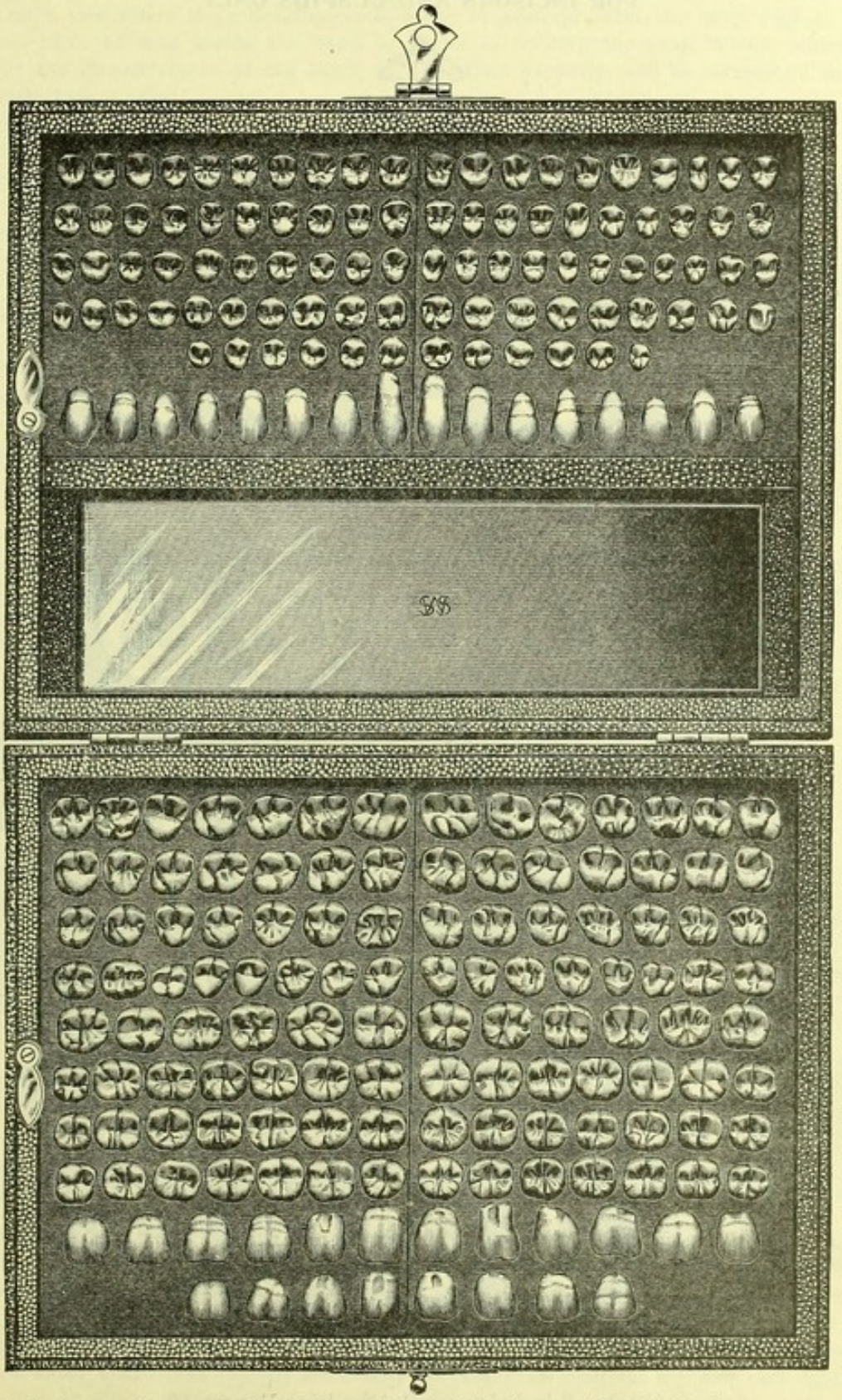


For price and description, see page 51

APPLIANCES FOR HOLLINGSWORTH'S CROWN- AND BRIDGE-WORK SYSTEM

SET No. 2

FOR BICUSPIDS AND MOLARS ONLY



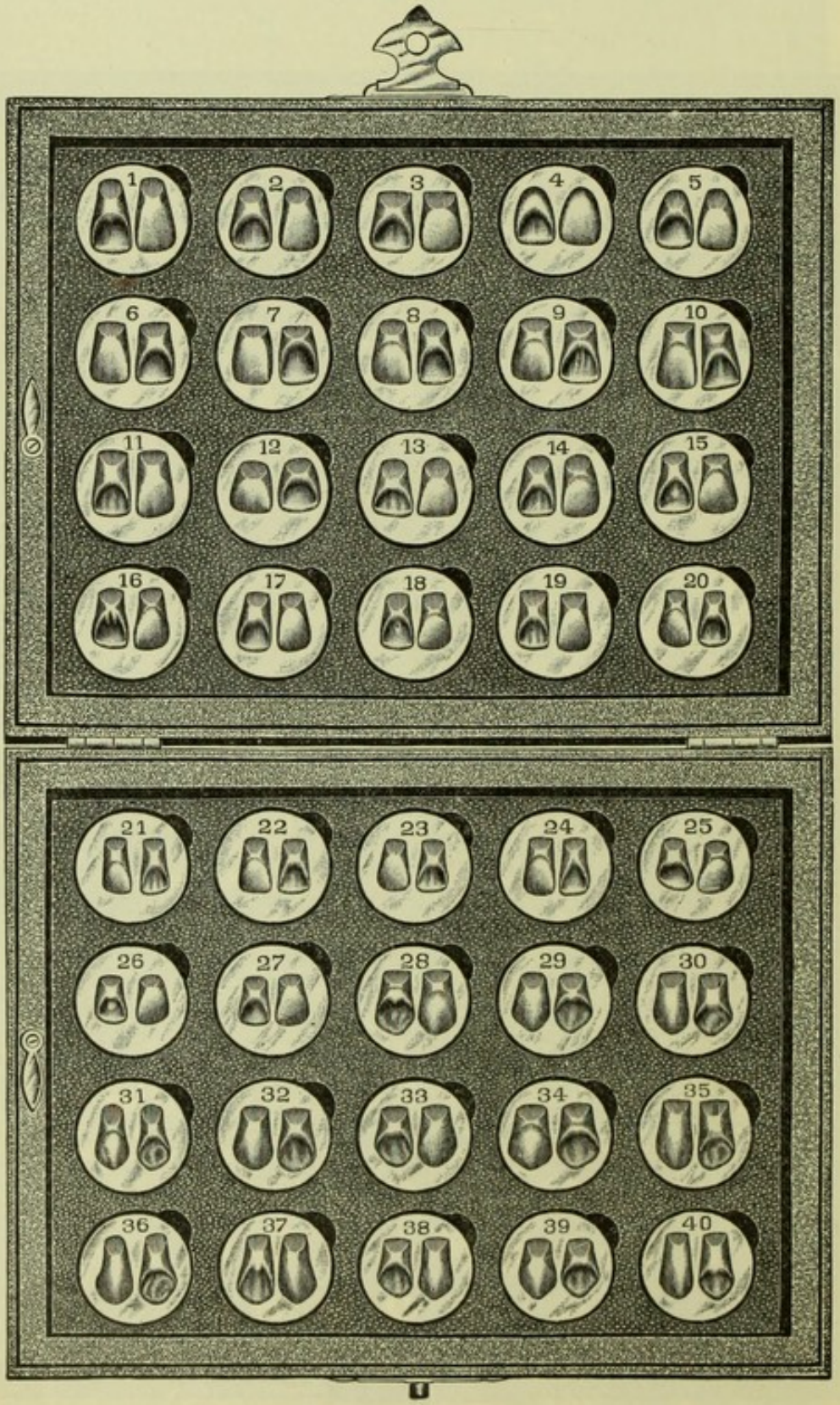
Set No. 2 includes appliances A, B, D, E, and two of F, shown with Set No. 1.

Price, Set No. 2 ..... $13.00

APPLIANCES FOR HOLLINGSWORTH'S CROWN- AND BRIDGE-WORK SYSTEM

SET No. 3

FOR INCISORS AND CUSPIDS ONLY



Set No. 3 includes one Rubber Ring F, page 52

Price, Set No. 3 ..... $9.00

HOLLINGSWORTH'S SYSTEM DIRECTIONS

To Make a Gold Crown (Bicuspid or Molar)

Make a band to fit the root in the ordinary way. Place the band in the mouth (see Fig. 1, A), nd cut off on a line where the adjoining teeth begin to turn to form the cusp (see *c*, Fig. 1, A). Place a small piece of wax inside the band to assist in holding the cusp button, which should be elected to fit the circumference of the band, to articulate properly, and to correspond in shape with he other teeth (see *b*, Fig. , A). Remove the button, nd place it on the mold- ng plate with the grinding surface up (see Fig. 2, A). Place the small rubber ring *d* around it, with the button as near the center as possible, and pour in a sufficient quantity of Melotte's metal to nearly fill the ring (Fig. 3, A). Start to pour the metal directly on top of the cusp, otherwise the flow of metal may force the cusp to one side and make an imperfect die. As soon as the metal sets, chill the surface by dipping in water for a moment, and then remove the rubber ring.

FIG. 1, A

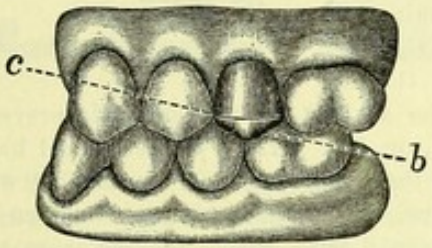
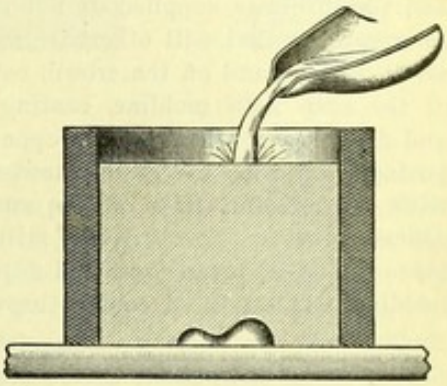


FIG. 2, A

FIG. 3, A



When the heat begins to return to the surface, a quick rap of the die on the bench will cause the cusp button to drop out and leave the mold ready to form the gold cusp. Now take a piece of lead, such as our lead hubs, and with a hammer drive into the Melotte-metal die (Fig. 4, A) to form the counter die (Fig. 4, A *d*).

FIG. 4, A

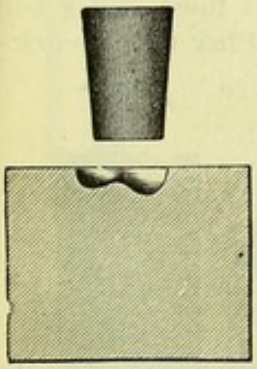


FIG. 4, A

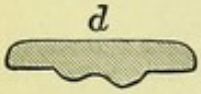


FIG. 5. A

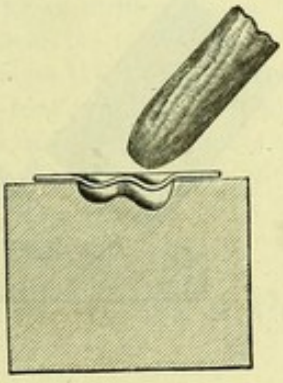


FIG. 6, A

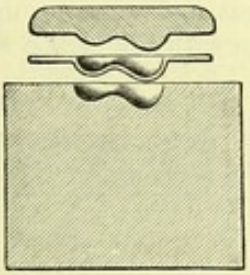


FIG. 7, A

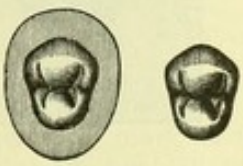
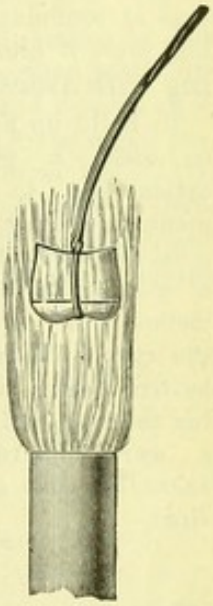


FIG. 8, A



Anneal the gold plate, and start the swaging process by coaxing the plate into the die by hand pressure (Fig. 5, A), using a piece of wood, which makes a depression for the lead counter die to rest in. Then place the counter die on the gold plate (Fig. 6, A), and drive to a partial fit. Remove the partially formed cusp, pickle it to remove traces of lead, and again anneal it. Place the counter die on the die without the gold plate and drive it in with a smart blow; this will resharpen all the lines of the counter die. Next replace the partly formed gold cusp in the die, and again drive the counter die into it for a perfect fit. Again pickle the cusp and proceed to cut the surplus metal from it with shears (Fig. 7, A), filling up the edges when necessary, and rub down the under surface on a

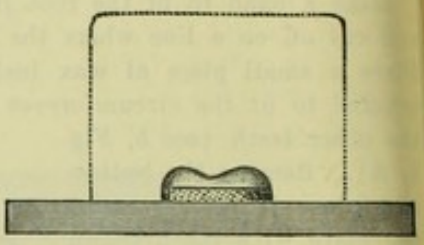
smooth file until it fits the band made for it (Fig. 1, A). Wire the cusp and crown together (Fig 8, A), place flux and solder in the cap, and hold over a lamp until soldered. Then finish in the usual way.

NOTE

If the forms of cusp buttons do not afford one which articulates perfectly, the difficulty is easily remedied by taking the button which most nearly answers, and building up the cusps with Melotte's moldine (Fig. 9, A). If necessary to make an absolutely perfect articulation, and the forms as supplied do not permit of it, select a cusp that will otherwise suit the case, set it on the band on the crown, cover the face of the cusp with moldine, coating the surface with collodion to prevent the saliva from crumbling it, and direct the patient to bite upon it, or, if a perfect plaster model has been made, articulate the opposing teeth with the cusp placed on the band, omitting the coating with colodion. Remove the cusp with the moldine, trim off the surplus, and proceed to cast as shown in Fig. 3, A. If a band is accidentally cut too short, it can still be utilized. Place moldine upon the molding plate, put the cusp button upon it, press down and adjust to make up the deficiency of the band, cutting away the surplus moldine. This will of course throw the soldering line a little farther up on the crown (Fig. 10, A).

FIG. 9, A

FIG. 10, A



To Make Solid Gold Cusps

Scrap gold can be utilized for making a solid gold cusp by casting in asbestos by the following method:

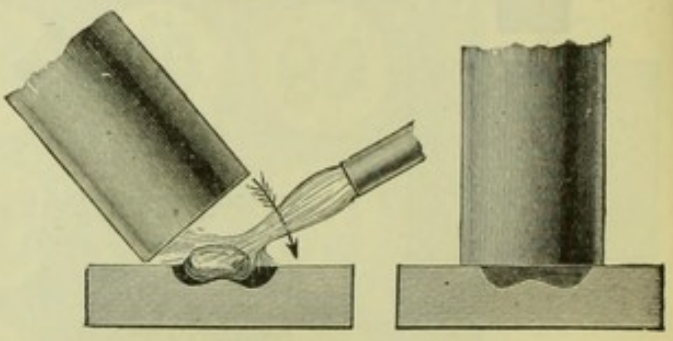
After selecting the desired cusp button, instead of making a mold in Melotte's metal, as before described, take a piece of asbestos board about one inch square and one-fourth inch thick, moisten it, and with a hammer drive the cusp button into it, flush with the surface of the button. (See Fig. 11, A.) Remove the button, and dry the asbestos in a flame. (Fig. 11, A, *a*.) When perfectly dry, place a sufficient quantity of gold scraps in the die made in the asbestos, and direct the blowpipe flame upon it until melted, inclining the carbon stick, as shown, against the die for the double purpose of confining the heat and warming up the carbon stick. When the gold is fused into a button, press it into the die with the carbon stick (Fig. 12, A). ***Avoid the use of Flux when working with asbestos.***

To build up a cusp to make a perfect articulation in this manner, sealing wax must be used instead of moldine, as in the method of swaging the cusp. Warm the button before applying the wax, and with a warm instrument shape the cusp as desired.

FIG. 11, A

FIG. 11, A, *a*

FIG. 12, A



To Make Gold Crowns (Centrals, Laterals and Cuspids)

Select from the forty different forms in the set that which is most suitable to the case in hand (Fig. 1, B). (The forms are in pairs, showing labial and lingual surfaces.) Take the measurement of the root to be crowned with one of the annealed copper strips, binding the strip around the tooth with pliers and pinching the joint firmly together. Trim off the surplus ends, and cut the measure (Fig. 2, B, *a*) through the center (Fig. 2, B, *b*), then bend the respective halves over the lingual and labial forms selected, at the necks, with the cut ends of the strips resting on the flat of the plate (Fig.

FIG. 1, B

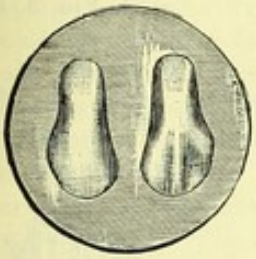


FIG. 2, B

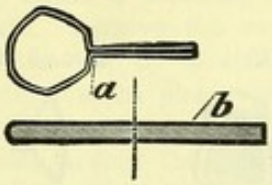


FIG. 3, B

FIG. 4, B

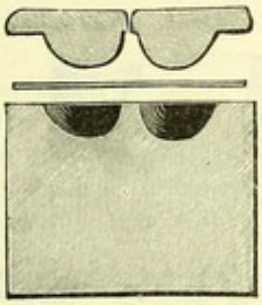


FIG. 5, B

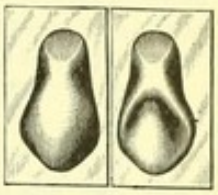
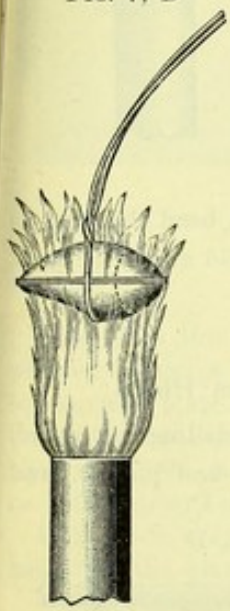


FIG. 6, B

FIG. 7, B



3, B). If the measure is larger than the form selected, build the latter up with moldine until the space between the form and strip is filled (Fig. 3, B, *b*). Avoid getting moldine on the approximal surface. Remove the strips, dry out the moldine, by passing through the flame a few times, then place the form on the molding plate with a rubber ring around it. Pour Melotte's metal into the ring as in forming the molar or bicuspid cusp, which makes a die of the two sections, lingual and labial. Make a lead counter die and proceed as directed in the making of a molar cusp, swaging the sections separately (Fig. 4, B). Trim off the sur-

FIG. 8, B

plus plate (Fig. 5, B), and square the opposing edges of the two sections by rubbing them over a dead smooth file. Bind the two sections together with wire with sufficient solder and flux inside (Fig. 6, B and Fig. 7, B), and proceed as in soldering an ordinary band. With a small mechanical saw cut off the upper portion where the tooth begins to slope back (about the dotted lines in Fig. 7, B). This leaves the crown as shown in Fig. 8, B, approximal and labial views. Drive on the root. If too small, place on the horn of an anvil and enlarge by hammering; if too large, band the root in the same manner as for a Richmond crown, grinding the tooth to fit it.

