

Roentgen radiographic table and several other new things.

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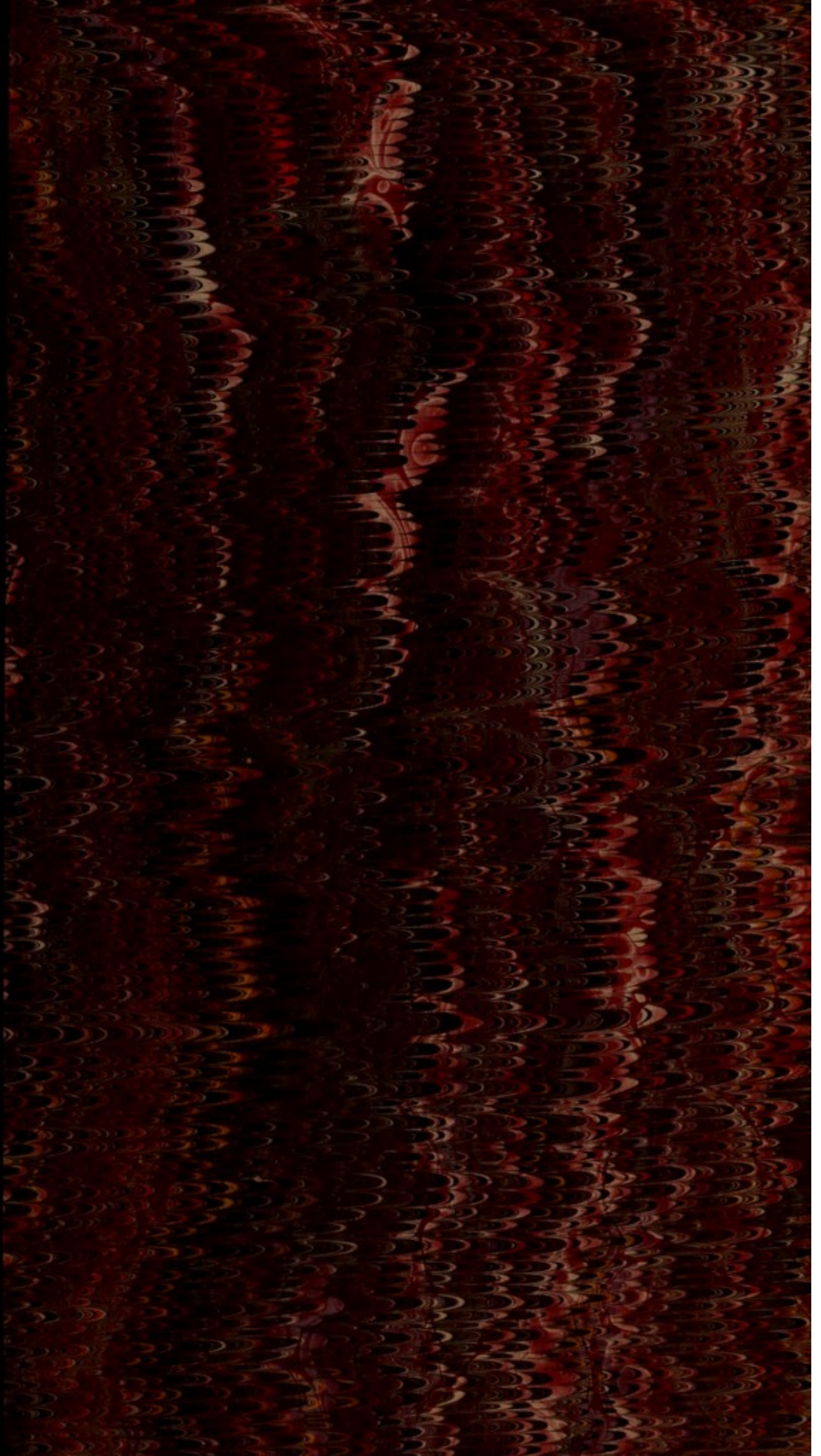
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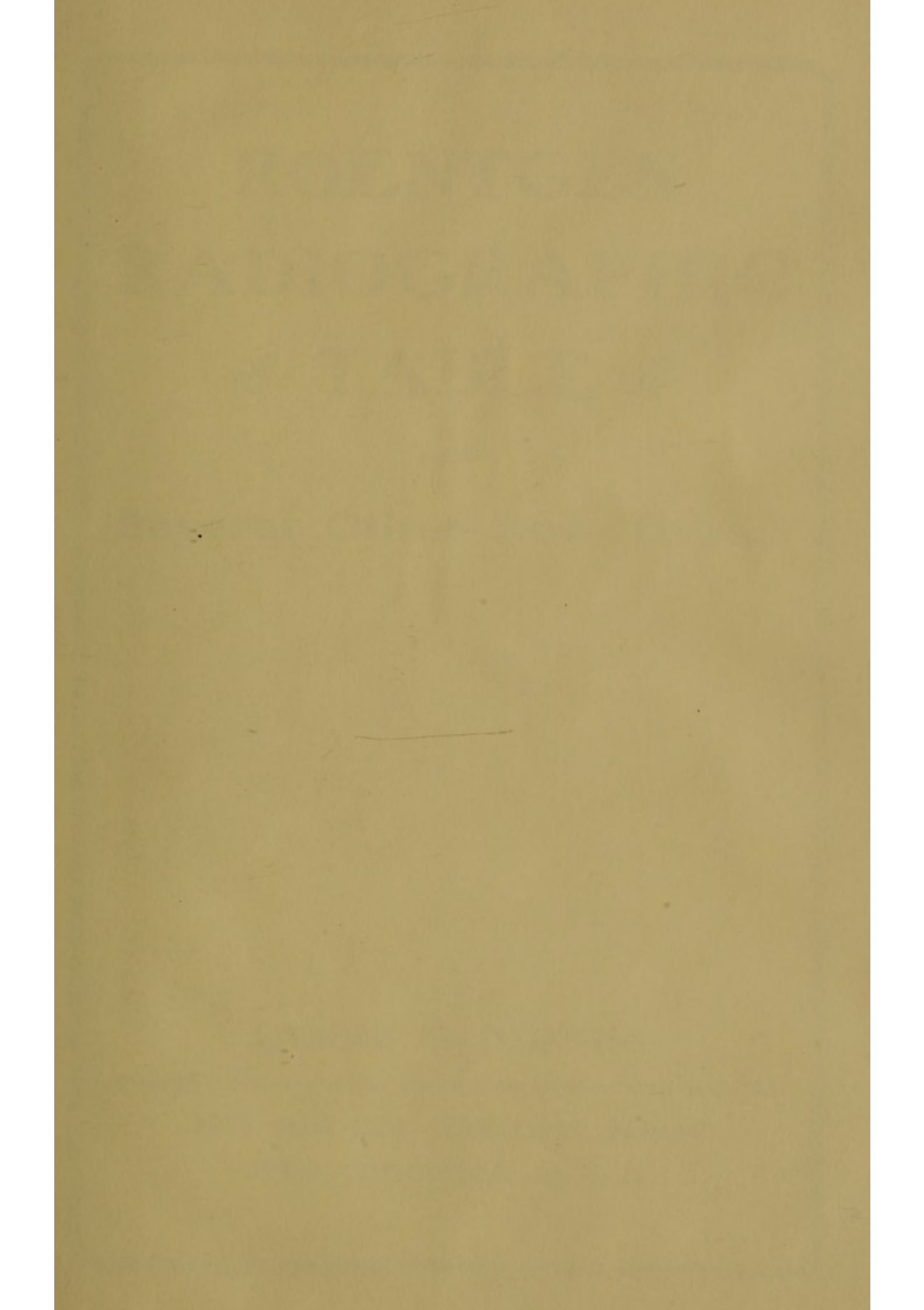


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ROENTGEN RADIOGRAPHIC ✈ TABLE ✈

and

Several Other New Things

c
JAMES G. BIDDLE

General Sales Agent Roentgen Manufacturing Co.

