

No. 765,083.

PATENTED JULY 12, 1904.

C. T. KNITTEL.
CUTTING DEVICE.

APPLICATION FILED AUG. 12, 1903.

NO MODEL.

Fig. 1

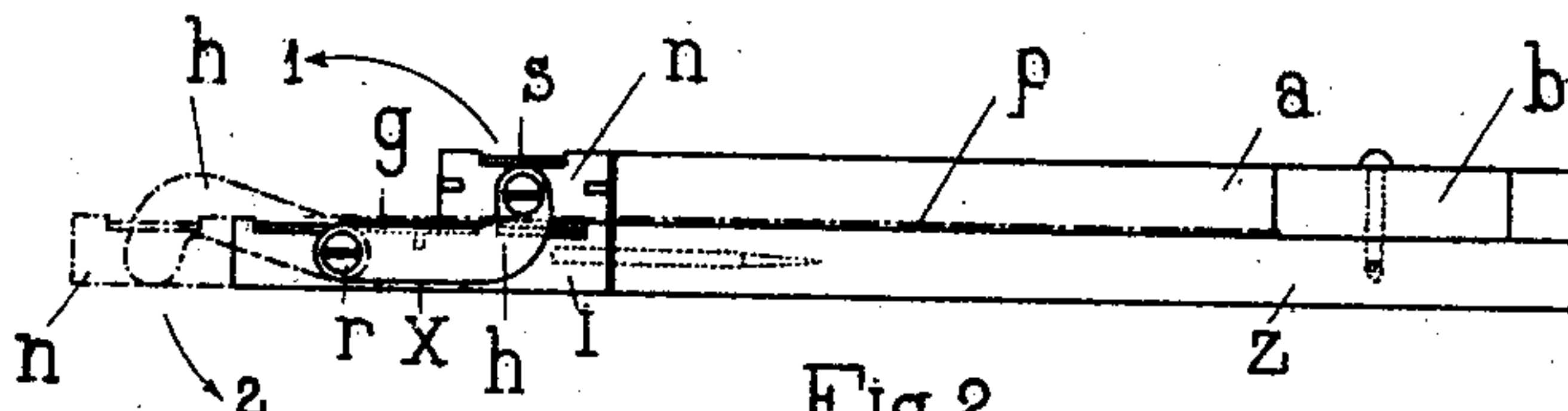


Fig. 2

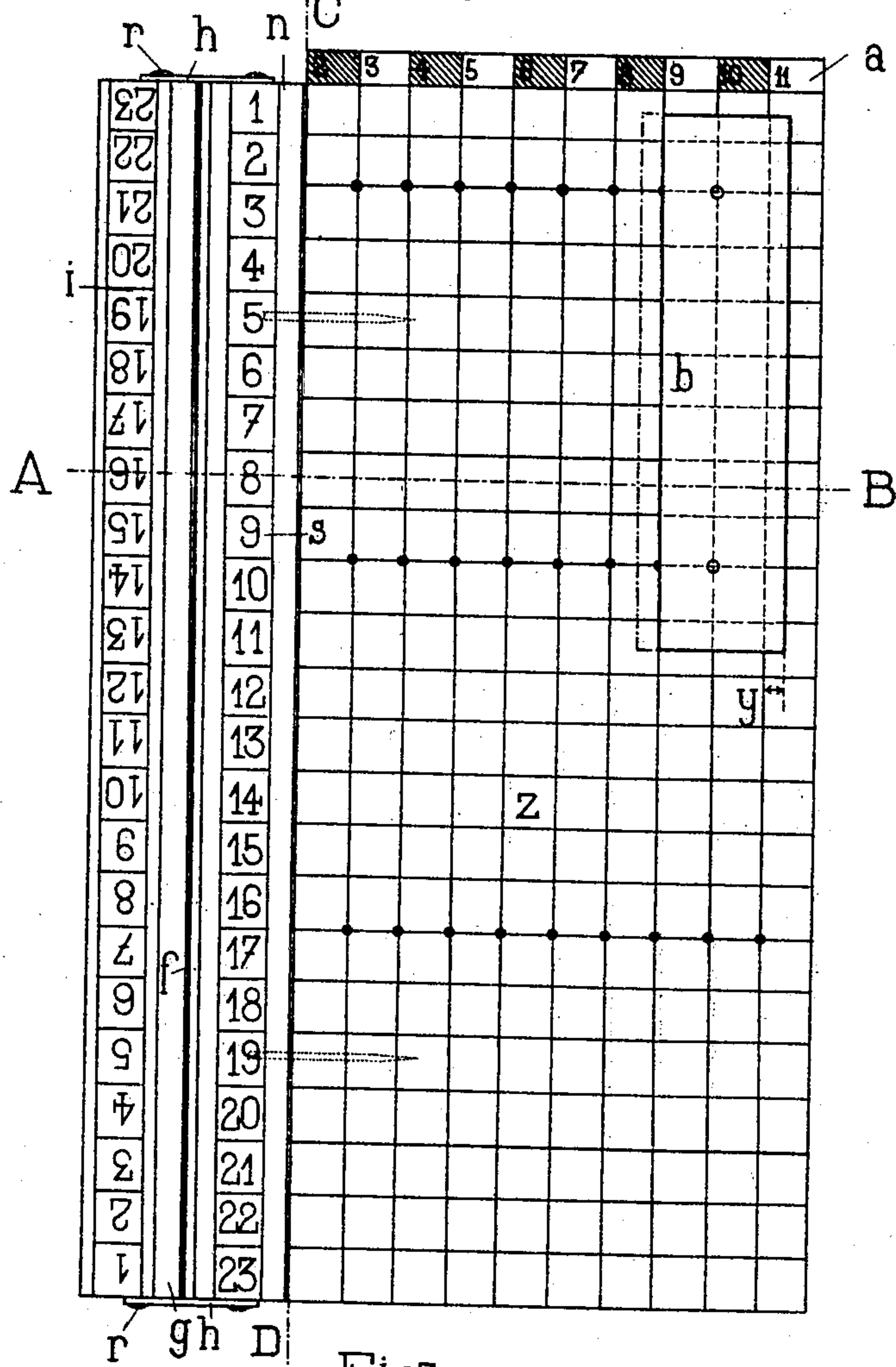
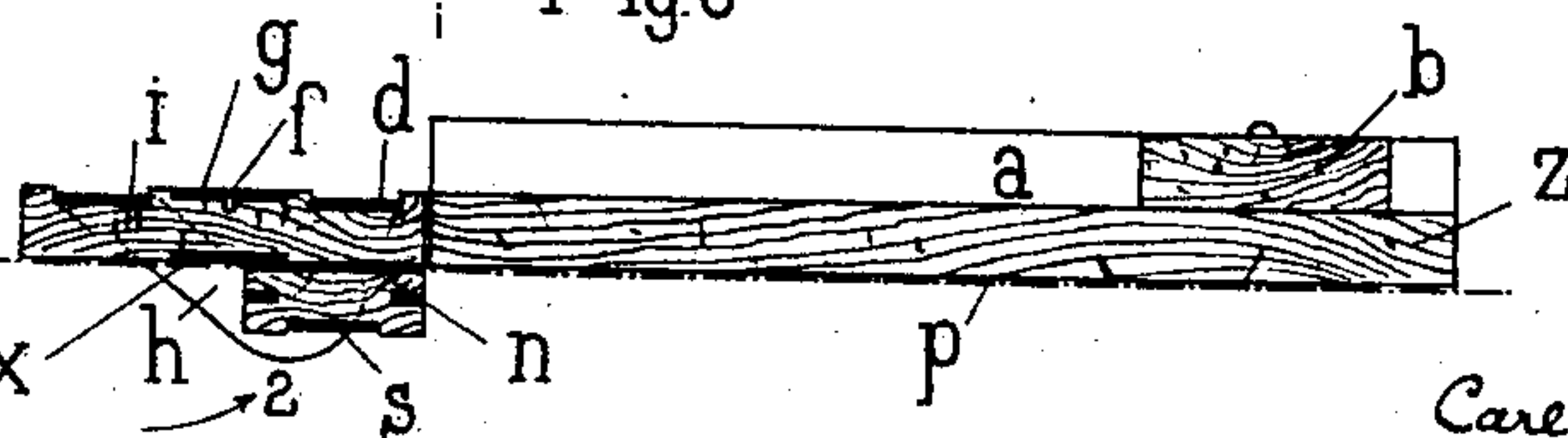


Fig. 3



Witnesses.

C. H. Schilling

Guaranteed

Inventor.

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by Paul E. Schilling,
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UNITED STATES PATENT OFFICE.

CARL THEODOR KNITTEL, OF FREIBURG, GERMANY.

CUTTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 765,083, dated July 12, 1904.

Application filed August 12, 1903. Serial No. 169,297. (No model.)

To all whom it may concern:

Be it known that I, CARL THEODOR KNITTEL, a subject of the Emperor of Germany, residing at Freiburg, Germany, have invented certain new and useful Improvements in Cutting Devices, of which the following is a specification.

