

What Our Frisco Girls Will Wear Abroad

This little black taffeta evening dress (at left), with trimmings and bindings in peach-colored silk, is most becoming to Miss King's slender figure.

At Right—Miss Willigan's sport outfit of imported wool kasha, in white and light pink combination, for wear on the boat. The hat is of white crepe, with printed georgette band.

At lower left—A plaid and dark blue combination, with hat to match, is Miss Willigan's train outfit. It is chic and comfortable.

At lower right—a charming, yet serviceable silk coat, with monkey fur trimming, white felt hat and white shoes to match. Of her entire wardrobe of beautiful clothes, Miss King will perhaps get the most wear from this little outfit.





The Story of the American Flag

*"I Pledge Allegiance to My Flag, and to the Republic for Which It Stands;
One Nation, Indivisible, with Liberty and Justice for All."*



There are some facts about our flag, yours and mine, that you and I should know. Let us learn them together.

You know the American flag was not always just as it is now. From 1777 to 1795 it was composed of thirteen stars and thirteen stripes; from 1795 to 1818, of fifteen stars and fifteen stripes; from 1818 to 1926 of a star for every state and thirteen stripes.

It was first displayed in battle at Fort Schuyler, New York, on August 3, 1777.

To Paul Jones was assigned the duty of displaying it for the first time aboard the "America", the first ship of the line built for the United States in 1782.

And do you know who christened the flag "Old Glory"? Here is the little story, quoted from *The History and Significance of the American Flag* by Emily Katharine Ide: "The first flag believed to have received the name 'Old Glory' was owned by Captain William Driver, who was born in Salem, March 17, 1803, and died in Nashville, Tenn., March 2, 1886. In 1831 he commanded the brig 'Charles Doggett' and just before leaving for a voyage to the South Pacific, he was presented with a large and beautifully made American flag. As it was raised aloft, he christened it 'Old Glory'. When he moved to Nashville in 1837, he carried his beloved flag with him, and during our Civil War, when the Confederates searched his home for it, he sewed it up in the coverlet of his bed. In 1862 when the Federal troops entered Nashville, Captain Driver obtained permission to raise his flag over the State Capitol—the story goes that he unfurled it himself, and with tears in his eyes, as it floated on the breeze, remarked, 'There, those Texas Rangers have been hunting for this these six months without finding it, and they knew I had it. I have always said if I could see it float over that Capitol, I should have lived long enough. Now, 'Old Glory' is up there, gentlemen, and I am ready to die.' The banner is preserved in the Essex Institute, Salem, Massachusetts.

Wonderful stories, and true ones, have been told of soldiers in battle, pledging a last allegiance and paying a last tribute to "Old Glory". In the battle of Fredericksburg, one soldier said, "Boys, I am shot, don't wait for me; just open the folds of the old flag, let me see it once more", and while the film of death was on his eye, he caught it in his hands, pressed it to his lips and died. One soldier justly said, "It is known, respected and feared around the entire globe. Wherever it goes it is the recognized symbol of intelligence, equality, freedom and Christianity."

This splendid flag should never be raised before sunrise and it should be lowered at sunset. When the flag is formally raised, all civilians present during the ceremony should stand bareheaded. The flag should never be allowed to touch the ground in the raising and lowering of it.

When the colors are passing on parade, or in review, the spectator should, if walking, halt; if sitting, rise, stand at attention and uncover the head.

No advertisement can be placed on the flag, nor can it be used as a trademark. The flag should never be draped, or twisted into rosettes.

Every American citizen is proud of his country and of his flag, and the very mention of either, fills him with reverence. Boast of your flag, your country, whenever you can—laud America to the sky, for it is the best nation in the world. See that your flag receives the proper recognition and reverence, and above all remember to study well your history of the American nation—of the fight which was made years ago for the freedom and contentment which you enjoy today. You will then be better able to appreciate the reverence and homage which other nations pay to "Old Glory", for American democracy is second to none in the entire world.

WHY, of course, you Frisco kiddies know that pledge. Learned it at school, didn't you, and you can all repeat it and I know that you realize just what it means.

The American flag is the most beautiful flag of any nation, and the American people who fought and bled for freedom and independence, see in it blessings guaranteed to all who seek its shelter. It is the emblem of a government which secures a greater measure of happiness and prosperity for the individual citizen than any other government has ever offered or given.