To Insert a Porcelain Facing

Make the gold crown as described. Select a porcelain facing suitable for the case (Fig. 1, C). Place the crown on the root in the mouth, and with an excavator mark on the face where the porcelain is to appear. Remove the crown and saw out, so that the facing will fit loosely. With a knife bevel the inner edge or seat for the facing (Fig. 2, C). Grind the facing to fit (Fig. 3, C). Back up the facing with No. 34 or 36 gage pure gold, punching holes in the backings for pins, annealing as required to readily conform it to the tooth (Fig. 4, C and Fig. 5, C). With a sharp knife cut a barb on each side of the pins in the facing, and press the barbs against the backing (Fig. 6, C), to keep the backing in place. Burnish down the edges well, being careful not to let the backing overlap the facing.

Place the facing in the space prepared for it in the crown (Fig. 7, C), and bind the two together (not too tight) with wire, wrapping the wire directly over the facing with asbestos to prevent discolora-

tion of the porcelain. Flux and solder by holding over a lamp as in the case of a band (Fig. 8, C). Then finish in the usual way.

FIG. 1, C

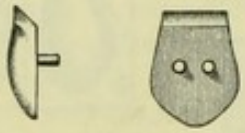


FIG. 2, C

FIG. 3, C

FIG. 8, C

FIG. 4, C

FIG. 5, C

FIG. 6, C

FIG. 7, C

FIG. 9, C

FIG. 10, C

If it is desired to use a platinum pin for anchorage, as, for instance, a Logan pin, bend the pins in the facing sufficiently to clamp the anchorage pin, and insert the pin through the gold crown (Fig. 9, C), finishing as before described. Fig. 10, C, shows a finished crown so made.

To Make the Grinding Surface of a Bridge in One Continuous Piece

After having crowned the teeth for the attachment of the bridge, take a bite in modelling compound, remove the compound, place the crowns in their impressions, make a cast of sand and plaster, and

FIG. 1, D

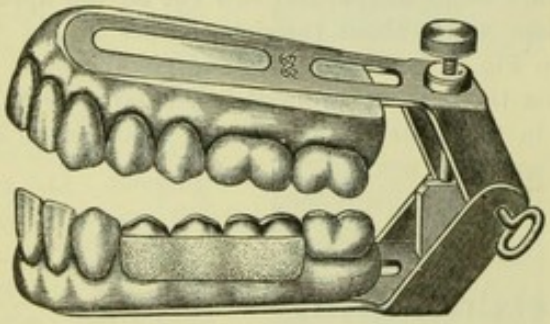


FIG. 3, D

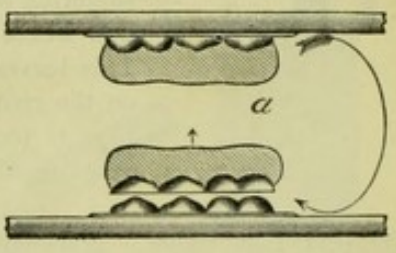
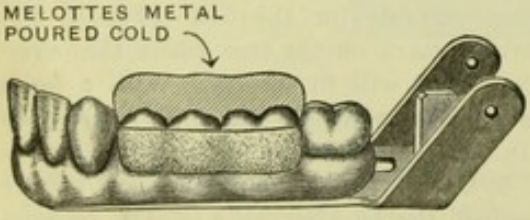


FIG. 2, D



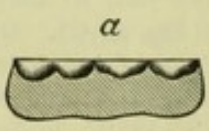
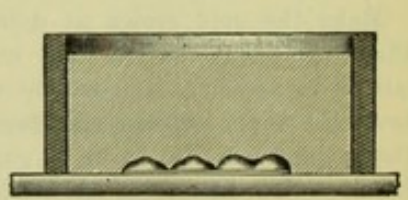


FIG. 4, D



place on an articulator; now put moldine between the abutments instead of wax, and get the articulation with cusp buttons the same as you would for plate teeth (Fig. 1, D). Then to remove the buttons without destroying the articulation, make a cup by pouring Melotte's metal, as cool as it will flow, on

e face of the cusp buttons. Heat the pouring lip of the ladle and use it to smooth out the half-ngealed metal, much as you would a soldering iron (Fig. 2, D). Then place a thin coating of oldine upon the molding plate. Remove the cup from the articulator with the cusp buttons in ace (Fig. 2, D, *a*). Transfer the cusp by inverting the molding plate (Fig. 3, D), and turn the sp buttons out upon the moldine on the plate with the grinding surface up (Fig. 3, D, *a*), and ey will occupy the same relative positions as when on the articulator.

Now place the large rubber ring around the buttons on the plate, and proceed to make a die with elotte's metal, as before described (Fig. 4, D). When cool remove the buttons and coat the face f the die with whiting. Invert the die and raise the rubber ring sufficiently high on it, and make a ounter die with the same metal by pouring as cool as possible (Fig. 5, D).

FIG. 5, D

FIG. 6, D

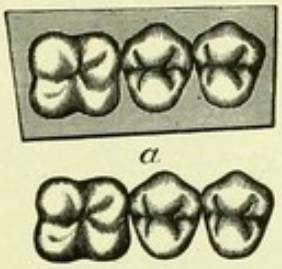


FIG. 7, D

This gives the male and female dies with which to swage the continuous grinding surfaces. Then proceed to swage the gold plate in one piece (Fig. 6, D), annealing as often as necessary. Trim off the surplus plate (Fig. 6, D, *a*), and place in position on the articulator. Cut the cusps out on the buccal face to avoid showing the gold (Fig. 7, D), grind the porcelain facings to fit the cusps, and back with gold, No. 34 or 36, letting the gold come to the cutting edge, the same as in a single crown, as before described.

If there is a space between the cutting edge and the porcelain, place a little wax in the joint to keep out the plaster investment, invest, remove the wax from between the joints, flux, and solder.

Facings for Making All-Gold Bridge

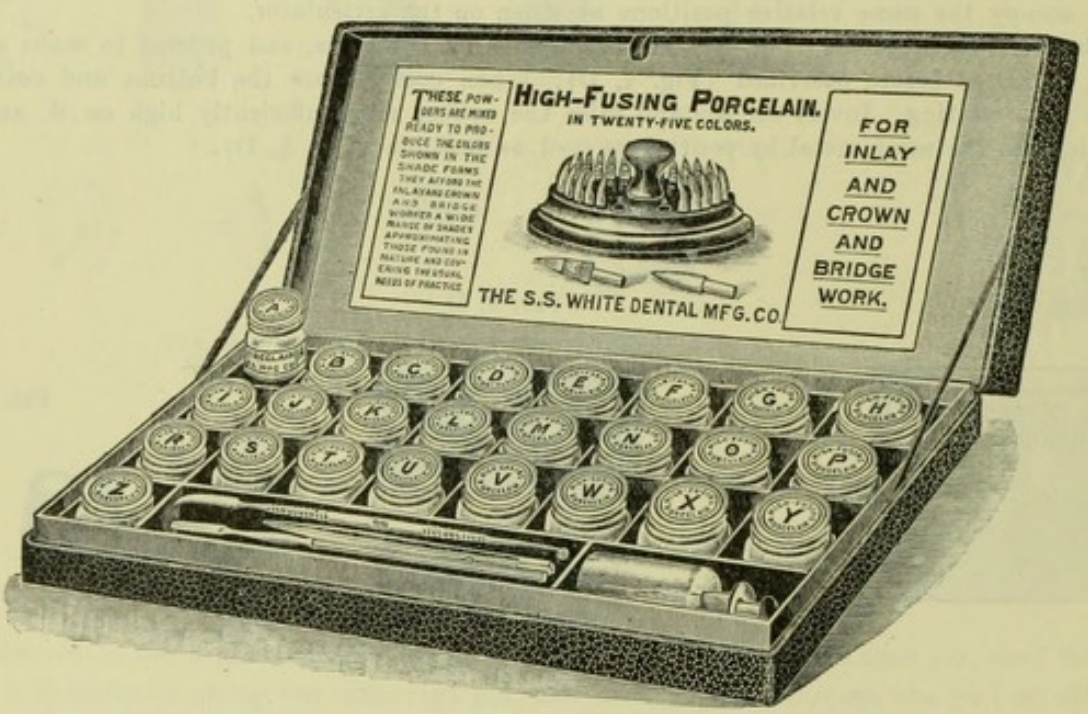
If it is desired to make an all-gold bridge, select the proper facings from the set, make a die of Melotte's metal, and swage up, the same as in the continuous bridge before described, and mount gold facings in place of porcelain.

NOTE.—In case it is desired to mount a gold tooth on a vulcanite plate, select the proper form from the set, and make the crown as described. Solder pins on the back, and vulcanize to the plate in the usual way.

Annealed Copper Strips

These strips will be found more desirable and practical than the ordinary binding wire for taking measurements of roots, especially of badly decayed teeth. To use them, the strip is passed around the tooth, and the joint pinched firmly with a pair of pliers. (Angle's Band-forming Pliers, page 31, for instance.) Where the decay runs under the gum, tack the ends of the strip together with soft solder, and with an excavator carry it well up under the gum.

HIGH-FUSING PORCELAIN OUTFIT FOR CROWN- AND BRIDGE-WORK



The S. S. White High-fusing Porcelain is especially adapted to the use of crown- and bridge-workers. Crowns made of this porcelain are strong and durable, approaching in this respect the best porcelain teeth. They can be readily carved, holding the fine lines of carving and their color through the process of firing. They can be fused in most of the electric, gas, or gasoline furnaces before the profession.

The twenty-five ready-mixed shades meet the needs of the majority of operators. The colors were carefully selected from several hundred, to afford the greatest range of selection with the closest approximation to the shades most commonly found in nature. They include grays, blues, yellows, browns, and greens,—all the shades in natural blendings likely to be required in average practice. They are also capable, by admixture, of indefinite expansion and variety of coloring.

PRICES

Complete outfit including 25 jars of Porcelain, 1 Inlay Carver No. 5, 1 Locking Tweezers "K," 1 Pipette Bottle, 1 Spatula No. 13, Shade Forms and Stand $12.50

Porcelains separately .....per jar .40

FOUNDATION PORCELAIN

At the solicitation of a number of dentists we have placed upon the market a series of Porcelains of a somewhat higher firing point than our well-known High-fusing Porcelain.

These have been submitted to a number of the practitioners who asked for them and have been unanimously approved.

They are made in four colors,—White, Brown, Yellow, and Blue,—and made in two textures, Nos. 1 and 2, the No. 2 being somewhat coarser than the No. 1, and therefore fusing a little higher.

This Foundation can be used for a first fusing when our High-fusing porcelain is to be used for the second firing.

Put up in quarter-ounce jars, with screw cap.

Price .....per jar $0.40

MINERAL STAINS FOR PORCELAIN WORK

Recent improvements—largely due to the practical experimental work of Dr. Edward A. Royce—in the S. S. White Mineral Stains, make their application easier and give better results.

The most important improvement is the grinding of the color powders under water until they are almost impalpable.

Scarcely second in importance is the change in the mixing medium, to glycerin (which is Dr. Royce's preference), or a properly prepared oil which we supply. These carry the finer ground powders better and distribute them more evenly.

A third important improvement is the intensification of two of the Stains, Yellow and Pink, and the addition of a Black Stain for the darkening of any of the colors.

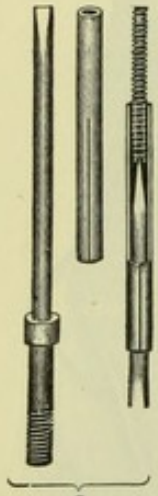
Our Stains are true Porcelains. With their fine texture and the improved mixing mediums they spread easily with a sweep of the brush. They flow and fuse smoothly. They fire at about the fusing temperature of pure gold, but stand a much higher heat without changing color. They fire true; firing merely intensifies the color shown by the wet tooth. The Stain becomes a permanent part of the tooth, can only be displaced by the wearing away of the surface. The simplicity of the outfit and the process places this beautiful work at the service of every practical dentist.

Full directions with every outfit. The outfit consists of eight stains: Brown, Yellow, Gray, Blue, White, Green, Pink and Black, a color guide, a mixing spatula, and two brushes for applying the Stains. The oil which we supply is not included in the Outfit, as many will prefer to use glycerin.

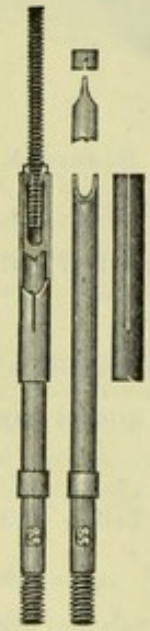
Outfit complete		$5.00
Extra Stains	per bottle	.75
Oil for Mixing	"	.15

APPLIANCES FOR MOUNTING TOOTH CROWNS AND ANCHORING FILLINGS

1
Long-handled Drill Chuck



2
Screw-driver and Sleeve

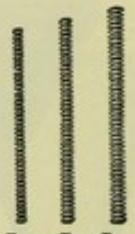


3
Nut Driver

4AA 4A 4B
Twist Drills

6AA 6A 6B
Screw Taps

Right-angle Drills and Taps

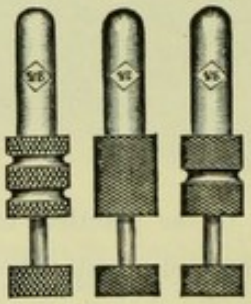


7AA 7A 7B
How Screw Posts made in Gold, Silver-platinum and Platinum

Enlarged Screw Post

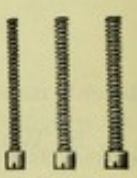
AA A B
Nuts for How Screw Posts

5
Short-handled Drill Chuck



8AA Screw 8A Post 8B Chucks

Hub for Right-angle Taps



AA A B
Screw Posts with Heads, made in Silver-platinum

By means of these appliances, very firm attachments,—*e.g.*, screws and nuts or headed screws or simple screw posts—may be employed for crowns with a strong sense of security in the mountings, because of the accuracy with which they are gaged. With Nos. 2, 4, 6, and 7 a reliable anchorage for large fillings may be obtained; while the hub, with the right-angle drills and taps, provides for the fixing of retaining screws in molar cavities and roots hitherto deemed inaccessible to such anchors. The screw posts are usually cut off after insertion, but short pieces may be inserted with No. 8, or slotted with a separating file and turned in with No. 2.

PRICES

No. 1.	Long-handled Chuck, with set screw for carrying the drills and taps	each $0.75
" 2.	Cone-socket Screw-driver, with sliding split tube or gage which serves as an adjustable holder for the screw post	" .50
" 3.	Nut Driver, with Split Tube for Cone-socket Handle, 3 sizes for Screw Posts with Nuts	" .50
" 4.	Twist Drills, 3 sizes	" 20
" 5.	Short-handled Drill Chuck with Set Screw	" .50
" 6.	Screw Taps, 3 sizes	" .50
" 7.	Screw Posts, Silver-platinum. (See next page.)	
Nuts for Screw Posts, Silver-platinum. (See next page.)		
No. 8.	Screw-post Chucks, 3 sizes	" 1.50
Screw Posts with heads, Silver-platinum. (See next page.)		
Right-angle Drills, 3 sizes, AA, A, and B		" .30
" Taps, 3 " AA, A, " B		" .50
Hub for Right-angle Taps		" .20

SCREW WIRE, POSTS AND NUTS

SCREW WIRE

	No.	Length	Diam.	Threads to inch	Price per rod
Morrison's 12-K. Gold	1	3 in.	.052		$1.50
" " "	2	3 "	.042	112	1.20
" " "	3	3 "	.035		1.00
Talbot's 18-K. "	4	2 "	.060		1.50
" " "	5	2 "	.058		1.50
" " "	6	2 "	.051	54	1.00
" " "	7	2 "	.046		1.00
" " "	8	2 "	.041		1.00
Anchor " "	9	2 "	.030	100	.50
" Platinum	10	2 "	.030		1.50

SCREW POSTS

	No.	Length	Diam.	Threads to inch	Price each
How's 14-K. Gold	AA		.051		$0.35
" " "	A		.058		.50
" " "	B		.065		.60
" Silver Platinum	AA		.051		.15
" " "	A		.058	48	.15
" " "	B		.065		.20
" Platinum	AA		.051		1.00
" "	A		.058		1.20
" "	B		.065		1.50

SCREW POSTS WITH HEADS

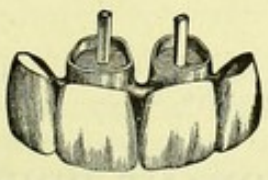
	No.	Length	Diam.	Threads to inch	Price each
Silver Platinum	AA		.051		$0.25
" "	A	⅝ in.	.058	48	.25
" "	B		.065		.30

NUTS FOR SCREW POSTS

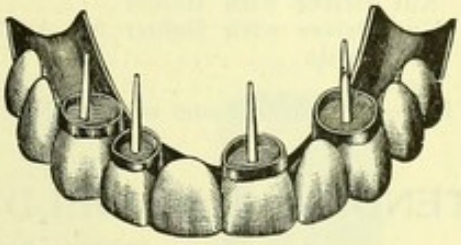
Gold, three sizes, AA, A, B	each $0.20
Silver Platinum, three sizes, AA, A, B	" .10
Platinum, three sizes, AA, A, B	" .25

DENTAL CUTS

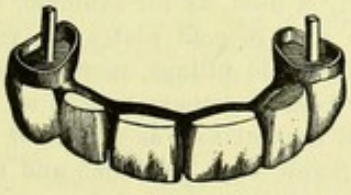
Illustrating Bridge Work



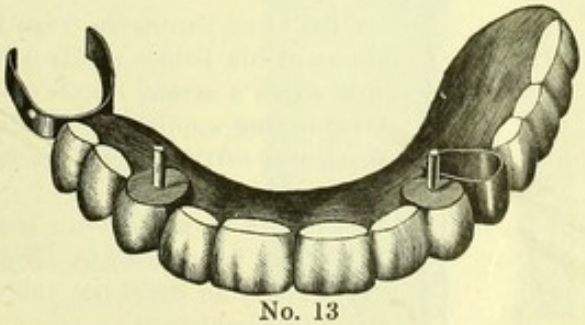
No. 10



No. 12



No. 11

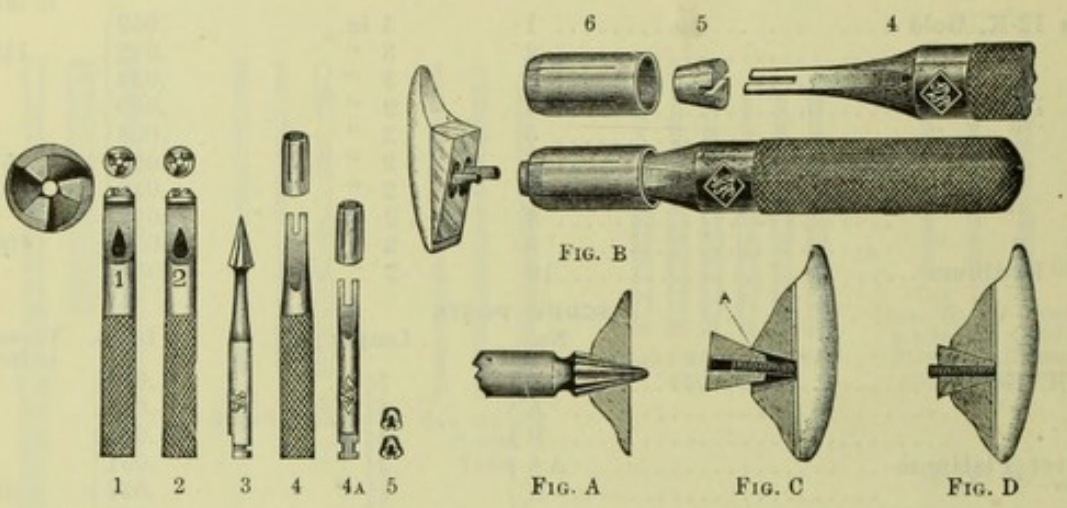


No. 13

Price, No. 10	$0.35
" " 11	.35
" " 12	.40
" " 13	.40

BRIDGE-REPAIR TOOLS

Approved by DR. E. A. BRYANT, inventor of the original set



The idea in the use of these Bridge-repair Tools is to fasten the repair tooth to the bridge by means of threaded nuts. The method is simple, speedy, and gives a strong result. It may be applied also in new work to make it removable.