1112 and 1114 Chestnut Street

PHILADELPHIA, U. S. A.

EXPLANATORY.

IN this pamphlet we illustrate and describe some new X-Ray Apparatus of importance, which we believe will prove extremely interesting to physicians and others engaged in such work.

We maintain a comprehensive working exhibit of X-Ray apparatus, and are always glad to receive calls from possible purchasers, as well as from parties who may be equipped already but who wish to keep posted as to advances in the art. It is far more satisfactory to see a machine "work" than to read a description of it or to depend on correspondence alone.

"High quality" rather than "low cost" is our constant aim, although it is true that our prices will be found very reasonable; and we render full equivalent in quality for what we find it necessary to charge. We intend to supply only the best apparatus.

At all times we carry a large stock of X-Ray Tubes suitable for coils and static machines. We invite correspondence on the subject, and ask particular attention to the facilities we offer a customer who may call here, for making personal selection of tubes specially suited to his particular needs.

We are about issuing a new catalogue on the general subject of X-Ray Apparatus, and if those who receive this pamphlet wish a copy of the catalogue we will thank them to advise us to that effect promptly.

JAMES G. BIDDLE,

General Sales Agent,

ROENTGEN MFG. CO.

February, 1906.

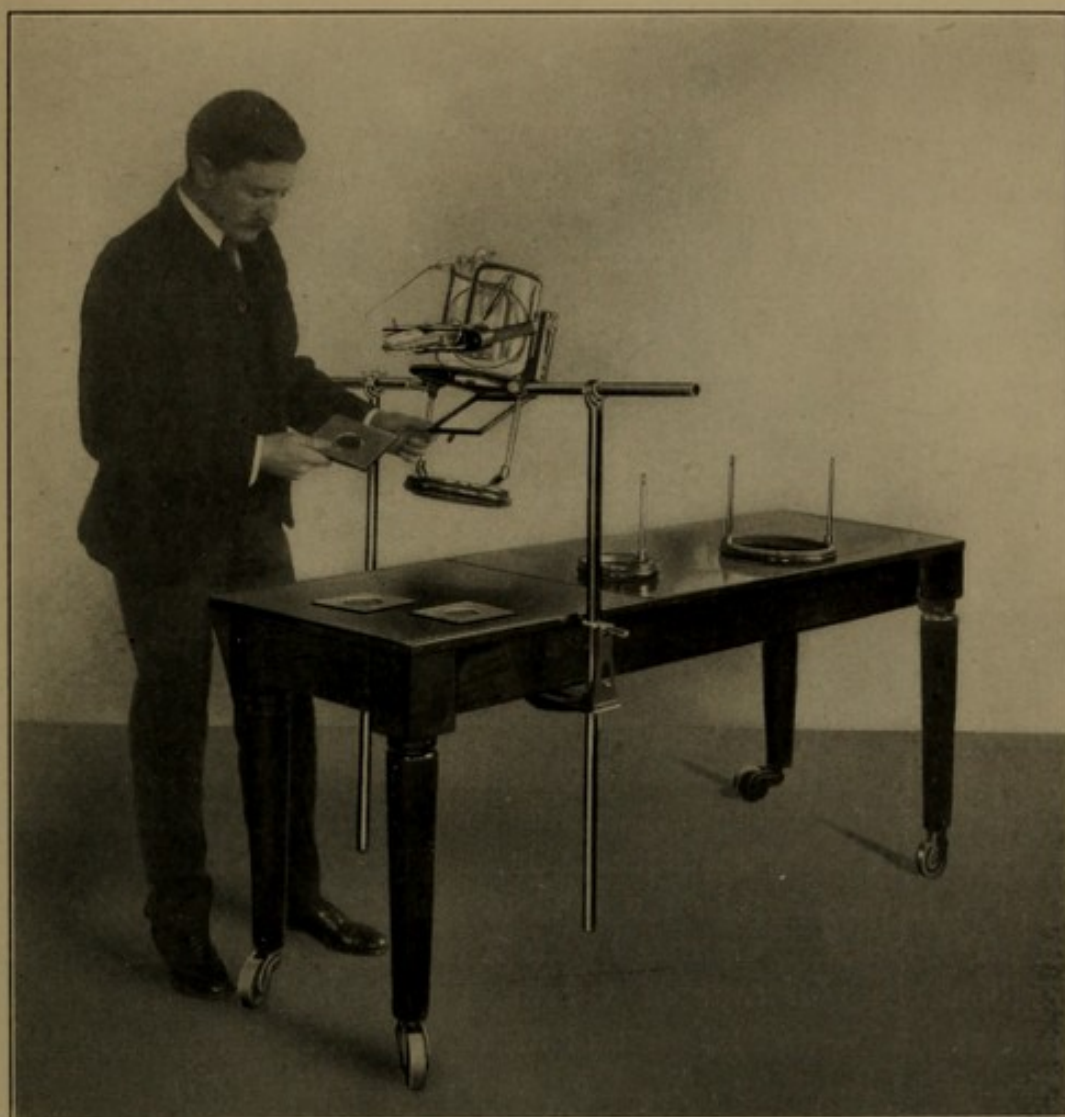


FIGURE 1.—COMPLETE TABLE.

Roentgen Radiographic Table.

IT is a new radiographic table that we present, but it is the best that yet has been produced. The adjustments are all easy—not at all complicated like the compression diaphragms of German make and those copied after them. This is strictly an American product, with all the technical ideas worked out in a practical way.

Compression Diaphragm.

The compression diaphragm idea is the principal one embodied in the apparatus, and everything about it is used to work this idea out.

The illustration (Fig. 1) shows the operator ready to put a diaphragm into position. The diaphragms are held by the rectangular support which, when raised into position, is locked by a spring catch. Three sizes of diaphragms are supplied—2, 2½ and 3 inches in diameter—which, with the adjustment of the distance of the tube from the diaphragm, provides for the diaphragm feature.

**Compression
Rings.**

Any one of the three sizes of compression rings can be used—5, 6½ and 9 inches. The under sides of the compression rings are of nicely turned, polished mahogany, so that no exposed metal parts come into contact with the patient. They are interchangeable, but can be removed entirely when no compression is wanted.

**Lead Glass
Shield.**

We furnish the table with or without the lead glass shield. But we recommend its use as a protection to the operator. The patient is already very effectually protected by the diaphragm, and really does not require the additional protection of the shield. We have spent much time and money in the development of this shield, and offer it as the best practical thing we can find. The lead glass does not stop *all* the rays from a hard tube when excited powerfully, but it does absorb the bulk of them, and *all of the harmful rays*. The radiation emitted by an X-Ray tube is a heterogenous thing, made up of rays of varying degrees of "hardness" or "penetration"—that is, some of them are soft and some are hard. According to Roentgen, Walter and Pfahler, there is a selective absorption of the softer rays by such materials as glass, the common metals, etc. Our own experiments have led us to decide upon the thickness of the kind of lead glass we are using in these shields as the practical thing for a glass shield which effectually stops all the harmful soft rays.

