H. R. STACKHOUSE.

GAGE.

APPLICATION FILED MAR. 5, 1910.

968,996. Patented Aug. 30, 1910.

Fig. 1

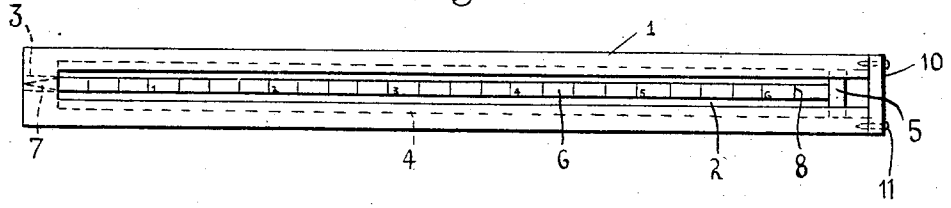


Fig. 2

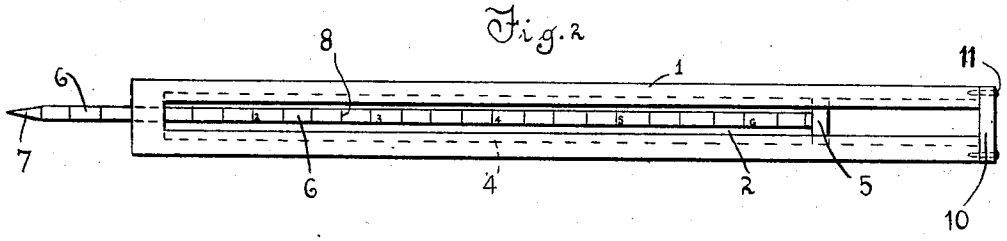


Fig. 3

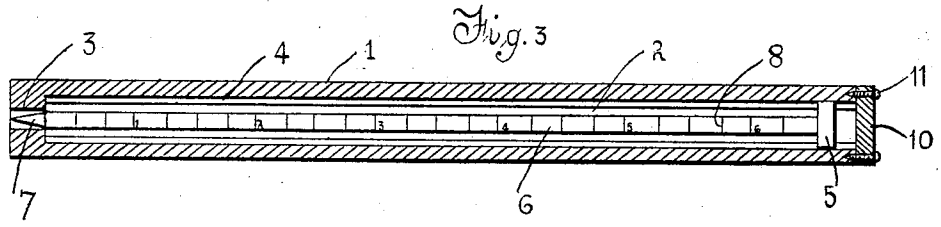


Fig. 4

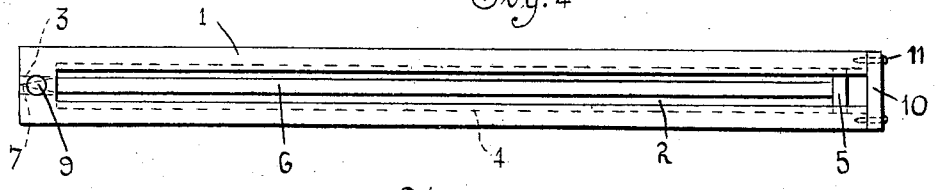


Fig. 5

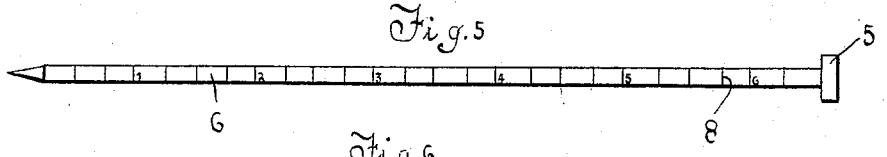
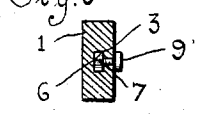


Fig. 6



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HENRY REID STACKHOUSE, OF TITUSVILLE, PENNSYLVANIA.

GAGE.

968,996. Specification of Letters Patent. **Patented Aug. 30, 1910.**

Application filed March 5, 1910. Serial No. 547,548.

To all whom it may concern:

Be it known that I, HENRY REID STACKHOUSE, a citizen of the United States of America, residing at Titusville, in the county of Crawford and State of Pennsylvania, have invented certain new and useful Improvements in Gages, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a gage adapted to be used in highway construction by inspectors, engineers and contractors to ascertain the depth or thickness of concrete or asphalt.

The object of my invention is to provide a simple and inexpensive gage which will facilitate the work of an inspector or similar artisan in determining the thickness of concrete or asphalt as the same is laid, the gage being provided with an adjustable needle that can be easily inserted in the asphalt or concrete before the same hardens, thus permitting an inspector to determine whether the required thickness of concrete or asphalt is being placed in the pavement.

