

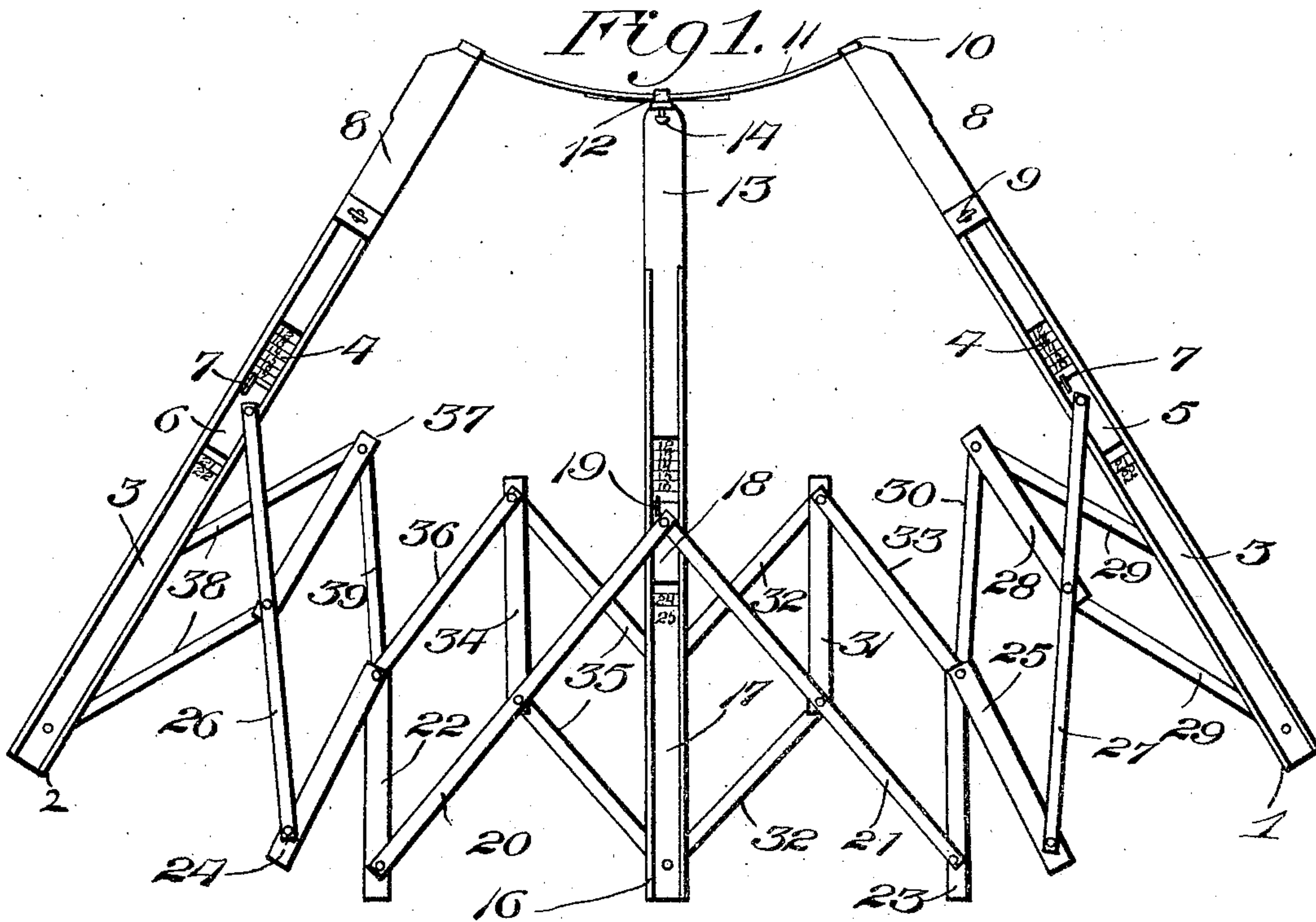
No. 778,061.

PATENTED DEC. 20, 1904.

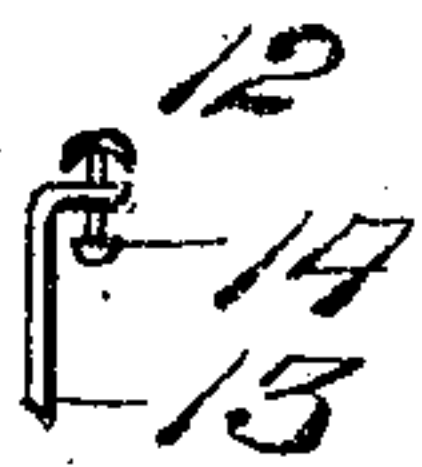
A. MUELLERWEISS.  
PATTERN.