July 4 brings to our mind again the story of Independence Day. Our flag which was presented as an insignia of our freedom many years ago, is celebrated anew each year.

You cannot learn too early in life to feel the deepest reverence for your flag. Although the history lessons sometimes seem hard to learn, study them well, for they tell the most wonderful story of your country, and my country. They tell of the hardships that our great, great grandfathers and grandmothers suffered that the Stars and Stripes might wave triumphantly some day, over just such a nation as we have today, with schools and churches and wonderful homes, secure from invasions of foreign peoples; where we may worship as we like, think as free people and enjoy a democracy second to none in the whole world.

*Your own
Twilight Lady*



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FRISCO BABIES

1—Mary Catherine, 6 months, daughter of M. Weaver Springfield baggage room, and niece of Gertrude Fryer, freight claim dept. 2—Reta, daughter of J. J. O'Neill, supt. terminals, Memphis. 3—Roy, age 4, son of P. Dodd, crossing watchman, Ft. Smith. 4—Billy, age 3 years, son of D. A. Cowan, operator, St. James, Missouri. 5—Andrew Lawrence, age 3 years, son of A. D. Partee, head car inspector, Rose-dale, Kan. 6—Donald Dean, 14 weeks, son of C. Woodall, trucker, Springfield. 7—Winifred Sample, granddaughter of N. Jacques, brakeman, Central Division. 8—Earline and Arline, twin daughters of Rate Clerk J. B. Wright, Freight Office, Memphis. 9—Patsy and Nancy, six mos., twin daughters of H. E. Bishop, special officer, Ft. Worth. 10—Wm., 6 months, son of G. Rogers, West Freight Shop, Springfield. 11—Danzel Hugh, age 6, and Gilbert Wayne, age 4, sons of lineman S. H. Kelso, Gang Camp 85. 12—Richard, age 6, and Norman Francis, age 4, sons of Paul Strauss, clerk, agents' acct. dept., St. Louis. 13—Jimmie Goddard, 9 months, grandson of I. N. Tague, section foreman, G-6, Neosho, Mo.



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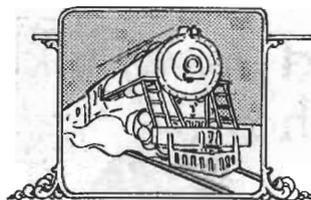
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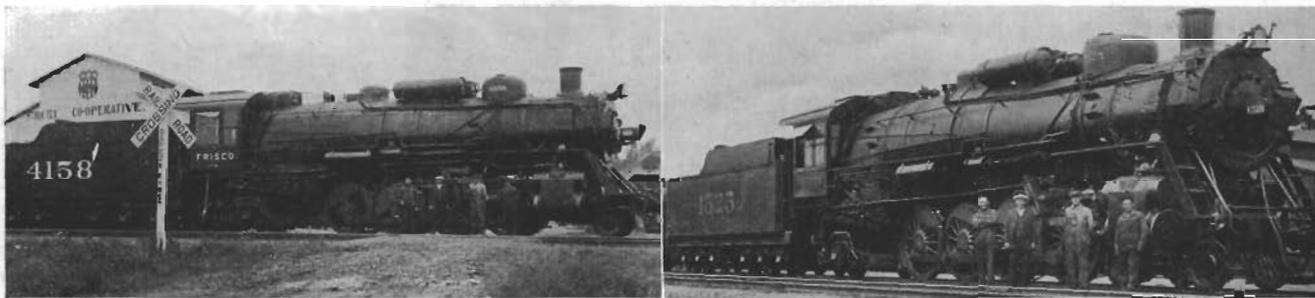


The FRISCO MECHANIC

Published in the Interest of the
F.A. of M.C. & C.D. Employes



Two More Giants of Power En Route for Service On Frisco Rails



Two giant locomotives en route to Springfield for service on Frisco Lines, were snapped by the photographer as the train in which they were being handled "cold" pulled into the siding at St. James, Mo., June 3. The engines, shown above, are a part of the \$11,000,000 equipment order placed by Frisco Lines last year. Engine 1525 is a passenger, and Engine 4158 is a freight locomotive. Several more engines of the same delivery were in the train, placed several cars apart because of their great weight. One Southern Pacific engine routed westward over Frisco rails was also in the shipment. The crew in charge of the train are standing in the same positions in each picture and are, left to right: C. G. Johnson, head brakeman; T. M. Roach, conductor; H. W. Knoerr, engineer, and T. C. Alverson, fireman. The engines of this year's order are the same type as those ordered in 1924. They will burn coal instead of oil. Several of the new delivery have already been broken in and the inspectors and enginemen report splendid performances in each instance.