**Advantages of
Glass.**

The superiority of glass over lead shields of various types, and over lead painted cardboard, wood, etc., is the transparency of the glass, enabling the operator to see the changes in the condition of the tube, and also the non-conductivity of the glass, preventing any danger from puncturing the tube by sparks leaping from the wires to the shield and from the shield to the tube.

Steel Track.

The carriage which supports the compression apparatus runs on a steel track beneath the table. The steel track and the carriage are simplicity itself,

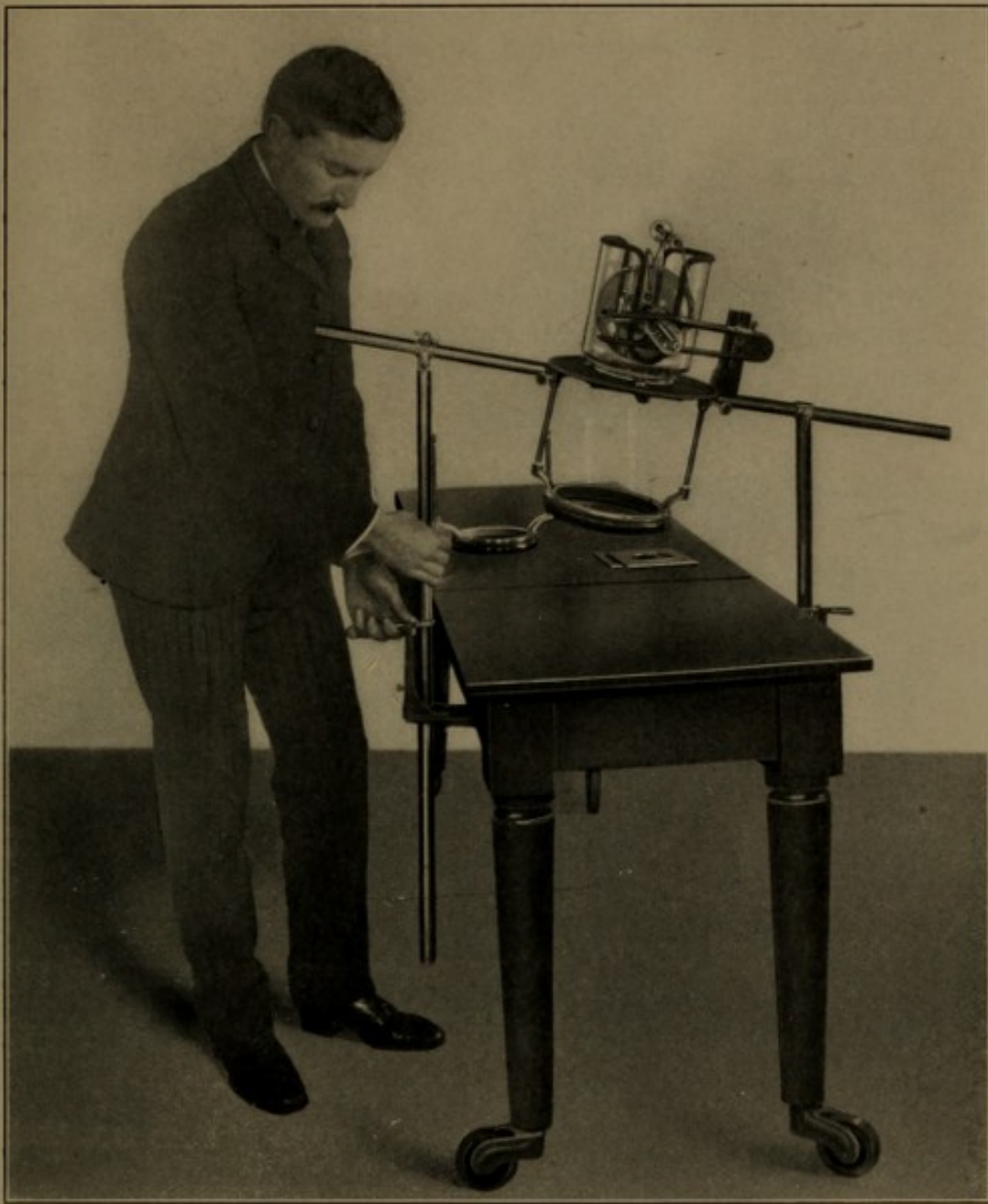


FIGURE 2.—ADJUSTING COMPRESSOR CORRECTLY.

and there are no parts to "get out of whack" or need adjustment. A drop or two of oil on the rails of the track once in a while is all the attention that is needed.

***Vertical
Adjustment.***

The vertical adjustment of the compression is illustrated in the above cut, which shows the correct method of operating the clamp for the vertical rod and the proper method of raising or lowering the vertical rod itself.

The left hand of the operator is on the clamp, with the thumb pressed down on it in the position shown. By pulling upward with the left hand the clamp is released and the rod can be adjusted up or down as desired. The clamp is so made that it will permit the compression to be pushed down, but it prevents it from being pushed back up again unless the clamp is released, as in the illustration.

A small friction brake immediately below the clamp provides just enough friction to prevent the compression from falling of its own weight. This brake is adjustable, but is set to the usual value at our factory before being sent out.

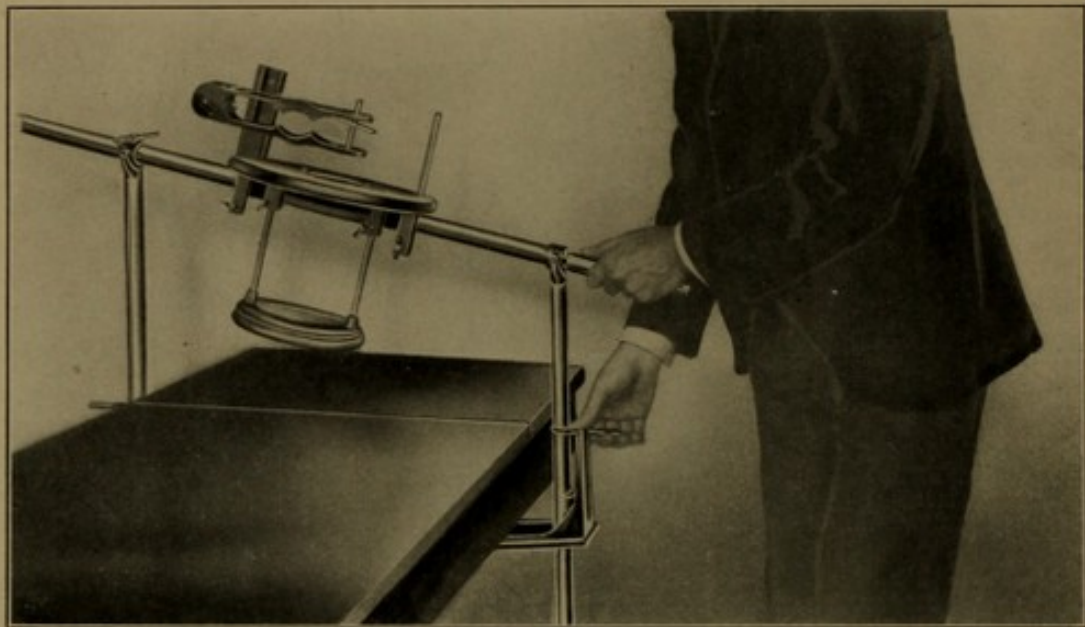


FIGURE 3.—ADJUSTING COMPRESSOR INCORRECTLY.

