

THEATERS

BILLS OF THE WEEK

Della Fox in Vaudeville—at the Metropolitan.

"The Watch on the Rhine"—at the Bijou.

Some Good Vaudeville—ever brought to the northwest.

theme with dramatists. Yet with a new turn to it, it never fails to be followed with interest.

In presenting A. H. Wilson of the golden voice in the romantic comedy, "The

In the bright scenes and merry laughter, to the maiden, the mother and older folks, who find enjoyment in all that serves to make life a pleasant path of sunshine.

The story of the drama told in "The Flaming Arrow," is in four acts.

"THE FLAMING ARROW."

not of the hair-raising kind, but of natural and interesting dramatic kind, played by a young civilized Indian, played by that graceful and physically handsome actress, Go-Go-Mohawk, returns to her home and tribes in the far west with a knowledge of the power and greatness of the white man whose advancements in the march of civilization have pushed forward until a conflict of supremacy with the red man is inevitable.

Footlight Flashes.

That jolly mirth provoker, "The Burgomaster," the same merry jingle that caught the town early in the season, is announced for a return date at the Metropolitan on three nights and Saturday matinee, beginning Thursday, May 2.

What is claimed to be the most natural play of the day is the drama entitled "The Village Parson," which comes to the Metropolitan for four nights and a matinee, opening Sunday, May 12.

The attraction at the Metropolitan for the week of May 5 will be George Clarke in "When We Were Twenty-one," supported by an excellent company under the management of Edward E. Richards, beginning Thursday, May 2.

"The Great White Diamond," Walter Fessler's strongest effort in the melodrama, comes to the Bijou in the near future with a great cast. Besides the "Human Mail Bag," the "Swing for Life," and other thrilling mechanical effects, there is a weird character called "The Nictalops," new to the stage and founded on medical authority.

Realism runs rampant in the new Swedish comedy-drama, "Carl Carlson," which is meeting with so much success with that excellent Swedish character actor and singer, Arthur Donaldson, in the name part. The finale of Carl shows a cattle stampede; act second a prairie fire scene.

Among the most enjoyable attractions yet folded in the Bijou's list of bookings is the visit of the big New York Casino manager comedy success, "The Telephone Girl." The

HILL'S MILLION-DOLLAR ELEVATOR ON THE LAKE

None Other Can Approach It in Handling Capacity—Matchless House of Steel, but Part of a Vast System.

In no line of endeavor has there been more experiment, recently, and a sharper advance than in the grain handling trade and grain elevator construction as the steel tanks, tile bins and concrete warehouses going up over the west testify.

There is being completed at West Superior what is not only the largest and most costly, but the most advanced grain elevator in the world. That it is of steel is not so remarkable, though steel for elevators is of few years' experience, but it is of 3,100,000 bushels capacity, can handle grain more rapidly than anything ever erected, is filled with new mechanical contrivances and adaptations and is driven from garner to boot by electricity.

This house is a part of the vast system that is being built by James J. Hill of the Great Northern road, whose originality in conception, boldness in execution and knowledge of detail are a marvel among the men that do things. Some of the requirements of the situation, the terminal elevator at the head of Lake Superior at the eastern end of his wheat carrying lines of road. Wood was then the material. This system has now been expanded into 3,400,000 bushels at Superior and Buffalo.

Fine Points of a Terminal House.

In the construction of a terminal elevator many new mechanical refinements are necessarily introduced, and mechanical contrivances must be twisted to meet the requirements of the situation. While steel elevators have been erected they have been marine and storage merely, of simple design and never containing the necessities of construction that are placed in a terminal house.

To work out these principles and appliances in cold steel, as it were, all on a scale far beyond anything attempted before, where more than ten miles of steel spouts alone—has required a daring and skill exceeding that of any engineer of a wood elevator, however vast its construction.

The steel elevator at West Superior consists essentially of the usual elements—a storage house below, a cupola above containing machinery and elevating and transferring apparatus, the distinctive features are the square steel bins, eighty-five feet deep, with hopper bottoms of pressed steel rectangular at top and rounded at bottom, the entire structure is mounted forty feet above the ground on steel columns; the elaboration of the transferring and hoisting appliances; the unusual construction of the systems by which the whole house can be maintained at any operation without closing any other part; the movable shovels for unloading the bins; the system by which cars to be unloaded need not be carefully placed before the automatic shovels, but the shovels are "spotted" to the cars; the return to the stationary spout system, and the application of electricity to all machinery devices.

