Nov. 10, 1936. N. NIEMIC 2,060,686

DEVICE FOR DRAFTING

Original Filed Nov. 7, 1934 2 Sheets-Sheet 1

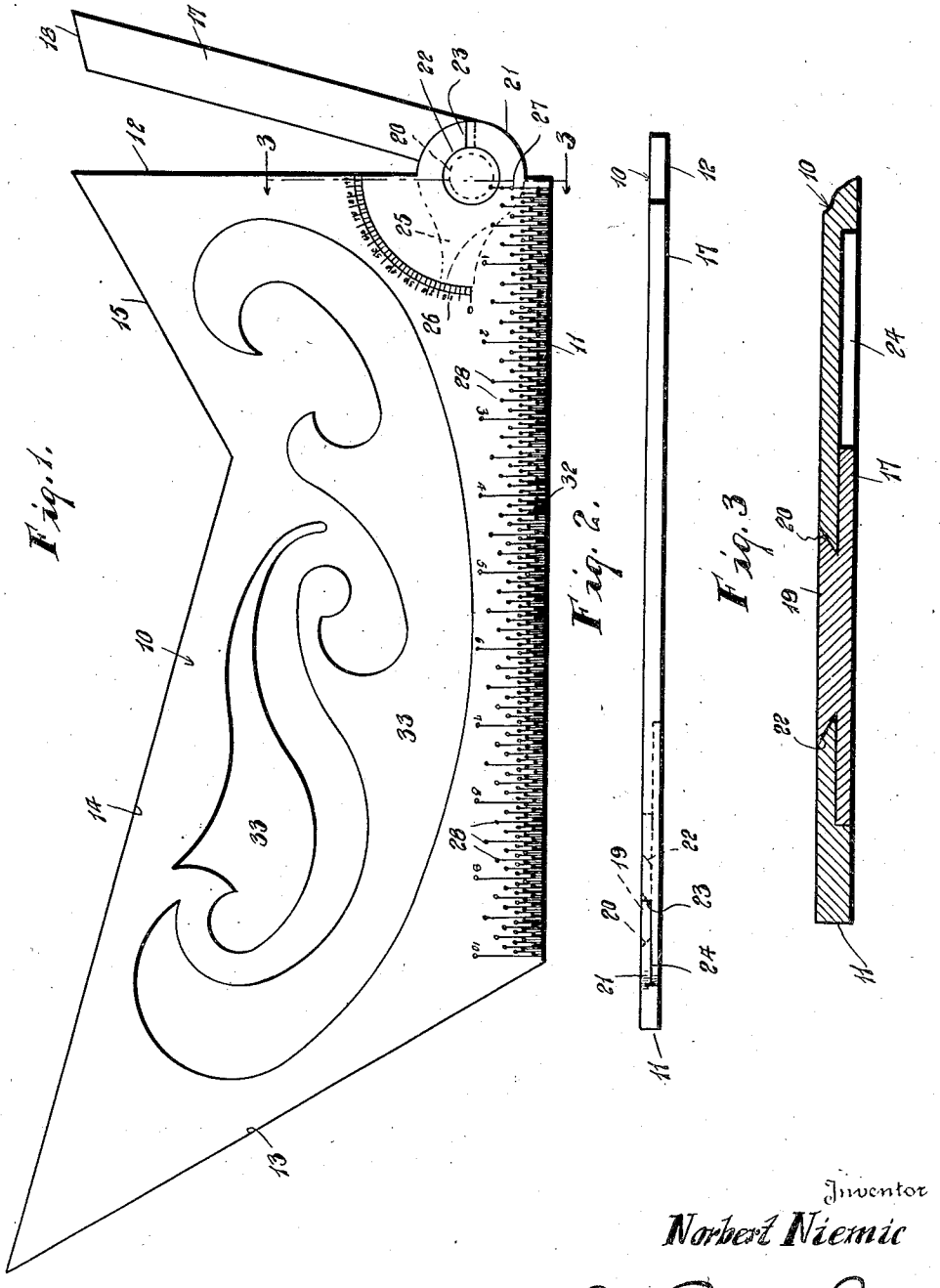


Fig. 1.

Fig. 2.

Fig. 3.

Inventor
Norbert Niemic

By L. F. Randolph Jr.
Attorney

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Fig. 4.

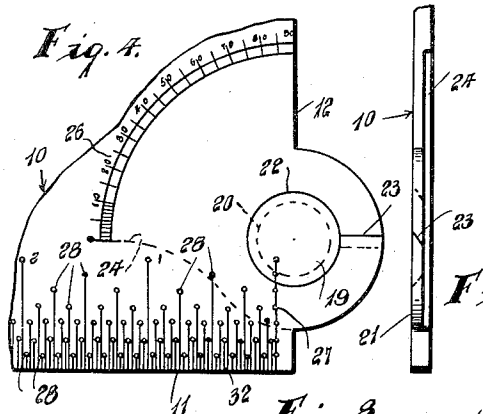


Fig. 5.

