A. H. KIRK.

PERFORATION GAGE.

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1,194,749.

Patented Aug. 15, 1916.

Fig. 3

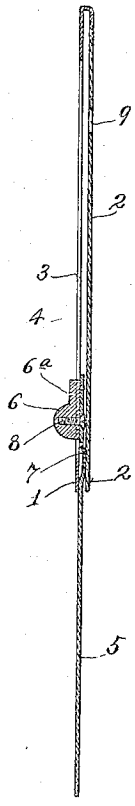


Fig. 2

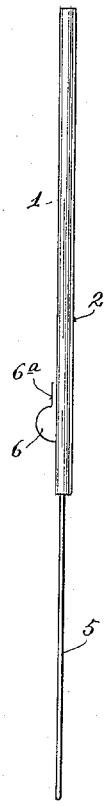


Fig. 1

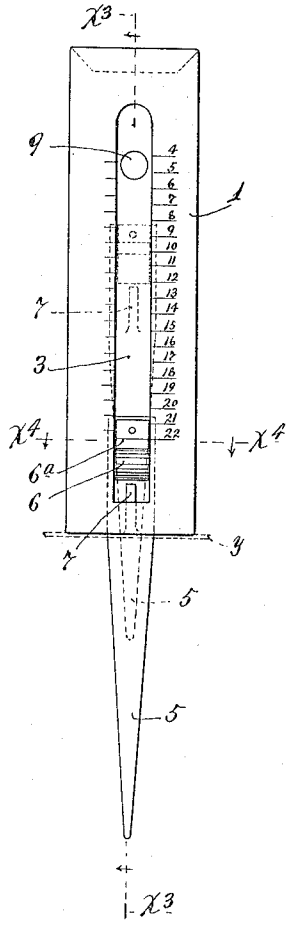
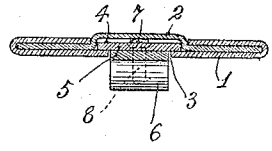


Fig. 4



Witnesses
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PERFORATION-GAGE.

1,194,749. Specification of Letters Patent. Patented Aug. 15, 1916.

Application filed October 26, 1914. Serial No. 868,593.

To all whom it may concern:

Be it known that I, ALVA H. KIRK, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Perforation-Gages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an extremely simple and highly efficient perforation gage especially adapted for use to quickly take and register the measurement of perforations in sheet metal sieves.

Generally stated, the invention consists of the novel construction and combination of parts hereinafter described and defined in the claims.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings: Figure 1 is a front elevation of the improved gage; Fig. 2 is a side elevation thereof; Fig. 3 is a section taken on the line x^3 x^3 on Fig. 1; and Fig. 4 is an enlarged transverse section taken on the line x^4 x^4 on Fig. 1.

The gage comprises a suitable casing and a tapered gage blade or wedge, which latter has a head arranged to slide within the said casing and to coöperate with graduations thereon, which indicate the width of the wedge at the point then alined with the bottom of the gage.

The casing is made of two sheet metal plates 1 and 2, the former of which has two edges and one end folded over the edges of the latter. The plate 1 is provided with a long slot 3 that extends less than from end to end thereof; and the plate 2 is provided with a central longitudinally extended laterally pressed channel 4 that extends nearly from the upper end, completely to the lower end of said plate. At their lower ends, the two plates 1 and 2 are flush and at a right angle to the longitudinal axis of the casing.

The gage wedge or blade 5 is preferably flat, being stamped from spring tempered sheet steel, and its relatively wide end is formed with parallel edges for a considerable distance that quite closely fit within and slide in the channel 4 of the plate 2. Here it will be noted that the said channel 4 is considerably wider than the slot 3. Secured to the head end of the gage wedge of blade 5 is a head 6 that projects outward through the slot 3 where it is adapted to be engaged by the fingers. Just below the head 6, the blade 5 is formed with a spring finger 7 that is partly cut therefrom and pressed laterally, so that it frictionally engages the back of the plate 2, and hence, serves to frictionally hold the blade 5 in any set position and against accidental movement under ordinary handling. Preferably, the head 6 is secured to the blade 5 by a screw 8; and to provide for the application of this screw when the blade is forced to its extreme position within the casing, the plate 2, near its upper end, is provided with a quite large perforation 9 through which the said screw may be then passed.

