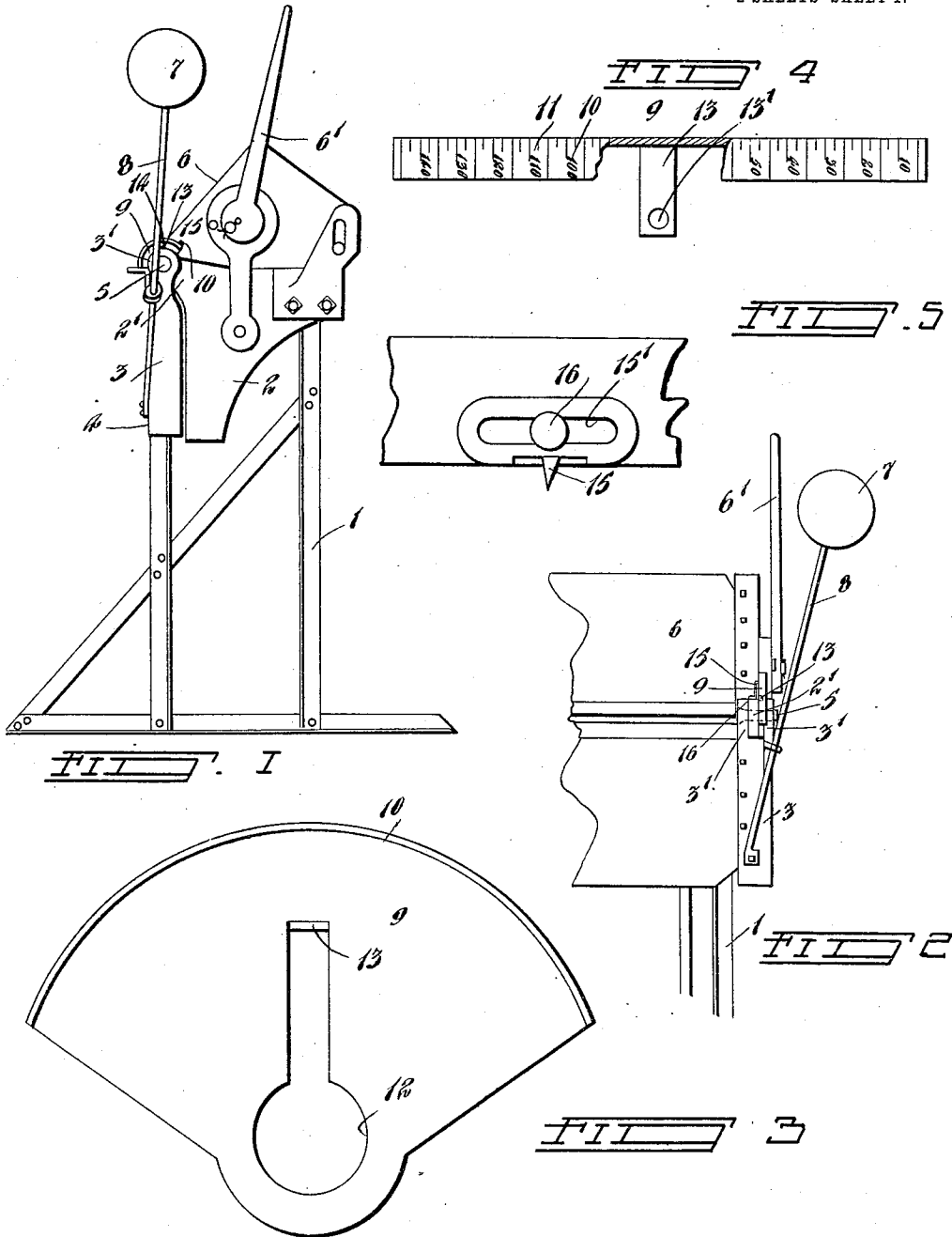


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ATTACHMENT TO STEEL BRAKES.
APPLICATION FILED MAR. 30, 1911.

1,050,274.

Patented Jan. 14, 1913.