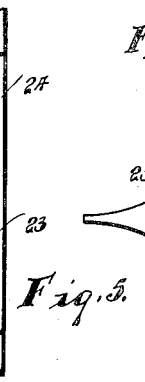


Fig. 6.

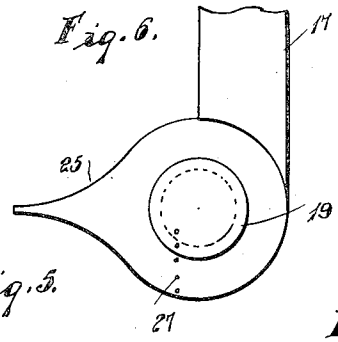


Fig. 7.

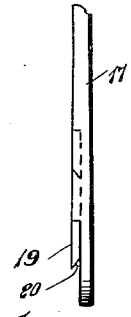


Fig. 8.

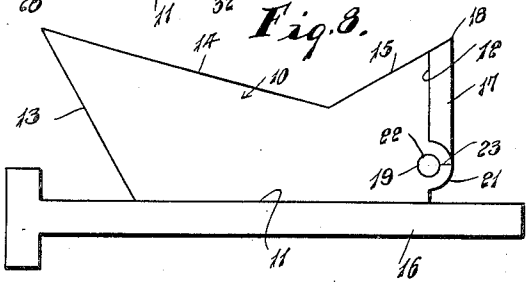


Fig. 9.

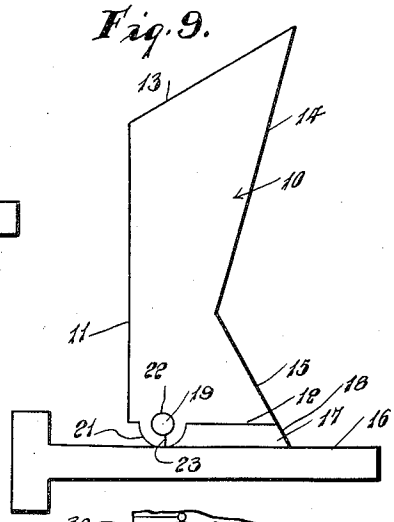


Fig. 10.

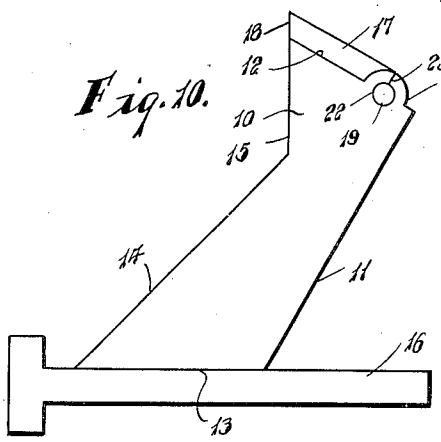


Fig. 11.

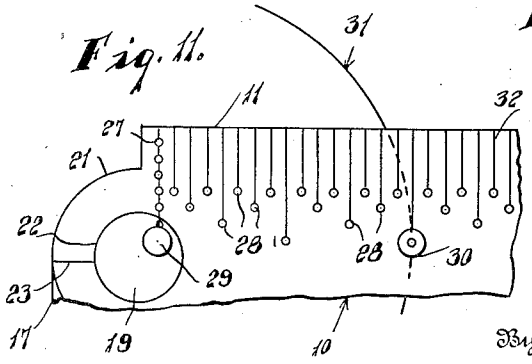
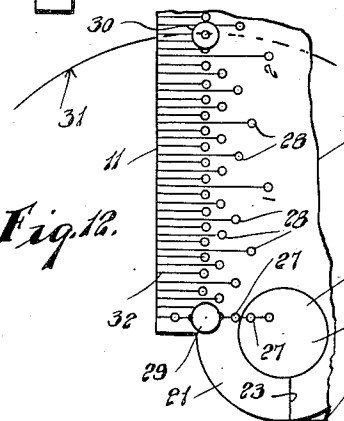


Fig. 12.



Inventor

Norbert Niemic.

By L. F. Randolph Jr.

Attorney

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UNITED STATES PATENT OFFICE

2,060,686

DEVICE FOR DRAFTING

Norbert Niemic, Detroit, Mich.

Application November 7, 1934, Serial No. 751,899
Renewed April 3, 1936

4 Claims. (Cl. 33—75)

This invention relates to an instrument or device for drafting purposes and it aims to provide novel means which will eliminate the individual use of many drafting instruments, which for the most part are usually found at random on the drafting board, being in the way of the draftsman and usually picking up dirt and soiling the drawings.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with the accompanying drawings illustrating an operative embodiment.