***Convenience in
Setting.***

This makes the setting of the compression very convenient. The carriage is readily pushed to the end of the table to permit the patient to get on the table. The compression apparatus is then pulled back over the patient. After the horizontal adjustment is made, the vertical one is made by merely pushing the entire compression down on the patient, where it clamps itself.

***The Wrong
Way.***

In Figure 3 we illustrate the wrong way to release the compression as it tends to push the compression ring down on the patient, and with sensitive patients is objectionable. The correct method was shown in figure 2.

For the Head.

This cut also shows the line across the table top at the lower end of the adjustable leaf for raising the head.

This is often a very convenient feature, and can be readily supplied when desired.

The Tube Clamp.

Our new tube clamp is another radical but good feature. As shown below, the operator is in the act of clamping the tube.

The jaws of the clamp are merely pressed together, and the clamping is done automatically.

We have made this our standard style of clamp for our tube

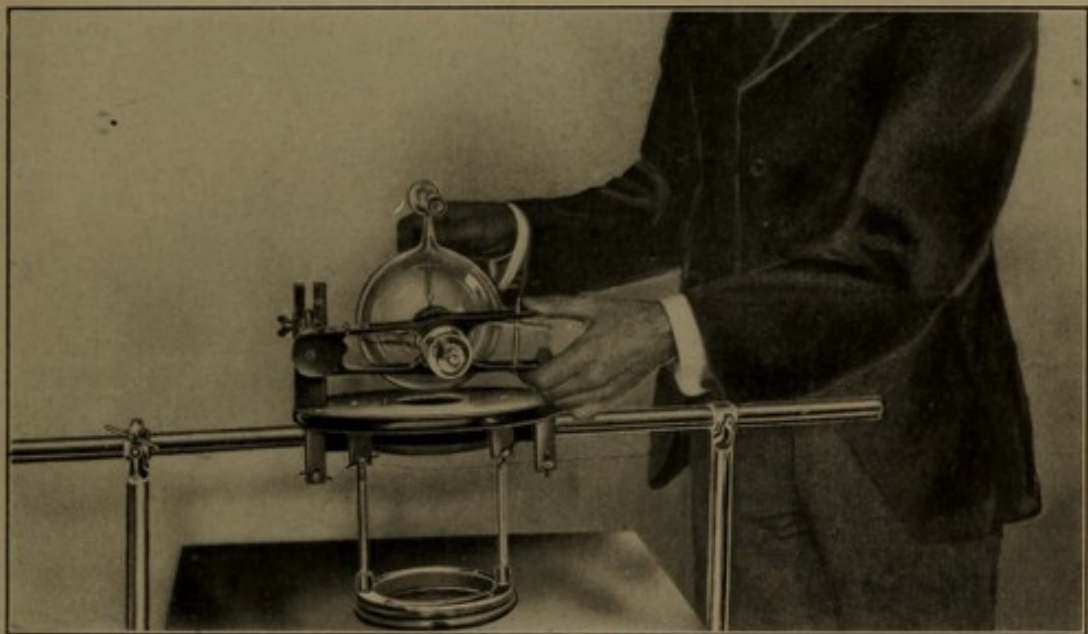


FIGURE 4.—NEW STYLE TUBE CLAMP.

stand as well as for our radiographic table, for we have found it more trustworthy and serviceable than anything else.

The Graduated Scale.

A graduated scale is placed on the vertical rod which supports the tube clamp. This scale indicates in inches the distance of the anode from the plane of the compression ring.

Unclamping the Tube.

When the tube is unclamped it is necessary to pull up the metal tongue which is between the jaws of the clamp. The jaws of the clamp should be held when this is done to prevent a sudden shock to the tube. The method of doing this is apparent from Figure 5.

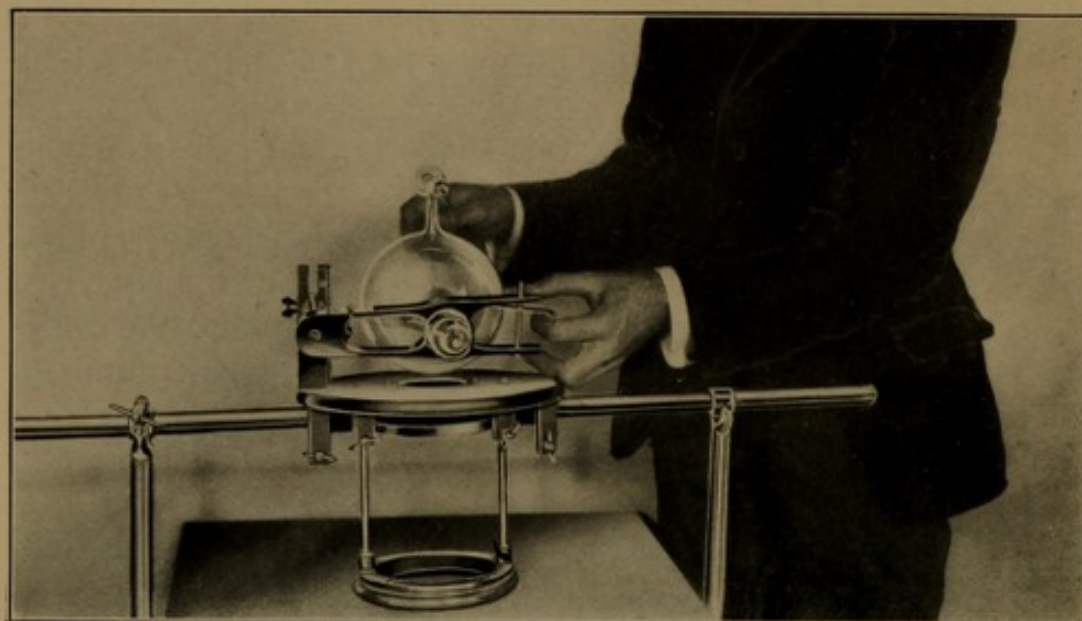


FIGURE 5.—CORRECT WAY TO UNCLAMP TUBE.

Casters.

When we came to the point of finding suitable casters for our radiographic table we scoured the country for something really good, and the best we could get was such as are used on hospital furniture; but that was not good enough to suit the standards we had set, and the result was that we designed and are now making our own casters for this use. They are really wheels, not casters, for the word caster does not imply the service to which they are put and fulfill.

Will Never Warp.

The top of the table will never warp, for we have slotted it longitudinally with the grain of the wood and placed battens cross-wise of the grain, in the manner of an engineer's drawing board. This insures against the breakage of plates, and is therefore a matter conducive to the operator's ease of mind.

All Kinds of Service.

The radiographic table is adapted to all kinds of service. It is usable not only for straight radiographic work, but also for treatments of all kinds. The tube may be adjusted to cover any spot on the table top, and it may be tilted sufficiently to obtain practically every adjustment an X-Ray operator could ever desire.