On the face of the gage adjacent to one side of the slot 3 are numbered graduations which are so spaced in respect to the taper of the gage blade that when a mark 6^a on the head 6 registers with the said graduations, it will indicate the width in sixty-fourths of an inch, of that portion of the blade which is then flush with the bottom of the casing. As shown, the above noted graduations are on the right hand of the slot 3, as viewed in Fig. 1, and on the opposite side of the slot, the casing is marked with intermediate graduations.

The size of the perforations of the sheet metal sieves are customarily indicated by number, the number thereof indicating the number of sixty-fourths of an inch in diameter of the perforation. For example, a 22 perforation would be 22/64 or 11/32 of an inch in diameter. In Fig. 1, a portion of a sheet metal sieve is indicated by dotted lines marked *y*. The size of the perforations of such a sieve is taken by forcing the blade or wedge 5 downward as far as it will go through the said perforation, and then forcing the lower end of the casing down on top of the sieve. This may be very quickly and easily done, and may, in fact, be readily accomplished while a sieve is being vibrated and while grain is flowing over the same.

When the blade is forced into the perforation and the casing downward against the sieve, the line 6^a of the head 6 registers with the graduation to indicate the size or number of the perforation, and this record will

be maintained on the scale after it is removed from the sieve and until the blade is intentionally moved from its set position.

It is highly important to note that the gage wedge or blade is tapered in the plane of its widest or flat dimension. This makes it possible to use the gage wedge to measure, for example, both the major and minor axes of an oval or elongated hole.

Gages of this character are adapted for many different uses, but will be found especially serviceable for quickly taking the dimensions of sieves of grain separators while in use in mills, elevators, and elsewhere, where it is necessary frequently to replace sieves and is desirable to take the dimensions of a sieve to be replaced without stopping the machine. Obviously, the wedge may be constructed at small cost.

What I claim is:

1. A perforation gage comprising a casing having a longitudinal slot and graduations adjacent to said slot, of a tapered gage blade that works through the lower end of said casing and is provided with a head working in the slot thereof, the said blade having a laterally pressed spring finger partly cut therefrom and frictionally engageable with the back of said casing.

2. A perforation gage comprising a casing having a longitudinal slot and graduations adjacent to said slot, of a tapered gage blade that works through the lower end of said casing and is provided with a head working in the slot thereof, said head having a mark coöperating with the graduations on said scale to indicate the width of that portion of the blade which is alined with the lower end of said casing, the said blade having a laterally pressed spring finger partly cut therefrom and frictionally engageable with the back of said casing.

3. A perforation gage comprising a casing having a longitudinal slot and graduations adjacent to said slot, of a tapered gage blade that works through the lower end of said casing and is provided with a head working in the slot thereof, a screw connecting said head to said blade, the said casing in its back having a perforation through which the said screw may be applied and removed.

4. In a perforation gage, a casing made up of two plates, the one having a longitudinal slot and side and upper end flanges embracing the other plate, and said embraced plate having a longitudinally extended laterally pressed channel wider than the slot of said embracing plate, in combination with a tapered gage blade working through the lower end of said casing and slidable within said channel, and provided with a head working in the slot of said casing, said head and casing having coöperating marks for indicating the width of the blade at points alined with the lower end of said casing.

5. In a perforation gage, the casing made up of two plates, the one having a longitudinal slot and side and upper end flanges embracing the other plate, and said embraced plate having a longitudinally extended laterally pressed channel wider than the slot of said embracing plate, in combination with a tapered gage blade working through the lower end of said casing and slidable within said channel and provided with a head working in the slot of said casing, said head and casing having coöperating marks for indicating the width of the blade at points alined with the lower end of said casing, and the said blade having a spring finger partly cut therefrom and pressed laterally and frictionally engageable with the back of the channel of said casing.

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