In said drawings:—

Figure 1 is a view in plan of the improved drawing instrument;

Figure 2 is a right hand elevation of the instrument as shown in Figure 1;

Figure 3 is a detail section taken on the line 3—3 of Figure 1;

Figure 4 is a detail view of a portion of the device with the protractor detached in plan;

Figure 5 is an edge view of the part of the device shown in Figure 4;

Figure 6 is a plan view of a portion of the protractor;

Figure 7 is an edge view of the protractor;

Figure 8 is a plan view showing the device in use in connection with a T-square;

Figures 9 and 10 are views similar to Figure 8 but showing the device in different positions relative to the T-square;

Figure 11 is a plan view illustrating the use of the device in drawing an arc, and

Figure 12 is a plan view showing the use of the device in the drawing of another arc.

Referring specifically to the drawings, the instrument has a sheet like, flat body as at 10 made from celluloid or any other desired material. This body has a side 11 and an end edge 12, at right angles to each other, another end edge at 60 degrees designated 13, and additional side edges at 14 and 15, respectively at 15 degrees and thirty degrees. The normal use of the device in connection with a T-square 16, is suggested in Figure 8 and it will be realized that lines may be drawn at the various angles by following the different edges, with a pencil or other instrument.

In Figures 9 and 10, it will be noted that the position of the device 10 is changed with respect to that of Figure 8. In Figure 9, for instance, the edges 15, 14, 13, and 11, respectively, are at 60 degrees, 75 degrees, 30 degrees, and 90 degrees. In Figure 10, the edges 11, 12, 15, and 14, are respectively at 60 degrees, 30 degrees, 90 degrees, and 45 degrees.

A suitable protractor is associated with the device along the edge 12 consisting of an arm 17 whose longitudinal edges are parallel and whose free end edge at 18, is at the same angle and a continuation of the edge 15 when the arm 17 is parallel to the edge 12. The protractor arm thus serves as an extension of the edge 15. Said protractor arm 17 may be made of the same material as the instrument 10, for instance celluloid, and it has a raised pivot stud 19 preferably integral therewith. Such stud is round and undercut at the margin as at 20. The instrument 10 has an extension as at 21 provided with a round opening 22 in which the pivot stud 19 is mounted. Attention is called to the fact that the extension 21 from the opening 22 outwardly is split as at 23, so that on opposite sides of the split the device may be sprung or separated to enable attachment and detachment of the pivot stud 19 with respect to the opening 22. It will also be noted that the body or instrument 10 is recessed or cut away in its upper surface as at 24, in order to house an indicator 25, associated with delineations at 26 on the body 10, to show the various angles or positions in which the tractor arm 17 may be placed. The edges of the protractor arm may be followed by a pencil or other instrument in the act of drawing.

A row of any desired number of openings at 27 may be provided through the body 10, and some of them may also extend through the protractor at the pivot stud. Through these openings 27, the point of a thumb tack or other instrument may be passed to penetrate the drawing board and permit swinging of the body 10 about the same as an axis. In addition, various openings 28 are provided adjacent the straight edge 11 through which a pencil point or a scribing instrument may be passed in order to draw arcs or circles. In this connection, note Figures 11 and 12 where the tack is designated 29 and the pencil is shown at 30, a drawn arc being indicated at 31.

A number of rows of the openings 28 may be provided and they may be arranged as close together as desired. In addition, any suitable calibrations as at 32 may be provided along the straight edge 11.

It will also be noted that the body 10 may be cut out as at 33 to form irregular or French curves for tracing purposes.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

I claim as my invention:—

1. A device of the class described comprising a body of flexible material, said body having edges adapted to be followed by a drafting instrument, said body having an opening and being split from said opening to one edge, a protractor arm having a pivot stud, said pivot stud occupying said opening and being applicable and removable through the slit upon distortion of the body.

2. A device of the class described comprising a body of flexible material, said body having edges adapted to be followed by a drafting instrument, said body having an opening and being split from said opening to one edge, a protractor arm having a pivot stud, said pivot stud occupying said opening and being applicable and removable through the slit upon distortion of the body, one edge portion of the body being angular, and the free end of the protractor being angular and a continuation of the first mentioned angular portion.

3. A device of the class described comprising a body of flexible material, said body having edges adapted to be followed by a drafting instrument, said body having an opening and being split from said opening to one edge, a protractor arm having a pivot stud, said pivot stud occupying said opening and being applicable and removable through the slit upon distortion of the body, one edge portion of the body being angular, and the free end of the protractor being angular and a continuation of the first mentioned angular portion, said protractor comprising an arm with longitudinal edges in parallelism.

4. A device of the class described comprising a body of flexible material, said body having edges adapted to be followed by a drafting instrument, said body having an opening and being split from said opening to one edge, a protractor arm having a pivot stud, said pivot stud occupying said opening and being applicable and removable through the slit upon distortion of the body, one edge portion of the body being angular, and the free end of the protractor being angular and a continuation of the first mentioned angular portion, said protractor comprising an arm with longitudinal edges in parallelism, a pointer on said protractor, said body having a cut-away portion housing said pointer, and indications on the body coacting with the pointer.

NORBERT NIEMIC.