B3087. Roentgen Radiographic Table, 1906 Model, complete as shown in Figure 1 (Tube not included), . . . \$80.00

In addition to the table itself with tilting end, the apparatus includes: Three compression rings, having respective diameters of 5, 6½ and 9 inches; three lead diaphragms, with diameters of 2, 2½ and 3 inches respectively; holder for X-Ray tube; holder for ventril tube; lead glass protective shield for tubes up to 6½" diameter.

B3088. Roentgen Radiographic Table, . . . \$86.00

Exactly the same as B3087, except that the lead glass protective shield is large enough for tubes up to 8" diameter.

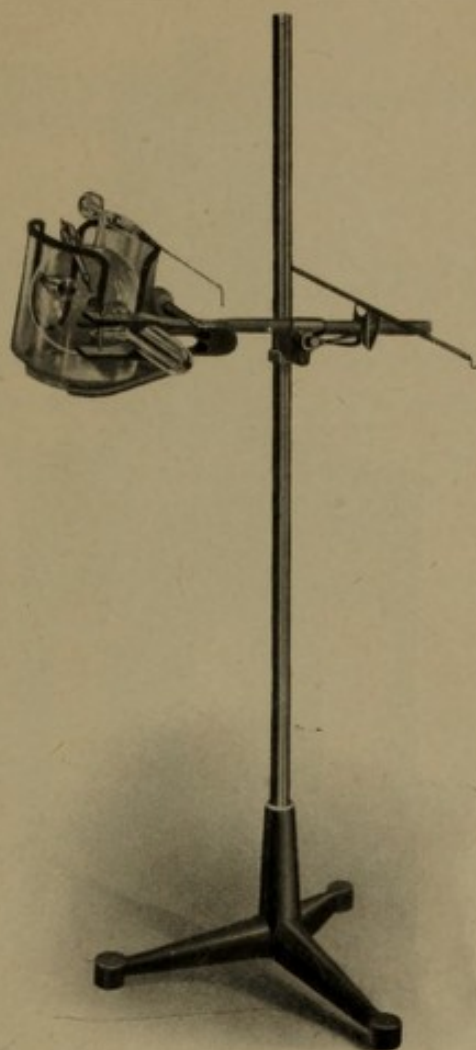


FIGURE 6.—ROENTGEN TUBE STAND WITH ACCESSORIES.

Roentgen Tube Stand with Glass Shield and Diaphragms.

THE name of this piece of apparatus is completely descriptive in itself. It is our regular tube stand equipped with a glass shield. The clamp for the tube is of our new type described on page 7 of this circular.

The construction is very rigid and substantial throughout. The removable lead diaphragms (not easily seen in the illustration) are the same as those described and illustrated on pages 3 and 4.

B 3095.	Roentgen Tube Stand	\$15.00
B 3096.	Clamp for Ventril Tube	2.25
B 3097.	Lead Glass Protective Shield*	5.75
B 3098.	Set of Lead Diaphragms	2.25

* For tubes not larger than 6½" diameter.

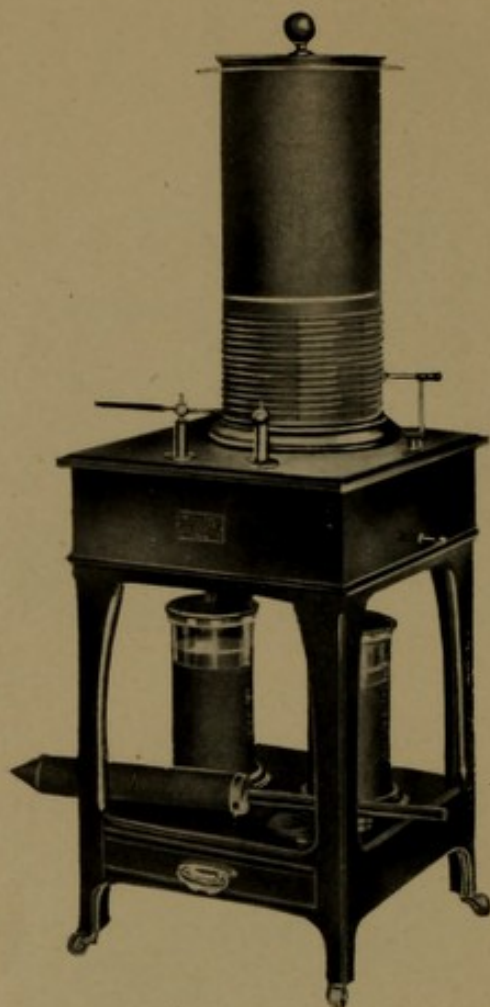


FIGURE 7.—OUDIN RESONATOR AND TESLA COIL.

Oudin Resonator and Tesla Coil with **Resonator Electrode.**

WE have hesitated to announce ourselves as makers of high frequency apparatus, although we have been making it for some time.

Our patrons will understand us when we say that there has been a period of doubt about the therapeutic value of high frequency current.

But some of our own apparatus has been out in the hands of a few of the best X-Ray workers long enough to assure us that "it really is of value." We therefore present our standard type of **Oudin Resonator and Tesla Coil**, together with something new, which is an adjunct to them.



FIGURE 8.—RESONATOR ELECTRODE.

Resonator Electrode.

THIS is a form of electrode designed to be attached to the **Tesla Coil** terminals or to the **Oudin Resonator** by a cord, just as are the regular vacuum electrodes. It gives a fine, long, soft, effleuve, much superior to the effleuve obtained in any other way, and is used to apply the effleuve or the spark. The latter is readily obtained by holding the electrode somewhat closer to the patient than when administering the effleuve.

It is really a success—a decided improvement—in the production of the much desired effleuve, giving enough that there is very little danger of sparking the patient when the effleuve alone is wanted.

The **Resonator Electrode** is a new and good thing. We have no hesitancy in recommending it to our customers as one of the very best things in high frequency work.

B 3242.	Oudin Resonator with Resonator Electrode	\$67.50
B 3243.	Oudin Resonator, Tesla Coil, and Resonator Electrode .	95.00
B 3244.	Set of Vacuum Electrodes	5.00

March 28, 1905.

"The new 'Jumbo' Coil has exceeded the claims made for it, and Mr. Snook should certainly be congratulated on building such a powerful and efficient coil.

"Of all the X-Ray apparatus I have used, this coil is certainly the most powerful one. With it a good radiograph can be made of any part of the body in from one-half to ten seconds. I have even succeeded in making a hip-joint in one second.

"The quickest and best radiographs were made with the Roentgen Ammeter, reading between 15 and 20 mil-amperes."

April 3, 1905.

"During the past eighteen months we have purchased from you for our X-Ray Department one 18-inch and one 24-inch induction coil, with Roentgen mechanical and electrolytic interrupters; one Roentgen milliammeter; one combined Oudin and Tesla high frequency coil and resonator, and numerous other parts of an X-Ray equipment, and have found all these appliances to be perfectly satisfactory in every way. Your attention to furnishing supplies and making repairs has aided us greatly in handling the large amount of skiagraphic and therapeutic work at hand, and we take pleasure in commending your ability to furnish the best quality of X-Ray apparatus."

