



# UNITED STATES PATENT OFFICE.

ADOLF ED. NOPPEL, OF CONSTANCE, GERMANY.

## STABLE-FLOORING.

No. 861,882.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ADOLF ED. NOPPEL, a subject of the Grand Duke of Baden, and a resident of Constance, Baden, Germany, have invented certain new and useful Improvements in Grooved Stones for Making Stable-Flooring, of which the following is a specification.

This invention has reference to improvements in stable flooring and pertains particularly to novel and improved stones of which the stable flooring is constructed.

It is the special object of this invention to produce stones for stable flooring by means of which such flooring may be built which remains dry whereby a healthy condition of the animals is insured.

The invention is illustrated in the accompanying drawing in which:—

Figure 1 represents in vertical section a stable floor built of my improved stones which embodies in desirable form the present improvements. Fig. 2 illustrates in top plan view a single stone. Fig. 3 is a section of such stone on line A—B of Fig. 2. Fig. 4 is a section of same on line D—C of Fig. 2, and Fig. 5 is a like section of the stone on line D—C of Fig. 2 showing a slight modification.

Similar characters of reference denote like parts in all the figures.

The stones are made from cement, loam, and all kinds of clay, such as clay for bricks, and burned or sun dried in the usual manner.

The stone *e* is formed with hollow spaces *l* to make same light and save material. To increase the strength of the stone, strengthening webs *m*, *m*<sup>1</sup>, are provided between said open spaces *l*. Each stone is formed so that it is broad at the top and narrower at the bottom and having straight slanting sides *g*, *g*<sup>1</sup>. The top surface of the stone is slightly convex. This convex upper surface is grooved having longitudinal grooves *i* of slightly undulating cross section so that any accumula-

tion of matter or remains of fodder is prevented. The stone further has transverse channels, *k*, *k*<sup>1</sup>, *k*<sup>2</sup>, at a right angle to the longitudinal grooves *i*. These channels have a smooth surface and are provided at suitable distances in the direction of the curvature of the stone. The channels *k* are made somewhat deeper than the longitudinal grooves. Hereby I attain that matter which has flown into the channels can not return into the grooves and any accumulation of liquid therein is prevented. The stones thus formed are mounted on beams *c* which are located over an inclined sole plate *a*, whereby any liquid and matter is flowing into the dung pit *b*. The stones are arranged in rows. Between every two rows of stones there is a space *f* which extends into an intermediate space *h* and widens downwardly because the stones are narrower at the bottom than at the top and have slanting surfaces *g*, *g*<sup>1</sup>. In this way any matter will flow from the longitudinal grooves *i* into the spaces *h* and between the beams *c* down onto the slanting sole plate *a* into the dung pit *b*. To prevent that the stones are longitudinally displaced, the webs *m*, *m*<sup>1</sup>, may be provided with circular channels *n* through which iron bars may be inserted for securing the stones permanently in their location.

Having thus described my invention I claim as new and desire to secure by Letters Patent:

Stones for stable flooring having inwardly slanting sides, a longitudinally grooved convex top surface of slightly undulating cross section, transverse channels with a smooth surface arranged at a right angle to said longitudinal grooves and made somewhat deeper, open spaces within the stones, strengthening webs between said open spaces, and longitudinal channels provided in the strengthening webs adapted to receive means for connecting the stones together.

Signed at Freiburg this 19th day of April 1907.

ADOLF ED. NOPPEL.

Witnesses:

FRANZ ZIMMERMANN, Sr.,  
CAMIEL NOPPEL.