Full instructions accompany the tools.

The Set consists of two screw-cutting dies (Nos. 1 and 2), a reamer (No. 3), a nut driver (a choice of two forms, Nos. 4 and 4A), and two gold nuts (No. 5); Nos. 1, 2 and 4 are manipulated between the thumb and finger; Nos. 3 and 4A with the Right Angle.

The larger of the two dies, No. 1, is for starting the thread on the pins of the repair tooth, and No. 2, which is smaller, for completing it. The reamer, No. 3, is for shaping the holes drilled in the backing for the pins so that they will receive the nuts (No. 5), to the taper of which it corresponds. The nut driver (No. 4) is for sending the nuts (No. 5) home upon the pins. A holder (No. 6) keeps the nut in line while being started. *An additional form* (4A) *of the nut driver is made for use in the Angle Attachments, but not included in the set, must be ordered separately.*

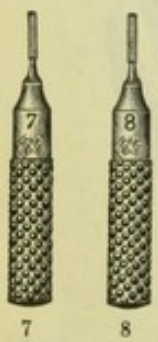
The numbered illustrations show the sizes; the lettered figures the manner of using the appliances.

In ordering No. 3, state for which Right Angle it is wanted.

PRICES

Nos. 1 and 2.	Tooth-pin Dies	each $0.75
No. 3.	Angle Reamers	" .25
" 4.	Nut Driver with Holder	" .25
" 4A.	Nut Driver with Holder for Angle Attachments	" .25
" 5.	Gold Nuts	" .50
" 6.	Holder	" .10
The Set in box containing one each of Nos. 1, 2, 3, 4, and two of No. 5		3.00

EXTENDING THE FIELD OF THE BRYANT BRIDGE-REPAIR METHOD



A Drill and two Screw Taps suggested by Dr. Bryant greatly extended the usefulness of his Bridge-repair Method. These will be found to fill a want in any work where a screw, whether headed or not, is used, as for example, the making of regulating appliances; setting platinum pins in gold plates for vulcanite attachments; setting anchorage screws for large gold fillings, more especially when cast; in holding the parts of split roots or teeth together; and so on. They can be used with or without the regular set, but are not sold as a part of it.

The Drill is operated by the engine; the Screw Taps by thumb and finger; they vary slightly in diameter, the smaller being used to start the screw thread, the larger to complete it.

PRICES

Nos. 7 and 8,	Screw Taps	each $0.75
No. 9	Drill, for Chuck Handpiece only	.30

MELOTTE'S IMPROVED GOLD CROWN DIES

In these sixteen Dies we have a simple, handy means for quickly swaging up bicuspids and molar crowns. The forms were carefully selected to afford typical cusps and occluding surfaces, which should be practical to use in most cases coming to the hands of the dentist. Each is designated by raised lettering and number. Made of case-hardened steel, there is plenty of strength to assure durability. A spring at the side of the socket in the holder retains the dies firmly, but does not interfere with their easy removal. Holder made of steel.

Put up in a wood case about 6 x 3½ x 1⅜ inches.

Price, per set..$6.00

SWAGING DEVICE

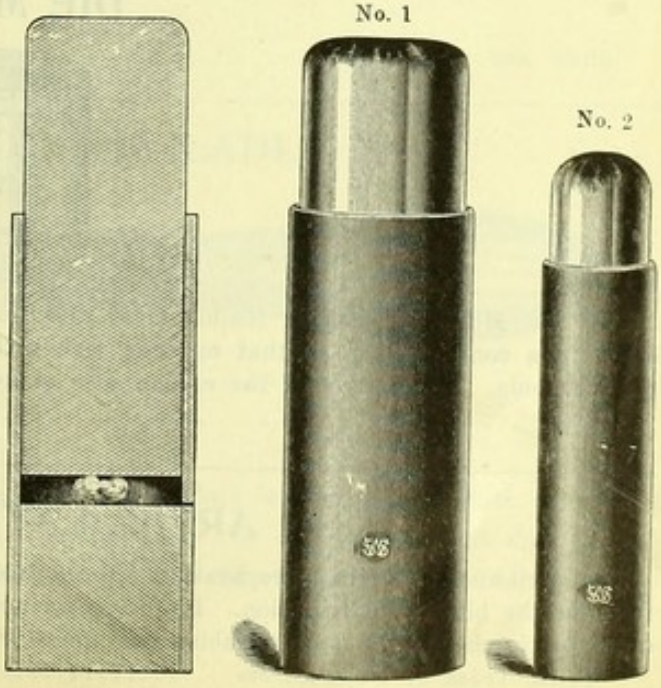
Designed by Dr. Fred A. Peeso

This pair of Plunger Swagers will enable the crown- and bridge-worker to quickly and economically swage a piece of gold plate for a band or cusp. A strong brass barrel is solidly clamped at one end with a substantial steel plug, forming an anvil, and fitted closely with a heavy steel plunger. The faces of plunger and anvil are finely finished, and present two perfectly flat, smooth surfaces to each other, which will hammer or swage out a piece of plate to a uniform thickness throughout. Keep the scrap clean, and be sure that the proper carat is used for the purpose in hand.

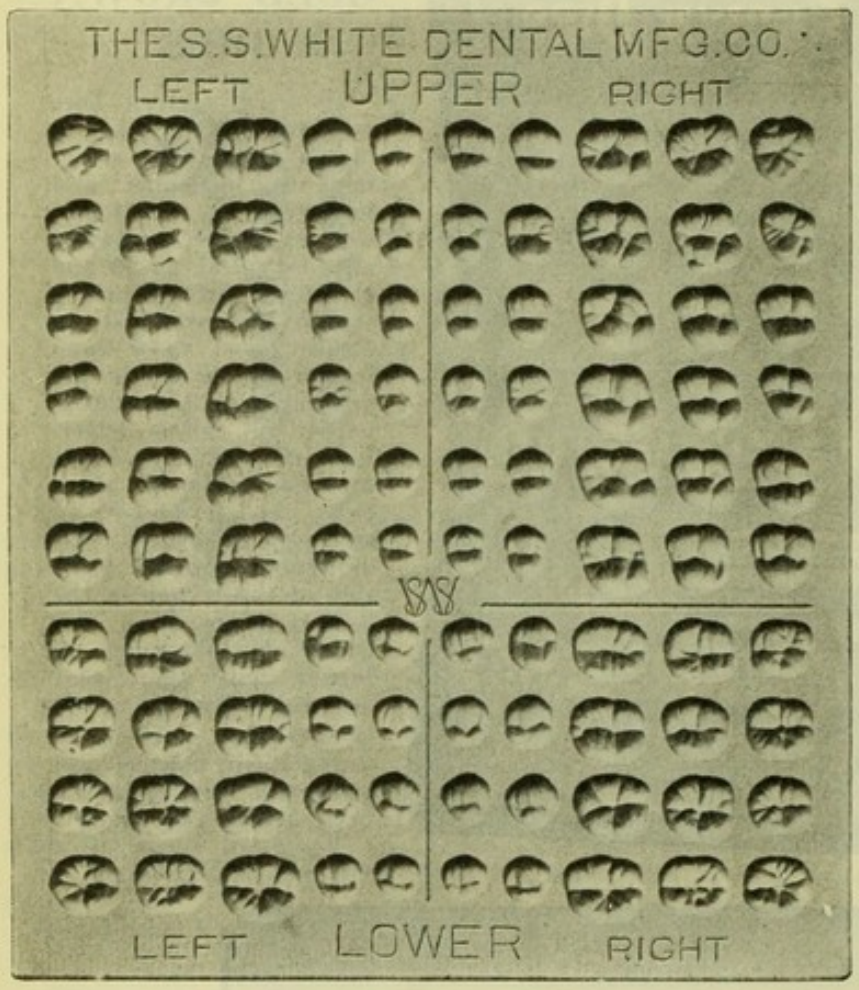
Two sizes. No. 1, about 5½ inches long over all by 1½ inches in diameter of plunger, is large enough to "swage" metal of sufficient size to make any band.

No. 2, about 4½ inches long over all by ⅞ inch in diameter of plunger. A convenient size for swaging pure gold for cusps.

Price, No. 1..... $2.75
" " 2..... 1.60



S. S. WHITE CUSP DIE PLATE No. 5 FOR BICUSPIDS AND MOLARS



We have introduced into this new Die Plate a marked improvement in the balancing of the forms. Whatever form you find for the right side, you find its mate for the left side, and all arranged simply for easy reference and identification.

A far-reaching advantage of this arrangement is this: Heretofore in fitting a band to a cusp cap you have had to pinch the band into shape with contouring pliers,—a more or less uncertain way. With this balanced Die Plate you run a die of the corresponding (opposite) form, drive it into the cusp end of the band, and you have a perfect fit to the cusp cap already made.

The variety of forms is ample. In selecting them attention was paid to the variations found in nature, so that the range of the types of cusps will meet every need. There are eighteen upper and twelve lower molars for each side, and twelve upper and eight lower bicuspids for each side, a total of one hundred forms. So carefully have these forms been selected to cover typical cases, that they will be found more useful than a large number not so well chosen.

The plate is of a very hard bronze, capable of withstanding the hard usage of a busy laboratory. The edges of the intaglios are so finished that there is little or no chance of their cutting the plate in swaging. Fine frosted finish.

Price $5.00

DIE MOLD

This Die Mold, for making fusible-metal dies for the S. S. White Cusp Die Plate No. 5, is calibered in a conical form, so that one end makes the dies with ample hubs for molars, the other those for bicuspids. The coning of the caliber also makes the hub easy of removal from the mold.

Price $0.15

ARTICULATING PAPER

This well-known English preparation affords a simple, ready, and effectual means for showing defects in the bite or articulation. Its manufacturer claims that it is entirely free from oil, smell, or taste; is chemically unchangeable, and almost everlasting. Put up in books of twelve sheets.

Price, Thick or Thin Sheets .....per book $0.12

THE S. S. WHITE SWAGING OUTFIT

FOR INLAYS (PORCELAIN OR GOLD) CUSPS, CROWNS AND BACKINGS

To facilitate the use of the S. S. White Dental Swager, we supply the Outfit here scheduled:

DENTAL SWAGER for swaging matrices, cusps, crowns, and backings (see page 68);

DENTAL LAC for taking impressions;

CELLULOID STRIPS for inclosing the space of which the impression is to be taken;

MOLDINE for investing the impression and for packing the swager;

INLAY METAL (see below) for making models or dies;

POURING LADLE (see below) for melting and pouring the inlay metal;

RUBBER DISKS for preventing the adhesion of Moldine to the matrix.

This Outfit comprises all the helps required in the minor swaging operations of modern dentistry. There is nothing lacking for accurate, rapid work. Equipped with this Outfit, the dentist is prepared to swage,—

Matrices for porcelain inlays
Hollow gold inlays
Solid gold inlays—filled with Moss Fibre
Gold Cusps
Tooth Backings
Seamless gold crowns
Two-piece gold crowns

A booklet telling how to use the Outfit in these operations free upon application.

Price, S. S. White Swaging Outfit, complete $4.25

THE S. S. WHITE INLAY METAL

Especially compounded for the purpose of making models upon which matrices of gold and platinum can be perfectly swaged. It can also be used for making dies or dentures upon which clasps, etc., can be fitted, and for making models for crowns and regulating appliances.

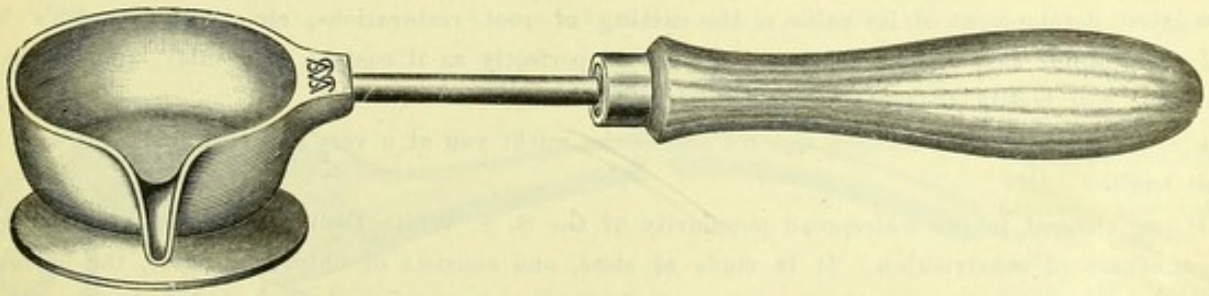
S. S. White Inlay Metal flows at a temperature so low that it may be poured on Modelling Composition, or Dental Lac. It sets immediately, making a sharp, accurate model which separates easily from the impression, and is hard enough to withstand the necessary swaging and burnishing of the matrix to place.

May be used over and over again.

Put up in a box containing 3 ingots.

Price ..... per box $0.25

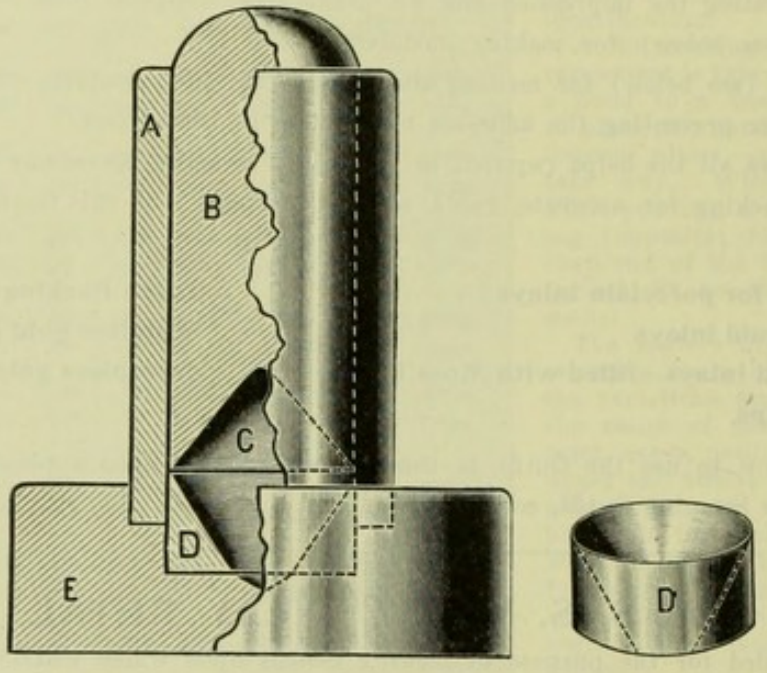
THE S. S. WHITE POURING LADLE No. 9



This ladle has a cast metal bowl with a long, narrow lip, slightly curved to facilitate control of the molten metal. The base is flared in an inverted saucer shape, to spread the flame and prevent ignition of the inlay metal. The wood handle is detachable. The illustration is three-fourths actual size.

Price $0.35

THE S. S. WHITE DENTAL SWAGER



Partly sectional view of the S. S. White Swager about three-fourths actual size. A, cylinder; B, plunger; C, cavity in plunger; D, cup; E, base.

The S. S. White Dental Swager was first brought out to meet the needs of individual porcelain workers in swaging matrices for inlays. Its many-sided usefulness at once widened the field for its application, and it was promptly accepted for all the smaller swaging operations of the dentist.

It is a universal Swager, because it is large enough for the largest crown, small enough for the smallest inlay, and you can swage in it inlay matrices, cusps, backings and crowns. Because also, you can use any of the usual substances in it for the cushion,—Moldine, water bags, cornmeal, or shot. We recommend Moldine, because it packs down hard without rebound.

The latest development of its value is the casting of root restorations, etc., with Weston's New Metal and similar substances. It does this just as perfectly as it casts a gold inlay, and thousands of dentists can testify to its superiority in gold casting.

The S. S. White Dental Swager and its accessories outfit you at a very low cost for the entire line of cast work.

A strong element in the widespread popularity of the S. S. White Dental Swager is its simplicity and soundness of construction. It is made of steel, and consists of only four parts, the barrel or cylinder, the plunger (hardened), the cup, and the base. An extra cup is included, to permit two cases to be carried along at once.

We will be glad to send you a booklet, telling all about the Swager and its uses.

Price complete, as shown	$3.00
" Cup "D" separately ..... each	.25

ACCESSORIES FOR THE SPLIT-MOLD METHOD OF SWAGING GOLD CROWNS

The accessories for the S. S. White Dental Swager illustrated and described below, extend its sphere the split-mold method of making crowns.

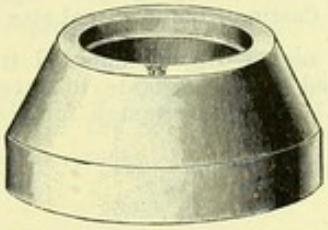
DIVIDING MOLD CUP

Dividing Mold Cup—¾ size

A nickel-plated metal Cup, 1 inch in diameter, slightly coned inside, with an opening in the bottom that when inverted over the model, fusible metal can be poured through the perforation to form e mold. On two opposite sides are internal ribs to form grooves in the mold so that it can be adily split to release the model. The bottom is scored across to show the location of the ribs.

Price $0.30

KNOCK-OUT BLOCK



Knock-out Block—¾ size

A cast-iron ring (nickel plated), 1¾ inches outside diameter, ¾ inch high, with coned top and internal annular shoulder, forming a rest or holder for the Dividing Mold Cup to facilitate the knocking out of the fusible metal mold.

Price $0.30

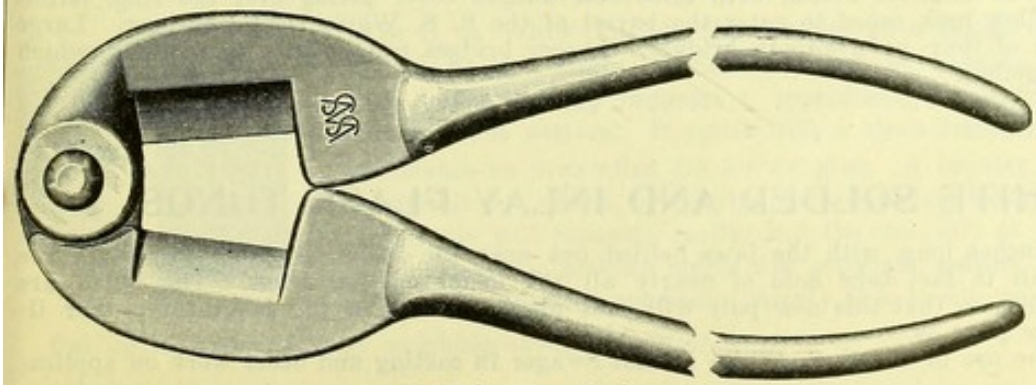
PUNCH

Punch—¾ size

A punch of hard wood, with one end coned down to enter the perforation in the Dividing Mold Cup, for knocking out the mold.