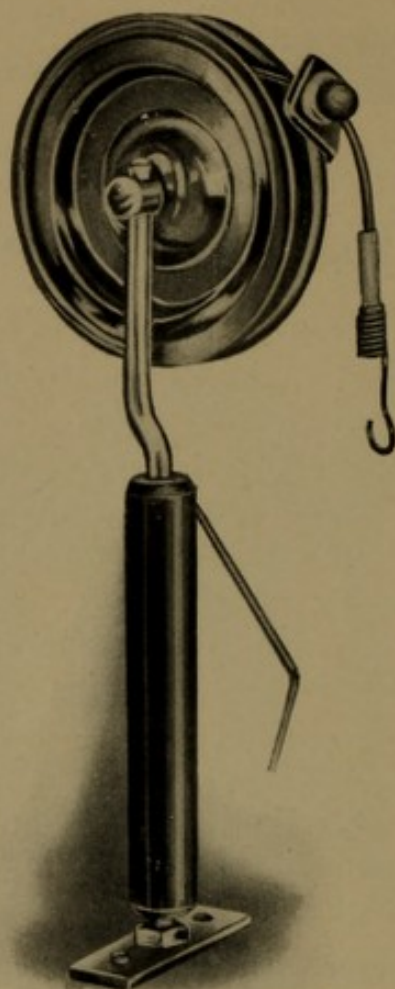


FIGURE 9.—MODEL 1 CONDUCTOR REELS.

Conductor Reels.

THIS is something new and is the most convenient little thing that we have ever produced. It is a nickel-plated brass reel, which carries about nine feet of flexible conductor for connecting the X-Ray tube to the high tension terminals of the induction coil. A spiral steel spring inside the body of the reel winds the wire up automatically like a window shade—with this exception that there isn't any catch to it—for the spring always pulls the slack out of the wire.

A substantial wire terminal is on the end of the wire for hooking into the tube terminals, and a porcelain eyelet with a wooden stop secure the proper winding of the conductor on the reel.

When they are adapted to **Roentgen Coils** they are merely

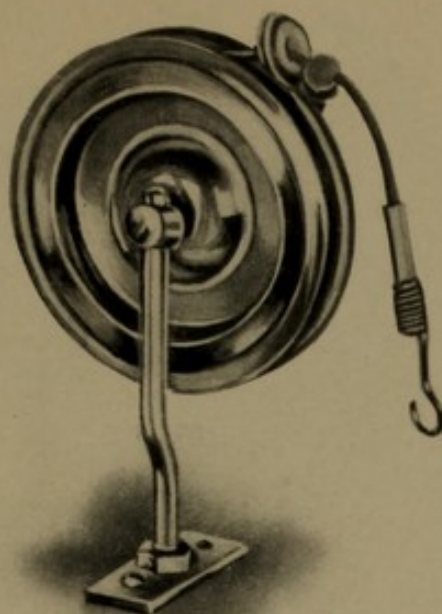


FIGURE 10.—MODEL 2 CONDUCTOR REELS.

set on top of the terminals in the place of the regular style of series spark gaps.

The reel is mounted upon a series spark gap, as shown in figure 9, for use in this manner.

When the reels are to be adapted to some make of coil other than our own, we can send them out like figure 10 with a little nicked brass plate with screw holes for fastening to any kind of a surface with screws; or the brass plate can be had with the reel and series spark gap as shown in figure 9.

Only an X-Ray operator can appreciate how convenient this reel is, for it does away with all curling of the wires over lead-pencils and similar annoying expedients used in an attempt to dispose of the troublesome "slack in the wires."

As above noted the reels are designed so that they may be attached to *any make of coil*, and we are sure that they satisfy conditions which for a long time have been annoying.

B 3055.	Roentgen Conductor Reels, per pair (Model 1)	\$5.00
B 3056.	" " " " " (Model 2)	5.00

July 1, 1905.

"The Portable Coil and Interrupter are very efficient, and I am very much pleased with the outfit. It is very compact, and I can place it in my automobile without any trouble; and still there is sufficient energy with a tube low enough to allow $7\frac{1}{2}$ mil-amperes to pass to make a kidney stone of a man weighing 135 pounds in 35 seconds.

"The Interrupter is the most efficient I have ever seen working on alternating current. I have used it with a ——— and several other coils which I have outside, and it works splendidly on each with the proper adjustment. Then, as soon as the treatment was given, the lid was screwed down tightly on the jar and I took it to the next patient's house."

Dec. 14, 1905.

"Although I already have two Portable Coils, I must have something of your manufacture to put the finishing touch to my equipment."

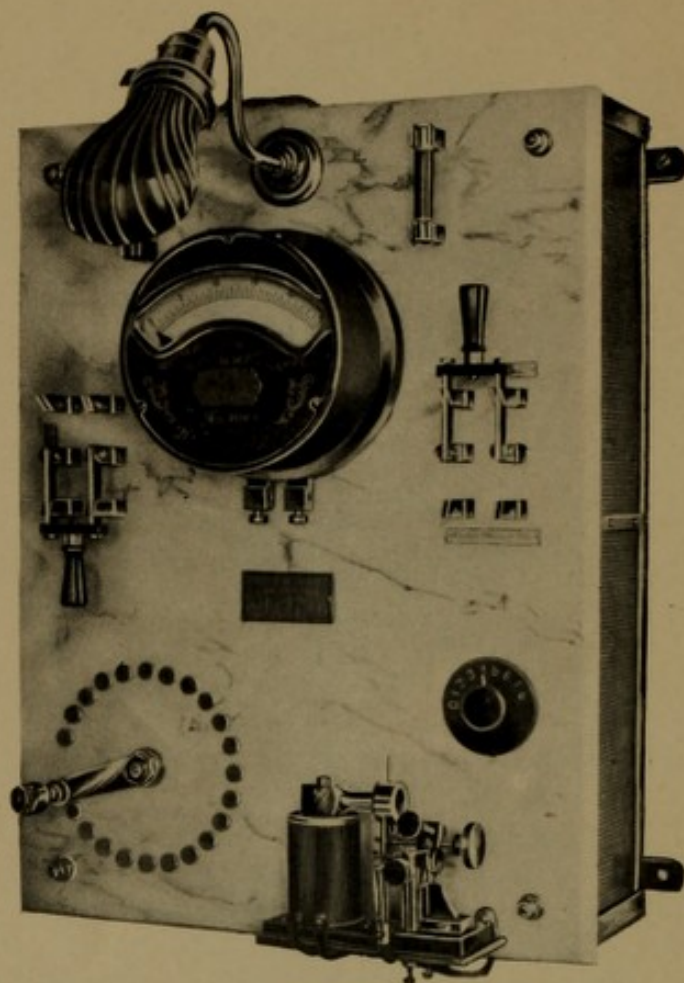


FIGURE 11.—SWITCH-BOARD FOR WALL.

Switch-board for Wall.

THE switch-board illustrated above is designed for mounting upon the wall and is a very convenient disposition of the switches, instruments, etc., when economy of floor space is a prominent factor in determining the type of apparatus to be installed.

The particular switch-board shown has mounted upon it an ammeter, pilot lamp, fuses, pole-changing switch, switch for changing from mechanical to electrolytic interrupter, condenser switch, mechanical interrupter and connections necessary for the coil, electrolytic interrupter and the line.

We are prepared to furnish switch-boards of special design and equipment to meet the demands of individual customers.

Prices on application.

