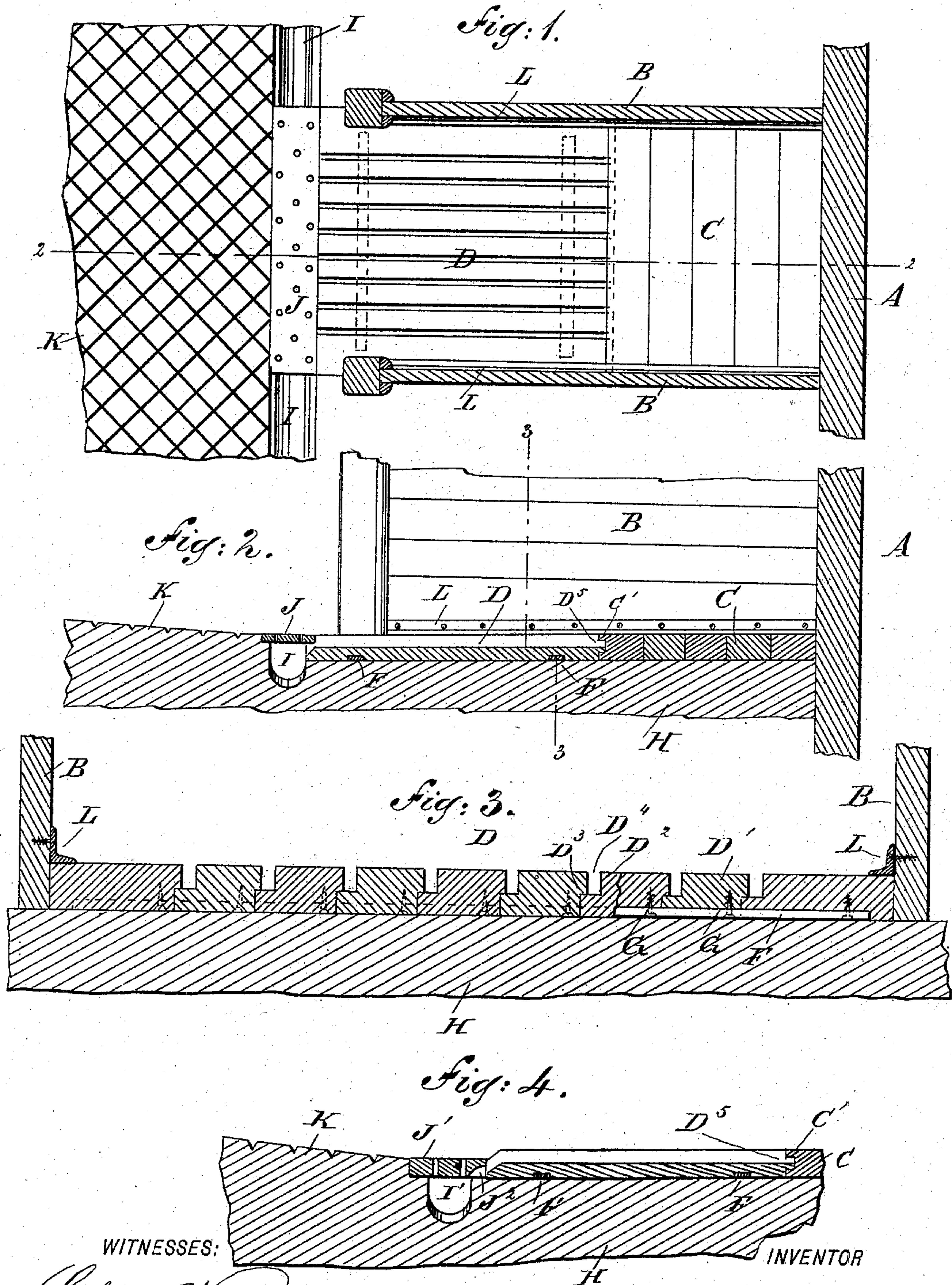


(No Model.)

H. SCHIFFER.  
STALL DRAIN.

No. 505,232.

Patented Sept. 19, 1893.





# UNITED STATES PATENT OFFICE.

HENRY SCHIFFER, OF NEW YORK, N. Y.

## STALL-DRAIN.

SPECIFICATION forming part of Letters Patent No. 505,232, dated September 19, 1893.

Application filed March 20, 1893. Serial No. 466,898. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY SCHIFFER, a citizen of the United States, and a resident of the city, county, and State of New York, have  
5 invented certain new and useful Improvements in Stall-Drains, of which the following is a specification.

The object of the invention is to provide a new and improved stall drain adapted to be  
10 readily and easily fitted in the bottom of the stall and arranged to insure perfect drainage.

The invention consists principally of a series of slats secured at the under side to cross  
15 bars and forming a series of channels or gutters extending a suitable distance in depth between adjacent slats.

The invention also consists of parts and details and combinations of the same as hereinafter more fully described and pointed out in  
20 the claims.

Reference being had to the accompanying drawings forming part of this specification and in which similar letters of reference indicate corresponding parts, Figure 1 is a plan  
25 view of the improvement as applied. Fig. 2 is a longitudinal sectional elevation of the same on the lines 2. 2. of Fig. 1. Fig. 3 is an enlarged cross section of the same on the lines 3. 3. of Fig. 2, and Fig. 4 is a longitudinal  
30 sectional elevation of a modified form of the same.