This elevator is located on the Superior side of the harbor of Duluth-Superior, and at the end of the yard is an eighty-foot transfer table feeding twelve tracks. The yard for this single house stores 160 cars of grain.

Foundations Well Laid.

For the foundations of this house 4,600 piles each forty to fifty feet long, by forcing timber grillage on a pile top, were driven by water jet and hammer to refusal, and each was then capped by heavy timber head. On clusters of these piles timber grillage was set, concrete pedestals of Portland cement were erected, into the concrete iron rods were laid to make the mass still more secure, and on these rest the five-ton steel columns supporting the structure, each one 1,000-pound base of cast iron. Along the entire length of the receiving side of the house are great piles for the receiving hoppers, each twenty feet wide and extending in a practically continuous line from end to end of the building. These piles are of concrete with steel pile coping flanges. Into the concrete boots of the receiving legs, into which all grain going to the elevator must pass before it can be caught by the buckets and hoisted to the cupola.

Above the foundation story eleven feet high, is the main floor. It is thirty-two feet high to the base of the bins. On this floor are two parallel railway tracks passing above the row of receiving hoppers. These hoppers are each thirty-five feet long, covered with the customary steel grating so that nine cars of any length can be unladen at once without any coupling. To add to dispatch there are eighteen large automatic shovels, one for each car, so placed on a hanging track that they can be spotted to any car on any other house, the equal of anything you can buy from any other house, the equal of anything you can buy from any other house, the equal of anything you can buy from any other house.

The building consists of nine duplicate sections, each 13.5 feet by the width of the structure, and by this means the task of drawing specifications was greatly reduced. Cars are handled through the elevator on two receiving tracks with an endless 1.24-pound steel cable 3,000 feet long, drawn by 100-horsepower motor geared to a 36-pound sheave. The cars are attached by hand grip to the cable and locomotives will not enter the structure.

On this floor is the cleaning machinery, consisting of eight groups of five machines each. These machines will scalp, grade and clean in one continuous operation. A forest of spouts reaches down from the bottoms of the bins for the transference of grain from one series of bins to another and thence to take off from the house pockets to the shipping bins, or in any direction.

Over Six Hundred Bins.

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What floors are not of steel plate are of wood lined by asbestos, and the only wood in the structure is that used in the frames for the cleaners, an insignificant quantity, hardly enough if all piled together to heat a single column.

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The power distribution throughout the elevator is entirely electric, from 3-phase, 440-volt, alternating current dynamo. This is generated in a central station outside, and works all the houses of the system, "A," "X" and the new steel house, which is to be denominated elevator. The dynamo is a standard 2107.5. There is a switchboard in the superintendent's office and each motor has its starting switch near the machine it drives.

10,000 Tons of Steel.

There are in the building 10,000 tons of steel, all soft, open hearth. This 500 carloads were all punched, sheared and much was riveted at Pittsburg, and all went together without error of any moment. They were erected in 200 days. There are 400 tons of sheet steel and small angles. Two million rivets were shop-driven by machine and half as many were driven by hand in erection. The ten miles of steel spouts were made on the ground and their correct position was one of the great problems of the work. The elevator has a local telephone system, a complete electric lighting plant, and the necessary offices for state and private officials. It is so nearly fireproof that insurance will be a minor item, and it is probable that the company will itself obtain a nominal charge for insurance on contents. It is fitted with automatic sprinkler systems, one in the upper part of the building and another that is galvanized iron, covering a volume of water that an unbroken curtain will vaporize under external heat. The fire tank is on the roof of the building from the main eaves down to the brick wall that surrounds the lower story. This protection is not alone for fire, but to guard against excessive heat, which might possibly injure grain adjoining the outer walls.

What floors are not of steel plate are of wood lined by asbestos, and the only wood in the structure is that used in the frames for the cleaners, an insignificant quantity, hardly enough if all piled together to heat a single column.