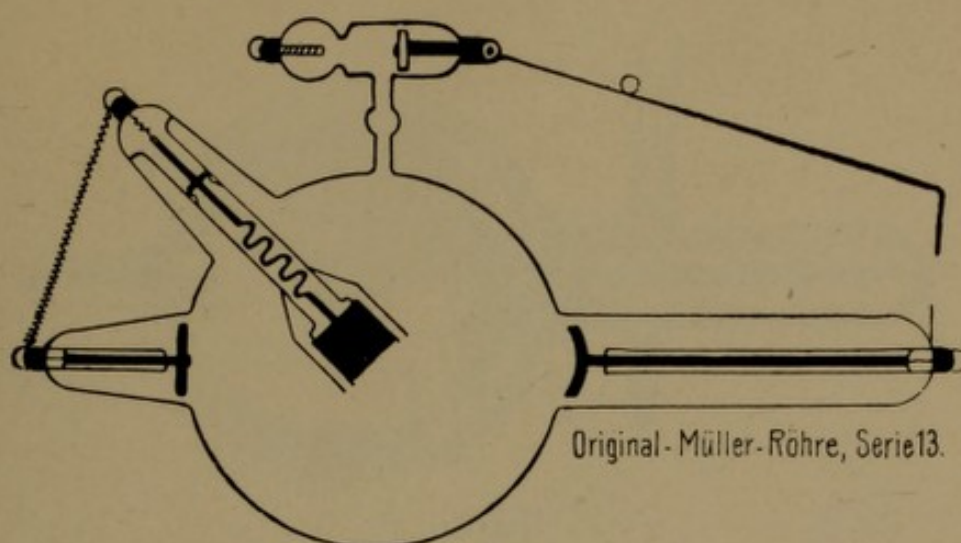


FIGURE 12.

Müller Heavy Anode Tubes.

B3205 (13). Diameter of bulb, 6''	\$22.50
B3206 (13a). Diameter of bulb, 6''*	25.00

*Same as B3205, with addition of glass mantle around anode.

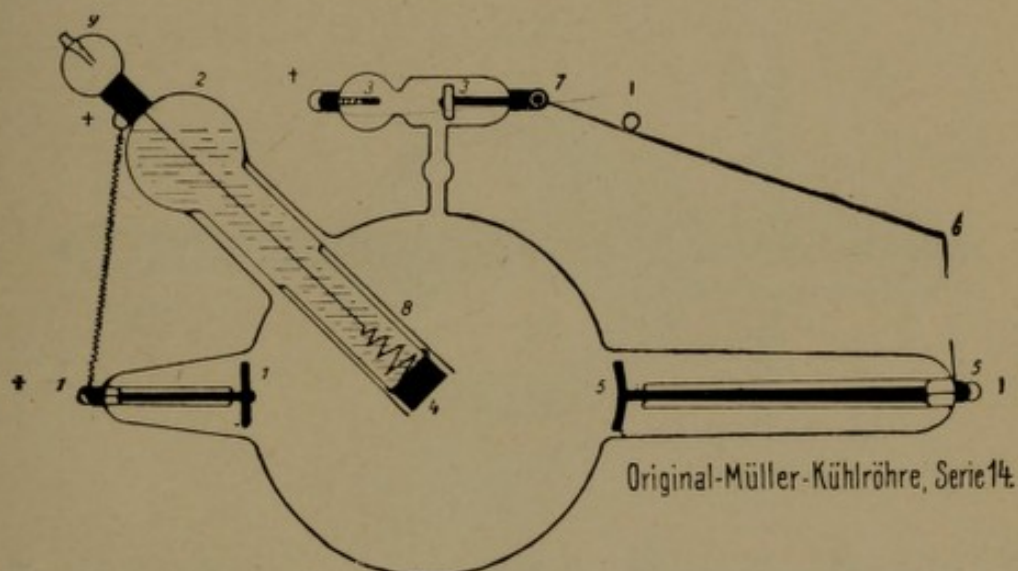


FIGURE 13.

Müller Water Cooled Tubes.

B3208 (14). Diameter of bulb, 7''	\$45.00
B3209 (14a). Diameter of bulb, 8''*	55.00

*Provided with double regulator.

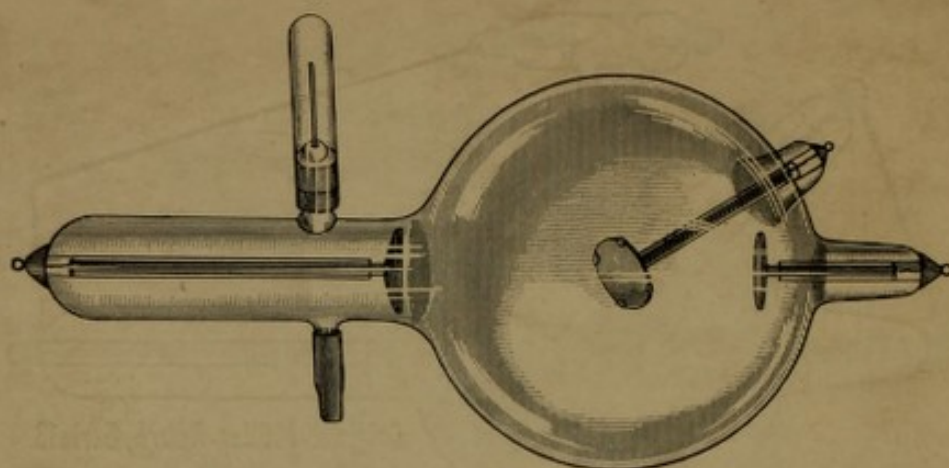


FIGURE 14.

Gundelach Light Anode Tubes.