Price $0.05

MOLD SPLITTER



Mold Splitter—¾ size

An appliance working like a nut cracker, with cutting blades between the fulcrum and the handles. The mold is easily split while still warm by inserting the blades in the grooves at its sides and bringing gentle pressure upon the handles.

Price $0.50

THE S. S. WHITE DENTAL SWAGER IN CASTING WORK

The many-sided usefulness of the S. S. White Dental Swager became most apparent when the ca ing of inlays was introduced. It was quickly seen to be an almost ideal appliance for producing t pressure whereby the molten metal is forced into every portion of the mold. With the accessori hereafter enumerated it covers the entire casting problem, affording the simplest as well as one of t most effective means for

Casting gold inlays
Casting gold crowns
Casting gold cusps for shell crowns
Casting gold bridges
Casting gold mountings for Logan or detached-post crowns
Casting gold backings for Richmond crowns with removable Facings

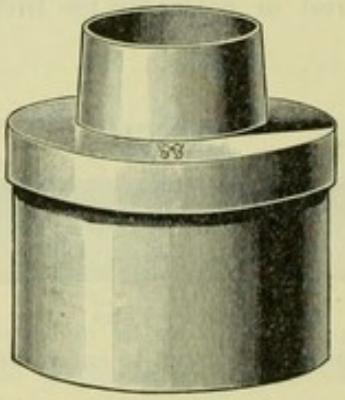
CASTING RING FOR INLAYS AND CROWNS

Casting Ring—¾ actual size

This small Casting Ring is of brass, nickel dipped, about 1 inch high, with an internal diameter of about ⅞ inch. One end is slightly coned on the outside to enter the barrel of the swager, while the other fits the depression in the base. It is large enough for the investment of any inlay or crown, or of even a two-tooth bridge.

Price $0.25

BRIDGE FLASK



Bridge Flask—¾ actual size

Bridges up to four or five teeth can be cast in a single piece in the Bridge Flask herewith described. A metal ring, 1½ inches diameter inside, with removable flanged cover fitting over the ring, terminating upward in a hollow neck coned to enter the barrel of the S. S. White Dental Swager. Large enough for the casting of four- or five-tooth bridges. Larger bridges can be cast in sections, which can then be soldered together.

Price $0.75

S. S. WHITE SOLDER AND INLAY FLASK TONGS

These tongs are 12 inches long, with the jaws bellied out near the beaks to grasp and carry the casting ring. They will in fact take hold of nearly all the usual casting rings. The beaks are curved, as in solder tongs, so that this new pair will find plenty of use in the laboratory. For illustration and price, see page 39.

Full directions for the use of the S. S. White Dental Swager in casting and other work on application.

S. S. WHITE INLAY MODEL WAX

TWO COLORS—BLACK AND GREEN

The foundation of successful gold inlay casting is an accurate model of the cavity, for the making of which the S. S. White Inlay Model Wax was devised. It is a specially prepared filtered product, is fine and smooth and hard, without grit or fiber, and has therefore beautiful carving qualities. It softens at a moderate heat (wet or dry, the latter preferred), takes a clean, sharp impression, and can be invested without danger of distorting its shape. It is absorbed into the investment during the heating up of the case and burns out completely, leaving no residue and assuring a good clean mold.

Of the two colors, the black is the harder,—requires a somewhat higher temperature to soften it, and is therefore better suited to warm weather work or tropical climates.

Put up in sticks, eight to the box.

Price, either color ..... per box $0.35

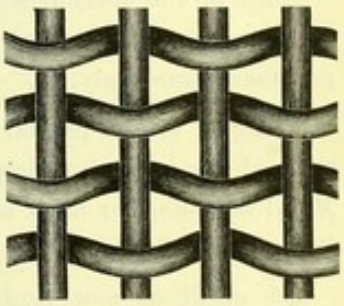
S. S. WHITE INLAY INVESTMENT COMPOUND

An accurate model of the cavity would be of no avail unless a mold which should produce exactly its every outline could be provided. The S. S. White Inlay Investment Compound supplies this mold. It is fine ground, gives a sharp reproduction of the detail of the model, and stands the high heat of the casting process. When set it is slightly porous, so that the wax of the model, driven in during the heating up, is carbonized as the higher temperatures are reached, leaving the mold perfectly clear and smooth for the reception of the molten gold. It is of course excellent as an investment for any high-heat soldering, as where platinum solder is used.

Put up in metal quart boxes.

Price ..... per box $0.50

HEATING FRAME No. 4



A woven-wire frame (No. 3 mesh) made of wire No. 10 gage, say ⅛ inch thick. In size the frame is about six inches square. It is very strong and the wire is heavy enough to stand a high heat. Its special usefulness is that it provides cast-inlay workers with a durable frame for drying out investments over a Bunsen burner, for instance, our No. 12 or 13 with Spider as shown on page 45.

Price $0.25

S. S. WHITE FUSIBLE METAL

The S. S. White Fusible Metal melts at a temperature so low that in a moment or two after it congeals, it can be handled with bare fingers. It takes a clean, sharp impression, reproducing accurately every detail of the surface of the pattern. It splits with a clean fracture.

It makes an unexcelled die for swaging. A counter die can be run on the die after it has cooled, by pouring the metal just before it congeals. Die and counter die will separate easily, and the one will fit the other. This metal also is ideal for making molds for porcelain crowns, its clean fracture and easy putting together conducing largely to accurate work.

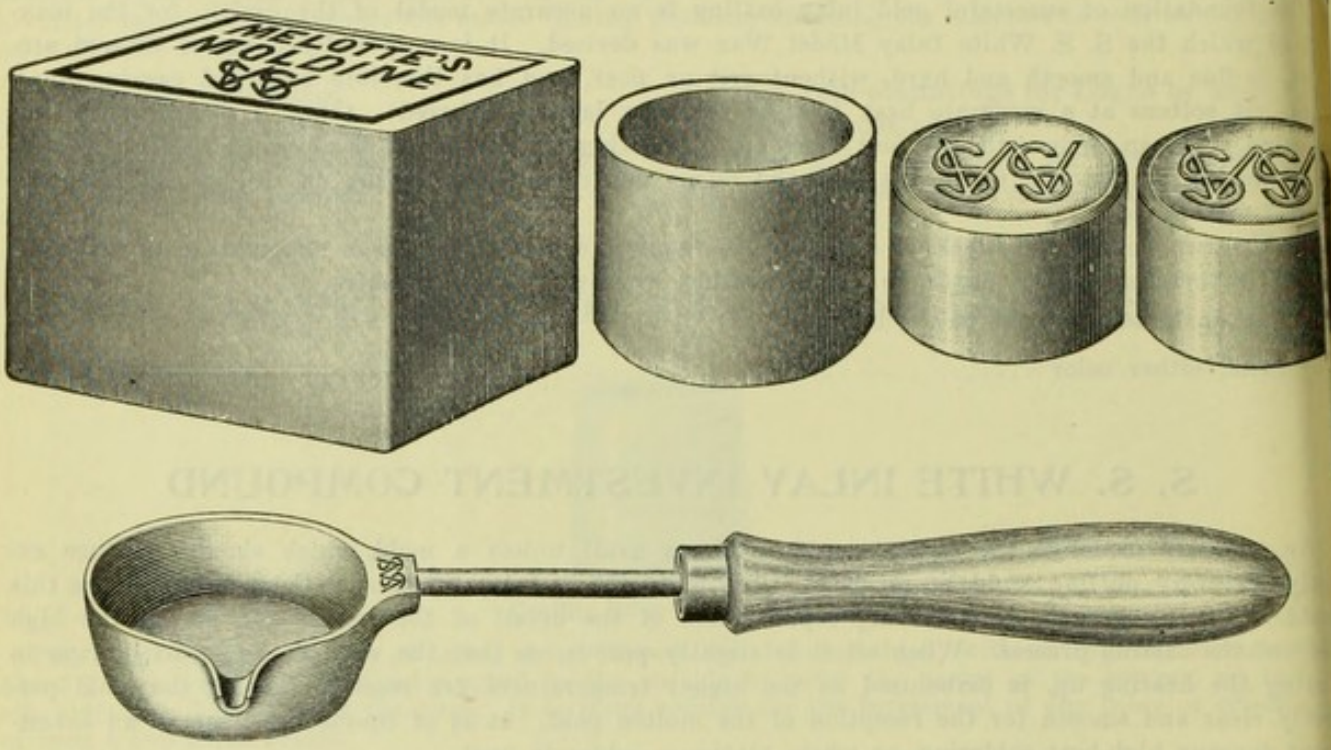
Put up in cubical ingots, weighing about 2½ ounces.

Price ..... per ingot $0.40

Registered

OUTFIT FOR MELOTTE MOLDINE AND FUSIBLE METAL

in U. S. Patent Office



Time, the wonder worker, has been gradually extending or rather multiplying the uses of Melotte Moldine and the Fusible Metal which is its complement, until the dental office which has not a Moldine Outfit is hardly complete in its appointments.

Much of the development in dental practice in the past few years has been along lines in which the many-sided usefulness of Moldine could be applied advantageously. Moldine has grown in importance accordingly.

So many of the partial impressions in Moldine required in the practice of the day can be made without the help of an impression tray, that we have dropped the tray from the outfit. The Fusible Metal on the other hand has come into so common use, that a handy ladle for melting and pouring it has been added.

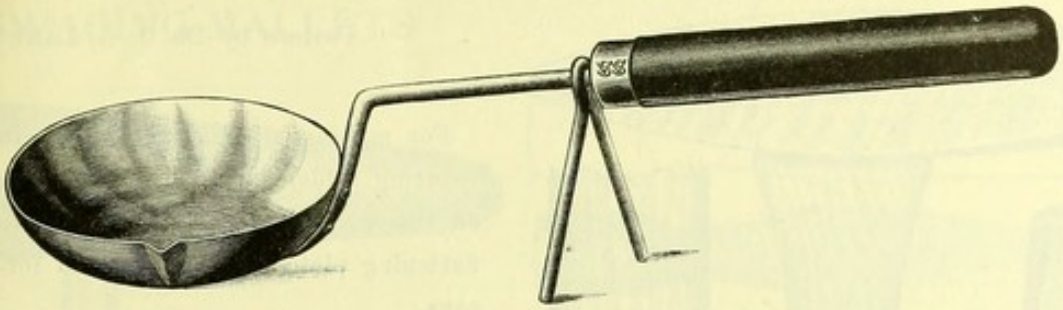
The outfit as now made up includes: Melotte Moldine (½ lb.), 1 Rubber Ring, 2 Ingots of Melotte Fusible Metal, and 1 Melting Ladle (our No. 8).

With this outfit you are prepared for all the numerous calls for taking impressions of the end of a root or of one or two teeth; for building up teeth for models; for making models or dies of crowns or of a small part of the arch; for making counter dies. Moldine also makes one of the best of cushions in the dental swager, superior in some respects to shot or water bags.

PRICES

Complete Outfit, inclosed in a wooden box containing one-half pound Moldine, one Melting Ladle No. 8, one Ring, and two ingots of Fusible Metal	$1.25
Melotte Moldine ..... per half pound	.25
Melting Ladle (S. S. White No. 8)	.25
Rubber Ring	.10
Melotte Fusible Metal, per ingot (about 2½ ounces)	.35

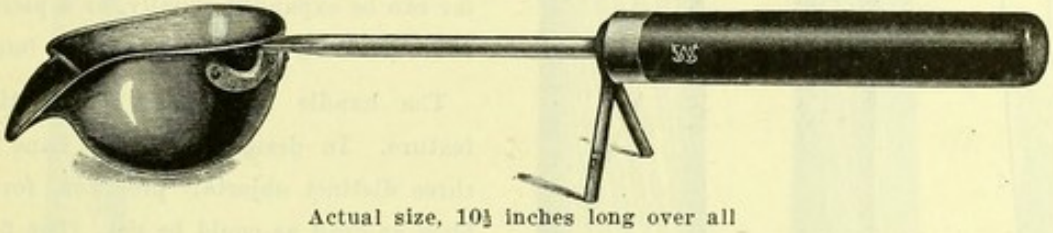
LADLES FOR FUSIBLE METALS, ETC.



dental laboratory is not complete without a handy, serviceable ladle for melting and pouring ible metals. This Ladle is made with copper bowl 3 inches in diameter (shown half size), and od handle 7½ inches long. A neatly turned lip facilitates pouring.

Price $0.40

LADLE DESIGNED BY DR. FRED A. PEESO



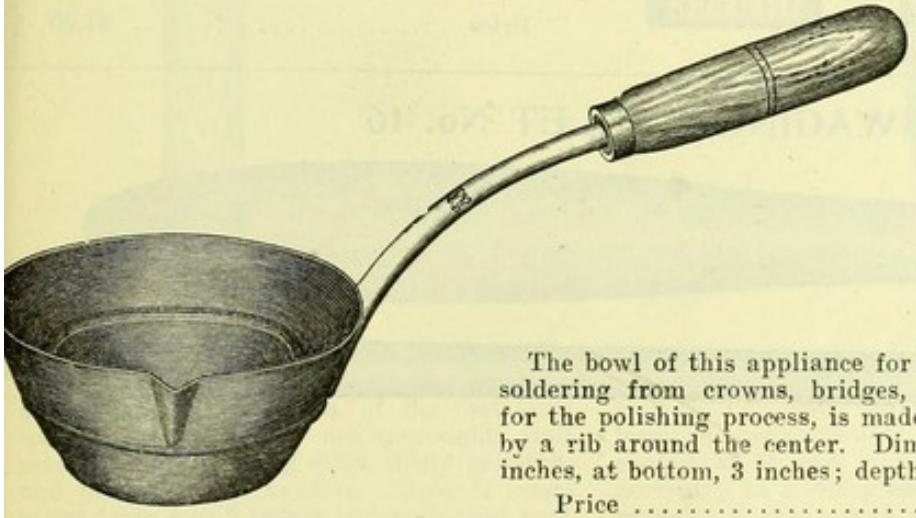
Actual size, 10½ inches long over all

This Ladle has a long, rather deep, rounded lip at right angles to the handle, so that it pours thout spilling, no matter how full the bowl may be. It gives perfect control of the quantity of the etal poured, and will deliver it in a very small ring, even when almost cold. The Bowl is made copper. Every particle of the melted metal will run out without adhering to the side or bottom. does not "tin." The Handle is supplied with legs, so that the Ladle can be set down without sk of being upset.

Price $1.00

COPPER ACID PAN No. 1

For Pickling Crowns, Bridges, and Plates



The bowl of this appliance for removing the oxids formed in soldering from crowns, bridges, and plates, to prepare them for the polishing process, is made of thin copper, and stiffened by a rib around the center. Dimensions: Diameter at top 4½ inches, at bottom, 3 inches; depth 1¾ inches.

Price $0.75

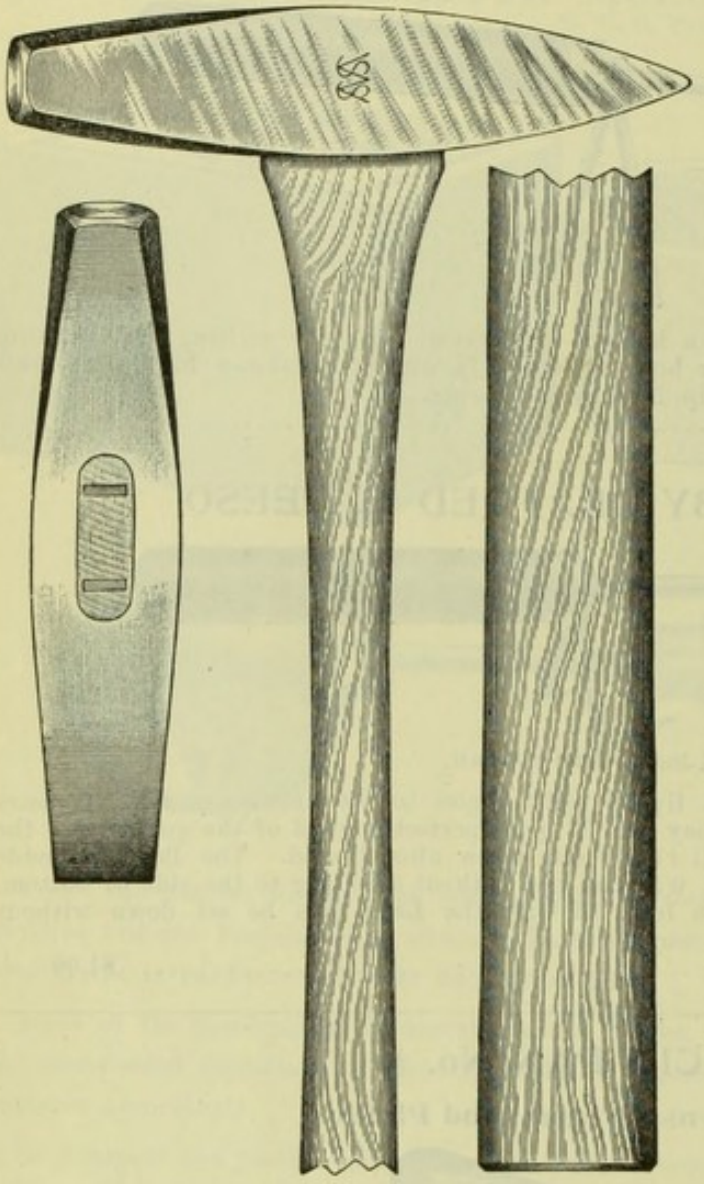
COPPER ACID PAN No. 2

For Pickling Crowns and Small Bridges

A plain round pan with brass handle. The pan is 2 inches in diameter at the top, 1⅝ at the bottom, nd about ¾ inch deep. Convenient for pickling small work.

Price $0.30

SWAGING HAMMER FOR CROWN WORK



Pattern by DR. J. G. LANE

For making all-gold and collar crowns; fo reducing soldered joints, or expanding collar on the anvil horn; and for straightening and flattening plate for backings and for floors of caps.

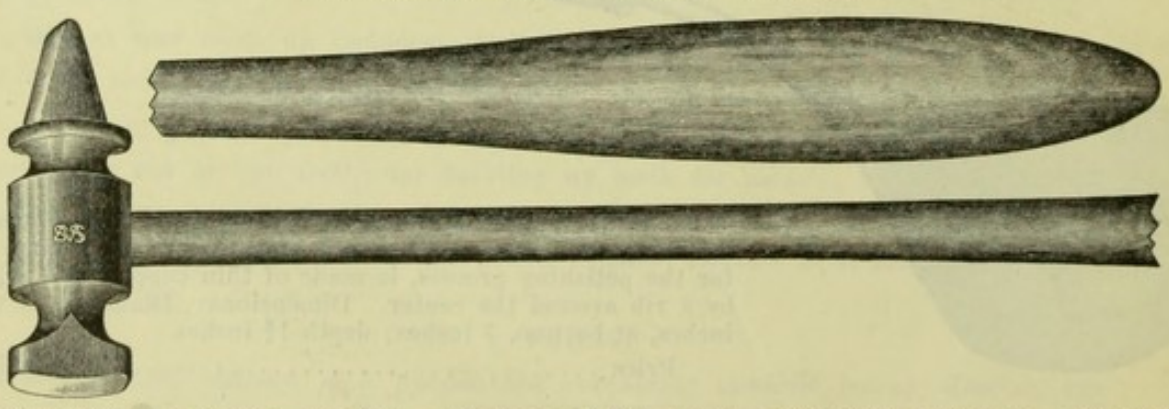
Its principal features are the extremely long (14 inches over all) and slender handle, which gives a maximum amount of delicacy; and the perfectly flat face, with which a collar can be expanded equally, or a piece of plate made perfectly flat without being buckled.

