

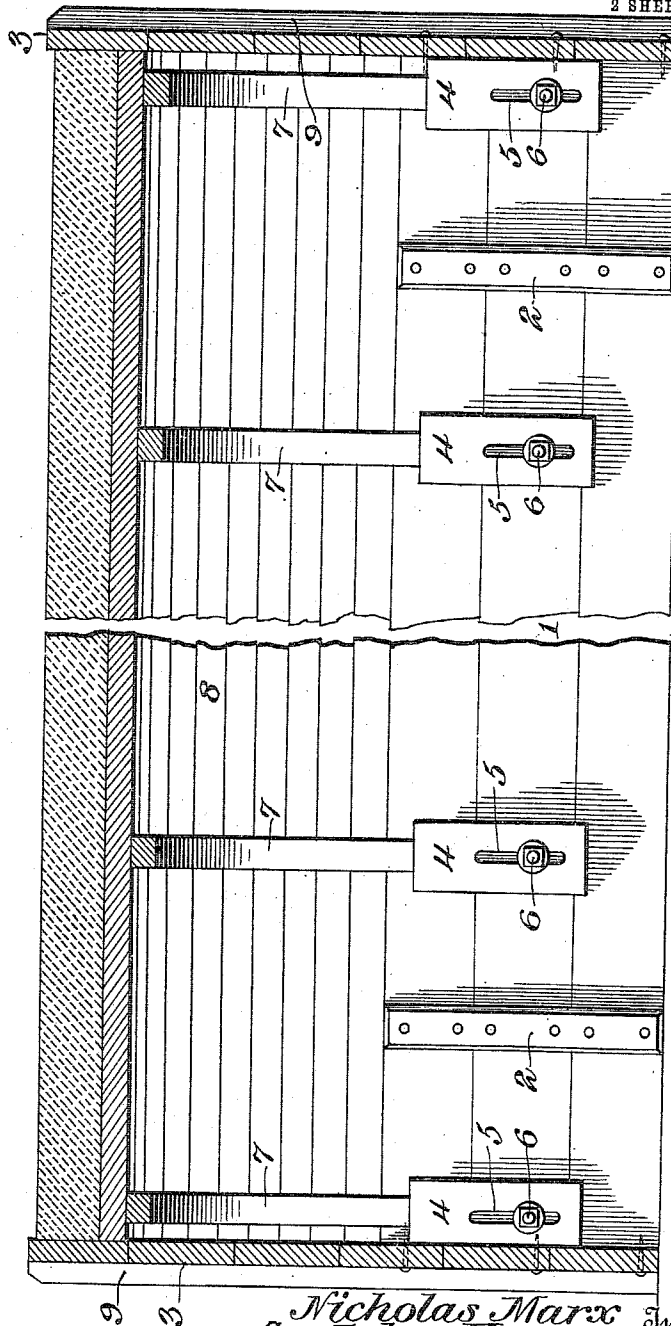
985,916.

N. MARX & J. KETZNER.
MOLD FOR CULVERTS.
APPLICATION FILED AUG. 25, 1909.

Patented Mar. 7, 1911.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
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2 SHEETS—SHEET 2.

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Fig. 3

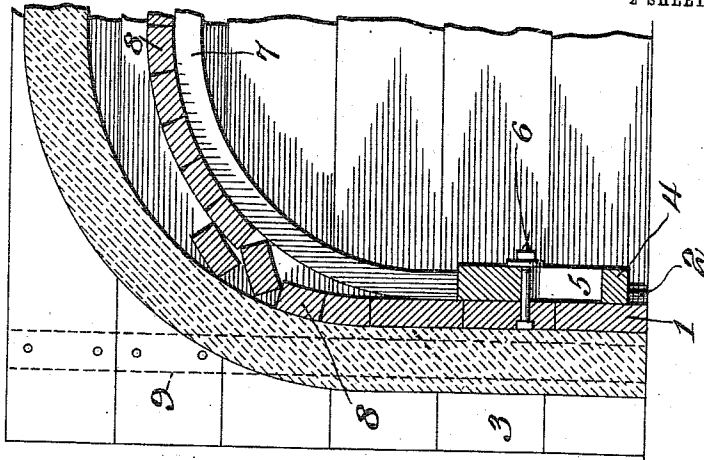
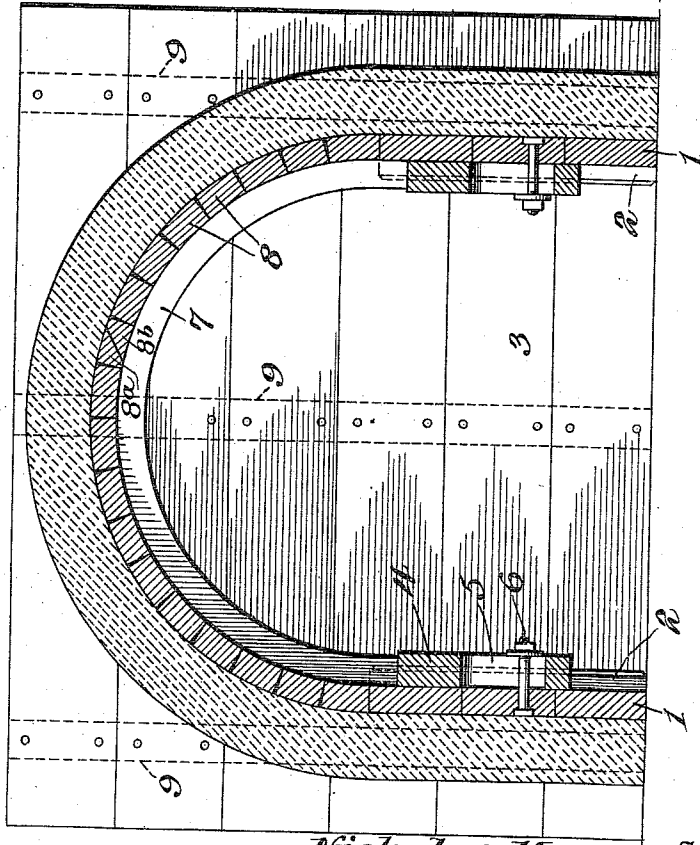


Fig. 2.