2 SHEETS—SHEET 1.



Witnesses
L. Thompson
R. Foster

Inventor
J. N. Henderson
By *Frank B. Talbot* *Att'y.*

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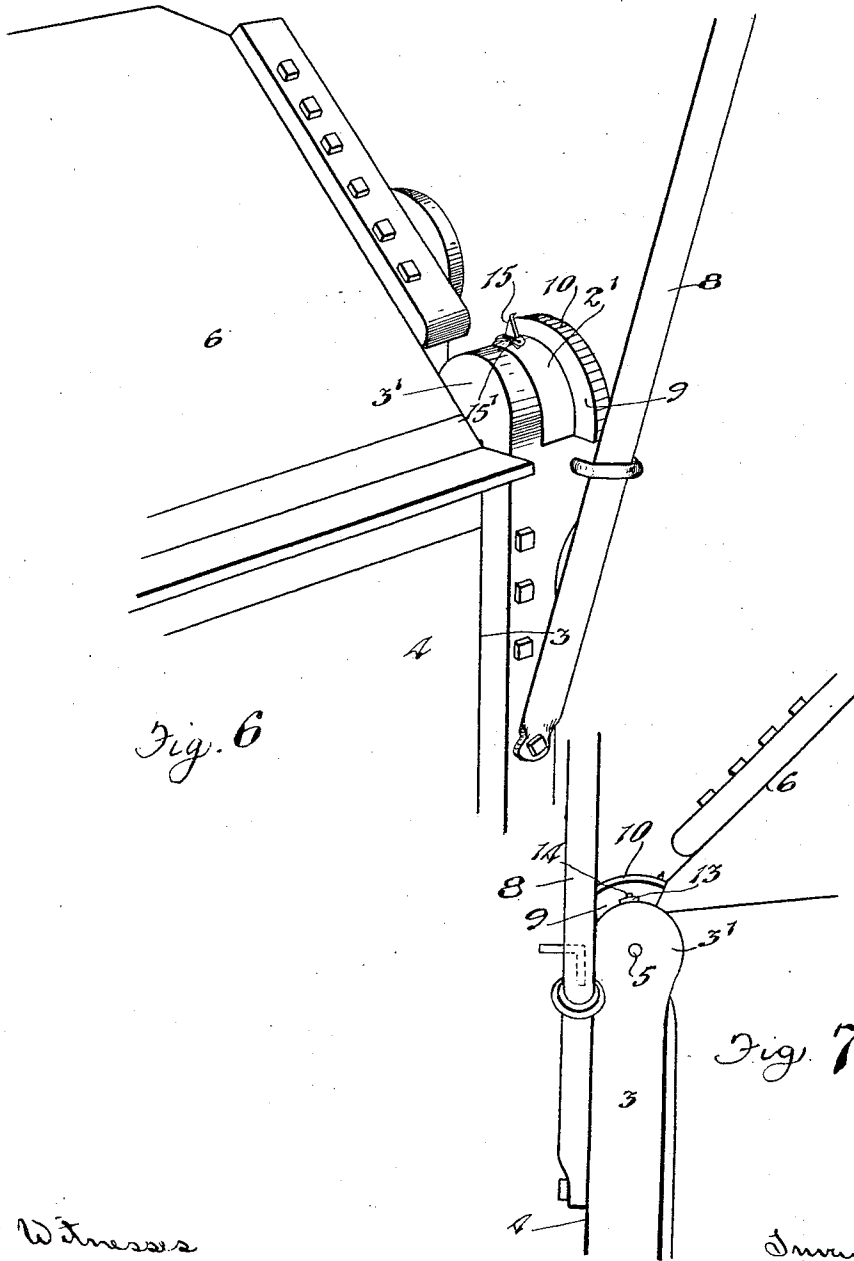


Fig. 6

Fig. 7

Witnesses

R. Foster

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UNITED STATES PATENT OFFICE.

JAMES NICHOLAS HENDERSON, OF SASKATOON, SASKATCHEWAN, CANADA.

ATTACHMENT TO STEEL BRAKES.