The present invention has reference to improvements in devices for cutting paper, cardboard, glass, and the like comparatively thin sheets; and the object of the invention is to provide a cutting device for the purpose indicated by means of which clean straight cuts are obtainable, which will produce true right angles and which will prevent the cutting-tool from slipping or leaving the straight line, and thereby injuring the guiding-rule.

With this object in view the invention consists in the construction, arrangement, and co-operation of the various parts now to be particularly described, with reference to the accompanying sheet of drawings.

Figure 1 shows a front elevation of the device; Fig. 2, a plan view of same, and Fig. 3 a sectional elevation on line A B of Fig. 2.

The guide-ruler *i* forms the essential part of the device. Upon its upper face are provided in any suitable manner two scales *d* with graduation-numerals—for instance, as shown, "1" to "23." Between these two scales is provided a metal strip *g*, having a longitudinal slot *f*, as clearly shown in Figs. 2 and 3. This slot serves to guide the cutting-tool, and the latter is thereby prevented from leaving the straight course. A second ruler *n* is hinged to the main ruler *i* by means of swing-arms *h*, so that it can pivot about the hinge-pivots *r* and also about its own axis, with the result that it can be folded into the plane of the ruler *i*, as shown in dotted lines in Fig. 1. The auxiliary ruler *n* is also provided with a scale *s* for reading off the dimensions of the object to be cut. Into the narrow longitudinal faces metal strips *n'* are sunk to prevent the cutting-tool from injuring the ruler.

For the purpose of cutting thin paper without having to make use of the guiding-slot *f*, simply by guiding the knife along the ruler *n*, there is provided a metal strip *x* on the un-

der face of ruler *i*. To make use of this strip *x*, the ruler *n* is swung about the axis *r* until it takes the position shown in Fig. 3, and the whole device is then inverted. The described cutting device may be made of any desirable size, so that large and small drawings, glass plates, and the like may be handled.

To further improve the described device, I provide a measuring-plate *z* and connect it suitably with the ruler *i*. This plate *z* is provided with stop-ledges *a* and *b* and with a square design corresponding to the scales of the rulers. The stop-ledge *a* is rigidly secured on the plate *z* rectangularly to the guide-slot *f*. If, consequently, one edge of the sheet to be cut is placed against the ledge *a*, the cut along the ruler *n* will necessarily be at right angles thereto. In cutting, the object to be cut is laid upon the plate *z* and ruler *i* and the auxiliary ruler *n* is placed on the top, as shown in Fig. 1. The stop-ledge *b* is movable and is provided with two pins, adapted to take into holes provided at the intersections of the graduation-lines. The ledge *b* is of a width to cover two squares, and the width of the ruler *i* likewise is of a multiple of the square graduation. In order to cut a sheet of paper of definite width, the graduation units between ledge *b* and ruler *n* are counted, the half-width of ruler *i* is added, and the width of the paper to be cut off is thereby determined. The stop-ledge *b* covers two squares plus a width *y*. This arrangement allows of using the glazier's diamond, the width *y* corresponding to the distance of the diamond's point to the edge of the setting. For cutting glass with the diamond the stop-ledge *b* is reversed, bringing the inner face into the position shown by a dotted line in Fig. 2, causing the object to be cut to be advanced for the same distance.

Since the plate *z* can be disconnected from the ruler *i* along the line C D, the tool may be used with or without the plate.

What I claim, and desire to secure by Letters Patent, is—

1. In cutting devices, the combination, of a main ruler, graduation-scales on said ruler, a longitudinal metal strip on one side of said ruler with a slot over its entire length, a lon-

5 longitudinal metal strip on the other side of said ruler, an auxiliary ruler, swinging arms connecting the two said rulers, so that the auxiliary ruler may be swung above or below the said main ruler or in a plane therewith, a scale on said auxiliary ruler, and longitudinal metal insertions in the narrow sides of said auxiliary ruler, substantially as and for the purpose set forth.

10 2. In cutting devices, the combination, of a main ruler, graduation-scales on said ruler, a longitudinal metal strip on one side of said ruler with a slot over its entire length, a longitudinal metal strip on the other side of said ruler, an auxiliary ruler, swinging arms connecting the two said rulers, so that the auxiliary ruler may be swung above or below the said main ruler or in a plane thereto, a scale

on said auxiliary ruler, longitudinal metal insertions in the narrow sides of said auxiliary ruler, a graduated plate, means for temporarily connecting the said plate to the said main ruler, a stop-ledge rigidly secured to the said plate, rectangularly to the said main ruler, a stop-ledge adapted to be temporarily secured on said plate in different positions parallel to the said main ruler, and means for temporarily securing the said stop-ledge on said plate, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CARL THEODOR KNITTEL.

Witnesses:

JOSEF WICKENHAUSER,
FRIEDR. PHIL. KOCH.