SAPULPA CELEBRATES

Fifteen Hundred Brotherhood Members Picnic at Wela Park, June 13

ON JUNE 13, the Frisco employes of Tulsa and Sapulpa went by special train to Wela Park where they had one of the finest picnics of this year. Wela Park is between Neosho and Seneca, Missouri.

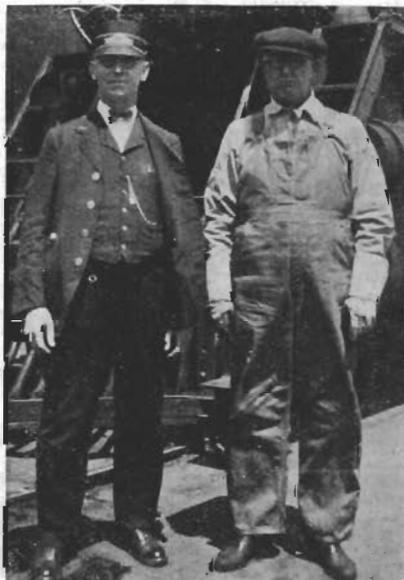
This picnic was arranged for by the four big brotherhoods—the engineers, firemen, brakemen and conductors. President Kurn authorized running a special train to carry the employes to the picnic grounds.

The special left Sapulpa at 6:00 a. m., arriving at Wela Park at 10:30 a. m. It is estimated that over 1,500 people were in attendance for they consumed ninety gallons of ice cream during the day and the lemonade was served from barrels. Each family came provided with its own basket lunch.

A band furnished by the park entertained the picnic crowd with music and there was swimming, horseshoe pitching and a baseball game between the West Tulsa Craft and the Afton Craft.

Among the out of town guests who attended were J. W. James, executive general agent of Tulsa; Z. B. Claypool, C. C. Mills and J. W. Morrill of the accident prevention bureau—St. Louis.

MAGNER ON LAST RUN



ENGINEER Edward P. Magner, retired on a pension recently on reaching the age limit, is shown in the accompanying picture with Conductor Ben Gould, just prior to leaving on his last trip on train 127. His last trip was made May 13, 1926, and the photograph was taken at Ft. Scott, Kansas. Magner held a run on the Afton-Parsons sub for many years.

SECTION FOREMAN CITED

Close observation and prompt action earned Section Foreman M. Kehrt of Ten Brook, Missouri, ten merits on his record and a congratulatory letter from his superintendent, J. A. Moran recently.

On May 27th, Kehrt watched train extra No. 1292 going south through Ten Brook and noticed a car in the train riding roughly. Kehrt flagged the train and inspection was made. The car was found to have a bent axle and flat wheels, and it was necessary to set it out for repairs before proceeding further.

In his letter to Kehrt, Superintendent Moran said:

"Your close observation and appropriate action taken in watching trains is in accordance with instructions and without doubt prevented derailment or possibly serious accident in this particular case. I want to personally thank you for especial efforts displayed by you in locating this car and in recognition of your alertness I am crediting your record with ten merits for meritorious services rendered in this case."

Accommodating

"I asked her if I could see her home."

"What did she say."

"She said she would send me a picture of it."

Water Treatment Is an Important Aid in Smoke Abatement, Water Engineer Shows

Nuisance and Waste of Black Smoke Can Be Decreased by Treating Water For Scale Prevention

By L. E. ELLIOTT, Water Engineer, Frisco Lines

IT MAY seem far out of line to attempt to apply the theory and practice of treating water for scale prevention to the very necessary abatement of the smoke nuisance. Black smoke is without a doubt a nuisance and there is no question but that it is wasteful. In this day of urgent need for conservation of resources and increase in efficiency of machines and men, applied engineering is coming to the front more and more all of the time.

It is my intention to try to bring out the importance of clean tubes and sheets in prolonging the life of the fire box and boiler and as an aid to easier and lighter firing. The data that will be furnished is not new; much of it can be obtained from any engineering reference book.