1,050,274.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed March 30, 1911. Serial No 618,041.

To all whom it may concern:

Be it known that I, JAMES NICHOLAS HENDERSON, of the city of Saskatoon, in the Province of Saskatchewan, Canada, have
5 invented certain new and useful Improvements in Attachments to Steel Brakes, of which the following is the specification.

My invention relates to improvements in steel brakes for bending sheet metal, and the object of the invention is to provide an attachment whereby one can definitely and quickly ascertain the angle through which the sheet is bent, and it consists essentially in a quadrant having degrees notated thereon, the quadrant being attached to a movable
10 part of the machine, and an index pointer operating over the quadrant and secured to a stationary part of the machine, the parts being arranged and constructed as herein-
15 after more particularly described.

Figure 1 is an end view of a steel brake fitted with my invention. Fig. 2 is a front elevation of a portion of the end of a steel brake showing my invention applied. Fig.
25 3 is an enlarged detail side elevation of the quadrant. Fig. 4 is a plan view of the quadrant, part being removed to expose construction. Fig. 5 is an enlarged detail plan view of the index pointer. Fig. 6 is an enlarged perspective view; and Fig. 7 is an enlarged end view.

In drawing like characters of reference indicate corresponding parts in each figure.

1 represents the supporting legs of a brake
35 at one end thereof, which legs support the casting 2 having the upper forward corner constructed so as to form the central portion 2' of a hinged joint made with the projecting ends 3' of a plate 3 permanently secured
40 to the apron or bending leaf 4. A pin 5 connects the parts 2' with the ends 3'.

6 is the upper jaw of the machine, which jaw is controlled by the lever 6' in the usual way. The apron 4 is counterbalanced by a
45 weight 7 located at the end of a rod 8 extending from the apron.

The parts above described form no part of my invention, but are introduced in the application to show how my invention is ap-
50 plied.

With a machine as above described I have found difficulty in bending sheets to a re-

quired angle, as no means is attached whereby the angle between the apron and the jaw can be determined, and in order to overcome
55 this difficulty I have provided the attachment now described.

9 is a quadrant having its outer edge flanged backwardly at 10 and marked with numbers representing degrees as at 11. The
60 quadrant is made from thin steel plate and has the flange formed concentric to a central opening 12, which opening is adapted to receive snugly the pin 5 when the body of the plate is inserted between the cen-
65 tral member 2' of the casting 2, and the outer portion 3' of the plate 3. The quadrant is supplied with a lug 13 provided with an opening 13' which receives a pin 14
70 screwed tightly into the outer member 3' of the plate 3, so that the quadrant is held firmly in position.

15 is an index pointer playing over the flange (degree scale) of the quadrant, which pointer has the base thereof enlarged and
75 slotted at 15', and is held to the portion 2' of the casting 2 by an adjusting screw 16 which passes through the elongated slot 16'. This construction allows the pointer to be
80 reset at any time it is not registering properly.

When placing the quadrant and index pointer on the brake, it is necessary to have the index pointer register with the mark indicating zero, or no degrees, on the quad-
85 rant, when the apron is down. If this be done and the parts be fastened firmly the angle through which the apron is swung can be determined at any time by simply refer-
90 ring to the quadrant where the degrees can be read off.

What I claim as my invention is:

In a machine of the class described, the combination with a suitably supported casting formed with a projecting hinge member,
95 a plate supplied with complementary hinge members, a pin securing all of said hinge members together pivotally, and an apron carried by the plate, of a quadrant centered on the pin and extending between the hinge
100 members, said quadrant having its outer edge supplied with a flange having degrees notated thereon, means for fastening the quadrant to one of the hinge members

formed with the plate, an index pointer
operating over the flange and provided with
a base having an elongated slot therein, and
an adjusting screw passing through the slot
5 and holding the pin firmly to the hinge
member formed within the casting, as and
for the purpose specified.

Signed at Winnipeg in the Province of
Manitoba this 17th day of February, 1911.

JAMES NICHOLAS HENDERSON.

In the presence of—
G. S. ROXBURGH,
J. K. ELKIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."