The handle is perhaps the distinguishing feature. In designing it, Dr. Lane aimed at three distinct objects: precision, force, and a blow as dead as could be got. The first comes from the hand needing to move but little to give the hammer head quite a swing; the second, from the unusual momentum of the head by its long swing; the third, through thinning the handle near the head as much as is consistent with strength and durability.

Head of steel, polished; handle of hickory.

Price $1.00

SWAGING MALLET No. 16

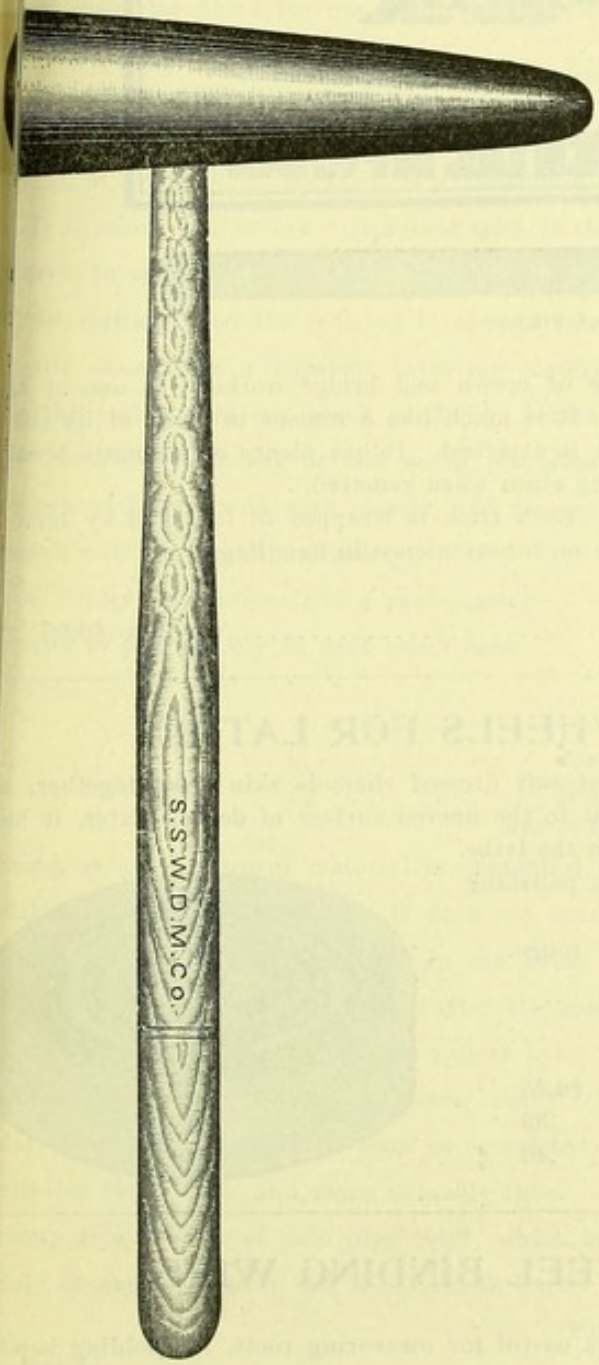


For the ofttimes delicate swaging operations of the crown- and bridge-worker in conforming collars and crowns, a mallet is needed which will give the lightest kind of a tap. Our Swaging Mallet No. 16 is very light, having a metal face and a horn peen set upon the end of a thin, finely shaped handle 9 inches long. Its small size permits it to be used where a larger mallet would be impossible, and the blow may be graduated with exactness. Well made, well balanced.

Metal parts nickel plated.

Price $1.50

HORN SWAGING MALLETS



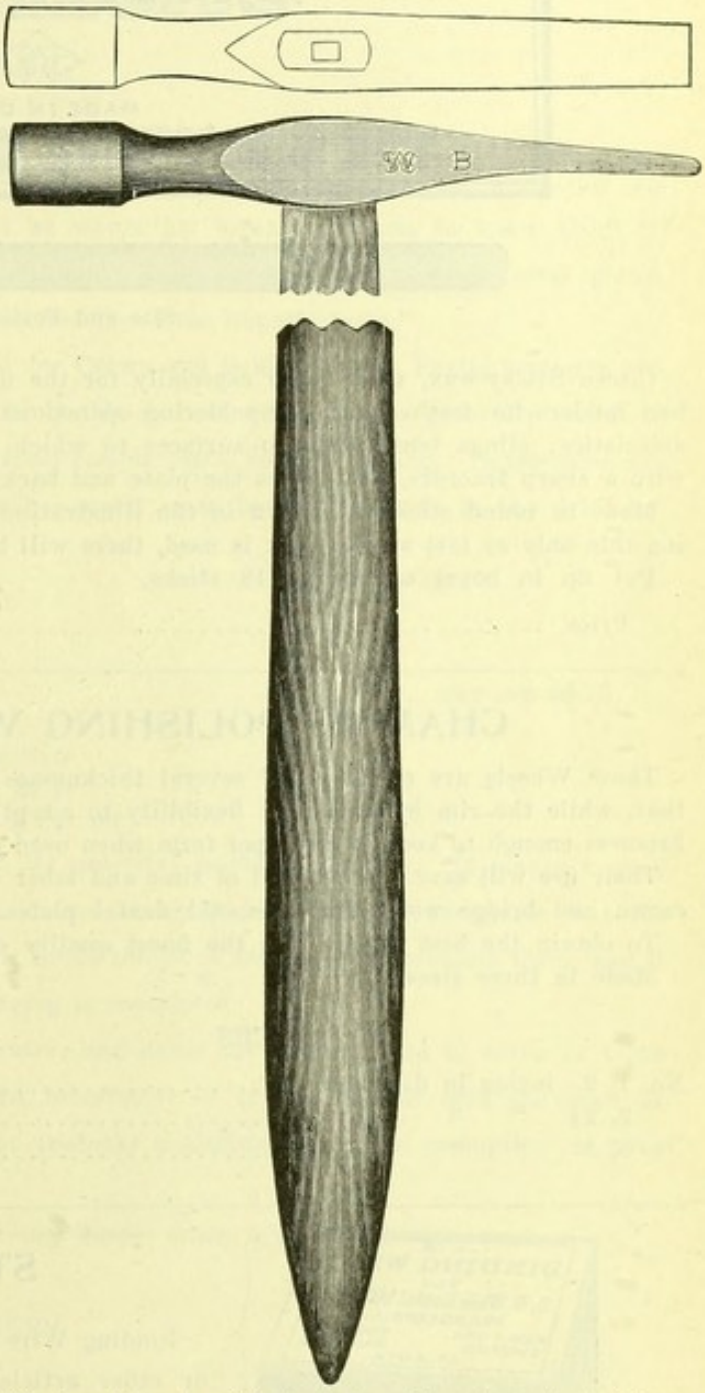
Our Horn Swaging Mallets are made with straight heads, as shown, of the best horn we can procure. They are thoroughly well made, the heads being extra finely polished, and pinned to the handles. Sizes of heads range from 4 to 5 inches in length, and vary somewhat in diameter. Handles 11 inches over all.

Price $0.40

We also have a smaller Horn Mallet, length of head about 2½ inches.

Price $0.25

RIVETING HAMMER "B"



The head is of solid steel, forged—not cast—to form, and gives a light, springy blow. The handle is of selected hickory, straight grained, 10 inches long, and so shaped as to give perfect control of the delicate taps necessary in riveting backings and so on. A special advantage is the secure manner in which the heads are fastened on the handle. They will not come off. The main idea in their make-up is serviceability. They are handsome, but their beauty does not merely serve to hide defects in workmanship. It is the proper finish to a fine article.

Price $0.60

TRADE MARK **CROWN** REG. IN U. S. PAT. OFF.

STICKY-WAX

MADE IN U. S. A.

THE S.S. WHITE DENTAL MFG. CO.

Size and Form of Sticks

Crown Sticky-wax, made more especially for the use of crown and bridge workers, is one of the best holders for teeth set up for soldering operations. It is much like a cement in many of its characteristics; clings tenaciously to surfaces to which it is attached. It has plenty of strength, breaks with a sharp fracture, and leaves the plate and backing clean when removed.

Made in round sticks as shown in the illustration. Each stick is wrapped in foil, and by removing this only as fast as the Wax is used, there will be no inconvenience in handling it.

Put up in boxes containing 18 sticks.

Price ..... per box $0.50

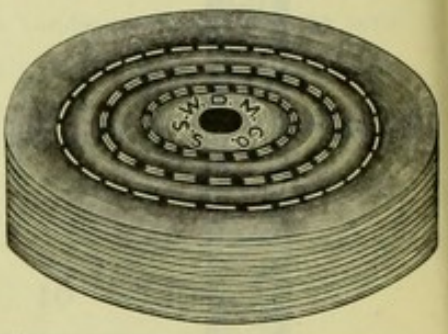
CHAMOIS POLISHING WHEELS FOR LATHE

These Wheels are composed of several thicknesses of soft dressed chamois skin sewn together, so that, while the rim has sufficient flexibility to adapt it to the uneven surface of dental plates, it has firmness enough to keep it in proper form when used on the lathe.

Their use will save a great deal of time and labor in polishing crown and bridge work, and all-metal dental plates.

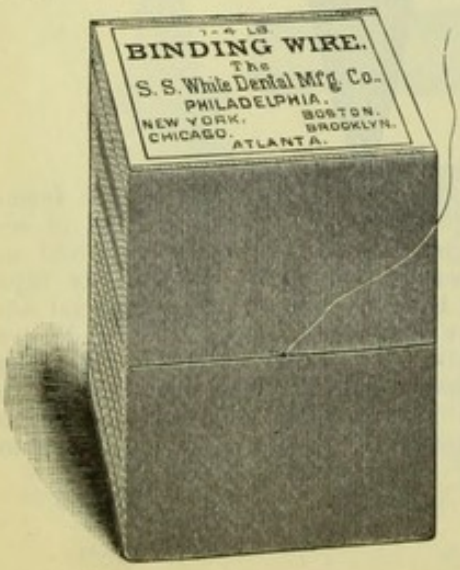
To obtain the best results, use the finest quality of rouge.

Made in three sizes.



PRICES

No. 1, 2	inches	in	diameter	.....	$0.25
" 2, 2½	"	"	"	.....	.35
" 3, 3	"	"	"	.....	.40



STEEL BINDING WIRE

Binding Wire is useful for measuring roots, for holding bands or other articles in soldering, etc. The stock we offer is of annealed steel, and is uniform in quality. The spools are put up in a paste-board box, with the end of the wire passed through the side. Pull on the wire, and it comes out soft, smooth, without kink or twist; cut off what is wanted, and the remainder is preserved in perfect condition.

Furnished in two sizes, approximately Nos. 28 and 31 B. & S. Gage ¼ lb. to the spool.

Price per Spool in Box $0.25

MAKING INVESTMENTS

Three excellent investment materials are described below, one for general work, one for crowns and bridges only, the third for use with Alexander's Plastic Gold.

Trade-Mark

FYRITE

Reg. in U. S. Pat. Off.

Dr. J. B. Zielinski of Chicago, is enthusiastic over the excellence of Fyrite as an investing material; so much has he been impressed with it that he wants his brother dentists to know about it. He says, in so many words, that it "is the finest thing he has ever used for making metal plates. It dries quickly, and the pouring is always smooth and free from imperfections."

Fyrite constitutes a superior investing material for Crown and Bridge Work. Fyrite perfectly protects the teeth; does not crack in firing; serves for molds in cast work; and is generally useful in cases involving soldering or hot metal processes from fusible metal to gold casting. Impressions can be taken with Fyrite as with plaster, and zinc or other metal casts be quickly made in the dried impression with certainty and safety.

For Bridge impressions add ¼ part plaster.

Fyrite is put up only in neat quart cans.

Price ..... per can $0.25

Trade-Mark

SUMP

Reg. in U. S. Pat. Off.

Sump as an investment material is unexcelled in its practical working qualities. It makes a good model, it holds together firmly, it does not crack, it can be built onto with the assurance that the built-up portion will not separate in the firing, it holds the teeth securely and protects them, and it is readily removed from the model after the soldering is completed.

Sump mixes quickly, because it requires little water, and dries out quickly, sets in seven or eight minutes because it gives up the water easily. An investment of it can be put into the oven or under the blowpipe almost as soon as completed, so that the soldering can go on promptly. It thus facilitates rapid work and saves valuable time.

Sump is a powder of pale lilac color, which becomes deeper when it is mixed.

Sold in one-quart cans (2¼ lbs.) and in bulk.

PRICES

Per can	$0.75
Bulk (10 lbs. or over) per lb.	.25

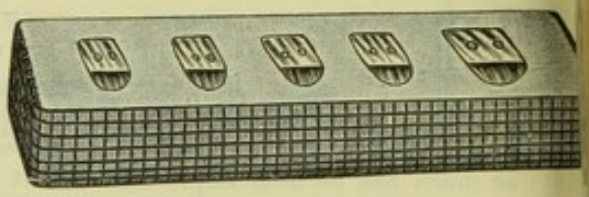
S. S. WHITE INVESTMENT No. 4

Prepared especially for working Alexander's Plastic Gold. The S. S. White Investment Material No. 4 is especially recommended for this work as it stands the heat required to melt the solder without shrinking sufficiently to warp the inlay. It is the best we have ever found for this purpose.

Price, per can $0.35

WIRE GAUZE FOR MAKING INVESTMENT FRAMES

FOR CROWN- AND BRIDGE-WORK



For single teeth or crown investment, or for backing a set of fronts, or an entire set, one may easily and rapidly shape a parallelogram of gauze, cutting say half-inch long slits near the four corners, and bending the sides and ends to form a boxlike frame, into which the thick-mixed batter may be put and the backed teeth be pressed in. Such framed gauze investments may be quickly made, easily handled, immediately dried (for the meshes allow rapid evaporation), while the conductive wire hastens t heating to the soldering temperature.

Price, Gauze in a roll, 24 x 6 inches ..... per box $0.30

POLISHING MATERIALS

These Polishing Powders embrace a wide range of grits, from the coarser to be used in the fir stages, to the finest for the finishing up of the work. Used with felt and leather buffs, wood point and disks, hard-rubber disks, soft-rubber disks, chamois polishing wheels, etc.

Price,	Arkansas Stone Powder	per box	$0.15
"	Chalk, Prepared	" lb.	.15
"	Crocus	" box	.15
"	Corundum Flour	" "	.15
"	" " Extra Fine	" "	.15
"	Emery	" "	.15
"	Polishing Putty, Oxid of Tin	" "	.15
"	Pumice Stone, Fine or Coarse, per lb. $0.10	" "	.10
"	Pumice-stone Flour (very fine)	" "	.15
"	Rottenstone	" "	.15
"	Rouge	" "	.20
"	Tripoli	" "	.15

ABRADA

Abrada preparations are simply efficient polishers and grinders put together with a "binder" of a character that, while not interfering with their work, makes them cleanly, convenient, and economical. They owe their popularity to their efficiency, convenience, economy, and cleanliness.

There is no waste in using Abrada unless you choose to be wasteful. The stick form gives absolute control of the quantity to be used.

There are no better grinders and polishers for vulcanite.

No. 1, Fine, for Polishing Vulcanite **No. 2, Medium, for Grinding Vulcanite**

Abrada is put up in oval sticks, 4 x 1¼ x ⅝ inches, each stick in a separate box, neatly labeled.

PRICE

Nos. 1 and 2 ..... each $0.15

STICK ROUGE

For convenience and cleanliness of handling we put a fine quality of Rouge up with a binder, made into sticks, which are wrapped in tin foil. The sticks are half round in shape, something over 3 inches in length by ¾-inch diameter across the flat. Stripping the foil from the stick as it is used and applying the end to the moving polishing wheel will prove economical, besides being cleanly and convenient. The excellence of Rouge for polishing metals needs no restating here.

Price $0.15

PORCELAIN TEETH FOR CROWN- AND BRIDGE-WORK

We show below illustrations of examples from the different classes of Porcelain Teeth commonly used in Crown- and Bridge-work.

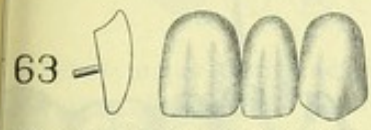
For incisors and cuspids the class known as Plain Long Pin (Flat Back), originally made for metal-plate work, have been found to be better adapted than other forms. For bicuspids and molars, Veneers, a special class, were early found the most desirable form. The saddle-back bicuspids and molars have the advantage, while affording a porcelain masticating surface, of minimizing the quantity of gold solder necessary in the attachment.

For crown-work specially, except for molars, Logan Crowns are now almost universally used.

For those who prefer a separate-post crown the S. S. White Detached-post Crown cannot be excelled. (See page 88.)

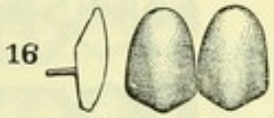
The full line of all these Porcelain Teeth is illustrated and described in our "Catalog of Porcelain Teeth," which will be sent free to any dentist on application.

PLAIN LONG PIN



Upper Incisors and Cuspid

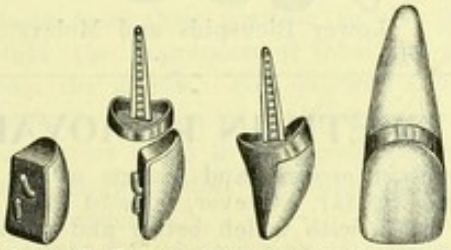
PLAIN LONG PIN



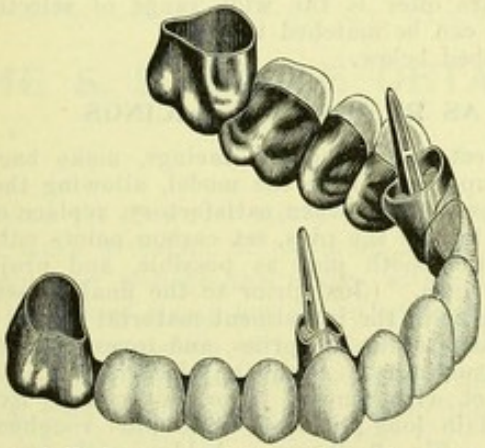
Upper Cuspids (Special)

PLAIN LONG PIN

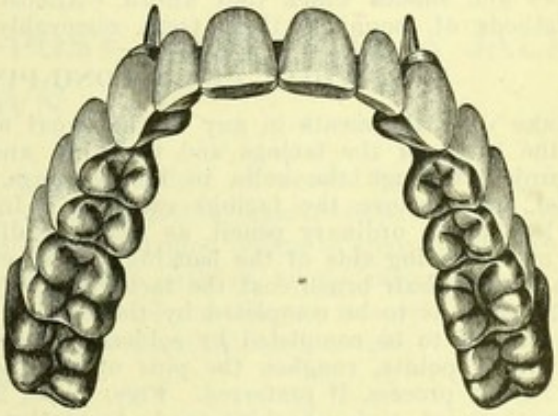
Lower Incisors and Cuspid



Richmond Crown in parts and complete



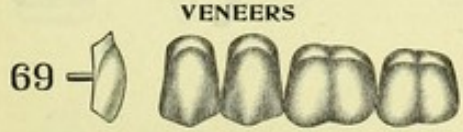
A full denture Richmond Bridge, side view, in perspective



A full denture Richmond Bridge, occlusal view, in perspective

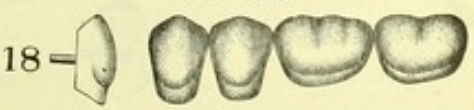
In constructing single crowns or crowns for bridges of "flat-back" teeth each tooth is backed with platinum or gold and contoured with either gold or porcelain. The Richmond Crown is one of the most popular and commonly used forms, to the construction of which the flat-back tooth is especially adapted. We illustrate various stages in the formation of a Richmond Crown, also two views of a full bridge constructed with this form of crown.