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UNITED STATES PATENT OFFICE.

NICHOLAS MARX AND JOHN KETZNER, OF MOUNT HOPE, KANSAS.

MOLD FOR CULVERTS.

985,916.

Specification of Letters Patent.

Patented Mar. 7, 1911.

Application filed August 25, 1909. Serial No. 514,561.

To all whom it may concern:

Be it known that we, NICHOLAS MARX and JOHN KETZNER, citizens of the United States, residing at Mount Hope, in the county of Sedgwick and State of Kansas, have invented a new and useful Mold for Culverts, of which the following is a specification.

The invention relates to improvements in molds for culverts.

The object of the present invention is to provide a simple, inexpensive and practical culvert mold, designed for molding culverts with vertical sides and arched tops, and equipped with means for also molding wings at either or both ends of a culvert to prevent the soil from being washed away at the sides of the culvert.

A further object of the invention is to provide a culvert mold of this character, adapted to be set up by one person and capable, after a culvert has been molded and the plastic material has set, of being readily removed from the finished culvert and re-used.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a longitudinal sectional view of a culvert mold, constructed in accordance with this invention. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a similar view, the arched supports being dropped to loosen the mold from the finished culvert.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

The mold comprises in its construction spaced vertical side frames or members 1, consisting preferably of a plurality of boards connected together by vertical cleats 2, as clearly illustrated in Fig. 1 of the drawings. The side frames or members are connected by end frames or members 3, and are equipped at their inner faces with vertically disposed blocks or supports 4, pro-

vided with vertical slots 5 and adjustably secured to the side frames or members by bolts 6, piercing the side frames or members and operating in the slots 5 to limit the vertical movement of the blocks or supports and to clamp the same in their supporting position. The bolts 6 are provided at the interior of the mold with nuts, so that the fastening means for securing the blocks rigidly to the side frames or members may be loosened from the interior to permit the blocks to drop, as hereinafter more fully explained.

In setting up the culvert mold, the blocks are raised the desired distance and are rigidly secured in such adjustment with their upper ends arranged in the same horizontal plane so as to form seats for arched supports or members 7. The arched supports or members may be constructed of any suitable material, and after they have been arranged in position, a collapsible arched cover 8 of sufficient strength to support the cement mortar, or other plastic material is laid on the arched supporting members 7. The arched cover 8 may be conveniently formed by longitudinal bars, as shown in the embodiment of the invention illustrated in the accompanying drawings, but other material may be employed in the construction of the cover. The bars 8^a and 8^b of the cover 8 are beveled and overlapped to form a collapsible joint to prevent the bars or members of the said cover 8 from binding when removing the mold from a culvert.

The end frames or members 3, which are also preferably constructed of boards and connecting bars or cleats 9, project laterally beyond the side frames or members, so that protecting wings may be molded at either or both ends of the culvert for preventing the soil at the sides of the culvert from being washed away. The end frames or members extend upward from the bottom of the mold and project above the core, formed by the arched portions and the parallel side frames or members, and the said end frames or members are secured to the side frames or members by suitable fastening devices and close the ends of the said core.

After the plastic material of which the culvert is made has been applied to the mold, and has set and hardened sufficiently to stand the weight to which it is to be subjected, the end frames or members are re-

moved and the fastening devices of the blocks are loosened to permit the same and the arched supporting members to drop downward, as illustrated in Fig. 3 of the drawings, whereby the arched portion of the core is loosened, disrupted and freed from the material of the culvert. The mold will then be readily removed from the culvert and can be used again, as will be readily understood. The upward and downward movement of the blocks 4 through the slots 5 enable the arched portion of the mold to be readily arranged for use and to be easily removed from the finished culvert.

15 Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

A culvert mold comprising a plurality of boards arranged on edge and rigidly connected by vertical cleats forming vertical side frames, vertically disposed blocks arranged at intervals on the inner faces of the side frames and provided with vertical slots, means operating in the slots for adjustably securing the blocks to the side

frames, said blocks terminating short of the upper edges of the side frames, rigid arched supporting members spaced apart and removably seated at their lower ends upon the upper ends of the blocks and extending below the upper edges of the side frames and held against lateral movement by the same, and a collapsible arched cover resting upon the upper outer faces of the arched members and also upon the upper edges of the side frames, said cover being composed of longitudinal bars placed edge to edge, two of the said bars being beveled and overlapped to form an automatically collapsible joint, whereby the cover is collapsed by lowering the blocks at each side. 30 35 40

In testimony, that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

NICHOLAS MARX.
JOHN KETZNER.

Witnesses:

R. C. FOUQUET,
JOHN KOPPERS.

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