I attain the above object by a gage that will be hereinafter specifically described and then claimed, and reference will now be had to the drawing forming a part of this specification, wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof can be varied or changed without departing from the spirit and scope of the invention.

In the drawings: Figure 1 is a side elevation of the gage with the needle thereof in a retracted position. Fig. 2 is a similar view showing the needle in extended position. Fig. 3 is a longitudinal sectional view of the gage with the needle in a retracted position. Fig. 4 is an elevation of the gage showing the opposite side from that shown in Fig. 1. Fig. 5 is an elevation of a detached needle, and Fig. 6 is a cross sectional view of the gage taken at the lower end thereof.

In the accompanying drawings the reference numeral 1 denotes a housing rectangular in cross section and provided with a transverse longitudinal slot 2 extending from the upper end of the housing to within proximity of the lower end thereof, the lower end of said housing being provided with a central longitudinal opening 3 communicating with said slot. The top and bottom walls of the slot 2 are provided with longitudinal grooves 4 corresponding in length to said slot, said grooves receiving the ends of a head 5, carried by the upper end of a needle 6 arranged within said housing, said needle being of a less length than the slot 2, with the lower end thereof tapered or pointed, as at 7 and adapted to extend through the opening 3 at the lower end of the housing. The needle 6 which can be either cylindrical or rectangular has one side thereof graduated, as at 8, whereby the length of the needle projecting from the housing can be easily determined, and these graduations are visible through the slot 2. The needle 6 is adapted to be adjustably held within the housing by a set screw 9 adjustably mounted in the lower end of said housing, and to retain the needle within said housing, the upper open end thereof is closed by a cap 10 secured to the housing by screws 11 or other fastening means.

The gage in its entirety can be made of metal and in order that its use can be fully understood, the present practice of constructing highways will be briefly considered.

Practically all pavements are constructed with a concrete foundation of from four and one-half ($4\frac{1}{2}''$) inches to six ($6''$) inches in thickness, and where such pavements are laid an inspector is generally appointed whose duty is to look after the interests of the corporation by which he is employed. Various cities require various thicknesses of concrete construction, and assuming that a thickness of four and one-half ($4\frac{1}{2}''$) inches is required, the inspector is accustomed to set the gage whereby the needle 6 will project four and one-half inches from the lower end of the housing. It is only necessary for the inspector to insert the needle in the concrete as it is laid to determine whether the proper thickness of material is being placed in position. It is an extremely easy matter for the inspector to test the pavement at various points and ascertain whether or not the required thickness is being laid.

In the laying of asphalt two methods are used, one consisting of laying one coat at one time, and the other of laying one coat and allowing it to settle and then placing another coat thereon. The one coat method consists of a wearing surface approximately three inches in thickness, while the two coat method consists of a one and one-half inch binder and a one and one-half inch coat of

top or wearing surface. In the laying of these coats of asphalt, it is an extremely easy matter for the inspector to adjust the gage, for instance in the one coat method, to three inches whereby he can ascertain whether the proper thickness is being laid. In the two coat method, the inspector can first adjust his gage to one and one-half inches for the first coat and after the first coat is settled use the gage again to determine the thickness of the second coat.

My gage has been particularly designed for asphalt and concrete construction and is adapted to save considerable time and labor upon the part of an inspector or contractor in ascertaining whether the work is being performed according to specification.

What I claim is:

1. A gage of the type described embodying a housing having a slot formed therein extending from one end of the housing to within proximity of the other end thereof, one end of said housing having an opening formed therein communicating with said slot, a pair of opposing walls of said slot having longitudinal grooves formed therein, a graduated needle arranged in said slot and having one end thereof pointed and adapted to extend through the apertured end of said housing, a head carried by the other end of said needle and adapted to extend into said grooves, and a cap detachably mounted upon said housing and adapted to retain said needle within said housing.

2. A gage of the type described embodying a housing having a slot formed therein extending from one end of the housing to within proximity of the other end thereof, one end of said housing having an opening formed therein communicating with said slot, a pair of opposing walls of said slot having longitudinal grooves formed therein, a graduated needle arranged in said slot and having one end thereof pointed and adapted to extend through the apertured end of said housing, a head carried by the other end of said needle and adapted to extend into said grooves, a cap detachably mounted upon said housing and adapted to retain said needle within said housing, and means carried by the apertured end of said housing and adapted to adjustably hold said needle within said housing.

3. A gage of the type described embodying a housing having a slot formed therein extending from one end of the housing to within proximity of the other end thereof, one end of said housing having an opening formed therein communicating with said slot, a pair of opposing walls of said slot having longitudinal grooves, a graduated needle arranged in said slot and having one end thereof pointed and adapted to extend through said opening, and a head carried by the needle and extending in said grooves.

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

HENRY REID STACKHOUSE.

Witnesses:
JNO. N. CARTNEY,
FAYETTE HARRINGTON.