VENEERS



Upper Bicuspids and Molars

VENEERS

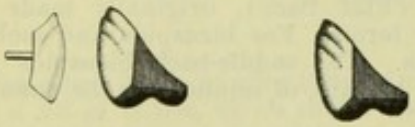


Lower Bicuspids and Molars

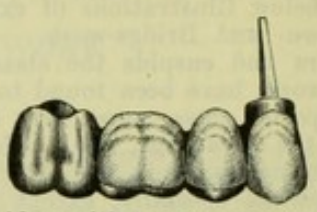
Veneers are backed and contoured in the same manner. We illustrate a side view of a veneer,

before and after backing, and a buccal view of a bridge piece, in which a molar and two bicusp Veneers are mounted with a Logan anchor post and a gold cap crown.

68



Veneer before and after backing

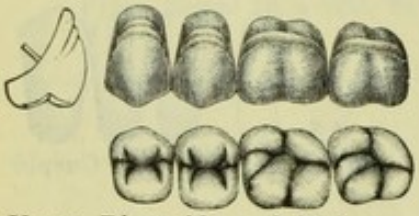


Bridge with veneer crowns

The illustration below shows upper and lower bicuspids and molars of our Saddleback Teeth, ar a Saddleback Tooth backed, also a buccal view of a bridge constructed of Saddleback teeth as com pleted, with Logan anchor post and gold cap crown for anchorage.

SADDLEBACK

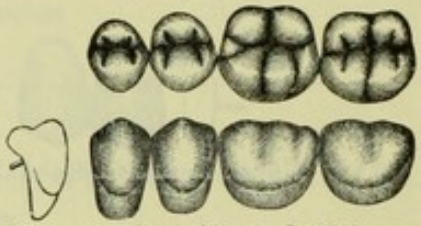
67



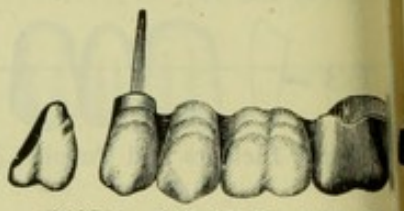
Upper Bicuspids and Molars

SADDLEBACK

15



Lower Bicuspids and Molars



Bridge of Saddleback teeth

PORCELAIN TEETH IN REMOVABLE WORK

Several special devices for porcelain crowns and facings which should be individually removable have been offered to the profession. So far, however, none of these have shown any advantages over certain forms of our regular stock teeth, with which better and more satisfactory work can be done. Our Plain Long-pin (Flat-back) Teeth for facings can be readily mounted removably, as can also our Detached-post Crowns and Diatorics either as single crowns or in bridges.

One immeasurable advantage which these forms of ours offer is the wide range of selection in shapes and shades which they afford. Almost any tooth can be matched in them.

Methods of mounting these teeth removably are described below.

S. S. WHITE PLAIN LONG-PIN TEETH AS REMOVABLE FACINGS

Make your abutments in any of the usual methods, select and grind the facings, make backings, oil the backs of the facings and the pins, and wax all up together on the model, allowing the pins to project through the holes in the backings. Try in the mouth; when satisfactory, replace on the model, and remove the facings carefully. In the holes left by the pins, set carbon points cut from the lead of an ordinary pencil, as near the diameter of the tooth pins as possible, and projecting out of the facing side of the backing say an eighth of an inch. (Just prior to the final investment, with a camel-hair brush coat the facing side of the backing with the investment material mixed thin.) If the piece is to be completed by the casting process, attach sprue or sprues, and invest in the casting ring; if to be completed by soldering, invest in the usual way. After the piece is cold, bur out the carbon points, roughen the pins of the facings and set with cement. The pins can be fixed by the Bryant process, if preferred. Figs. 1 and 2 show a plain long-pin tooth with pins roughened or screw threaded, and a backing ready to receive the facing. Fig. 3 shows a bridge with removable facings made of plain long-pin teeth.

FIG. 1

FIG. 2

FIG. 3

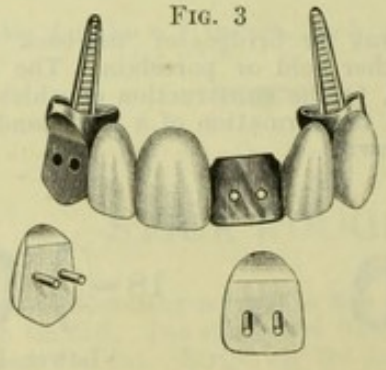
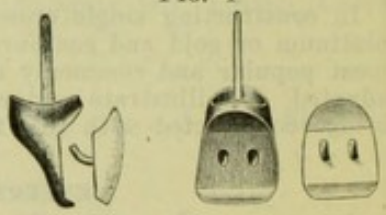


FIG. 4



Where the backing is thin, the pins should be bent slightly toward the heel of the crown so as to insure the full hold of the pin. Of course, the carbon points will have to be inserted accordingly. Fig. 4 gives views of a removable plain long-pin facing with pins bent to secure a better hold in a thin backing.

S. S. WHITE DIATORICS AND DETACHED-POST CROWNS MOUNTED REMOVABLY, SWAGED OR CAST

FIG. 5

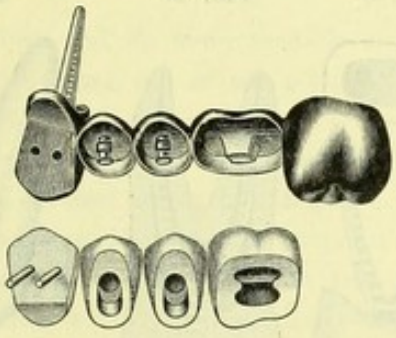
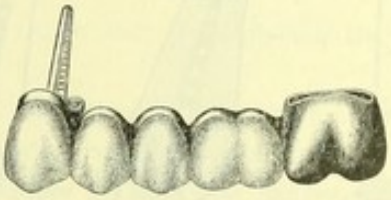


FIG. 6



Select proper teeth and grind to place, leaving them slightly shorter to allow for thickness of gold capping. From No. 36 pure gold, swage caps for each tooth, and if desired put pin through each and solder to cap. Trim to proper length labially and lingually.

With abutments in position arrange the dummies with their gold caps in proper alignment with a little wax. Carefully remove teeth from their position in the gold caps, leaving the latter undisturbed in the mouth. Then take the impression of these and the abutments in investment material and remove the whole piece from the mouth. Boil out wax and solder caps and abutments together.

Fig. 5 is a bridge with removable facings of plain long-pin, detached-post, and diatoric teeth. Fig. 6 shows how perfectly these forms blend in the completed bridge.

In case any repair is necessary simply select the duplicate of the broken tooth, grind to place and cement without removing from the mouth.

This method may be carried out in the regular way of swaging and soldering or by casting.

THE S. S. WHITE DETACHED-POST CROWN AS A JACKET CROWN

Grind the crown or stump down to a peg shape, with a shoulder all around at the gingival line, and make a matrix of platinum for it just as for a carved jacket crown. Select a Detached-post Crown and reshape the cavity with gem, carborundum or diamond points to approximate the shape of the dressed stump but somewhat larger. Place the matrix in position, fill the enlarged crown cavity with moist porcelain (High Fusing), set the crown in place and press home; remove the whole, clean off excess of porcelain, and fuse. If necessary, again apply porcelain and re-fuse. When properly fitted, remove the matrix and cement the crown to place.

IMPROVED LOGAN TOOTH CROWNS

Patented April 19, 1898

FIG. 1 FIG. 2 FIG. 3 FIG. 4 FIG. 5 FIG. 6 FIG. 7

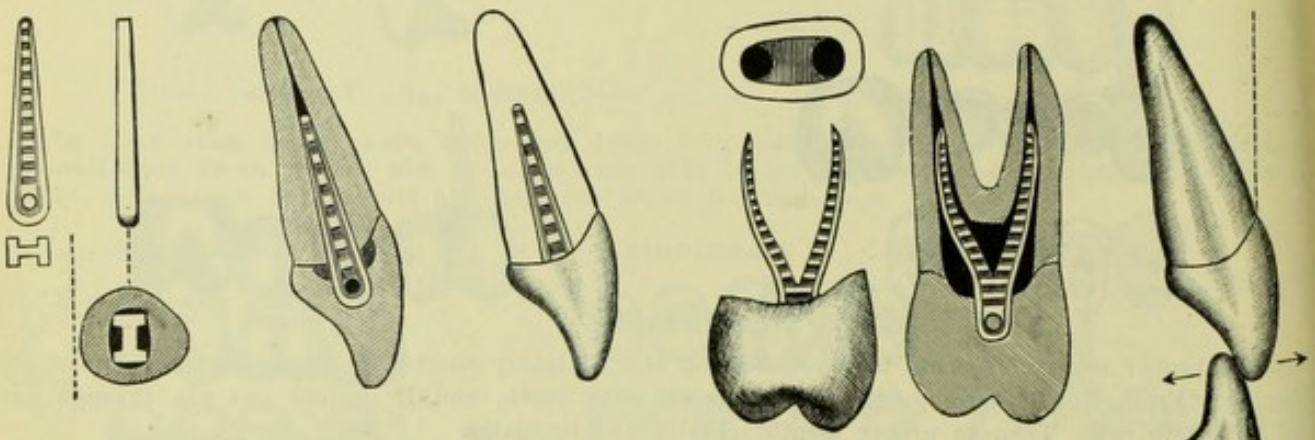


FIG. 8

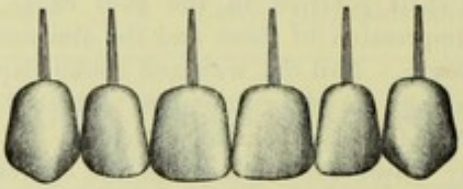


Fig. 1. Enlarged platinum pin, side and sectional views.

Fig. 2. Enlarged platinum pin, edge view and sectional view in position in incisor root.

Fig. 3. Enlarged sectional view of incisor root with Logan Crown in position, showing cup for retaining material.

Fig. 4. Enlarged incisor crown in position, fitted to root, which is cut away to expose pin.

Fig. 5. Enlarged bicuspid crown, with pin split for bifurcated root; end view of root, showing opening to canals.

Fig. 6. Enlarged sectional view of bicuspid crown in position on bifurcated root.

Fig. 7. Enlarged view of mounted incisor crowns in occlusion.

Fig. 8. Set of six front upper crowns, natural size.

THE SUPERIORITY OF THE LOGAN CROWN

There are three important facts to be considered in the selection of a porcelain crown for the operation of crowning a root.

The first and most important is durability, for if the crown possess all other features and lack the strength necessary to the function of mastication, it will be useless.

The second is the artistic feature, for it is important not only that the operation shall be durable, but that the result shall approximate Nature's own.

The third is simplicity, for where time and labor are a consideration, the simpler the operation of successfully fitting and mounting the crown on the root, the more the patient will be spared of pain and endurance, and the more the dentist's time and labor will be conserved.

We claim these points for the Logan Crown. Its superiority is unquestioned. Because of the general recognition of its advantages it has practically superseded all other porcelain crowns.

A DESCRIPTION

A little study of the characteristics and capabilities of the Logan Crown will demonstrate its value. It is an all-porcelain crown, with a strong, tapered platinum post fired in the porcelain, with the base cupped out around the post, forming a recess for the placing of a considerable body of cement.

DURABILITY

The durability of the Logan Crown is assured by these features:

The crown and its non-corrodible anchor post are practically one piece, the porcelain being fired around the larger end of the post, the continuous flanges of which afford a firmer attachment than can be obtained in any other way.

The post is of a regular I-beam form, tapering from the crown end, thus placing the most metal where the greatest strength is required.

This tapering form of the post not only facilitates the mounting of the crown, but the wedge-shaped grooves made by its flat ribs give the cement a better retaining hold upon it. When the post is cemented in the root, the cement forms two solid wedges between the flanges on either side, making it impossible to pull the post out while the cement remains.

The post is so placed, with the flanges to the labial and lingual faces, as to oppose the greatest resistance against the greatest strain (as indicated by the arrows in the illustration (Fig. 7) showing the wedge-like action of occlusion).

The oblong shape of the post prevents its rotation in the root, its four corners engaging with the walls of the enlarged canal in such wise as to assure immobility. (See Fig. 2.)

The recess in the base will contain a sufficient quantity of cement or other retaining material to make a perfectly fluid-tight joint between crown and root. This is important in prolonging the life of the operation.

The carrying of the cement into the base of the crown adds materially to the strength of the operation. The line of leverage is brought nearer to the point upon which the biting force is applied, because of the considerable body of cement instead of a thin disk, as in ordinary crowning. This reinforcement of cement largely lessens the liability to fracture.

The hollowed-out base also assures the strength of the attachment of the post to the crown. Because the insertion of the post in the porcelain is beyond the cup, the attachment remains the same, no matter how much the edges of the cup are ground away in fitting. There is no diminishing of the depth of the insertion, as is the case in crowns having a plain or convex neck end, with the inevitable weakening of the hold of the crown upon the pin by grinding.

ARTISTIC

The Logan Crown is superior in that it permits of an artistic operation

Being an all-porcelain crown it meets the objection made by many leading practitioners to the use of metals in the mouth, because of their unsightly appearance.

When properly fitted and mounted upon the root, it is impossible after the gum has assumed its normal position by coming down over the joint, to detect its artificiality, even when the mouth is fully open. Besides, the porcelain surface on the lingual face is decidedly more agreeable to the tongue than metal.

The tissues of the mouth seem to take more kindly to a porcelain surface than to a metallic, and the gum will come back to its normal position sooner than when metal is used.

The assortment of these crowns, comprising 39 molds of incisors and cuspids and 16 molds of bicuspids, affords a wide range for selection, the molds being constructed on the lines of the natural teeth, not only as to labial, lingual, and buccal faces, but as to the form of the root surface and the position and angle of the post.

SIMPLICITY

The simplicity of the Logan Crown is evident in the fact that it is practically a complete crown when bought by the dentist. It requires no fitting and cementing or soldering to attach pin and crown, as is the case with all-porcelain crowns in which pin and crown are separable. The work therefore is simplified and the risk of breakage incident to soldering eliminated.

To put it another way: The operator, instead of having two joints to make has but one, the other having already been made secure by the manufacturer, who has also provided every facility for assuring the security of the one to be made.

The leading operators, in preparing a root surface, invariably bevel the root on its labial side to permit of the lapping of the labial face of the crown at its cervical border over the beveled root, thus giving an artistic as well as entirely satisfactory fit at the gum margin. They recognize that a crown fitted in any other way will present an inartistic appearance, and may irritate the gum.

The Logan Crown is constructed to meet this idea, and the surface of the crown which comes in contact with the root is designed as nearly ideal as we can make it, requiring little grinding to fit the average root in the normal state.

The cup-shaped base of the crown enables the operator to more readily grind and fit the crown to the root than when the base is solid or convex in form, inasmuch as only a thin wall is to be ground instead of a solid mass from the outer surface to the post.

ADAPTABILITY

Through its own inherent excellences of form and the number of different molds which are available for selection, the Logan Crown is almost universally adaptable. The only cases to which it cannot be applied are those in which the shut of the jaws is extremely short, and those in which there is marked recession of the gum. There is also an occasional instance where the root to be crowned is too small and frail to receive the full size Logan post. This can usually be remedied by filing down the post to suit.

The nearly universal adaptability of the Logan is evidenced by the facility with which it lends itself to different methods of working. It can be mounted with band or cap or without, and whatever method is used, the result is a strong, durable, satisfactory crown.

When a Logan Crown is to be mounted on a bicuspid with bifurcated root, all that is necessary is to split the post (Figs. 5 and 6).

SELECTION

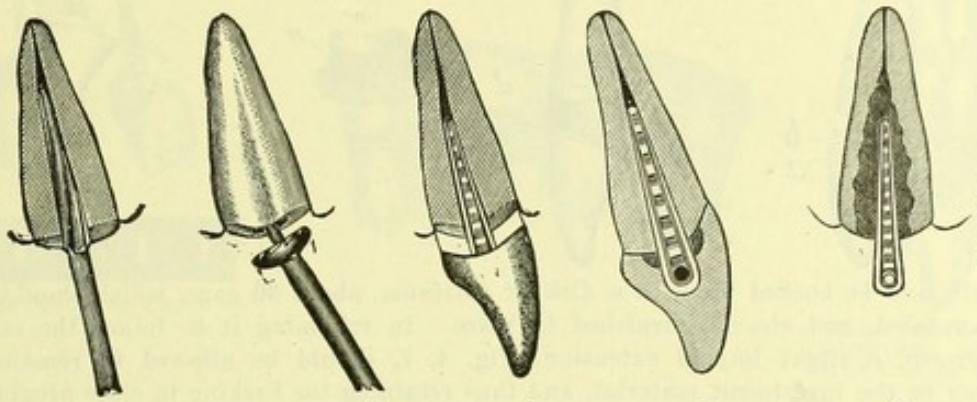
Proper selection has an important bearing upon the fitting and mounting of Logan Crowns just as in other porcelain teeth. The number and variety of molds of these crowns afford ample opportunity for the wise exercise of this faculty.

Taking advantage of this opportunity for selection, and considering the ease and security with which it can be mounted, the Logan is the cheapest crown at the service of the dentist.

Sold as single crowns, and in sets of 2 (centrals, laterals, or cuspids), 4 (centrals and laterals), 6 (centrals, laterals, and cuspids), and 4 (bicuspids).

MOUNTING THE LOGAN CROWN

DR. R. OTTOLENGUI'S METHOD



A B C D E

Enlarged sectional view of a left central incisor root with anchor post in position.

The canal of the root to be crowned is opened to the proper depth with a twist drill large enough to admit rather more than the point of a tapering canal reamer, Fig. A. With this it is partially enlarged and tapered to fit the post of the crown. Then with a root facer, Fig. B, a labial slope is given to the end of the root, the enlarged opening of the canal receiving the pivot point of the facer to prevent accidental cutting of the free margin of the gum.

