

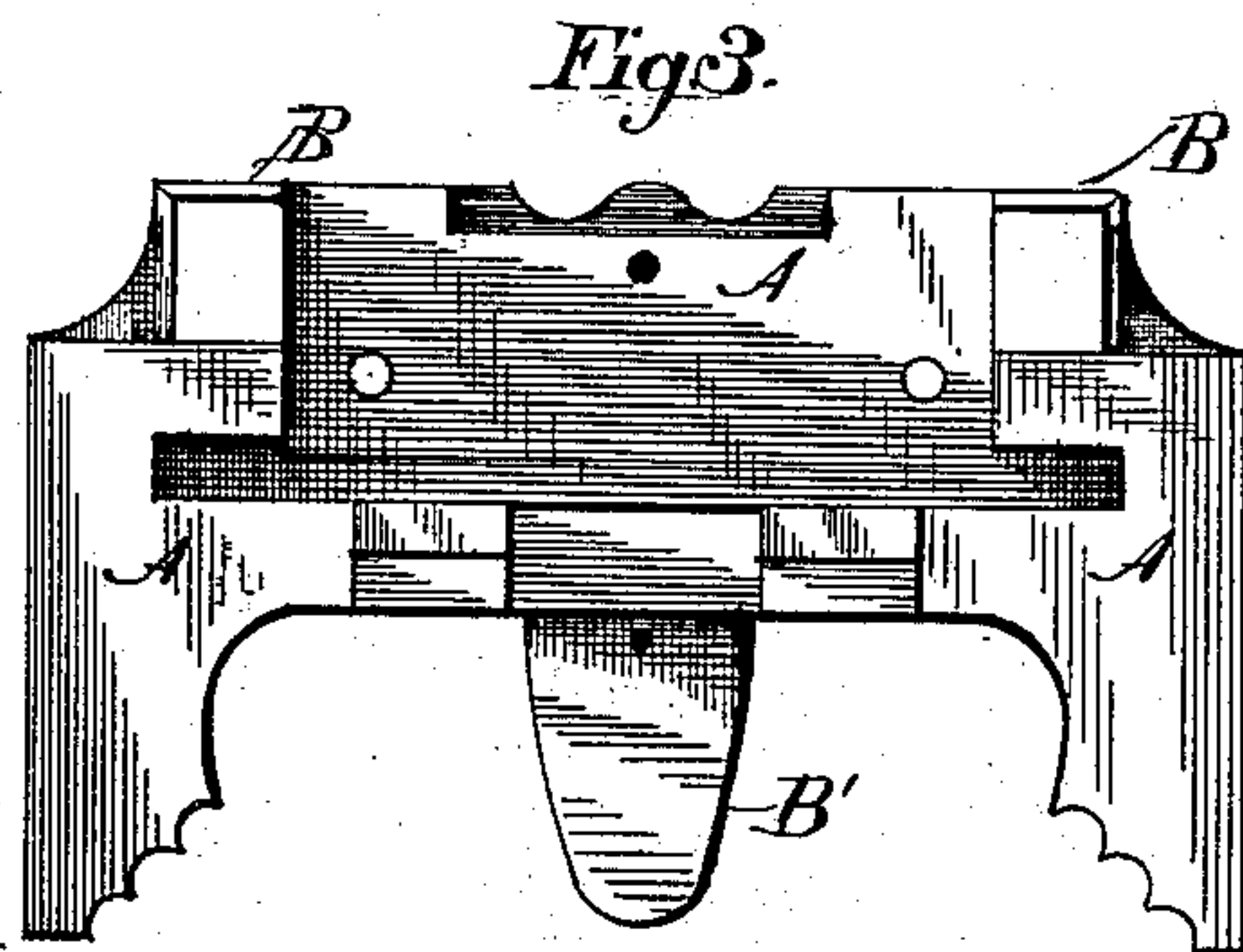
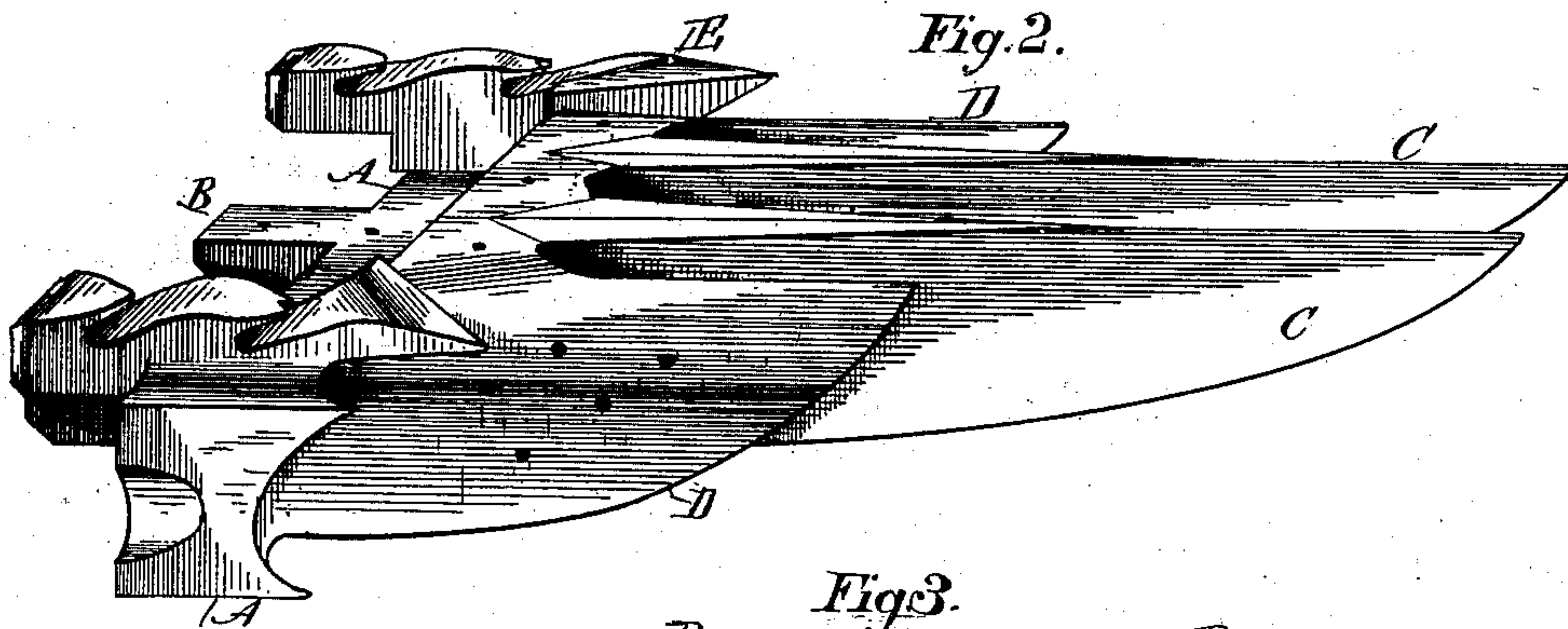
