To all whom it may concern:

Be it known that I, ADAM TINDEL, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Metal-Sawing Apparatus, of which the following is a description.

This invention is a metal-sawing apparatus comprising mechanism permitting its table to be used as an ordinary work support or as a vise for holding the work in the desired relation to the saw-blade, the table being formed in two sections, so that one can be moved with relation to the other to form a plain table or to provide an opening for receiving the work or a work-holder to be engaged between the sections.

In sawing shapes of various kinds with apparatus heretofore in use it has been necessary to strap or tie them upon the table, with difficulty in setting and holding them in the desired relation to the saw, while to fix and change the position of the shapes involves considerable loss of time and renders it impracticable to turn the various shapes operated upon so as to saw through them in the most expeditious manner. The improvements of the present invention avoid these objections by providing means for firmly holding, readily changing, and easily adjusting the material to be operated upon in relation to the operating mechanism. Through my mechanism it is rendered practicable to cut through various shapes with the shortest possible travel of the saw-blade and a corresponding reduction of time for the operation and with the largest possible number of cutting-teeth simultaneously engaging in the kerf of the work, whereby the action of the blade is steadied, so that there is avoided the chattering and jolting incident to sawing through thin sections of material having their edges presented to the blade and a single tooth thereof engaged at a time, with increased steadiness, greater safety, and saving of wear. For example, in the usual manner of sawing a twelve-inch I-beam the shortest section through which the blade travels would be six inches, with the beam resting upon a flange and in an upright position, while if supported upon the edges of the flanges with the web parallel to the table the blade would be required to travel twelve inches. By my invention the work can be turned to present the faces of the flanges and the web to the blade successively, so that to cut through each the blade is required to travel through but one-half inch or through a total distance of one and one-half inches to sever the entire section.

In the accompanying drawings, Figure 1 represents a plan view of a sawing apparatus embodying the improvements. Fig. 2 represents a side elevation thereof. Fig. 3 represents a plan view, and Fig. 4 a side elevation, of a section of the machine, showing the table-sections open and holding a bar at right angles to the saw-blade acting thereon. Fig. 5 represents a plan view, and Fig. 6 a side elevation, of a section of the machine with a holding device engaged between the open sections of the table. Fig. 7 represents a plan view, and Fig. 8 a side elevation, of a section of the machine with a device for holding shapes in various relations to the saw-blade. Fig. 9 represents an end elevation of the apparatus shown in Figs. 7 and 8, and Figs. 10, 11, and 12 represent views of further forms of devices for holding various shapes.

As shown in the drawings, the apparatus comprises the base 1, on which moves the carriage 2 for the saw-blade 3, the base having thereon the table 4. A table 5 is movably supported on the table 4, being adjustable thereon transversely to the saw-blade 85 by means of a screw 6, revolving in a bearing 7 on the base and working in a slide 5° on the bottom of the table, which runs in the way 1° in the base. The table 5 comprises the section 5°, having the base 5° and the section 5° movably supported by the base 5°. To guide the section 5° in its movement parallel to the plane of the blade, it is provided on its bottom with the slide 5°, which works in a way 5° in the base 5°, the movement being effected by the screw 8, journaled in the section 5° and working in the section 5°. By operating the screw 8 the section 5° can be brought into abutting relation with the section 5°, so as to form a solid unbroken table having the usual functions, as shown in Figs. 1 and 2, or opened to receive and fix a shape or a shape-holder, as shown in Figs. 3 to 8, inclusive.

In Figs. 3 and 4 the sections 5° and 5° are provided with the dovetail ways 5°, and jaws 9 are provided with the dovetail slides 9°, which engage the ways to hold the jaws.
Having described my invention, I claim—
1. In mechanism of the class described, a
saw-blade, in combination with a table hav-
ing sections adapted for holding upon or be-
tween them an object to be acted upon by
said blade and means whereby the sections
of said table can be opened and closed.
2. In mechanism of the class described, a
base, a carriage movable on said base, a saw-
blade supported by said carriage, a sectional
table supported by said base and adapted
for holding work upon or between the sec-
tions thereof, and a screw for moving the one
section of the table with reference to the
other.
3. In mechanism of the class described, a
saw-blade, in combination with a sectional
table, jaws between the table-sections for
holding the work so that said blade can act
thereon, and means for moving one of said
sections with reference to the other.
4. In mechanism of the class described, a
sectional table, a chuck held between the
sections of said table and a cutting device
adapted to operate upon work held by said
chuck.
5. In mechanism of the class described, a
base having a table, a carriage movable on
said base, a saw-blade supported by said
carriage, a sectional table mounted on said
first table and adapted for holding work be-
tween the sections thereof so that said blade
can act thereon, and means for moving said
sectional table transversely to said blade.
6. In mechanism of the class described, a
base, and a table having a section with a
base movable on said first base, and a section
movable on the second base.

In testimony whereof I have hereunto set
my name, this 9th day of May, 1906, in the
presence of the subscribing witnesses.

ADAM TINDEL.

Witnesses:
GEORGE N. CRISPIN,
W. ELLIOTT HAZZARD.