The anchor post of the crown is then placed in the hole (Fig. C) to determine the proper alignment of the crown. If it has not been attained, the difficulty can be remedied by sweeping the reamer, while in motion, around the side of the hole in the direction which requires enlarging. When the proper alignment is attained, the hole may be enlarged and deepened to admit the post until the crown and root nearly touch. If the neck end of the crown and tooth fit each other, the operation is ready for completion. The retaining material is applied to the cavity or hole in root and base of the crown, the anchor post is forced up into position as far as it will go, when a light tap with a wood or horn mallet will drive it home to a close fit. The corners of the anchor post will be driven slightly into the cementum of the root, giving a support to the crown, with the advantage that the crown is held in place independently of its retaining material and is not liable to be displaced while the cement is hardening. (See cross section of root, Fig. D.)

If decay has enlarged the root-canal opening until it is larger than the anchor post, it may be filled with amalgam, and when properly hardened a hole can be drilled into it and reamed as above described. (See Fig. E.) In this instance the operation should not be completed the same day, but the amalgam should be given time to thoroughly harden. The opening in the amalgam must be large enough to allow the crown to rest upon the root, as the corners of the post will not cut their way into the amalgam when struck by the mallet, as before described, but would be liable to split the metal plug.

DR. J. G. HOLLINGSWORTH'S METHOD

Prepare the root in the usual way for banding. (See Fig. 1, front view, and Fig. 2, side view.)

Grind the abutting surface of the crown to fit the root under the free margin of the gum, along the labial face ONLY. (See Figs. 1, 2, *a* to *b*.)

Cut the crown away slightly at the lingual surface, so as to leave a space between it and the end of the root. (See Fig. 3, *c*.)

Make a band to fit the root only wide enough to give a good hold on the root, but not to extend beyond margin of gum, and trim off even with the end of it. (See Fig. 3, *d*.) After fitting the band properly, remove it and solder a piece of pure gold plate, say about No. 34, on the outer end. (See Fig. 3, *e*.) This can be done quickly by placing the plate in your hand and pressing the band onto it with the thumb for a fit, then soldering in the flame of a Bunsen burner. Punch a small hole through the plate to take the post in the crown, and replace in position on the root after trimming off the exposed edges.

FIG. 1

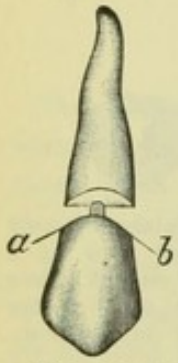


FIG. 2

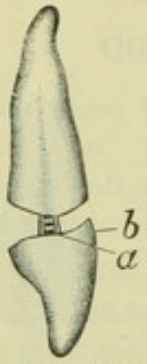


FIG. 3

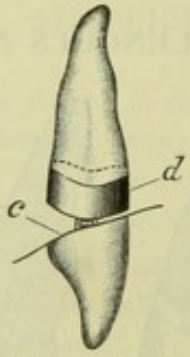
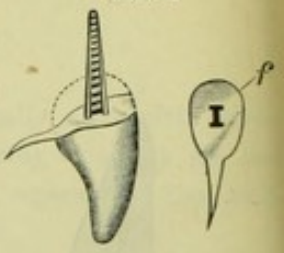
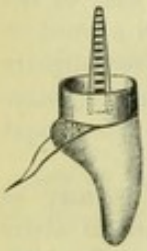


FIG. 4



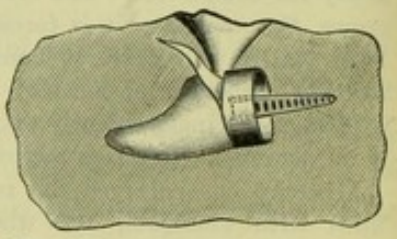
The crown should now be backed up with a disk of *platinum*, about 36 gage, which should be properly perforated, annealed, and closely burnished to place. In trimming it to follow the outlines of the base of the crown, a slight *lingual* extension, Fig. 4, *f*, should be allowed to remain for the purpose of engaging in the investment material, and thus retaining the backing in close proximity with the porcelain during the process of soldering. If this precaution is not observed, the backing will invariably be drawn away from the base of the crown as a result of the shrinkage of the solder, thus diminishing the strength of the union and affording an unhygienic joint. Next warm the post and place a sufficient quantity of Parr's Wax Flux around it as shown by dotted lines, Fig. 4. Replace the Logan Crown on the root (with the cap in position), force home until the labial edges of root and crown meet, obtain the proper alignment, and cool and harden the wax by using a napkin with ice water. Then remove the crown and cap together, held in proper relative position by the wax. (See Fig. 5.) Trim off the surplus wax and invest. (See Fig. 6.) Remove all the wax possible between the crown and the band, and flow 20-karat gold solder into the space. The wax which will necessarily remain, being fluxed, will carry the solder into every crevice and give the crown great strength. Finish the band and the soldered edges, and the result will be a strong and perfectly aligned crown.

FIG. 5



This method of mounting may be used either with or without a band or with a partial band, just as is desired. Also this method may be carried out by the casting process, instead of the usual soldering, if desired. If metal parts as described here are made of platinum instead of gold, the crown may be completed by the addition of High-fusing Porcelain instead of gold. In this case, the first disk next to the porcelain tooth is left off entirely.

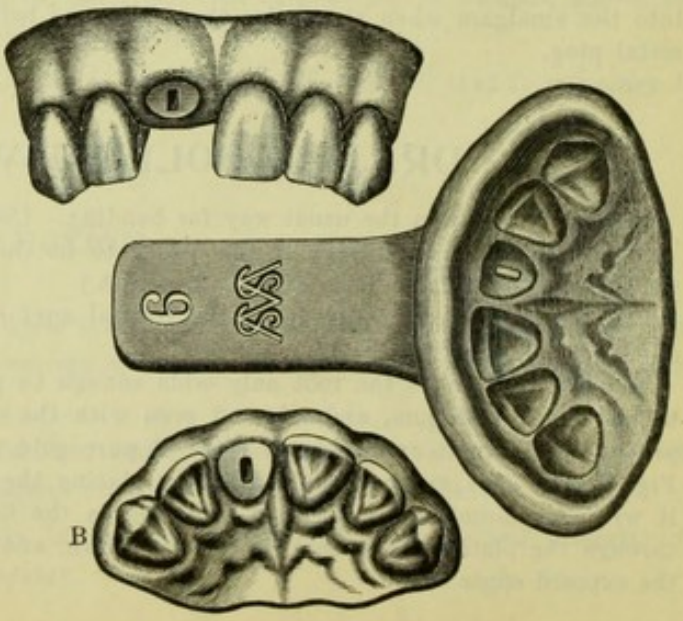
FIG. 6



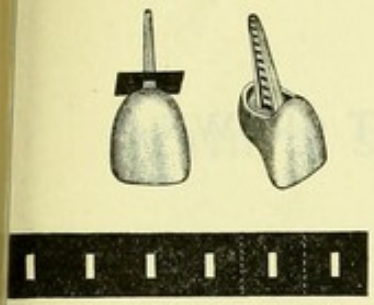
(See Caution about Soldering Logan Crown, page 87)

ANOTHER METHOD

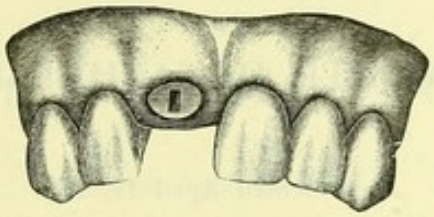
After preparing the root for receiving the Logan Crown in the usual manner (Fig. A), take an impression of the root and surrounding parts with the proper quantity of Moldine in a partial impression tray (see illustration). Remove the impression carefully and fill with Melotte Metal. The location of the root canal will be clearly indicated by a small hole in the metallic model (Fig. B), and this hole may be deepened with a twist drill and slotted or elongated for the reception of the crown post with an Ottolengui reamer. This gives a metal root,—the exact counterpart of the natural one and adjacent teeth,—by which the crown may be fitted.

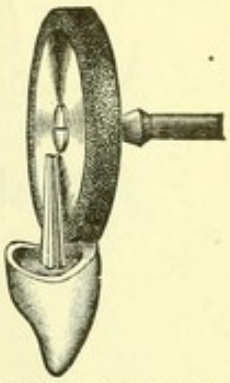


DR. E. C. KIRK'S METHOD



Prepared Articulating Paper





The above figure shows the operation of grinding the crown to fit the root.

The following method will in the majority of cases enable a perfectly close joint to be made between the crown and root end. Cut several small pieces, about one-quarter inch square, from a strip of thin articulating paper. In the center of each punch an oblong hole that will permit the entrance of the Logan pin. Having prepared the root end, slip the perforated piece of articulating paper over the post of the Logan Crown and press it firmly into position, in contact with the root. Upon withdrawing the crown and removing the articulating paper, the points of contact will be found to be marked black. Grind these off carefully, readjust on the root as before, grind again, and continue the operation of fitting and grinding until the mark made by the articulating paper on the contact surface of the crown presents as a uniformly unbroken black ring. When this has been accomplished, the crown will be found to fit the root end with the utmost accuracy.—*Dental Cosmos, June 1894.*

CAUTION

The Logan Crown contains a large tapering post with its large end baked in the tooth, and when heated to flow solder over or around it, care must be taken that the porcelain is made as hot or hotter than the post, thus preventing uneven expansion and cracking of the porcelain.

THE S. S. WHITE DETACHED-POST CROWN

Patented April 19, 1898

Everybody knows the superiority of the Logan Crown. But there are some practitioners who prefer for their own convenience, to have the crown separate from the post, during the fitting process; they say it gives them a greater adaptability, and saves time in grinding.

We now offer such a crown, with a post exactly adapted to mount it, but unattached, and we have no hesitation in asserting, without qualification or reservation, that it is by *long odds the best separate post crown ever brought out.*

It has all the excellences of the regular Logan in naturalness of shape, in form and strength of post, in ease of grinding and fitting, with whatever advantage the detachability of the post confers.

The crowns are made in certain of our most popular Logan molds as shown in our Tooth Catalog. They have consequently the beautiful shapes which have made the Logan famous; the narrow necks and thin rim of porcelain to be ground which makes fitting easy; the cup for the reception of the cement, which strengthens the attachment. They differ in having a socket for the post opening from the bottom of the cup. The socket affords ample room for adjustment, and its walls are rough to afford a better hold for the cement.

Now, as to the post. The root end is of the familiar tapering I-bar type, *à la Logan*, with its flanged edges and ribbed body, opposing the greatest strength to the greatest strain, and permitting the preparation of the root with the least loss of useful root substance. The crown end, which is separated from the root end by a circular shoulder to rest in the cup of the base, is round in its general shape, with two groove-like reduced portions. These reduced portions are flattened on four sides, showing, in section, the appearance of a square with rounded corners. The conformation of this end of the post thus provides against both endwise and rotary movement in the crown, when fixed in position.

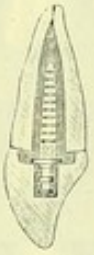
They are made of Silver-platinum Alloy, whose value in the setting of crowns has been approved by many years of extended use. Two sizes are made as shown. We also make an all-platinum post in size No. 1, which will only be sent when mentioned.

The Detached-post Crown can be set with collar or without. However it is set, we are confident the results will be satisfactory.

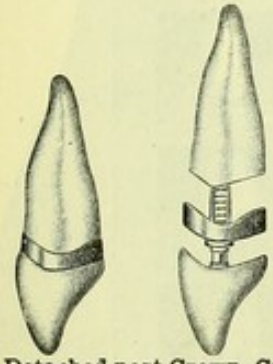
THE S. S. WHITE DETACHED-POST CROWN

Patented April 19, 1898

Detached-post Crown, Cuspid, fitted to root.

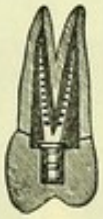


The same, sectional view.

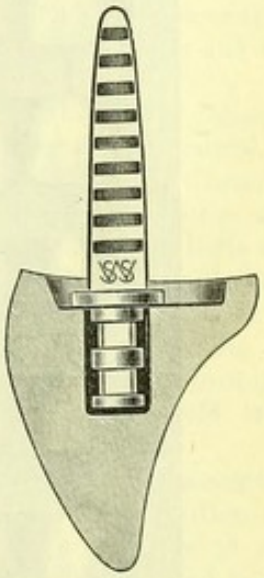


Detached-post Crown, Cuspid, mounted with gold collar and cap.

Detached-post Crown, Bicuspid, fitted to root.



The same, sectional view, showing the splitting of the Post for a bifurcated root.



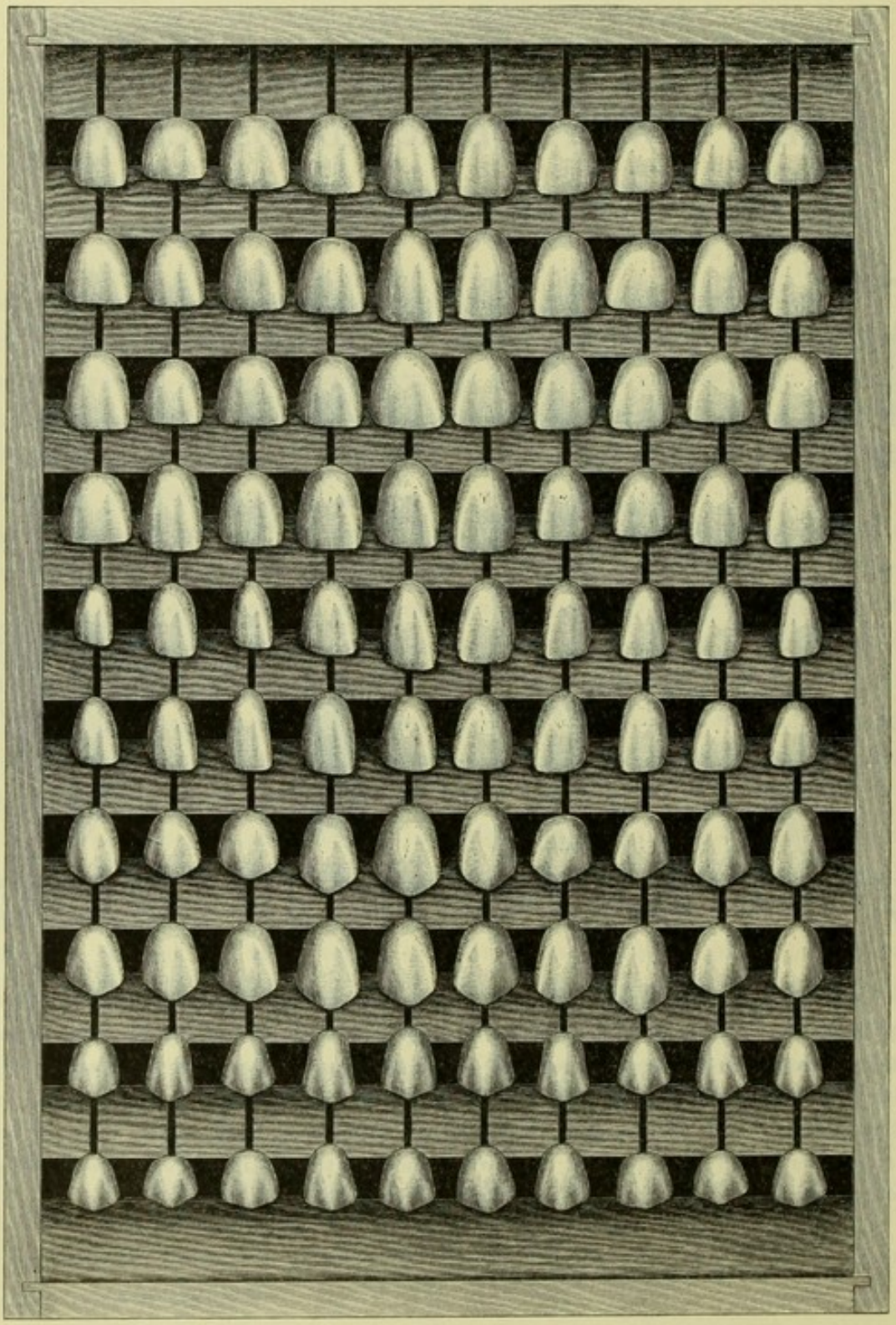
Enlarged sectional view of S. S. White Detached-post Crown complete.

For bifurcated roots, the post can be easily split by means of a circular or mechanical saw, and the two prongs bent to suit the root canals. Owing to the stiffness of the Silver-platinum metal, care must be exercised in bending the sections of the posts after they have been separated.

It is always advisable before bending a crown post, either as a whole or when split, to anneal it.

The Silver-platinum post can be used in connection with 16 or 18-K. solder. For all operations in which any solder higher than 18-K. is used, we recommend the Platinum Post. The Silver-platinum post is not suitable where the fusing of porcelain is required.

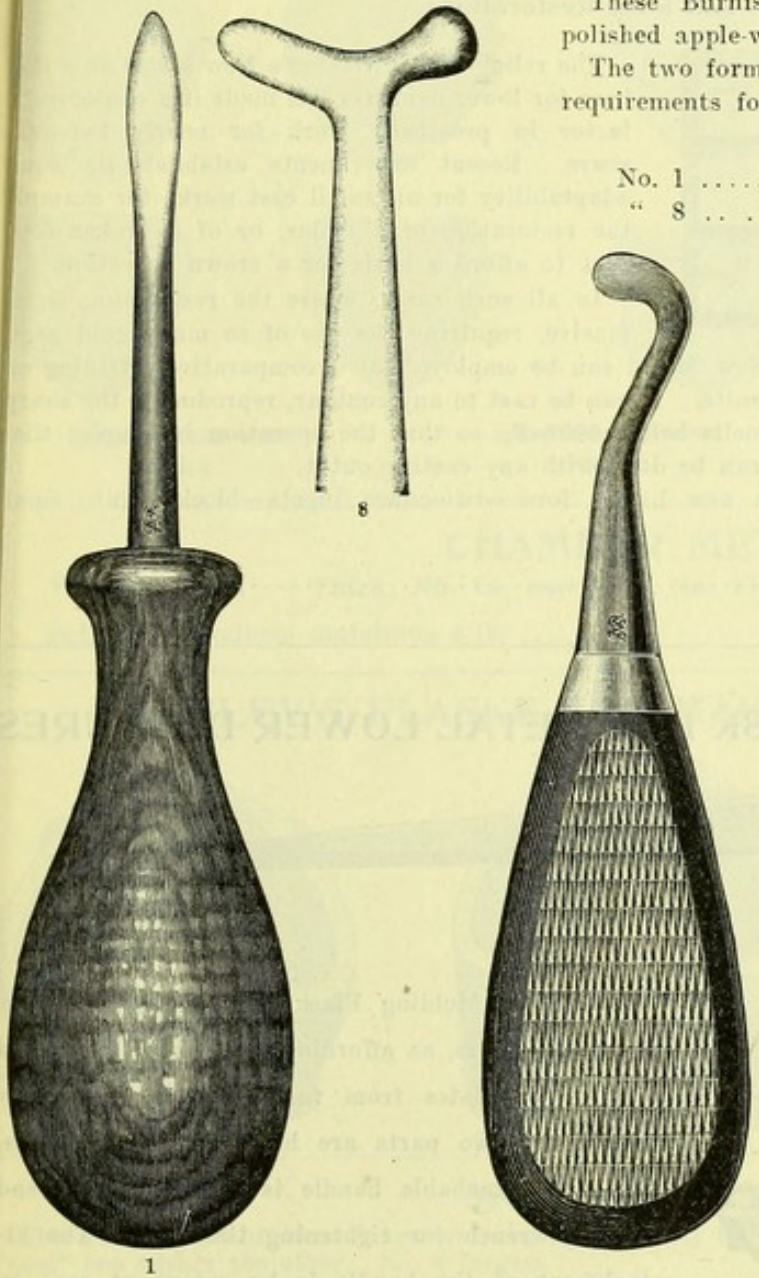
100-CROWN TRAY FOR LOGAN CROWNS



Free with Every Purchase of 100 Logan Crowns

Carries the Crowns so that no one interferes with any other. Every one easy to see and easy to get at. We also give a similar tray with 100 Detached-post Crowns

PLATE BURNISHERS



These Burnishers have finely shaped steel heads and polished apple-wood handles.