All water supplies that are practical for locomotive use contain dissolved matter and many of them carry suspended matter as well. It is of the dissolved matter that I will speak, because it has more direct bearing on the question at hand. There are two classes of dissolved matter that determine the fitness of water for use in boilers; the incrusting or scale forming salts and the alkali or foaming salts. The scale forming salts may be divided again into the so-called temporary and permanent hardness. The temporary hardness is that which deposits scale at ordinary boiling temperature of 212 degrees Fahrenheit. The permanent hardness does not deposit scale until a temperature corresponding to about 60 degrees gauge pressure is reached. The temporary hardness deposits a soft mud or bulky scale that can be rather easily removed at wash-out periods. The permanent hardness deposits scale that is very fine and hard and which cannot be removed by ordinary wash-out methods. The two kinds of scale together build up quite rapidly on the sheets, staybolts and flues, thus providing an excellent insulation against proper transference of the heat of combustion through the fire box sheets. Scale is a continual source of leaking boilers brought about by overheating of the fire box and flue ends. This overheating, aside from the grief it causes, due to leaking boilers, necessarily makes for increased fuel consumption or a steam failure, either of which is an expensive proposition.

Temperature Measurements

As to the insulating effect of scale previously mentioned. Some temperature measurements made some time ago on one-half inch boiler plate, with heat on one side and water on the other side, separated from the plate by scale of varying thickness and also with no scale on the plate, and a thermo couple inserted in a

This extensive article by Water Engineer Elliott treats a subject of vital importance to the Frisco Lines, and of primary importance in the efficiency of train crews to perform their duties in the matter of fuel conservation.

For years railway men of America have worked with the fuel problem—one of the greatest items of expense in steam power—and they have found willing helpers among the men who have the fuel in charge. To the enginemen of the Frisco belong a great share of the credit for the remarkable reduction in fuel made over a period of years by this railroad.

But the work is not yet completed. This article is recommended to the loyal workers who are striving each day to effect further economies in fuel for their company.

—W. L. H., Jr.

hole in the plate to determine the temperature. With no scale on the plate, the temperature of the metal was only 50 degrees higher than the temperature of the water, while with 1/3 of an inch of scale, the temperature of the metal was 665 degrees higher. The temperature of water under 200 pounds steam pressure is 387 degrees, therefore, the clean plate would have had a temperature of about 440 degrees, while the temperature of metal with scale 1/3 of an inch thick would be about 1,050 degrees. The difference between 440 and 1,050 indicates the extra fuel necessary to heat a given amount of water through a clean plate and one having scale on it. This makes it necessary to force the fire to keep maximum steam pressure with all the attendant possibilities of making black smoke. Then, too, when an engine has to be forced, it quite often becomes necessary to trade water for steam which is very liable to compel the use of the injec-

tor for sometime after shutting off and of course heavy firing to keep up steam against the injector so as to be ready to go on quick notice. Further on this subject: All metals have a definite ratio of expansion. The flues and sheets cannot avoid expanding by this ratio. It can readily be seen that when expansion takes place up to possibly 1,000 degrees and a proportionately stronger and heavier fire is kept up, the tendency to have flues loosen up in the sheet is much greater than if flues and sheets are clean and the temperature of the metal is not more than 440 degrees or 450 degrees. It might be suggested that welding flues to sheets will overcome the tendency to leak. This is true, but the strain set up by the higher expansion is going to have to be taken care of some place. If the flues do not loosen up, staybolts, flue sheet knuckles or something must give way. Expansion and contraction make for crystallization and crystallization means failure of metal.

Preservation of Flues

It has been my experience that electrically welded flues will not last very long without breaking the welds unless the sheets are kept clean. I know of one operating division that has always been considered as having excellent boiler water. Analysis showed it to be of good quality, carrying only small amounts of scale forming salts. The power used was rather small engines with welded flues. After about four months, flues began to leak, due to welds breaking and continually gave trouble on account of leaking. There was no water treatment on this division. Other divisions of this same road had no trouble with the same class of engines, although the water used carried large amounts of scale forming salts, but was fully treated. Inasmuch as engines for both divisions came from the same shop and welding was done by the same men, poor welding cannot be blamed for the failures on the first division. The condition spoken of was not a few isolated cases. It was general.

Any figures given to show fuel wasted due to scale formation are necessarily open to opposition. It has been stated on no less authority than the director of the Division of Locomotive Operation of the United States Railroad Administration that