The stall is provided with the usual front wall A, the sides B, and an inclined bottom composed of the front cross board C, and the  
35 drain D, the lower end of which discharges into the gutter I.

The drain D is composed of a series of slats D' placed firmly alongside one of the other so as to form on the under side an unbroken  
40 surface as will be readily understood by reference to Fig. 3. The several slats D' are united on the under side by transversely extending metallic flat bars or battens F let into recesses cut in the slats so that the under side  
45 of the bars is flush with the under side of the slats as illustrated in Figs. 2 and 4. The slats D' are fastened in place on the bars F by short screws G, passing through the bars into the slats from underneath so that no dangerous  
50 points or projections extend to the top of the drain to injure the animal's hoof. Each slat D' is formed on top and one edge

thereof with a rabbet D<sup>2</sup> extending longitudinally throughout the length of the slats and having a depth approximately one half of  
55 the thickness of the slats. Each rabbet is slightly overlapped by an undercut D<sup>3</sup> of the next adjacent slat so that a channel D<sup>4</sup> is formed between each two adjacent slats as plainly shown in the enlarged detail Fig. 3. 60  
The upper ends of the slats are formed with transverse tongues D<sup>5</sup> fitting into a correspondingly shaped groove C' of the lowermost cross board C so as to connect the drain D firmly with the crossboards C, see Fig. 2. 65

The entire bottom C. D. rests on a cement floor H in which is formed the transverse gutter I of suitable depth and inclination to run  
70 off the liquid matter, flowing down the channels D<sup>4</sup>, which latter discharge at their lowermost ends into the said gutter I, as shown in Figs. 2 and 4. The gutter I is closed on top by a perforated metallic cover J, extending from the middle of one side B to that of  
75 the other side B, so that each stall has its own cover for that part of the gutter I extending on the lower or outer end of the stall. The aisle K extending beyond the gutter I is curved, or inclined upwardly from the gutter I, and is a continuation of the cement floor H. 80

In order to securely hold the bottom C. D. in place on the floor H, I provide small angle  
85 irons L secured with their vertical flanges by screws or other means to the sides B; the horizontal flanges resting on top of the outermost or side slats D' and the ends of the cross boards C as plainly shown in Figs. 1, 2 and 3.

As shown in Fig. 2, the cover J. is flush with the top of the lower ends of the slats D' the inner edge of the cover resting in a seat  
90 formed transversely in the slats D' while the outer edge of the cover rests in a seat or rabbet formed in the cement floor. The cover is somewhat less in thickness than the depth of the channels D<sup>4</sup>, so that they discharge directly into the gutter I as will be readily understood by reference to the said Fig. 2. 95

As illustrated in Fig. 4 the under side of the wooden cover J' is flush with the under side of the bottom slats D<sup>5</sup> and in this case  
100 the inner edge of the cover is cut out to form a transverse rabbet J<sup>2</sup> into which lead the downwardly beveled ends of the bottoms of the channels formed by the slats.



The aisle is formed with diagonal grooves so that any liquid matter thereon can drain to the cover J and through the perforations in latter into the gutter I.

5 It will be seen that the entire construction of the stall drain is very simple, ample provision is made for perfect drainage and no screws or nails liable to injure the animal project on the upper surface of the stall bottom.

10 Having thus described my invention, what I desire to secure by Letters Patent is—

1. A stall drain comprising a bottom made of cross boards and longitudinal slats connected at their upper ends with the lower-  
15 most of the said cross boards and forming top channels between adjacent slats, battens connecting the said slats with each other at the under side and angle irons adapted to be fastened to the sides of the stall and adapted  
20 to engage with their horizontal flanges the top surface of the said bottom at the sides thereof to securely hold the said bottom to the floor substantially as shown and described.

2. A stall drain provided with a bottom  
25 comprising a series of cross boards and a drain composed of a series of longitudinal slats in alignment with the said cross boards, each slat being formed on top and on one edge thereof with a rabbet extending throughout  
30 the length of the slat, and partly overlapped by an undercut on the next adjacent slat so as to form a longitudinal channel between each two adjacent slats and on the top thereof substantially as shown and described.

35 3. A stall drain comprising a bottom made of cross boards and longitudinal slats forming channels between adjacent slats, the upper ends of the slats being connected by

tongue and groove with the end cross board, battens connecting the slats with each other 40 at the under side, and angle irons adapted to be secured to the sides of the stall and resting with their horizontal flanges on the end slats and the sides of cross boards substantially as shown and described.

4. A stall drain comprising a cement floor formed with a transverse gutter, a cover for the said gutter and a bottom extending from the gutter to the head of the stall, the said bottom being inclined and made of cross 50 boards and longitudinal slats each formed on one side with a rabbet overlapped by an undercut on the next adjacent slat for forming longitudinal channels in the top of the slats and between each two adjacent slats and bat- 55 tens secured to the under side of the slats substantially as shown and described.

5. A stall drain provided with a drain made of slats placed firmly alongside one of the other, each slat being formed on top and on 60 one edge thereof with a rabbet extending throughout the length of the slat and partly overlapped by an undercut on the next adjacent slat so as to form a longitudinal channel between each two adjacent slats and on the 65 top thereof substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 17th day of March, 70 1893.

HENRY SCHIFFER.

Witnesses:

CHARLES NIDA,  
S. FRIEDRICH OTT.