The two forms shown will be found to meet most of the requirements for general laboratory use.

PRICES

No. 1 ..... each $0.50
" 8 ..... " .75

Contra-Angle Plate Burnisher No. 9

Designed by DR. JAMES H. PROTHERO

This addition to the laboratory outfit will doubtless find wide acceptability because of its advantages and effectiveness.

First, there is the short, compact form which aids to perfect control.

Second, it has a thick, short handle, checkered, which permits of the application of great force with little effort, because of the firm grasp it gives.

Third, the blade is rounded, of a generally flattened form, making it particularly applicable for burnishing backings and for forcing gold into angles.

Fourth, the blade is contra-angled, which permits of the application of great force with no tendency to rotate, because the working point is in the line of the axis of the instrument.

Price $1.20

ASBESTOS MATS

A good protector for the laboratory table in soldering or vulcanizing is often wanted, especially if the operator desires to be cleanly in his work and to keep his laboratory in neat condition. Most anything, like a block of wood, will do at a pinch but an Asbestos Mat is decidedly better, more sightly, and likely to be kept where it is wanted.

Our Asbestos Mats are of solid asbestos, about a quarter of an inch thick.

Made in two sizes, 4¼ and 9 inches in diameter.

Price, 9 in. diameter ..... each $0.20
" 4¼ " " ..... " .10

WESTON'S NEW METAL

In Crown and Root Restorations

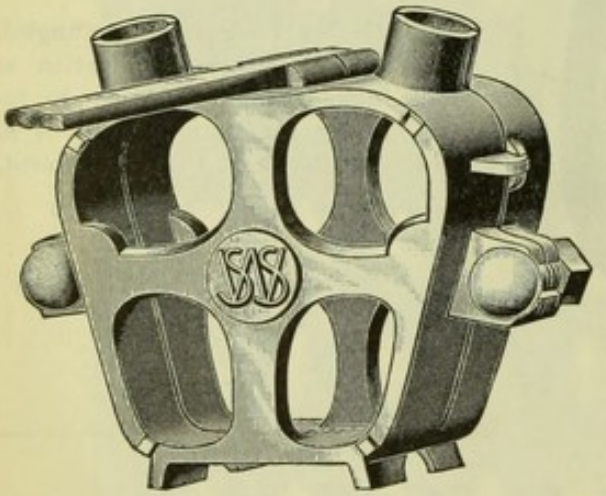
The reliability of Weston's New Metal as a Cast base for lower dentures has made it a considerable factor in prosthetic work for nearly two-score years. Recent experiments establish its equal adaptability for all small cast work; for example, the restoration of a molar, or of a broken-down root to afford a basis for a crown operation.

In all such cases, where the restoration is extensive, requiring the use of so much gold as to render the expense prohibitive, Weston's New Metal can be employed, at a comparatively trifling expense, and with the most satisfactory results. It can be cast to any contour, reproducing the sharpest outlines, and it does not oxidize. It melts below 500° F., so that the operation is simpler than the casting of a gold inlay, and the work can be done with any casting outfit.

For this use we put the Metal up in new handy form—two-ounce ingots—blocked into small squares for ready breaking up.

Price .....per ingot $0.75

WATT'S IMPROVED FLASK FOR METAL LOWER DENTURES



The Watt Molding Flask has been well known for many years, as affording every facility for the casting of plates from fusible metals. As now made, the two parts are held together by bolts, and the detachable handle is formed at one end into a wrench for tightening the bolts. The attachment of the handle is by means of ears on the top of the flask.

Price, Iron $1.00

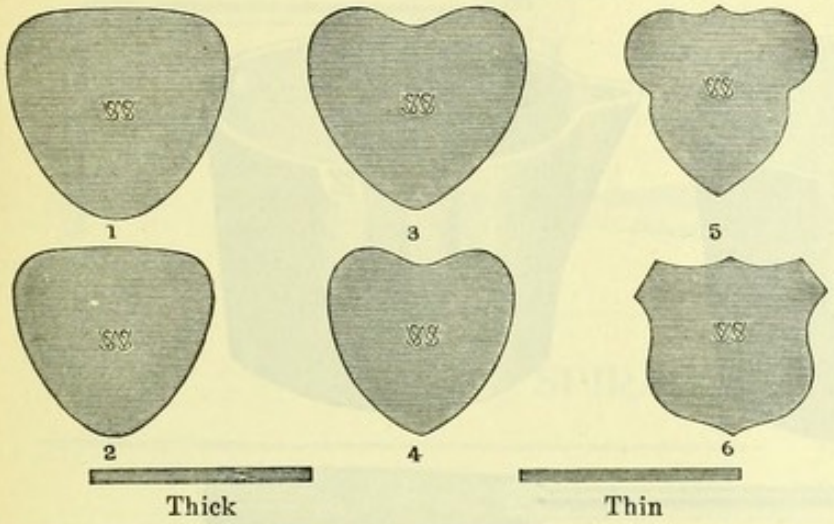
ALUMINUM PLATE

The advantages of Aluminum as a base for artificial dentures, its lightness, strength, cleanliness, and so on, have often been exploited. Swaged Aluminum Plates with rubber attachments have come into considerable vogue, and the method of construction is taught in a number of the dental schools.

We offer a fine Aluminum Plate for this use. It is pure, polished on both sides, is three inches wide, and of gages 18, 19, 20, 22, 24, B. & S. gage. Sold cut to lengths as required.

Price .....per oz. $0.15

AIR-CHAMBER PATTERNS



Each form of our Air-chamber Patterns is made in both thicknesses, affording practically a choice of twelve styles. They are put up in boxes containing a dozen each, either of separate numbers or assorted thin or assorted thick.

PRICES

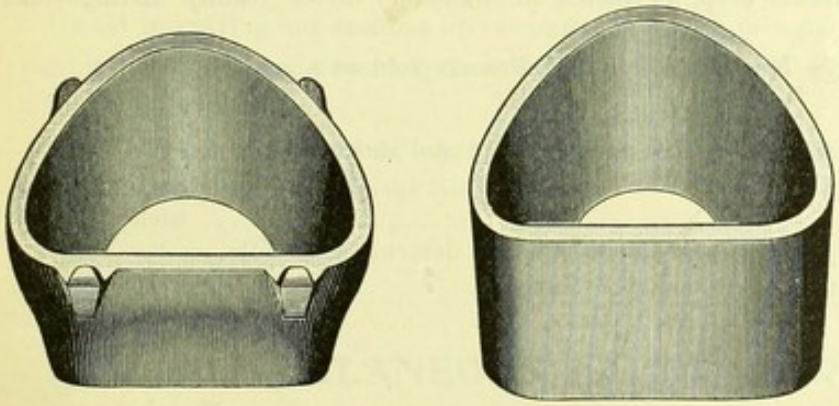
Thick	per doz.	$0.20
Thin	"	.15

CHAMBER METAL

Thick, No. 15, and Thin, No. 17, B. & S. Gage

Put up in envelopes containing ½ lb. ..... per lb. $0.25

BAILEY'S FLASKS FOR MAKING METAL DIES



These Flasks are especially adapted for this very essential process. Two sizes.

PRICES

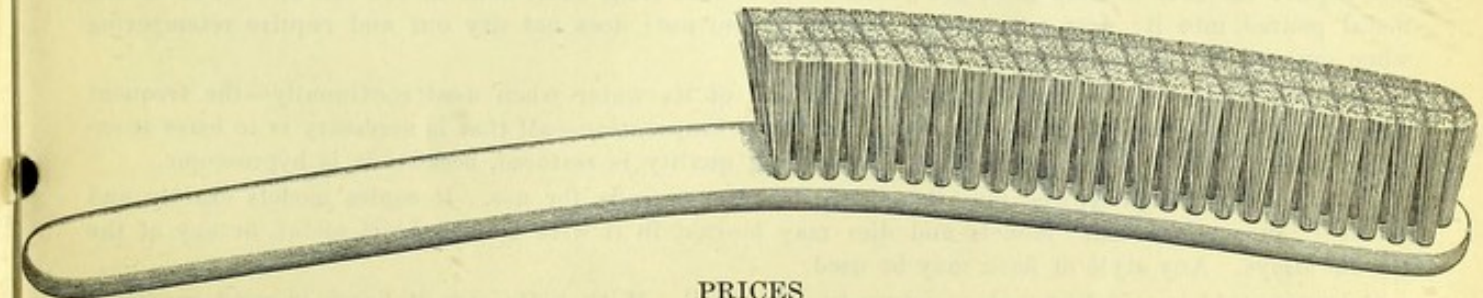
Large	per pair	$0.40
Small	" "	.35
Per set of two flasks..		.75

MOLDING RINGS

The set consists of four Rings wide enough for any dental casting, and so graded in size that they "nest" one within the other. No. 4 largest.

Price	set of four	$0.60
" No. 1 Small; No. 2 Small Medium	each	.15
" " 3 Medium Large; No. 4 Large		.20

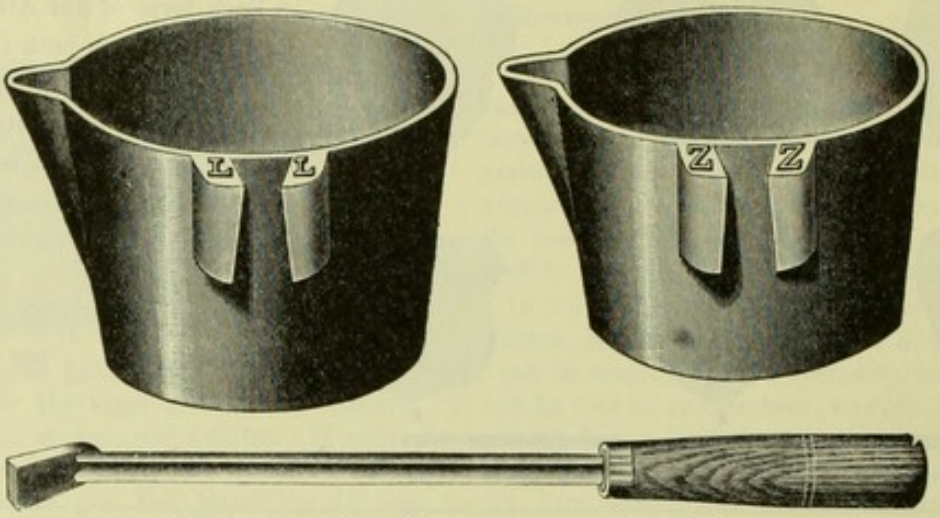
PLATE BRUSHES (Bone Handles)



PRICES

Three Row	each	$0.25
Four "	"	.35
Five "	"	.40

MELTING LADLES



These Ladles are for melting metals, for dies and counter dies. To prevent their promiscuous use, which would contaminate the metals melted in both, the larger one (2⅞ inches deep, 4⅜ inches in diameter at the top) is marked L, to suggest its use for lead; the smaller (2⅜ inches deep, 4⅛ inches in diameter) is marked Z for zinc.

A third size, of the same general character, but unlettered, and commonly called "Extra Large," can be used for other metals on occasion. It holds about the same quantity as the L, but is heavier and differs sufficiently in appearance (2½ inches deep, 4½ inches in diameter) to be readily distinguished from it.

The detachable handle fits all three. The two lettered Ladles are sold as a set.

PRICES

Set of two Ladles designated by the letters L and Z for lead and zinc, and one detachable Handle	per set	$0.80
Ladles, separate, L or Z	each	.30
Extra Large Ladle (2½ inches deep; 4½ inches diameter) with detachable Handle	"	.70
Set of two Extra Large Ladles and one Detachable Handle	per set	1.00
Extra Large Ladle separate	each	.40
Detachable Handle "	"	.30

Trade-Mark

CALCAR

Reg. in U. S. Pat. Off.

A SUBSTITUTE FOR MOLDING SAND

Suggested by DR. A. D. GRITMAN

This compound is free from some of the objections to the various forms of Molding Sand. It does not require the care to keep it in good condition; is free from odor, both in the can and when having metal poured into it; does not become "lumpy" from use; does not dry out and require retempering when exposed to the atmosphere.

As a matter of fact, while it will lose a portion of its water when used continually—the frequent contact with the molten metal is bound to cause evaporation—all that is necessary is to leave it exposed to the air for a few hours, and its working quality is restored, because it is hygroscopic.

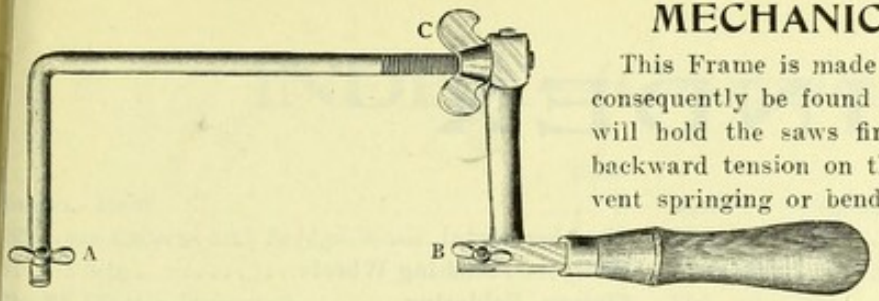
Calcar is clean, sightly, and may be said to be always ready for use. It copies models exactly and smoothly in every detail. Models and dies may be cast in it with zinc, Babbitt metal, or any of the fusible alloys. Any style of flask may be used.

Calcar as sold has just enough moisture to work well. With little care it keeps in good condition for years. A tin can is a good receptacle to store it in.

Put up in 2-qt. cans.

Price	per can	$0.25

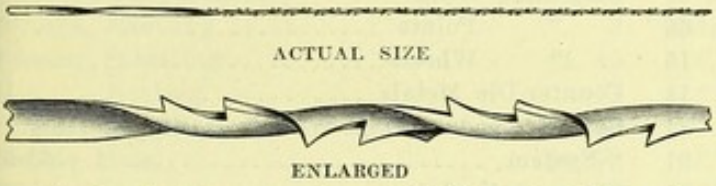
MECHANICAL SAW FRAME



This Frame is made especially for our sales, and will consequently be found durable; the set screws A and B will hold the saws firmly, and by turning the nut C backward tension on the saw is increased so as to prevent springing or bending.

Price $0.60
Price of Saws for same, per doz....$0.10 and .15

SPIRAL SAWS



Here we have an intensely practical working device, so simple the wonder is it wasn't done before. It is merely a thin, flat steel spring, not much wider than a watch spring, twisted into a spiral, with saw teeth cut along one edge. Will it cut? Like a house afire, and in any and every direction.

Heretofore, blades for saw frames have cut on one edge only or on opposite edges. This new spiral saw is all edge, cuts in all directions equally well, sidewise as well as forward or backward. In whatever way you turn it there are the cutting teeth.

Useful in cutting out sections of vulcanite to facilitate repairs, making regulating appliances, shaping plaster models and removing them from the articulator,—wherever a thin, strong rapid-cutting saw blade is indicated.

Spiral Saws are five inches long over all, saw cut evenly for about 3½ inches, with the ends fitted to engage with our Mechanical Saw Frames.

Price .....per dozen $0.10

MISCELLANEOUS LABORATORY ACCESSORIES

Molding Sand	per bushel $1.60; per qt.	$0.06
Kaolin, Prepared	per lb. pkg. $0.15; per ½ lb. pkg.	.10
Silex, Coarse	per lb.	.10
" Extra Fine	"	.25
Marble Dust	per qt.	.10
Crucibles, Sand	nest of four	.10
Pattern Metal	per lb.	.25

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INDEX—(Continued)

TWO WAYS

THE difference between the statesman and the politician is that the former takes the future into the purview of all his plans, while the latter is intent only on gaining a present advantage. The statesman builds an empire for generations to come; the politician builds a machine to grasp the spoils of office,—what is in sight is good enough for him; let those who come after take care of themselves.

One or the other of these two ideas represents essentially the lines upon which any given business is conducted.

A business established upon the statesman lines is founded upon the quality of the goods, an honest price for that quality, the fairness of its treatment of buyers, and a sound financial policy. A structure built on such lines is bound to endure.

On the other hand, a business founded on the politician idea seeks only to gather "the next dollar." It is careless as to whether its products are inferior or indifferent, so long as they can be sold at a low price; they are not cheap,—the best is always the cheapest. To this policy the world of dentistry owes the introduction of the base-metal pin. The "next dollar" is always the "cheapest" dollar.

Our business was founded and has always been conducted on the statesman idea. We have always believed that there was a sale at a reasonable price for all the best quality goods that we could make. We have found it so and we have never ministered to a demand for mere cheapness of cost. We have refused, for example, to substitute a base metal for Platinum in the pins of our porcelain teeth, because no base metal has been discovered or invented which can adequately supply the place of Platinum.

Starting with the best porcelain teeth that had ever been made, we have made them better and better, using now as at the start, Platinum for pins. As we have progressed we have added every article used by the dentist in his business, always making it the best it could be made. That is the basis on which we have grown steadily for sixty-seven years.

We have always made the best goods; we know how and we always shall. The Trade-SS-Mark will be in the future, as in the past, the dentist's sure guide to a higher quality than he can get without that trade-mark.

The S. S. White Dental Mfg. Co.

DON'T LET ANYBODY FOOL YOU

into the notion that anyone makes better Gold Plates and Solders than we do, because it will be only a notion and without a shadow of foundation in fact. Did you ever know of anybody who made anything better than we made the same article? Not much. It never happened. Previous to the time when we standardized ours, some twenty-odd years ago, all Plates and Solders at the service of the dentists, including those which we sold, were a sorry lot compared with what they are today. The pace we then set in quality has been followed by others; they had to follow, but they haven't caught up with us yet.

Recently we have set up another standard—prices to favor the dentist rather than the dealer. You are likely to have other plates and solders thrust at you when you ask for ours, with the statement that these others cost more than ours—*ergo*, they must be better. You can believe this if you want to. But you'll cheat yourself if you do. The extra retail charge goes to the dealer to "justify" his "rooting" for the others. You pay this.

Again, if you buy an ounce of ours at a time you get a reduction of five cents a pennyweight—$1.00 the ounce. In other words, in buying ours you save $1.00 the ounce plus the extra inducement for the dealer, and you get a quality that can't be beaten.

S. S. WHITE GOLD PLATES, GOLD WIRES, and GOLD SOLDERS, in lots of one ounce or more, will be sold FOR SPOT CASH, at 5 cents per pennyweight ($1.00 per ounce) less than the prices of pennyweight lots. When sold in lots of five ounces or more there is a still greater reduction. *(See page 17.)*

The S. S. White Dental Mfg. Co.