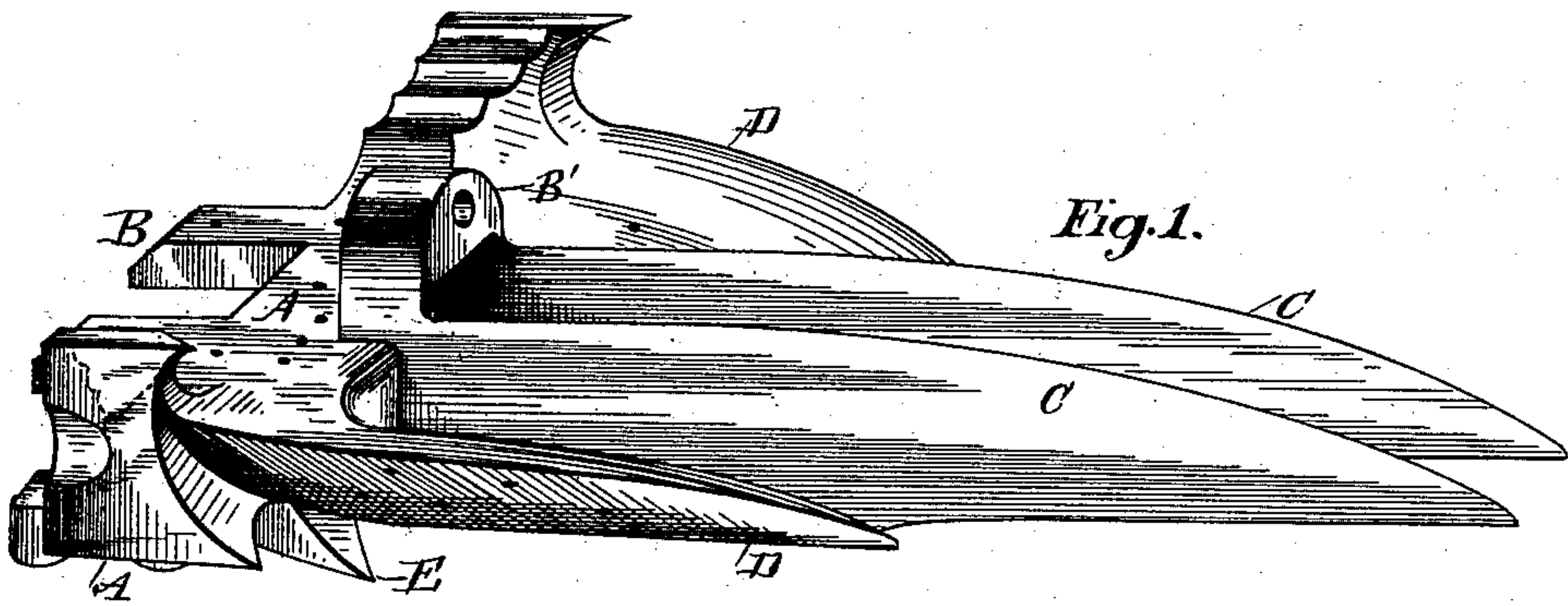
(No Model.)