APPLICATION FILED MAY 24, 1904.

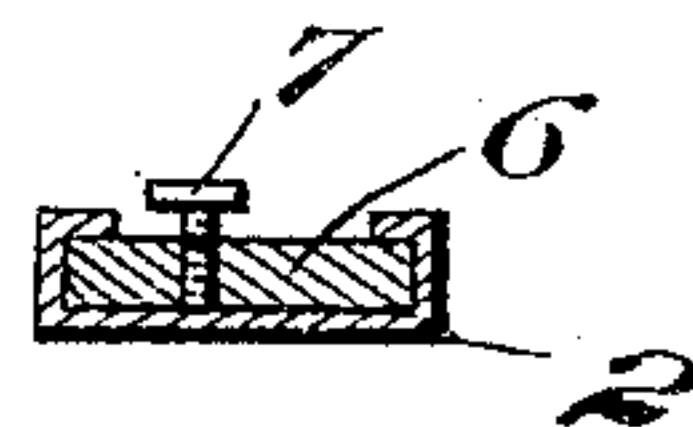
NO MODEL.



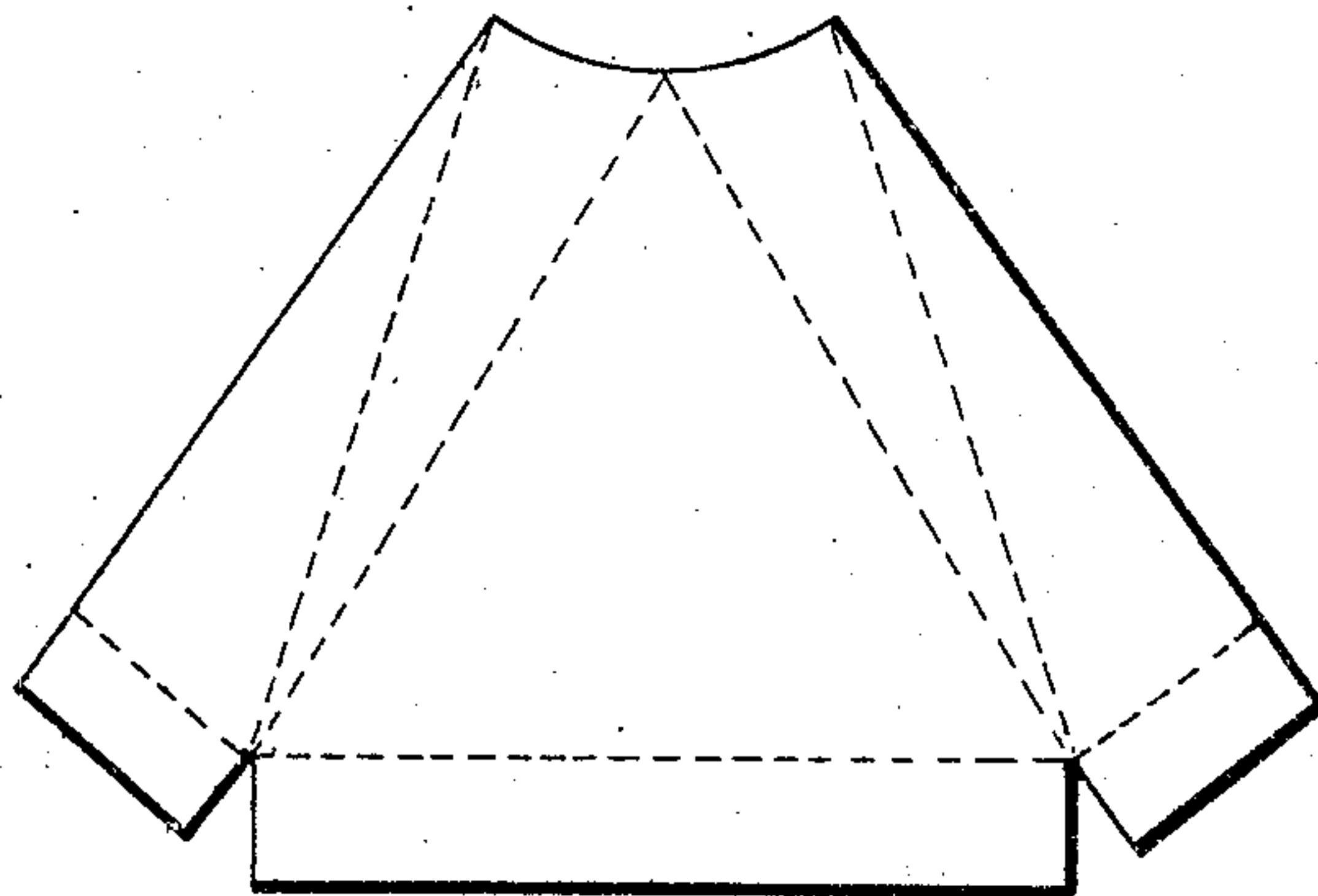
*Fig 3.*



*Fig 4.*



*Fig 2.*



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# UNITED STATES PATENT OFFICE.

ADOLPH MUELLERWEISS, OF SEBEWAING, MICHIGAN.

## PATTERN.

SPECIFICATION forming part of Letters Patent No. 778,061, dated December 20, 1904.

Application filed May 24, 1904. Serial No. 209,533.

*To all whom it may concern:*

Be it known that I, ADOLPH MUELLERWEISS, a citizen of the United States, residing at Sebe-  
waing, in the county of Huron and State of  
5 Michigan, have invented new and useful Im-  
provements in Patterns, of which the follow-  
ing is a specification.

My invention relates to new and useful im-  
provements in patterns; and its object is to  
10 provide an adjustable device for laying off  
blanks for producing tubular objects having  
their opposite ends rectangular and round, re-  
spectively.

The device is especially adapted for use in  
15 constructing chimney-tops and pipe-sections  
having their opposite ends rectangular and  
round, respectively. Heretofore in laying off  
sheet metal for producing objects of this char-  
acter it has been necessary to do considerable  
20 calculating in order to produce an accurate fit.

The object of my improved invention, how-  
ever, is to provide an adjustable pattern which  
can be readily set to produce blanks of any  
desired dimensions and which can be readily  
25 assembled to form a section of a predetermined  
shape.

The invention consists of arms having ad-  
justable ends, to which are connected flexible  
rods. Slides are adjustably mounted upon the  
30 arms, and interposed between these slides are  
rules which are pivoted together, one rule be-  
ing parallel at all times with the adjoining  
arm. A novel arrangement of connecting-  
links are employed for imparting movement  
35 from the slides to the rules, and the arms are  
provided with graduations, whereby the pat-  
tern can be quickly adjusted to produce blanks  
of proper dimensions.

The invention also consists of the further  
40 novel construction and combination of parts  
hereinafter more fully described, and illus-  
trated in the accompanying drawings, show-  
ing the preferred form of my invention, and in  
which—

45 Figure 1 is a plan view of my improved pat-  
tern. Fig. 2 is a similar view of a blank which  