B3215 (3).	Diameter of bulb, 5''	\$12.50
B3216 (4).	Diameter of bulb, 5½''	15.00

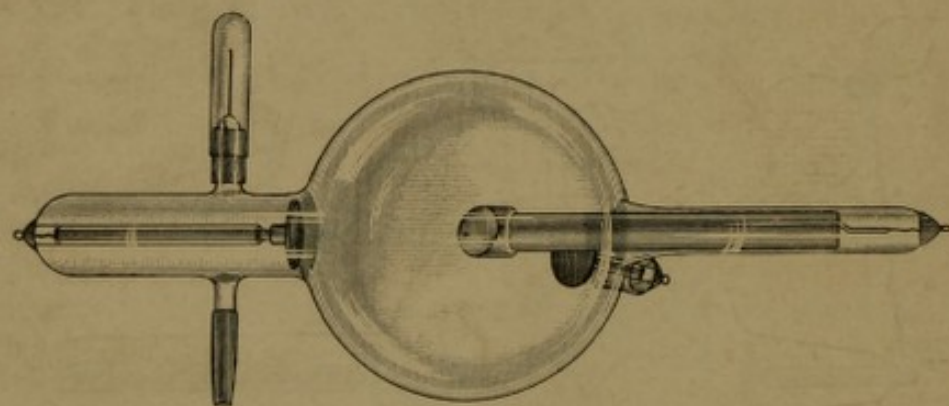
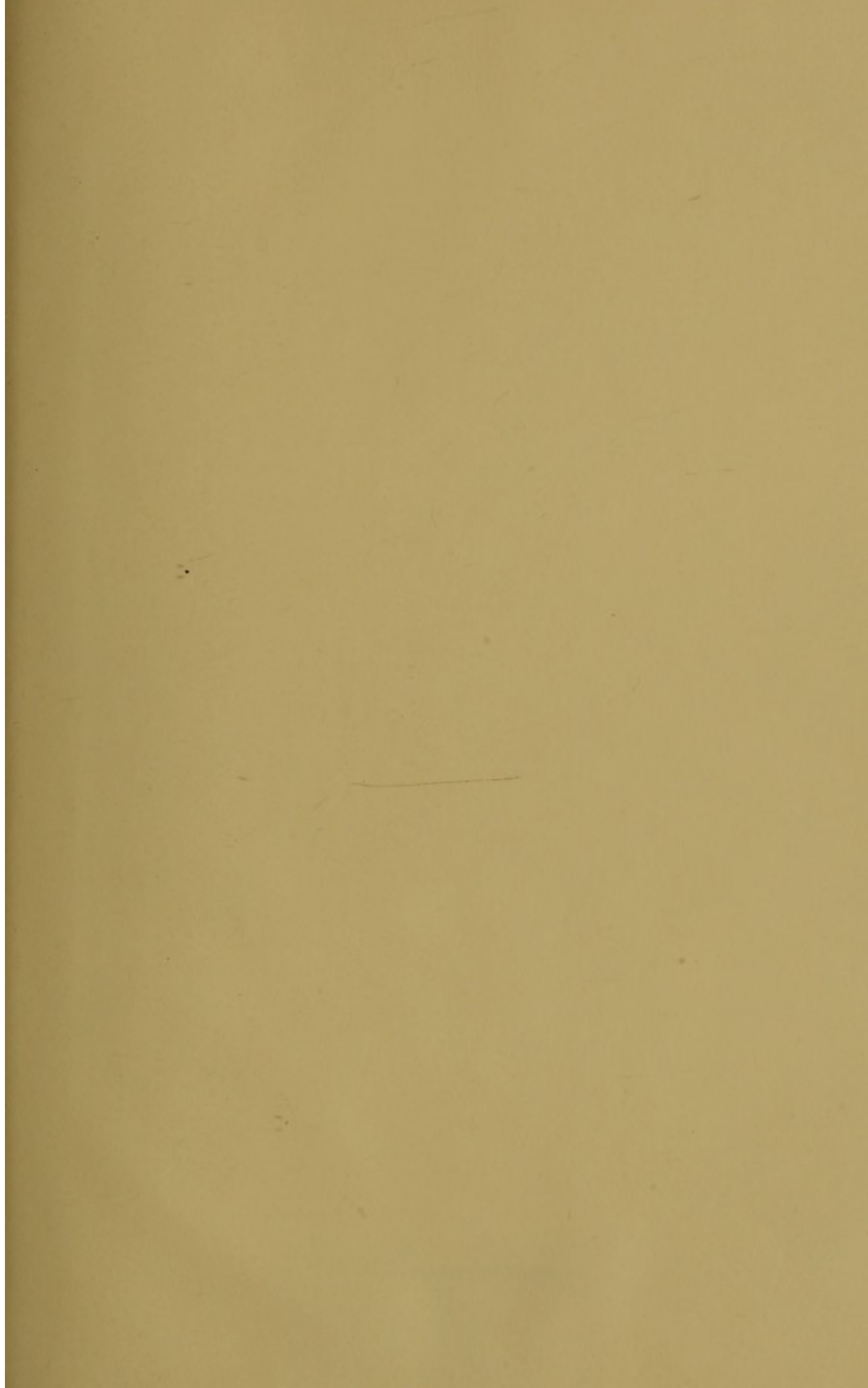
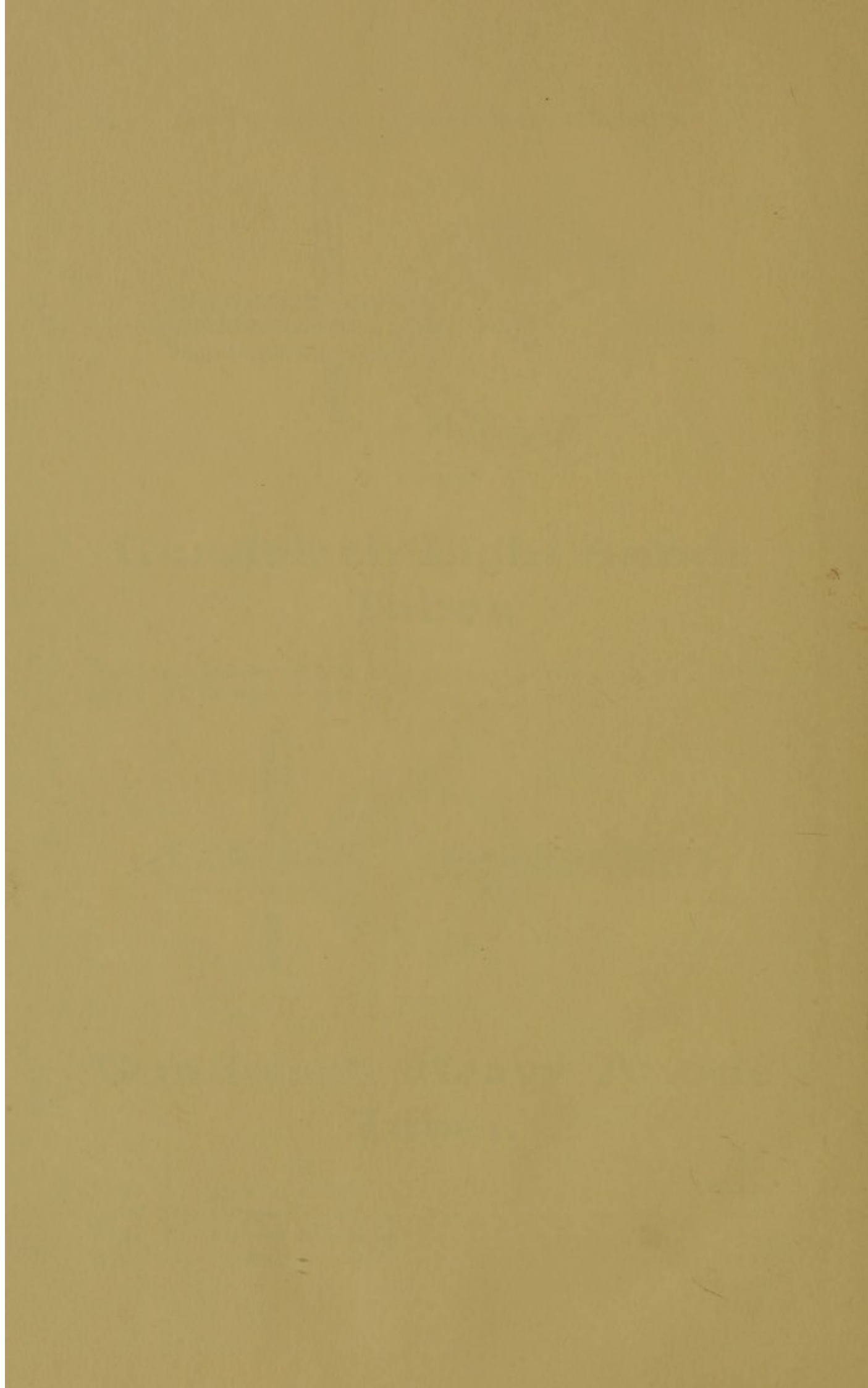


FIGURE 15.

Gundelach Heavy Anode Tubes.

B3219 (C).	Diameter of bulb, 5½''	\$22.50
B3220 (D).	Diameter of bulb, 6''	25.00
B3221 (F).	Diameter of bulb, 6½''	30.00
B3222 (G).	Diameter of bulb, 8''	40.00





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