F. NORELL.

PILOT OR COW CATCHER FOR LOCOMOTIVES.

No. 375,457.

Patented Dec. 27, 1887.



WITNESSES

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FRANK NORELL, OF BIG RAPIDS, MICHIGAN.

PILOT OR COW-CATCHER FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 375,457, dated December 27, 1887.

Application filed July 9, 1887. Serial No. 243,854. (No model.)

To all whom it may concern:

Be it known that I, FRANK NORELL, of the city of Big Rapids, in the county of Mecosta and State of Michigan, have invented certain new and useful Improvements in Pilots or Cow-Catchers for Locomotives; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in the pilots or "cow-catchers" of locomotive-engines; and it has for its object to so construct such pilot that instead of throwing objects to one side, like the ordinary pilots, it will lift them off the track and hold them safely until removed, the invention being particularly designed to remove cattle and other live stock from the road without material injury to the same, thus, besides preventing the derailment or other injury to the train, relieving the railroad company of the damages for injury to and loss of such stock. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of my improved pilot; Fig. 2, a similar view of the same inverted, and Fig. 3 an inverted rear view thereof.

Referring to the drawings, the letter A indicates the base or pilot frame, which is provided with rearward extensions B, by which it may be fastened to the forward end of the truck of the engine, and with a central vertical extension, B', for the central brace-rod, which connects it with the front of the boiler. Extending centrally and forwardly from the base or frame are two parallel leaders, C, which set over the track between the rails and a suitable distance above the same. The said leaders are curved on their upper edges from the point of junction with the frame to their forward ends, where they terminate in points which lie near the rails or surface of the track, so as to pick up any live stock thereon. The lower edges of the leaders are straight and lie horizontally above the rails or surface of the track.

The lateral leaders are indicated by the let-

ter D, and are located one at each side of the leaders C. The said leaders D set obliquely in opposite directions—that is, their upper edges extend outwardly and their inner ends inwardly over the rails, the lower edges approaching the lower edges of the central leaders and being in the same horizontal plane therewith. The upper edges of the leaders D likewise are curved to a point, but terminate considerably back of the forward extremities of the central leaders, so as to pick up objects at either side of the track which may escape said central leaders.

Outside of the lateral leaders are short leaders E, which clear the track of small obstructions outside of the rails and which may have escaped the leaders D.

The frame and leaders may be made in one piece of cast-iron, or they may be made separately of the same or different materials and secured together in any convenient manner.

The operation of my invention is as follows: The central leaders running between the rails, with their forward ends slightly above the road-bed, will pick up any obstructions—such as cattle—and, by reason of their curved upper edges, raise them and carry them back, where they will be held, without serious injury, until they can be removed, instead of being knocked to one side, which almost invariably results in death, broken bones, or such serious injury as to entail the loss of the animal and burden the company with damages for the same. Should the obstruction or the animal be at either side of the track over the rails in such position as to escape the central leaders, one or the other of the lateral leaders, as the case may be, will catch, elevate, and hold it safely.

It will be seen that the injury attendant upon the pilot heretofore used will be almost, if not entirely, obviated, relieving the company of a large item of expense.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, with the frame of a pilot, of the central parallel leaders extending forward from the frame over the track between the rails, substantially as and for the purpose specified.

2. The combination, in a pilot or cow-catcher

of a locomotive-engine, of the frame thereof secured to the engine and the parallel central leaders extending forwardly from the same, having their upper edges curved to a point at 5 their forward extremities and their lower edges horizontally parallel with the road-bed, or nearly so, substantially as and for the purposes specified.

3. The combination, in a pilot or cow-catcher 10 of a locomotive-engine, of the frame thereof and the lateral leaders to catch and receive obstructions at the sides of the central leaders and prevent the same from passing under and interfering with the wheels of the train, sub- 15 stantially as specified.

4. The combination, with the frame of the pilot, of the central parallel leaders and the obliquely-set lateral leaders, so arranged, re- 20 spectively, as to catch and hold obstructions between the rails above the same at either side and in the line of travel with the same, substantially as specified.

5. The combination, with the frame of the pilot and the oblique leaders, of the short lead- 25 ers extending outside of the rails at either side to clear the track of small side obstructions, substantially as specified.

6. The combination of the pilot-frame, the parallel central leaders, the oblique lateral leaders, and the short leaders located outside 30 of the oblique leaders, the whole arranged relatively to each other to clear the track between the rails, above the rails, and at each side of the same, so as to effectually prevent obstructions under the train, and thus secure 35 its safety, substantially as specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

FRANK NORELL.

Witnesses:

ANDREW HANSON,
W. S. TUCKER.