may be produced by the pattern. Fig. 3 is  
an enlarged section through the wire-clamp-  
ing block, and Fig. 4 is an enlarged transverse

section through one of the arms and the slide 50  
therein.

Referring to the figures by numerals of ref-  
erence, 1 and 2 are side arms having grooves  
3 in their front faces, which are provided with  
a desired number of graduations 4, suitably 55  
designated by numerals. Mounted within the  
grooves 3 are slides 5 and 6, respectively, which  
are adapted to be secured in adjusted position  
by means of set-screws 7. End strips 8 are  
adjustably mounted upon the grooved arms 1 60  
and 2 and may be locked in adjusted positions  
by set-screws 9, and at the outer end of each  
of these strips is a tubular projection 10, in  
which is adjustably mounted one end of a wire  
11. The two wires are adapted to cross and 65  
extend through a clamping-block 12, which is  
adjustably connected to one end of a strip 13  
by means of a screw 14. Slide 13 is adjust-  
ably connected, by means of a set-screw, with  
a central arm 16, having a groove 17 in its 70  
front face, in which is mounted a slide 18,  
similar to the slides 5 and 6. This arm is  
also graduated, said graduations being desig-  
nated by suitable numerals, and a set-screw  
19 is employed for locking the slide 18 in 75  
adjusted position. Pivoted to the slide 18  
and extending in opposite directions there-  
from are rods 20 and 21. Rod 20 is pivot-  
ally connected to one end of a ruler 22, and  
rod 21 is connected in a similar manner to one 80  
end of a ruler 23. The other end of ruler 22  
is pivoted to a ruler 24, while the other end of  
ruler 23 is pivoted to a ruler 25. A rod 26 is  
pivoted at opposite ends to slide 6 and to the  
lower end of ruler 24, while an arm 27 is piv- 85  
otally connected at opposite ends to the slide  
5 and the lower end of ruler 25. A strip 28  
is pivoted to the center of rod 27 and is con-  
nected at its ends to links 29, which are par-  
allel and are pivoted to the arm 1. A link 30 90  
is arranged parallel with the rod 27 and is piv-  
oted to the rulers 23 and 25 and to strip 28.  
A strip 31 is pivoted to rod 21 and is parallel  
with arm 16, and this strip is connected to said  
arm by pivoted parallel links 32 and to the 95  
rulers 23 and 25 by a link 33, which is par-  
allel with rod 21. A strip 34 is interposed be-  
tween arm 16 and ruler 22 and is parallel



therewith, and this strip is pivoted to the rod 20 and is connected to arm 16 by parallel pivoted links 35. A link 36 connects the strip 34 with the two rulers 22 and 24. A strip 37 is interposed between and parallel with the arm 2 and ruler 24 and is pivoted to the rod 26. Pivoted parallel links 38 connect the ends of strip 37 with arm 2, and a link 39, which is parallel with rod 26, connects said strip 37 with the two rulers 22 and 24.

When it is desired to produce a chimney-section having a base which is fourteen inches square, the three slides 5, 6, and 18 are adjusted within their respective grooves until their upper ends aline with the graduations designated by the numerals "14." The slides are then locked in such position. This movement of the slides will cause the links and rods of the pattern to move the rulers from or toward each other and from or toward the arms 1, 2, and 16 until the distance between the rulers 22 and 23 is equal to fourteen inches and the distance between the ruler 24 and arm 2 and the ruler 25 and arm 1 is seven inches, respectively. The pattern is then laid upon the sheet of metal to be cut, and said metal is marked by drawing a line along the outer edge of each arm 1 and 2, along the inner or adjoining edges of the rulers, and along straight lines connecting the ends of the arms with the lower ends of the rulers. A line is also drawn upon the metal by following the outline of the flexible rods 11. By cutting along the lines thus produced a blank is formed, such as shown in Fig. 2, and by making two of these blanks and joining them together a section of the desired shape is produced. The height of the section can be regulated by adjusting the strips 8 and 13 upon arms 1, 2, and 16, and the rods 11 can be adjusted longitudinally within the clamping-block 12, so that when the blank is cut it can be accurately fitted to a pipe of any predetermined diameter.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing any of the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus fully described the invention, what is claimed as new is—

1. In a device of the character described, the combination with arms having slides adjustably mounted thereon; of rulers pivoted

together and interposed between the arms, each ruler being parallel with one arm, and connecting devices interposed between the rulers and slides for adjusting said rulers in relation to each other and the arms.

2. In a device of the character described, the combination with arms having slides adjustably mounted thereon, and flexible adjustable connections between the arms at one end; of rulers pivoted together and interposed between the arms, each ruler being parallel with its adjoining arm, and connecting devices between the rulers and slides, whereby said rulers may be adjusted from or toward the arms.

3. In a device of the character described, the combination with graduated arms having slides adjustably mounted thereon, and adjustable flexible connections between the arms at one end; of rulers pivoted together and interposed between the arms, each ruler being parallel with its adjoining arm, a rod connecting each ruler with one of the slides, and links connecting the rulers and arms, whereby said rulers are maintained parallel with their respective arms.

4. In a device of the character described, the combination with grooved graduated arms having slides adjustably mounted thereon, and flexible adjustable connections between the arms at one end; of rulers pivoted together and interposed between the arms, each ruler being parallel with the adjoining arm, rods pivoted at opposite ends to the slides and rulers, respectively, strips pivoted to the rods and parallel with the arms, and links connecting the strips with the arms and rulers.

5. The combination with graduated arms having slides adjustably mounted thereon, strips adjustably mounted upon the arms, and flexible connecting devices detachably and adjustably connected to the strips; of rulers pivoted together and interposed between the arms, each ruler being parallel with the adjoining arm, rods pivoted at opposite ends to the slides and rulers, respectively, strips pivoted to the rods and parallel with the adjoining arms, and links connecting said strips with the rulers and arms.

In testimony whereof I affix my signature in presence of two witnesses.

ADOLPH MUELLERWEISS.

Witnesses:

H. R. MORRIS,  
R. C. RANK, Jr.